

Saudi student teachers' perceptions
of formative assessment

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Abstract

This study explores Saudi student teachers' perceptions of formative assessment (FA). Recently, there has been a shift in Saudi Arabia towards a constructivist approach within education, which emphasises problem solving, analysis and research rather than memorisation and repetition. Despite these changes, FA, which is best utilised in a constructivist environment, has been overlooked. There are few studies on FA in the Arabian region, and there are no studies about student teachers' perceptions of FA.

Because FA is a new approach in Saudi Arabia, the researcher drew upon traditions of action research, in that FA was introduced by the researcher and discussed with the participants throughout the study. A purposive sample of eleven Saudi student teachers and their tutors participated in this study. Data was collected using a variety of instruments over a period of time. The process of data collection was in three stages: before, during and after school placement. Initial one-to-one semi-structured interviews were conducted with the student teachers before school placement. Thirty-three observations took place during school placement. After school placement, questionnaires and one-to-one semi-structured interviews were conducted with the student teachers, and interviews were also conducted with their tutors.

Although the Saudi student teachers had been influenced by summative assessment, the main findings showed that they were enthusiastic about the idea of FA and they recommended implementing it in Saudi schools. The findings also indicated that the student teachers could learn about FA, and the researcher's approach of connecting theory to practice through reflection seemed to be helpful in developing their knowledge about FA. The student teachers perceived that mixed abilities classrooms and time limitations — both time within lessons and the period of school placements — affected their practice of FA. The findings also suggested that in order to avoid what they seemed to identify as problematic FA techniques, the student teachers tended to focus on certain FA strategies.

Table of Contents

Abstract	II
List of Tables.....	X
List of Figures	XIII
Acknowledgements	XV
Declaration	XVII
Chapter One	1
Introduction	1
1.1 Background to the study.....	1
1.2 Research questions	2
1.3 Brief description of the research strategies and techniques	2
1.4 Statement of the problem	3
1.5 The gap in research and the significance of this study.....	5
1.6 Organisation of the thesis.....	5
Chapter Two.....	8
Context of the study	8
2.1 Introduction	8
2.2 Brief background of Saudi Arabia:	9
2.3 Administration of the Saudi educational system.....	10
2.4 Policy of education in Saudi Arabia.....	11
2.5 Developments in the Saudi educational system	12
2.5.1 Reforming education to better enhance learning	12
2.5.2 Changes of assessment.....	13
2.6 Challenges within the Saudi education system	14
2.6.1 Classroom layout.....	14
2.6.2 Classes with mixed abilities	16
2.6.3 Syllabus, textbooks and assessment influence on learning	19
2.7 Teacher training in Saudi Arabia	20
2.7.1 Specific information about the context where the study was conducted	22
2.8 Conclusion	24
Chapter Three.....	25

Literature review	25
3.1 Introduction	25
3.1.1 Overview of the chapter	27
3.1.2 The researcher's approach to the literature	28
3.2 The term formative assessment.....	28
3.3 Complexity of definition.....	29
3.3.1 Formative assessment and assessment for learning	31
3.3.2. Assessment vs. evaluation.....	31
3.4 Development of assessment	32
3.5 Summative assessment.....	33
3.6 The relationship between summative and formative assessment.....	35
3.6.1 Distinguishing formative assessment from summative assessment.....	35
3.6.2 Formative and summative assessment tension.....	38
3.7 Development of FA.....	40
3.8 The nature of formative assessment.....	41
3.9.1 Integrating formative assessment into teaching and learning	43
3.9.2 Sharing and clarifying outcomes and success criteria to students	44
3.9.3 Questioning	45
3.9.4 Feedback	48
3.9.5 Peer-assessment and self-assessment.....	50
3.9.6 Day-by-day and minute-by-minute	52
3.10 Formative assessment and theories of learning.....	53
3.10.1 Behaviourist view and formative assessment	53
3.10.2 Constructivist view and formative assessment	54
3.11 Formative assessment in foreign/second language classrooms	55
3.12 Advantages of FA and its current state in UK schools	58
3.13 Issues of practising formative assessment.....	59
3.14 Critiques of FA.....	60
3.15 Perceptions of formative assessment	62
3.15.1 Teachers' perceptions of assessment and formative assessment in particular.....	62
3.16 Research studies about student teachers' perceptions of FA	64
3.17 Research studies of assessment and FA in the Arabian region.....	68
3.18 Teacher education	69

3.18.1 Teacher education programmes and their issues.....	69
3.18.2 Theory and practice approach in teacher education.....	72
3.18.3 Teacher training and assessment.....	78
3.18.4 The importance of preparing teachers and student teachers to implement FA	80
Chapter Four	83
Methodology	83
4.1 Introduction.....	83
4.2 Scope of the research	83
4.3 Rationale for using mixed methods.....	85
4.4 Rationale for utilising action research.....	86
4.4.1 The researcher’s approach to fostering reflection.....	90
4.5 Participants.....	92
4.5.1 First group of participants: student teachers	92
4.5.2 Second group of participants: tutors	93
4.6 Pilot study	93
4.7 Data collection	95
4.7.1 Before school placement.....	95
4.7.2 During school placement.....	97
4.7.2.1 The first phase	97
4.7.2.2 The second phase	98
4.7.3 After school placement	98
4.8 Data collection methods.....	100
4.9 First semi-structured interview conducted with the student teachers before school placement	102
4.10 Observation schedule conducted during school placement	102
4.11 Semi-structured interviews conducted with the tutors after school placement.....	104
4.12 Justification for using a combination of a questionnaire and an interview after school placement.....	107
4.12.1 Questionnaire conducted with the student teachers after school placement.....	107
4.12.2 The second semi-structured interview conducted with the student teachers after school placement.....	108
4.13 Data analysis of the first interview conducted with the student teachers	109
4.14 Data analysis of the observation schedule	109
4.15 Data analysis of the questionnaire.....	111

4.15.1 Justification for using two different instruments to compare the participants' perceptions	112
4.16 Data analysis of the second interview and the tutors' interviews	113
4.17 Validity.....	116
4.18 Reliability.....	117
4.19 Ethical considerations and limitations of the study	118
4.20 Chapter summary	120
Chapter Five	121
Questionnaire data analysis with direct comparison to the pre-placement interviews	121
5.1 Introduction.....	121
5.2 Part I: Comparing the questionnaire data with the first interview data.....	122
5.2.1 Comparing the student teachers' perceptions of the purposes of assessment as a whole.....	122
5.2.2 Significant differences in the student teachers' perceptions of the purposes of assessment.....	127
5.2.3 Comparing the student teachers' perceptions of the elements of assessment.....	128
5.2.4 Comparing the student teachers' perceptions of FA	131
5.2.4.1 Comparing the student teachers' perceptions of the advantages and disadvantages of FA, before and after school placement.....	131
5.2.4.2 Significant differences in the student teachers' perceptions of FA's advantages and disadvantages, before and after school placement	133
5.2.4.3 Comparing the student teachers' perceptions in terms of each statement about the advantages and disadvantages of FA, before and after school placement	135
5.2.4.4 Comparing the student teachers' perceptions of the challenges when introducing FA into the Saudi system, before and after the school placement	139
5.2.4.5 Student teachers' perceptions on whether formative assessment should be implemented in Saudi schools.....	141
5.3 Part 2: Questionnaire results only	142
5.3.1 Student teachers' perceptions of FA in relation to helping pupils make progress	142
5.3.2 Student teachers' perceptions about whether their training programme is coherent and useful in helping them to develop their professional practice of FA	143
5.3.3 Student teachers' perceptions about what they did during their school placements	145
5.3.4 Challenges perceived by the student teachers when practising FA	146
5.4 Conclusion	147

Chapter Six.....	149
Second interview data analysis	149
6.1 Introduction.....	149
6.1.1 Data collected after school placement.....	149
6.2 Student teachers’ perceptions of assessment as a whole and FA in particular, after the school placement.....	150
6.2.1 Student teachers’ perceptions of the elements of FA, after school placement.....	156
6.2.2 The student teachers’ perceptions of formative and summative assessment.....	158
6.3 Student teachers’ perceptions of FA in relation to helping school students to make progress	159
6.4 Student teachers’ perceptions, after school placement, of whether their training programme is coherent and useful in helping them to develop their professional practice	166
6.4.1 Student teachers’ perceptions, after school placement, of whether their university training programme is coherent and useful in helping them develop their professional practice of <i>assessment in general</i>	167
6.4.2 Student teachers’ perceptions, after school placement, about whether their university training programme is coherent and useful in helping them develop their professional practice of <i>formative assessment</i>	171
6.4.3 Student teachers’ perceptions, after the school placement, about whether the researcher’s programme is coherent and useful in helping them to develop their professional practice of <i>formative assessment in particular</i>	175
6.5 Student teachers’ perceptions of what they did during school placement	182
6.5.1 The most and least used techniques, and the reasons behind focusing on certain techniques.....	183
6.6 Student teachers’ perceptions, after school placement, about the challenges that they have faced when applying FA.....	198
6.7 Student teachers’ perceptions, after school placement, about implementing FA in Saudi schools.....	200
6.8 Conclusion of the second interview results.....	201
Chapter Seven	204
Observation analysis	204
7.1 Introduction.....	204
7.2. What do the Saudi student teachers do during their teacher-training programme in connection with formative assessment?.....	205
7.2.1 Total use of formative assessment across the whole observation database	205
7.2.2 Overall trends of the usage of the five elements of formative assessment	207

7.2.3 Most-used elements of formative assessment	210
7.2.4 Most-used evidence items	212
7.2.5 Most- and least-used evidence items under each element of FA	219
7.2.6 Tracing the usage of each evidence item from the first to the last observation ...	221
7.2.7 Evidence items which all participants used or did not use.....	226
7.2.8 Evidence items which were largely avoided in the last observation.....	228
7.3 What are the challenges that the student teachers faced when applying formative assessment?	231
7.4 Conclusion of the observation results	232
Chapter Eight	233
Tutors' interview analysis	233
8.1 Introduction	233
8.2 Tutors' perceptions about what the student teachers did during their teacher-training programme in connection with formative assessment	233
8.3 Tutors' perceptions about the challenges that the student teachers faced when applying formative assessment	242
8.3.1 Tutors' perceptions about the challenges that the student teachers faced or might face when implementing formative assessment.....	242
8.3.2 Tutors' perceptions about how to minimise the challenges that student teachers face or might face when implementing formative assessment.....	244
8.4 Conclusion of results from the tutors' interviews	245
Chapter Nine	247
Discussion	247
9.1 Introduction	247
9.2 Perceptions of student teachers about assessment and formative assessment	248
9.2.1 Student teachers' perceptions regarding assessment and its purposes.....	249
9.2.2 Student teachers' perceptions of FA and its elements	251
9.2.3 The student teachers' perceptions of the advantages and the disadvantages of formative assessment, as informed by their implementation of FA.....	255
9.2.4 Student teachers' perceptions about whether formative assessment could help pupils to make progress.....	259
9.2.5 Student teachers' perceptions about whether formative assessment should be implemented in Saudi school	260
9.2.6 Student teachers' perceptions of their university-based training programme, which is distinct from their work in schools and work undertaken with the researcher.....	263

9.2.7 Student teachers' perceptions of what they have experienced with the researcher	264
9.3 Perceptions and observations of student teachers about their individual classroom-based experience of formative assessment.....	265
9.3.1 Focusing on particular strategies over period of time, data analysed from the researcher's observations only	266
9.3.2 Focusing on particular strategies over period of time: data analysis from the researcher's observations, the student teachers' perceptions and tutors' perceptions ..	269
9.3.2.1 Most-used strategies.....	269
9.3.2.2 Least-used strategies	271
9.3.3 Reasons behind focusing on particular strategies	273
9.3.4 Further reasons behind focusing on certain strategies over period of time.....	275
9.4 Conclusion	277
Chapter Ten.....	279
Conclusion	279
10.1 Introduction	279
10.2 Conclusions about substantive areas.....	279
10.2.1 Student teachers' initial lack of knowledge about formative assessment.....	280
10.2.2 Enthusiasm about applying FA	281
10.2.3 Linking theory and practice to help develop the student teachers' understanding of FA	282
10.2.4 The student teachers can learn about FA	283
10.2.5 The student teachers' focus on certain strategies of FA	283
10.3 Conclusions about methodological matters	284
10.3.1 Working with student teachers as participants in this study	284
10.3.2 The issue of intervention, and the relationship between the researcher and the participants	285
10.3.3 Ethical issues.....	287
10.3.4 Using different types of research instruments.....	288
10.3.5 General limitations	289
10.4 Recommendations	289
10.5 Suggestions for further research.....	292
Appendices:.....	293
List of Abbreviations.....	383
References	384

List of Tables

TABLE 3- 1: A POSSIBLE DIMENSION OF ASSESSMENT PURPOSES AND PRACTICES (ADAPTED FROM HARLEN, 2006: 114)	37
TABLE 3- 2: NUMBER OF YEARS OF POST-SECONDARY EDUCATION REQUIRED TO BECOME A TEACHER IN 2001 (OECD, 2005B: 107)	70
TABLE 3- 3: VREUGDENHIL'S SCHEDULE ABOUT THE REFLECTIVE PROCESS (ADAPTED FROM VREUGDENHIL, 2005: 119).....	76
TABLE 4- 1: SUMMARY OF OCCASIONS WHEN ACTION RESEARCH WAS UTILISED.....	89
TABLE 4- 2: SUMMARY OF DATA COLLECTION METHODS	100
TABLE 5- 1: RANKING OF THE PURPOSES OF ASSESSMENT	123
TABLE 5- 2: COMPARING THE OVERALL MEAN OF THE THREE TYPES OF ASSESSMENT BEFORE AND AFTER SCHOOL PLACEMENT	127
TABLE 5- 3: THE VARIATION IN THE STUDENT TEACHERS' PERCEPTIONS OF THE PURPOSES OF ASSESSMENT, BEFORE AND AFTER SCHOOL PLACEMENT	128
TABLE 5- 4: COMPARING THE STUDENT TEACHERS' CHOICES OF ELEMENTS OF ASSESSMENT, BEFORE AND AFTER SCHOOL PLACEMENT	130
TABLE 5- 5: COMPARING THE OVERALL MEAN OF THE PERCEPTIONS OF THE ADVANTAGES AND DISADVANTAGES OF FA, BEFORE AND AFTER SCHOOL PLACEMENT	134
TABLE 5- 6: THE VARIATION IN THE STUDENT TEACHERS' PERCEPTIONS OF THE ADVANTAGES AND DISADVANTAGES OF FA, BEFORE AND AFTER SCHOOL PLACEMENT	135
TABLE 5- 7: STUDENT TEACHERS' PERCEPTIONS ABOUT THE UNIVERSITY PROGRAMME IN RELATION TO FORMATIVE ASSESSMENT.....	143
TABLE 5- 8: STUDENT TEACHERS' PERCEPTIONS OF THE RESEARCHER PROGRAMME IN RELATION TO FORMATIVE ASSESSMENT.....	144
TABLE 5- 9: STUDENT TEACHERS' PERCEPTIONS ABOUT WHAT THEY DID DURING SCHOOL PLACEMENT.....	146
TABLE 6- 1: PARTICIPANTS' JUSTIFICATIONS FOR CHOOSING EACH ELEMENT OF ASSESSMENT	152
TABLE 6- 2: PARTICIPANTS' DESCRIPTION OF ASSESSMENT	155
TABLE 6- 3: DIFFERENCES BETWEEN FORMATIVE AND SUMMATIVE ASSESSMENT.....	158
TABLE 6- 4: PARTICIPANTS' PERCEPTIONS OF WHETHER OR NOT FA HAS HELPED PUPILS TO MAKE PROGRESS.....	160
TABLE 6- 5: PARTICIPANTS' PERCEPTIONS OF WHO, IN PARTICULAR, FA HELPED	164
TABLE 6- 6: TOTAL OF PARTICIPANTS' PERCEPTIONS OF WHICH GROUPS, IN PARTICULAR, FA HELPED.....	165
TABLE 6- 7: PARTICIPANTS' PERCEPTIONS OF HOW FA COULD BE USEFUL	165

TABLE 6- 8: SCEPTICAL PARTICIPANTS' PERCEPTIONS OF THE CONDITIONS NEEDED IN ORDER FOR FA TO BE USEFUL.....	166
TABLE 6- 9: PARTICIPANTS' PERCEPTIONS IN TERMS OF NUMBER OF SESSIONS, DISCUSSIONS, BOOKS OR HAND-OUTS, ASSIGNMENTS, AND TESTS PROVIDED BY THE UNIVERSITY IN RELATION TO ASSESSMENT	169
TABLE 6- 10: STUDENT TEACHERS' EXPLANATIONS OF HOW COHERENT THE UNIVERSITY PROGRAMME IS IN RELATION TO DEVELOPING THEIR UNDERSTANDING OF THE NATURE OF ASSESSMENT	170
TABLE 6- 11: PARTICIPANTS' PERCEPTIONS IN TERMS OF NUMBER OF SESSIONS, DISCUSSIONS, BOOKS, HAND-OUTS, ASSIGNMENTS AND TESTS PROVIDED BY THE UNIVERSITY IN RELATION TO FA	172
TABLE 6- 12: PARTICIPANTS' EXPLANATION OF HOW COHERENT AND USEFUL THE UNIVERSITY PROGRAMMES WAS, AS A WHOLE.....	175
TABLE 6- 13: PARTICIPANTS' PERCEPTIONS OF NUMBER OF SESSIONS, DISCUSSIONS, BOOKS AND HAND-OUTS, PROVIDED BY THE RESEARCHER IN RELATION TO FA	177
TABLE 6- 14: REASONS BEHIND USING "NO HANDS UP" STRATEGY, DURING SCHOOL PLACEMENT.....	183
TABLE 6- 15: REASONS BEHIND USING "HELP STUDENTS TO BE ACTIVE LEARNERS (MORE STUDENT DISCUSSION AND LESS TEACHER DOMINANCE)"	184
TABLE 6- 16: REASONS BEHIND USING "PROVIDING EFFECTIVE COMMENTS THAT INITIATE THINKING AND HELP PUPILS TO OVERCOME THE DIFFICULTIES THAT THEY ARE FACING"	185
TABLE 6- 17: REASONS BEHIND USING "USING SUCCESS CRITERIA FOR PEER-ASSESSMENT"	187
TABLE 6- 18: REASONS BEHIND USING "NO MARKS ARE USED, ONLY COMMENTS"	188
TABLE 6- 19: REASONS BEHIND USING "PROVIDE AN OPPORTUNITY FOR THE LEARNERS TO RESPOND TO FEEDBACK ORALLY IN THE CLASSROOM OR WRITTEN"	189
TABLE 6- 20: REASONS BEHIND USING "DECLARING THE LEARNING OBJECTIVES IN A CLEAR WAY"	190
TABLE 6- 21: REASONS BEHIND USING "PUPILS' SELF-ASSESSMENT DURING OR AT THE END OF THE LESSON"	192
TABLE 6- 22: REASONS BEHIND USING "ASSESSING STUDENTS MANY TIMES IN THE CLASS"	194
TABLE 6- 23: REASONS BEHIND USING "USING MORE OPEN-ENDED QUESTIONS THAT PROVOKE THINKING"	195
TABLE 6- 24: STUDENT TEACHERS' PERCEPTIONS, AFTER SCHOOL PLACEMENT, ABOUT THINGS THAT EITHER FACILITATED OR HINDERED THEM FROM IMPLEMENTING FA	197
TABLE 7- 1: COMPARING THE FIVE ELEMENTS OF FORMATIVE ASSESSMENT	211
TABLE 7- 2: COMPARING THE USAGE OF EACH EVIDENCE ITEM.....	213
TABLE 7- 3: MOST AND LEAST USED EVIDENCE ITEMS IN EACH ELEMENT	220
TABLE 7- 4: EVIDENCE ITEMS USED IN EACH OBSERVATION	222
TABLE 7- 5: COMPARING LEVEL OF EVIDENCE USE FROM THE FIRST OBSERVATION TO THE THIRD OBSERVATION	225
TABLE 7- 6: EVIDENCE ITEMS ALL PARTICIPANTS USED OR DID NOT USE.....	227

TABLE 7- 7: ISSUES WHEN APPLYING FORMATIVE ASSESSMENT	231
TABLE 8- 1: TUTORS' PERCEPTIONS OF FORMATIVE ASSESSMENT STRATEGIES THAT COULD NOT BE IMPLEMENTED	235
TABLE 8- 2: BASED ON SCALE OF 1-10, TUTORS' PERCEPTIONS ABOUT THE EXTENT TO WHICH STRATEGIES COULD BE IMPLEMENTED	238
TABLE 8- 3: FORMATIVE ASSESSMENT STRATEGIES RANKED FROM THE EASIEST TO THE MOST DIFFICULT (1 AS EASIEST AND 10 AS THE MOST DIFFICULT)	240
TABLE 8- 4: TUTORS' PERCEPTIONS OF THE REASONS THAT HINDERED OR MIGHT HINDER STUDENT TEACHERS' DEVELOPMENT IN RELATION TO FORMATIVE ASSESSMENT IN SAUDI CLASSES	243
TABLE 8- 5: TUTORS' PERCEPTIONS OF THINGS THAT SHOULD BE DONE TO MINIMISE THE CHALLENGES FOR STUDENT TEACHERS BY THE MINISTRY OF EDUCATION, SCHOOLS AND PROGRAMMES IN THE UNIVERSITIES.....	244

List of Figures

FIGURE 2- 1: MAP OF SAUDI ARABIA (SAUDI POST, 2014).....	9
FIGURE 2- 2: TRADITIONAL CLASSROOM IN SAUDI PUBLIC SCHOOLS.....	15
FIGURE 2- 3: SOURCE ROOM IN SAUDI PUBLIC SCHOOLS	16
FIGURE 3- 1: SUMMATIVE ASSESSMENT (ADAPTED FROM HARLEN, 2000: 116)	35
FIGURE 3- 2: FORMATIVE ASSESSMENT (ADAPTED FROM HARLEN, 2000: 112)	44
FIGURE 3- 3: BLOOM'S TAXONOMY (ADAPTED FROM FAUTLEY & SAVAGE, 2008: 40) ...	46
FIGURE 4- 1: THE RESEARCHER'S REFLECTIVE MODEL	91
FIGURE 5- 1: COMPARING THE OVERALL MEAN OF THE STUDENT TEACHERS' PERCEPTIONS OF THE PURPOSES OF ASSESSMENT IN RELATION TO THE THREE PARTS BEFORE AND AFTER PLACEMENT: LEARNING, SELECTION AND CERTIFICATION, AND QUALITY ASSURANCE	124
FIGURE 5- 2: COMPARING THE STUDENT TEACHERS' CHOICES OF EACH PURPOSE OF ASSESSMENT IN RELATION TO THE THREE PARTS: LEARNING, SELECTION AND CERTIFICATION, AND QUALITY ASSURANCE, BEFORE AND AFTER SCHOOL PLACEMENT	126
FIGURE 5- 3: COMPARING THE OVERALL MEAN OF THE STUDENT TEACHERS' CHOICES REGARDING THE ADVANTAGES AND DISADVANTAGES OF FA, BEFORE AND AFTER SCHOOL PLACEMENT	132
FIGURE 5- 4: COMPARING THE STUDENT TEACHERS' PERCEPTIONS OF THE ADVANTAGES AND DISADVANTAGES OF FA, BEFORE AND AFTER SCHOOL PLACEMENT	138
FIGURE 5- 5: COMPARING THE STUDENT TEACHERS' PERCEPTIONS, BEFORE AND AFTER THE SCHOOL PLACEMENT, OF CHALLENGES TEACHERS MIGHT FACE IF FORMATIVE ASSESSMENT WERE TO BE INTRODUCED INTO THE SAUDI SYSTEM.....	140
FIGURE 5- 6: REASONS FOR THE STUDENT TEACHERS' DESIRE TO IMPLEMENT FORMATIVE ASSESSMENT IN SAUDI SCHOOLS, AFTER SCHOOL PLACEMENT	142
FIGURE 5- 7: CHALLENGES CONSIDERED BY STUDENT TEACHERS WHEN PRACTISING FA	147
FIGURE 6- 1: PARTICIPANTS' DESCRIPTIONS OF FA.....	156
FIGURE 6- 2: REASONS FA HELPFUL FOR PROGRESS.....	160
FIGURE 6- 3: PARTICIPANTS' PERCEPTIONS OF PRACTICES, WHICH THEY HAD ENGAGED IN, THAT HELPED PUPILS TO MAKE PROGRESS	161
FIGURE 6- 4: PARTICIPANTS' PERCEPTIONS OF HOW FA HELPED THE PUPILS TO MAKE PROGRESS.....	162
FIGURE 6- 5: REASONS PROVIDED BY PARTICIPANTS WHO THOUGHT MOST PUPILS MADE PROGRESS.....	163

FIGURE 6- 6: REASONS PROVIDED BY PARTICIPANTS WHO THOUGHT ONLY SOME PUPILS MADE PROGRESS.....	163
FIGURE 6- 7: PARTICIPANTS' PERCEPTIONS OF WHAT THE UNIVERSITY INTRODUCED TO THEM IN RELATION TO ASSESSMENT AND ITS TYPES	168
FIGURE 6- 8: PARTICIPANTS' PERCEPTIONS IN TERMS OF THE INFORMATION PROVIDED TO THEM BY THE UNIVERSITY IN RELATION TO FORMATIVE ASSESSMENT.....	171
FIGURE 6- 9: SUBJECTS' PERCEPTIONS ABOUT WHAT THEY LEARNT ABOUT FA FROM THE RESEARCHER IN GENERAL	176
FIGURE 6- 10: STUDENT TEACHERS' PERCEPTIONS OF THINGS NEEDED TO DEVELOP THEIR PRACTICE OF FA.....	182
FIGURE 6- 11: STUDENT TEACHERS' PERCEPTIONS OF WHAT <i>THE MINISTRY OF EDUCATION</i> SHOULD DO TO MINIMISE THE CHALLENGES OF IMPLEMENTING FA.....	199
FIGURE 6- 12: STUDENT TEACHERS' PERCEPTIONS OF WHAT <i>SCHOOLS</i> SHOULD DO TO MINIMISE THE CHALLENGES OF IMPLEMENTING FA.....	199
FIGURE 6- 13: STUDENT TEACHERS' PERCEPTIONS OF WHAT <i>UNIVERSITIES</i> SHOULD DO TO MINIMISE THE CHALLENGES OF IMPLEMENTING FA.....	200
FIGURE 6- 14: STUDENT TEACHERS' PERCEPTIONS OF WHY FA SHOULD BE IMPLEMENTED IN SAUDI SCHOOLS	201
FIGURE 7- 1: TOTAL USE OF EVIDENCE ITEMS BY ALL PARTICIPANTS THROUGHOUT THE ENTIRE STUDY	207
FIGURE 7- 2: EVIDENCE ITEMS USED IN THE FIRST OBSERVATION.....	208
FIGURE 7- 3: EVIDENCE ITEMS USED IN THE SECOND OBSERVATION.....	208
FIGURE 7- 4: EVIDENCE ITEMS USED IN THE THIRD OBSERVATION.....	208
FIGURE 7- 5: LEARNING OUTCOMES USE IN EVERY OBSERVATION.....	207
FIGURE 7- 6: QUESTIONING USE IN EVERY OBSERVATION.....	208
FIGURE 7- 7: FEEDBACK USE IN EVERY OBSERVATION	208
FIGURE 7- 8: PEER-ASSESSMENT USE IN EVERY OBSERVATION.....	209
FIGURE 7- 9: SELF-ASSESSMENT USE IN EVERY OBSERVATION	209
FIGURE 7- 10: COMPARING THE FIVE ELEMENTS OF FORMATIVE ASSESSMENT	212
FIGURE 7- 11: COMPARING THE USE OF THE FIVE ELEMENTS OVER TIME.....	228
FIGURE 7- 12: THE USE OF LEARNING OUTCOMES' ITEMS IN EACH OBSERVATION.....	229
FIGURE 7- 13: THE USE OF QUESTIONINGS' ITEMS IN EACH OBSERVATION	232

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Declaration

I hereby certify that this thesis has been written by me, that it is the record of work carried out by me and that it has not been submitted in any previous application for a higher degree.

I declare that all the material in this thesis which is not my own has been acknowledged, to the best of my ability.

Chapter One

Introduction

1.1 Background to the study

The present study aims to explore Saudi student teachers' perceptions of formative assessment (FA). Because FA was not a part of these student teachers' university teacher-training programme, FA was introduced to them by the researcher for the purpose of this research study. This project was conducted in three main stages: before school placement, during school placement and after school placement. At the outset, before school placement, the researcher introduced FA to the student teachers and obtained their initial perceptions of FA through first interviews. Then, during school placement, the researcher explored how the student teachers perceived FA by observing their practices of FA in Saudi schools. Finally, after school placement, the researcher obtained the student teachers' perceptions of FA through questionnaires and second interviews. It was important for the researcher to obtain these perceptions for two reasons: to trace any changes in their perceptions and to obtain in-depth data about their perceptions after their experience of implementing FA during their school placements. This study helped to show how this group of Saudi student teachers perceived FA after practising it in Saudi schools. It also helped to show some of the challenges that student teachers might face when applying FA in the Saudi context.

This introductory chapter will first introduce the research questions. There will then be a brief description of the research strategies and techniques. After this, the researcher will give an account of the problems which prompted her to undertake the present study. Why a research study on Saudi student teachers' perceptions of FA is significant, and where the present research study contributes to past research will then be discussed. Finally, the researcher will explain the organisation of the thesis.

1.2 Research questions

This study aims to answer the following research questions:

- i) What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?
- ii) Do the student teachers think that formative assessment can help school students to make progress?
- iii) What do the student teachers do during their teacher-training programme in connection with formative assessment?
- iv) Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?
- v) What are the challenges that the student teachers faced when applying formative assessment?
- vi) Do the student teachers think that formative assessment should be implemented and why?

1.3 Brief description of the research strategies and techniques

This is a study about Saudi student teachers' experiences and perceptions of FA. This research study is not concerned with assessing either what teaching practices are the most effective in Saudi classrooms or judging how well the student teachers implemented FA. There were eleven student teachers who participated in this research study. The researcher wanted to conduct this study with student teachers for numerous reasons. First, investing in student teachers in Saudi Arabia might be very practical because 52% of the current Saudi population is under the age of 25 (Central Department of Statistics & Information, 2004: 47). This contrasts with the UK, where only around 31% of the population is under 25 (Office of National Statistics, 2011: 11). With such a high percentage of young people in Saudi Arabia, it would seem to be especially beneficial to focus on training new and future teachers. Second, because this study is focused on assessment strategies, which are relatively new practices in Saudi Arabia, student teachers were chosen because they are young and more likely to be open to new ideas. As Wiliam (2007: 196) explained, it is difficult to get experienced teachers to change their teaching habits. Because deeply engrained teaching habits take more time to change (Wiliam, 2007: 197) and because of the time limitation of this research study, student teachers seemed to be the most appropriate choice for the present study. Additionally, since there were time constraints and a significant amount of material that

the participants were asked to consider and put into practice, student teachers from the top percentile in one university's teacher-training programme were chosen to participate in this study. The researcher used purposive sampling because high-attaining students would seem to be more able to quickly understand FA in a limited period of time. Six supervisors — either university tutors or schoolteachers — all of whom were mentors to the selected student teachers, were also interviewed in the final stage of the research study. These tutors' interviews were important for data triangulation. That is, the findings were juxtaposed with the student teachers' perceptions and the researcher's observations, as triangulation helps to increase reliability and validity. Moreover, the university tutors' and schoolteachers' perceptions helped to provide a context for the researcher to better understand the student teachers' perceptions.

Several research instruments were used throughout the study to collect data and to ensure validity. These research instruments were: interviews, questionnaires and observation schedules. Eleven one-to-one, face-to-face semi-structured interviews were conducted with the student teachers before their school placements. During school placement, thirty-three observations took place. After school placement, eleven questionnaires and eleven one-to-one, face-to-face semi-structured interviews were conducted with the student teachers. Finally, another six one-to-one semi-structured interviews were conducted with schoolteachers and university tutors who had also observed the student teachers implementing FA during their school placements. These different research instruments were helpful for this study for several reasons. First, the one-to-one semi-structured interviews and questionnaires helped the researcher to know more about the student teachers' perceptions of assessment and to compare their perceptions before and after their school placements. Classroom observations during school placement helped the researcher to record what FA practices the student teachers implemented and what challenges they faced. These observations also helped the researcher to better understand the perceptions of the student teachers. Finally, one-to-one semi-structured interviews were conducted with some of the university tutors and schoolteachers in order to obtain their perceptions about how the student teachers used assessment within the classroom.

1.4 Statement of the problem

There were certain reasons that motivated the researcher to conduct this present research study. First, while many researchers have argued that FA helps to raise pupils' achievement (see, for example, Black and Wiliam, 2001: 13; 2006: 9; OECD, 2005a:

69; Sadler, 1989: 120-121; Sliwka, Fushell, Gauthier & Johnson 2005: 114; Wiliam, 2006; 2007: 184), and while FA has been practised in many schools around the world, FA is still not well known in the Arabian region. This is apparent in the fact that there is a noticeable lack of resources about FA in Arabic. Currently, summative assessment is dominant in the Saudi educational system. There has been, however, a growing awareness that this summative assessment system might be an obstacle to learning. Al-Sadan (2000) suggested that Saudi assessment system might be

described as a 'killer of pupils' because teachers and pupils focus only on one objective: how many pupils will pass? (p. 154)

More recently, Darandari and Murphy (2013) have argued that the assessment regime in Saudi Arabia has neglected 'many important cognitive, behavioural, and communications skills' (p. 63). Pupils have also expressed their frustration with the existing summative assessment system. As these critiques of summative assessment might suggest, an emphasis on marks can deflate the excitement and joy of learning. There are also other issues associated with summative assessment. Because of its emphasis on examinations, summative assessment often puts pressure on pupils. Moreover, summative assessment does not usually provide feedback, and this is problematic as feedback might help learners to understand how to overcome their difficulties. The emphasis on marks, instead of feedback, and on exams, instead of research, has fostered a way of thinking that there is only one right answer and textbooks are unilaterally correct. As a result of this, pupils in Saudi Arabia are often reluctant to participate; discussions are limited and there is little group work. Outcomes are not generally shared with pupils and self-assessment is not usually practised. Peer-assessment might be occasionally used, but marks are provided instead of feedback. Other assessment strategies, such as discussion and the use of questioning to promote understanding and thinking, are also not used very often. Thus, it might be suggested that the current classroom practices in Saudi schools may have hindered pupils' learning, as the focus on summative assessment in Saudi Arabia places emphasis on marks and passing rather than enhancing pupils' learning and raising achievement.

While FA has been considered to be effective in enhancing learning and raising achievement, it is unrealistic to assume that what has worked in other countries, such as the UK, will work in the Saudi context. But more specifically, FA might not be perceived the same way in Saudi Arabia as it has been perceived in other countries.

Therefore, obtaining Saudi student teachers' perceptions of FA and observing them implementing FA in Saudi schools might be very useful, especially if the Saudi Ministry of Education (MOE) decides to promote FA within their educational system.

1.5 The gap in research and the significance of this study

Recent research (Azis, 2012) has drawn attention to the need to focus on teachers' perceptions 'from different parts of the world' (p. 42). Despite the recognition of the importance of focusing on perceptions, there are only a few studies regarding student teachers' perceptions of FA, and these will be discussed in more detail in the literature review. Of further significance for the present research study, there are only a few studies related to FA in the Arabian region and there are not any studies focused on Saudi student teachers' perceptions regarding FA. Hence, this research study is significant for many reasons. Most importantly, this study is the first to focus on Saudi student teachers' perceptions of FA. The growing criticism of summative assessment and the more recent interest in a constructivist approach to learning in Saudi Arabia suggests the need to explore FA. If FA is adopted by the MOE in Saudi Arabia, this study might be beneficial for teacher-training programmes and Saudi universities that provide the initial teacher training. Moreover, because educational systems in Arabian countries are often similar, the results of this study might be beneficial not merely for policymakers in Saudi Arabia, but for educators in other Arabian countries as well. This research study is interested in Saudi student teachers' perceptions of FA and its findings might shed light on why and how FA is perceived in a context currently dominated by summative approaches to assessment. Finally, most of the research questions used in this study have not been addressed by previous studies. Thus, it can be suggested that this research study helps to supply new knowledge.

1.6 Organisation of the thesis

This thesis is divided into ten chapters, which will be discussed in more detail below. In order to better understand Saudi student teachers' perceptions of assessment, it is essential to first consider the context in which this research was conducted. Hence, Chapter Two describes the structure of the Saudi educational system. In particular, this chapter is interested in assessment and its role in Saudi education. Tracing the development of assessment in the Saudi education system, this chapter argues that although steps have been taken to emphasise problem solving and analysis, rather than

memorisation, FA has somehow been overlooked in these developments and summative assessment remains dominant in the Saudi educational system.

This study is interested in student teachers' perceptions of FA, and Chapter Three presents a general review of the literature relevant to this study. In this chapter, the researcher identifies gaps and tensions in the research literature. These gaps and tensions provided this research project with a clear focus on important issues in a new context. This chapter begins by discussing what FA is and what the researcher means by FA. What is the importance of FA? What are some critiques that have been formulated by researchers regarding FA? What are the tensions between formative and summative assessment? What previous studies have been conducted on teachers' and student teachers' perceptions of FA? What studies have been conducted on FA in the Arabian region? Finally, because this study is interested in student teachers, teacher-training programmes are considered to show that assessment and formative assessment tend to be neglected in training programmes. The importance of relating theory to practice through reflection in order to enhance teachers' understanding and practice is also discussed. All of this will indicate the link between the research questions and the literature; it will provide the relevant background for this study; and it will highlight gaps and tensions in previous research studies.

Chapter Four describes the methods used to address the research questions. It presents information about the sampling and piloting used in this study. This chapter also provides information about the procedure of data collection. Finally, a justification of the research methods that were employed in this study is discussed.

Chapter Five, Chapter Six, Chapter Seven and Chapter Eight all report the findings of the study using tables and figures. Explanations are provided to clarify the meaning of these findings. Chapter Five is divided into two parts: the purpose of the first part is to provide a direct comparison between the findings derived from the first interviews, which were conducted with the student teachers before their school placements, to the findings which were derived from the questionnaires, which were conducted with the student teachers after their school placements. This first part of Chapter Five focuses on the student teachers' perceptions about the meaning of assessment as a whole and FA in particular, and whether FA should be implemented in Saudi schools or not.

The purpose of the second part of Chapter Five is to display further findings from the questionnaire without comparing these results to other data. This second part of Chapter Five focuses on the student teachers' perceptions of FA in relation to four

aspects. First, did the student teachers perceive that FA can help pupils to make progress. Second, what did the student teachers perceive their teacher-training programme to provide in connection with FA. Third, did the student teachers perceive that FA was presented to them in a way that helped them to develop their professional practice of FA. Finally, what were the challenges that the student teachers perceived they faced when implementing FA during their school placements. All of the six research questions were partially answered in this chapter.

Chapter Six reports the findings derived from the second interview, which was conducted with student teachers after their school placements. Chapter Six provides in-depth data about the student teachers' perceptions of FA in relation to all six of the research questions.

Chapter Seven focuses on analysing the data derived from classroom observations. Of key importance here is the student teachers' practices of FA in Saudi schools during their school placements. Data in this chapter helped to partially answer two of the research questions: first, what do student teachers do during their initial teacher-training programme in connection with FA? Second, what are the challenges that the student teachers faced when applying FA?

Chapter Eight reports the findings from the tutors' interviews. This chapter focuses on the tutors' perceptions of how FA was implemented by the student teachers during their school placements. The results in this chapter helped to partially answer two of the research questions: first, what do the student teachers do during their initial teacher-training programme in connection with FA? Second, what are the challenges that the student teachers faced when applying FA?

Finally, Chapter Nine and Chapter Ten summarise the findings of the study. Chapter Nine investigates and analyses the findings with a clear referral to the research questions used in this study. This chapter also relates the findings to previous research studies, some of which were also discussed in the literature review. The findings from this research study showed that the student teachers were positive about FA and able to learn about FA. In addition to this, they all tended to focus on certain FA strategies over time due to the challenges that they faced.

Chapter Ten, which provides a conclusion of this research study, also discusses methodological matters, including the limitations of the study, as well as recommendations and directions for further research.

Chapter Two

Context of the study

2.1 Introduction

This research study is broadly interested in formative assessment and how it might be perceived in the Saudi context. While a review of the research literature helps to focus a research study on important issues, context too can give particular insight into the background and, through that, the importance of the topic. In Saudi Arabia, there have been recent developments in the Saudi educational system, which have shifted the focus to a constructivist theory of learning. Recently, there has been criticism of the dominance of summative assessment, as well as more emphasis on problem solving and research rather than traditional teaching methods, which encourage memorisation and repetition. The recent and ongoing openness to and investment in innovation in Saudi Arabia, and in particular the turn to constructivist approaches to learning, may suggest that FA, which is also based upon constructivist theories of knowledge, might also be accepted.

In order to understand both why this study is important and the recent changes in the educational system, it is necessary to have some knowledge of both the history and recent developments in Saudi Arabia. Hence, the main purpose of this chapter is to provide a background of the educational system in Saudi Arabia and to highlight its relevant recent developments. First, the general background of the educational system in Saudi Arabia, including its policies, goals and administrative bodies will be introduced. The chapter will then focus on assessment in Saudi education: recent developments and the dominance of summative assessment will be discussed. Finally, the chapter will discuss teacher training in Saudi Arabia, which is relevant to this study as it focuses on Saudi student teachers.

2.2 Brief background of Saudi Arabia:

Figure 2- 1: Map of Saudi Arabia (Saudi Post, 2014)



Saudi Arabia is an Islamic country formed in the twentieth century and located in the Arabian Peninsula. It is the largest and most influential country in the Arabian Peninsula. The country shares its land border with Jordan, Iraq and Kuwait from the north, its southern border with Yemen, and its eastern with Qatar, the United Arab Emirates (U.A.E), and Oman (Siddiqui, 1996). The official language is Arabic. According to the Central Department of Census and Information, the total population of Saudi Arabia was 29,195,895 million in 2010, including expatriates (Ministry of Economy and Planning, 2010). This study was conducted in Riyadh, the capital city, which is situated in the centre of the country. If FA were to be promoted as part of the classroom practices in schools in Riyadh, it might be suggested that these practices might be exported to other cities, towns and villages across the country. Moreover, were FA to be adopted in Saudi Arabia, it is likely that other Arabian countries in the region would consider FA.

Organised education started in Saudi Arabia with the *katateeb* (schools teaching religion and literacy), which were attended by some children (Al-Sadan, 2000: 145). The first formal Saudi educational system was only established in 1924 when a few primary schools for boys were founded (Al-Sadan, 2000: 145). At this time, girls were

still attending the *katateeb*. In 1960, the General Presidency for Girls' Education was established, and schools for girls were opened (Al Sadaawi, 2010: 1). In 2003, the MOE became responsible for girls' schools (Ministry of Education, 2011). All of this suggests both the importance of learning and education in Saudi Arabia and the rapidly growing developments, which have occurred over the last eighty years.

Before discussing the development of assessment and teacher training in Saudi Arabia, it is necessary to have an understanding of both the main governing bodies in the Saudi educational system and the policies of education in Saudi Arabia. This information is important because, as part of this study, the researcher asked the participants if they perceived that FA should be adopted and what the MOE should do to alleviate challenges that teachers might face when implementing FA. Moreover, the MOE and the Ministry of Higher Education are the highest authorities through which all changes to assessment, teaching and learning are planned and approved: any future inclusion of FA would have to come through them. Finally, some of the challenges which the student teachers within this study perceived as problematic, as will be discussed in Chapter Nine, are explored here in order to provide an overview of the perceived issues in the Saudi educational system.

2.3 Administration of the Saudi educational system

It is important to know which administrative bodies have authority in the Saudi educational system, as these groups control all developments, curriculums and changes. First and foremost, education in Saudi Arabia is supervised and managed by the MOE, the Ministry of Higher Education, and the General Organisation for Technical Education and Vocational Training (UNESCO & IBE, 2007: 4). There are other establishments, which are also responsible for students in kindergarten, primary, intermediate, secondary and adult education (UNESCO & IBE, 2007: 4). These are: the Ministry of Defence and Aviation; the Presidency of the National Guard; and the Ministry of the Interior (UNESCO & IBE, 2007: 4). For students from both genders, these establishments must follow the same educational system and curriculum designed by the MOE (UNESCO & IBE, 2007: 4). The highest authority within the MOE is the Supreme Committee for Educational Policy (UNESCO & IBE, 2007: 4).

The Saudi MOE, which was established in 1954 (Oyaid, 2009: 18), is responsible for both the education of males and females in general education (primary, intermediate and secondary) and for implementing teacher training courses in teacher colleges, special education, and adult education and literacy (Ministry of Education,

2011; UNESCO & IBE, 2007: 4). The MOE is also in charge of planning and forming curriculums; this includes printing books and providing educational materials. The Saudi MOE manages the forty-two regions across Saudi Arabia (Alshumrani, 2008: 505; Oyaid, 2009: 18). While each region has its own educational councils, the MOE is the main source, which provides the rules and initiatives which each council must implement (Oyaid, 2009: 18). Additionally, the MOE is responsible for supervising school buildings and constructions (Oyaid, 2009: 18).

The Ministry of Higher Education was founded in 1975 (Oyaid, 2009: 19; UNESCO & IBE, 2007: 4), and it is in charge of supervising the implementation of the educational policies in higher education (UNESCO & IBE, 2007: 4). Currently, there are twenty-five public universities in Saudi Arabia (Ministry of Higher Education, 2014), eighteen Primary Teacher Colleges for men, eighty Primary Teacher Colleges for women, thirty-seven Colleges and Institutions for Health, twelve Technical Colleges, and thirty-three private universities and colleges (Alamri, 2011: 89); the Ministry of Higher Education supervises all of these. Qualified teachers usually obtain their degrees from these universities and teacher colleges. The Ministry of Higher Education also supervises and manages scholarships, international academic collaboration, and educational centres abroad (Oyaid, 2009: 19). As all of this demonstrates, both the MOE and the Ministry of Higher Education are extremely influential and important for the development of student teachers and assessment.

2.4 Policy of education in Saudi Arabia

Educational policy in Saudi Arabia is strongly influenced by Islam (Ministry of Education & Ministry of Higher Education, 2008: 11). A key document, which outlines and governs the principles, objectives and goals of education in the country, can be found in the 'Education Policy in the Kingdom of Saudi Arabia'. The most noticeable principles are:

- Believe in Allah and Islam as a religion and Mohammed as a prophet and messenger.
- Believe in the Islamic conception about the universe, humanity and life, including strengthening the Islamic belief about the importance of education, which the country must offer.
- Female equal rights in education.
- Education suitable to the public development plan.

- Arabic language is the educational language for all grades (Ministry of Education & Ministry of Higher Education, 2008: 11).

UNESCO and IBE (2011: 3) pointed out that the ‘Education Policy Document’ suggests that it is government’s responsibility to offer free education across all levels in Saudi Arabia.

The improvement of education in Saudi Arabia is associated with the general development plan of the country (Alshumrani, 2008: 506). The most recent ten-year plan (2004-2014) contains the following general aims:

- Make sure that all pupils from ages 6-18 are included in public education.
- Encourage interactions, both nationally and internationally.
- Develop the educational system.
- Improve the curriculum in order to help pupils develop their critical thinking.
- Focus on raising the quality of teachers.
- Improve the educational environment.
- Develop the use of technology for the sake of teaching and learning.
- Increase social participation in education (Alshumrani, 2008: 506).

As we can see, these recent general aims seek to foster better learning environments, which promote critical thinking and participation. Improvement of teacher quality is also of key importance, as it is known to be an essential factor in raising pupils’ performances (British Educational Research Association, 2014: 5). It might be suggested that assessment practices, such as FA, and the development of better teacher-training programmes would be of use in ensuring the success of these developments.

2.5 Developments in the Saudi educational system

2.5.1 Reforming education to better enhance learning

Over the last few years, educators in Saudi Arabia have tried to enhance pupils’ learning by developing many changes in the educational system. In particular, educators have focused upon changing the traditional methods of teaching in order to promote learning. Important here is the Tatweer project, a research project established by the King to advise the MOE. Tatweer means reform. The idea of Tatweer is to reform the educational system and the way pupils learn new knowledge and information. Hence, the Tatweer project is interested in both improving the learning environment to better

enhance learning, as well as the development of teachers. The Tatweer project was influential in introducing new approaches, which embrace the constructivist theory, to the Saudi system of education. For example, all science and mathematics curriculums were changed to include more analysis, problem solving and research. Self-assessment and authentic assessment also started to gain more focus in Saudi classrooms (Tatweer, 2011). All of these changes to develop pupils' learning skills were mainly led by the Tatweer project's work with the MOE. They point to a new emphasis in the Saudi educational system, which may have important implications for this study.

2.5.2 Changes of assessment

As the current recent project focuses on FA, it is important to consider recent changes and developments made to assessment practices in Saudi Arabia. Saudi educational assessment has been through many changes. Most notably, there have been more liberal and flexible rules implemented about passing requirements, and there has also been a growing emphasis on continuous assessment.

The Saudi educational assessment system has always been about conducting monthly exams and final exams. In the past, the scores from both terms for each subject were added to determine whether a pupil should pass to the next grade or repeat the same grade. In order to pass, the total score of the subject from both terms must reach the minimum requirement (Addamegh, 2003: 15-16). During this time, if any pupil failed to obtain the required mark for passing, he/she can retake the test again at the end of the summer holiday (Alshumrani, 2008: 511). If he/she fails to achieve the required mark, he/she has to repeat the whole year, doing all subjects again, including the subjects he/she has already passed (Alshumrani, 2008: 511). This was applied for all pupils from year 1 to year 12 (ages: 6-17). In 1999, an essential alteration took place, and students from year 4 until year 9 (ages: 9-14) could pass the tests if they achieved at least two-thirds of the minimum passing marks in just two subjects (excluding religion and Arabic subjects) (Alshumrani, 2008: 511). If a pupil in year 7, 8, 9 and 10 could not pass more than two subjects, he/she will have the chance to choose from any two subjects, from which they failed, in order to retest in them (Alshumrani, 2008: 511).

In addition to rules about passing, assessment in primary schools has also changed to continuous assessment, which is applied throughout the year rather than implemented by year-end written summative tests (Alshumrani, 2008: 510). Continuous assessment has been implemented for year 1 to year 6. This continuous assessment system in Saudi primary schools has been gradually developed and applied since 1998

(Alshumrani, 2003: 18; 2008: 511). The aim behind implementing continuous assessment was:

- Relating assessment to classroom teaching.
- Providing the opportunity to implement authentic assessment.
- Using criterion-referenced assessment.
- To include pupils and parents in the assessment process (Alshumrani, 2003: 18; 2008: 511).

Continuous assessment seems to be an attempt to implement FA, but perhaps due to the lack of teacher training regarding FA, continuous assessment has been applied in a summative way. That is, the focus is still on marking and passing: pupils, from year 1 until year 12, still face the risk of failing if they do not obtain the required marks for passing at the end of the year. As Alshumrani (2008: 511) explained, in primary schools if any pupil has failed to achieve the required level to pass, it is the School Consular Committee's duty to decide whether to upgrade him/her to the next year or leave him/her to repeat the same year again (Alshumrani, 2008: 511).

Even though there have been recent developments, the assessment methods in Saudi Arabia still focus on marks and passing rather than fostering learning and nurturing individuals. This supports Addamegh's (2003: 22) argument about assessment in Saudi education. They depend on memorising rather than cognitive communication skills (Darandari & Murphy, 2013: 61-63). Hence, although Saudi teachers, like many other teachers around the world, are concerned about their pupils' learning, FA as an approach to enhance learning is hardly known.

2.6 Challenges within the Saudi education system

There are practical factors within Saudi classrooms, such as classroom layout and mixed abilities classes, which may inhibit the implementation of FA.

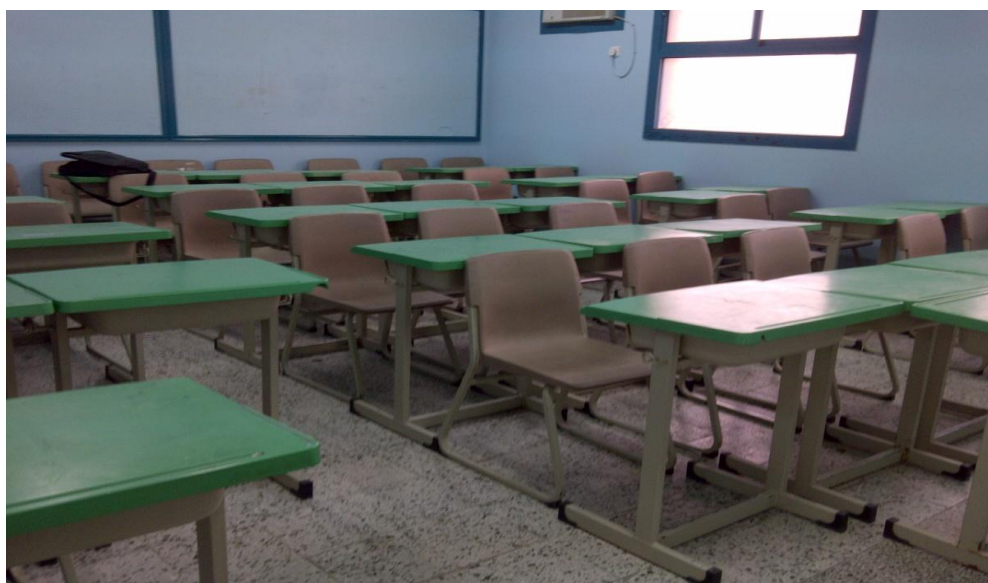
2.6.1 Classroom layout

Because the current study was conducted in Saudi public schools, it is important to provide an overview about the physical arrangement of classrooms in Saudi public schools, and discuss how the seating arrangement might affect the implementation of FA. Classes, especially in public schools, are designed in the traditional way: students sit in rows and each has his/her desk with a white board and markers hung at the front

of the classroom. This traditional classroom layout might affect the implementation of FA negatively. As Bell and Cowie (2001: 22) argued, the use of FA is affected by the classroom layout. Moreover, Rosenfield, Lambert and Black (1985) argued that

desk arrangement influences participation, thinking, and appropriate comments, which in turn can have a positive effect on learning (p. 107).

Figure 2- 2: Traditional classroom in Saudi public schools



Aside from traditional classrooms, and important for this study, almost every school has a room called the source room. This room is usually spacious and it has a smart board, more teaching aids, and pupils are seated in circles rather than in rows. This is important because, as Shulman (2004: 267) pointed, teaching and learning are often dependent upon resources and spaces. Different teachers at the school can use the source room, and it is often utilised as a way to help pupils to interact more frequently and easily. In the source room, teachers can use smart boards and easily arrange their pupils in groups. The change in environment might also have a positive effect on the pupils' attitudes, as they are encouraged to become active learners who are more engaged with the lesson. On the other hand, due to the fact that this source room is shared by all staff in the school, teachers might not have the chance to make use of this usually well-equipped room to introduce their lessons all the time. These challenges might effect the implementation of FA in Saudi schools. Alkatibi et al. (2005: 28) argued that educators in Saudi Arabia need to pay more attention to the classroom environment because it plays a significant role in raising pupils' achievement.

Figure 2- 3: Source room in Saudi public schools



2.6.2 Classes with mixed abilities

Although mixed abilities classrooms are not recognised as a problem by Saudi educational authorities, they are both a fact of the current Saudi educational system and a perceived challenge by the Saudi student teachers in the current study. Hence, it is important to consider mixed abilities classrooms in Saudi Arabia, as such classroom settings might hinder the use of FA, especially as class time is relatively short in Saudi Arabia (45-40 minutes), the number of pupils in one class is sometimes very high, and there is no concept of a teacher assistant. Moreover, implementing FA in mixed abilities classrooms might not be an easy task, especially for student teachers.

Classrooms in Saudi schools are often mixed ability classes (Addamegh, 2003: 15); that is, talented pupils and lower than average pupils are located in the same classrooms. Dukmak's (2009) research study on ability grouping in middle and primary schools in the United Arab Emirates found that 'students in the same-ability groups interacted more than those in the mixed-ability groups' (p. 1). This suggests that placing pupils in mixed abilities groups hinders interaction. Although mixed abilities classrooms have been only recently recognised as an issue by some researchers in Arabian countries, numerous researchers in other countries have also suggested that this might be problematic. Wiliam (2009) stated that:

When the level of competence is high, and the level of challenge is low you get boredom, and when the level of competence is low, and the level of challenge is high, you get alienation. (p. 6)

Wiliam's explanation of classrooms with high and low achievers might provide a description of what is going on in the Saudi classrooms: low achievers are left behind, whereas high achievers are not encouraged and challenged to reach their full potential. Research studies, however, have varied in their results regarding the benefits of setting pupils according to their ability. Boaler, Wiliam and Brown (2000) argued that placing pupils in different classes according to their ability has negative effects on the pupils' achievement. Boaler, Wiliam and Brown (2000) suggested that set classes also have negative impacts on student performance. Boaler, Wiliam and Brown (2000) reported that teachers had low expectations of low attainers, and these pupils were often denied the opportunity to learn; moreover, these low attainers might feel themselves less able than their colleagues, who are located in higher levels, even though this might not necessarily be true. On the other hand, Kulik and Kulik (1992) suggested that setting pupils in different groups according to their ability is beneficial for pupils, and pupils in the lower sets are not affected in a negative way, either emotionally or academically.

Kyriacou (1997: 60) provided a concise argument both for and against mixed ability classes. Kyriacou (1997: 60) suggested that placing pupils from different abilities in different groups might have a negative impact on the lower group's pupils. Kyriacou (1997: 60) further pointed out that setting low attainers in a lower group might ingrain a negative label on low achievers, and as a result leave them with a passive attitude towards learning, making them difficult to teach. Kyriacou (1997: 57) emphasised that low attainers and less able pupils are not the same. This is because the low attainers group might contain some able pupils (Kyriacou, 1997: 57). There are a variety of reasons why pupils might be working at a lower level: low motivation, lack of parental help and support, and a curriculum, which is not suitable (Kyriacou, 1997: 57). Kyriacou (1997: 59) added that a lack of the basic skills in reading and writing could be the main reason behind low achievement, not only in reading and writing, but in other subjects as well. For example, pupils might not provide adequate responses to written assessments in geography or history because of their weakness in writing. Thus, the pupils' performance might be improved in most subjects if more attention was paid to enhancing their basic skills in reading and writing. Kyriacou's suggestion is very important because low attainers are not necessarily less able, and this is a fact. Setting

the low attainers in one group will provide the opportunity for educators and teachers to focus on the group, analyse the problems that they face, and possibly divide them into more specific groups in order to be able to help them to overcome their issues and provide them with appropriate support.

Kyriacou (1997: 60) argued that it is very difficult for teachers to work successfully in mixed abilities classes because teachers need to be highly proficient in working with different abilities at the same time. Most teachers in Saudi Arabia are not trained to deal with different abilities in classrooms. This might not only be the case for Saudi teachers; teachers from other countries around the world face similar problems. In the UK, the head of Ofsted, Sir Michael Wilshaw, stated that:

If they want mixed-ability, then they have got to make sure there's differentiated teaching. And we will be very critical when we inspect schools, particularly in the secondary sector, if we see mixed-ability without mixed-ability teaching. (Paton, 20 September, 2012)

Sir Michael Wilshaw supported the idea of classifying pupils in different groups according to their ability, calling mixed ability classes 'a curse' to high attainers (Paton, 2012). The serious issue in mixed abilities classrooms is that teachers might focus on only one or two of the three ability levels (the high attainers, average attainers and low attainers) (Kyriacou, 1997: 60).

Moreover, Kyriacou (1997) pointed out that mixed abilities classrooms are not suitable in subjects, such as mathematics and languages, because comprehension in these subjects is 'overtly hierarchical and cumulative' (p. 60). Observing language classes in Saudi Arabia, Zohairy (2014) found that 'students make more sentences when they are paired in same-level pairs [...] they produce less number of sentences when they are paired with a higher or a lower-level student' (p. 59). This finding supports Kyriacou's (1997) argument that mixed abilities classrooms might not be appropriate for certain subjects, such as language studies. This is significant, for the current research project, which focuses on English taught as a foreign language (EFL) in Saudi schools. Therefore, making ability grouping an available policy in Saudi schools, which can be used when needed rather than forcing every school in the country to operate by a fixed standard, might be a helpful means to enhance learning.

2.6.3 Syllabus, textbooks and assessment influence on learning

The present research study focuses on the implementation of FA in Saudi schools. Although there has been a recent shift towards a constructivist approach to learning, there are still many issues in the Saudi educational system which seem to hinder learning, such as the focus on textbooks and summative assessment rather than problem solving, classroom discussions and feedback, which are all significant aspects of FA.

Textbooks are designed and published by the MOE. Textbooks are offered free to all pupils every year. Teachers and pupils are asked to follow the information provided to them in these textbooks. There are numerous issues, which might be essential to point out here. First of all, little or no attention is paid to the differences between pupils' needs and abilities. This means that all pupils in the same year are provided with the same textbook and have to go through the same tests, which are based on the contents of the prescribed textbook. Second, most of the curriculums and assessments are based on memorisation rather than discussion and analysis. Although these latter two have been recently integrated into the new textbooks, these parts are usually neglected by teachers. The lack of an opportunity to question, think and discuss might have a negative impact on pupils' abilities to think critically and be independent learners. Third, because assessments are based on textbooks, this may encourage pupils to be passive learners, who quickly accept information, write it down for the test, and then move on.

In addition to the problems associated with textbooks, assessment in the Saudi educational system, from year one in primary school until the final year at university, is based on marks. This influence of marks, as many researchers have suggested (see, for example, Black and Wiliam, 1998b; Irons, 2008: 14), might hinder learning. That is, the emphasis on scores may impede pupils, parents and teachers from focusing on the learning process. These criticisms of summative assessment will be discussed in more detail in the literature review. Marks are a large part of Saudi classroom culture. Because of this, pupils might not take education seriously if there are no marks. For example, misbehaving might occur more frequently amongst pupils when there is an absence of marks. Although summative assessment is important for certification, the dominance of this type of assessment seems to have had a negative impact on pupils' learning.

Because the present research study is interested in a group of Saudi student teachers' perceptions of FA, it is crucial to understand the emphasis on marks and fixed curriculums in Saudi Arabia. Rather than marks, FA focuses on feedback, which often

reflects where pupils are and what they might achieve, instead of ranking their performance. Moreover, the use of textbooks, which do not take different abilities and levels into account, might also be problematic when implementing FA, as such textbooks might not allow teachers to design their own programmes in response to where their pupils might be in their learning.

2.7 Teacher training in Saudi Arabia

This study is concerned with Saudi student teachers' perceptions, and hence it is important to discuss teacher training in Saudi Arabia. The following section will first provide the background of teacher training in Saudi Arabia; second, issues surrounding teacher-training programmes in Saudi Arabia, including assessment and practical training, will be discussed; finally, specific background information regarding the department in which the study was conducted will be provided.

Teacher-training programmes in Saudi Arabia began in the early 1950s (Alghanem, 2005: 12). Although there were sixty-two teacher preparation establishments (Alghanem, 2005: 12) by 1975, all of these programmes were two-year courses after secondary school until 1987. Most of the preparation programmes are now integrated into undergraduate studies, which take at least four years (Alhamid, Ziyada, Al Otaibi & Mutwalli, 2005: 250). Today, teacher qualification in Saudi Arabia is mainly divided into three routes. Two routes are integrated within undergraduate studies and take around four years: the first type is obtaining a bachelor's degree, which qualifies the student to teach in primary schools (Baghdadi, 2014); the second type is obtaining a bachelor degree, which prepares the candidates from different specialities to teach in intermediate and secondary schools (Alhamid et al., 2005: 251, Al-Aqul, 2009: 45-46). The third type is a one- to two-year diploma, which can be applied for by candidates who have already obtained an undergraduate degree, but did not receive any pedagogical training (Alhamid et al., 2005: 251, Al-Aqul, 2009: 45-46). This diploma course provides pedagogical preparation rather than content preparation, which the candidates should have received during their undergraduate course (Alhamid et al., 2005: 250). These three routes are provided by teacher colleges, education colleges at the universities, and girls' education colleges (Al-Aqul, 2009: 45-46). All of these programmes offer a wide curriculum in educational theory and methods, and they require students to get in-depth knowledge about certain subjects, such as mathematics, chemistry, English, Arabic and history and then combine these with courses in education (Saudi Arabian Cultural Mission, 2006: 11). Although a four-year training

programme is standard in many countries around the world (see (OECD 2005b: 107), there are many countries, such as France, Norway and Italy, which require five, six and even seven years of training. However increasing the number of years of teacher-training programmes does not necessarily improve the quality. As Alsharqi's (2004: 1) study on science teacher-training programmes in Saudi Arabia found, there are still faults in both the pedagogical and content training for student teachers in all subjects. Hence, Alsharqi (2004: 1) and Alkatabi et al. (2005) both recommend more emphasis on quality and the continuous evaluation of teacher-training programmes in order ensure and raise the standard of these programmes. Moreover, there is a need for more research on teacher-training programmes. As Alkatabi et al. (2005: 18) pointed out, there are no in-depth research studies regarding either the theoretical content or the practical training of teacher preparation programmes in Saudi Arabia.

There are other issues surrounding teacher training in Saudi Arabia. Teacher preparation programmes in Saudi Arabia focus on theory, while little attention is paid to practice. This type of teacher training has been described as the traditional approach (Korthagen & Kessels, 1999: 4). Korthagen and Kessels (1999: 5) have pointed out that this approach has continued to be applied in many places around the world, despite the fact that many research studies have demonstrated that paying less attention to student teachers' practices might have a negative impact when they begin their teaching career. Alkatabi et al. (2005: 21) argued that one of the main problems of teacher education programmes in Saudi Arabia is that most of them concentrate on theory rather than practice. This means that teacher-training programmes in Saudi Arabia tend to focus on providing student teachers with most of the information that they need pedagogically and academically rather than focusing on helping them to practise what they have learned.

Alkatabi et al. (2005: 26) also argued that there is a gap between theory and practice, which means that what the student teachers learned during their teacher preparation programmes is not always what they are asked to apply during their school placements. Alkatabi et al. (2005: 41) suggested that a balance is needed in order to provide better opportunities for student teachers to implement what they have learned. Alkatabi et al. (2005: 37) importantly emphasised the necessity of using a reflective process, which will be discussed in detail in the following chapter (see **sec. 3.18.2**), and feedback, which will be discussed in detail in the methodology chapter (see **sec. 4.4**), as these are crucial in helping to develop the student teachers' practices.

Recently, many educators in Saudi Arabia have also signaled that this focus on theory comes at the expense of practice. Alminyawi (2010) conducted a research study in Saudi Arabia to obtain teachers' perceptions regarding the preparation of student teachers and first-year teachers. The findings from Alminyawi's (2010: 25) study showed that most teachers perceived that first-year teachers at secondary level needed more practical training. In particular, these teachers thought that first-year teachers needed to be trained from six months to a whole school year, and this training should include assessment and classroom management. The findings also showed that all of the teachers in Alminyawi's (2010: 42) study perceived that the teacher-training programmes did not provide the first-year teachers with up-to-date knowledge regarding assessment. Furthermore, the findings from Alminyawi's (2010: 43-44) study showed that all of the teachers thought that the teacher trainers lacked a basic knowledge of assessment. Based on these findings, Alminyawi (2010: 43-44) urged educators to pay more attention to the preparation of student teachers, and in particular the training surrounding assessment.

All of these findings indicate that teacher education programmes might need to consider providing more time for practical training and relate theory to practice in order to help new teachers to practise what they have learned. These findings also suggest that assessment is currently not part of the teacher-training programmes in Saudi Arabia, and because of this, more focus on assessment is needed. However, the preparation of student teachers in relation to assessment is not only a problem in Saudi Arabia. Researchers in western countries have also indicated this as an issue (see, for example, Greenberg & Walsh, 2012: 18; and Stiggins, 2002: 762), and this will be discussed in more detail in the literature review.

2.7.1 Specific information about the context where the study was conducted

The programme in which the researcher conducted her study was integrated within undergraduate studies. The candidates involved in this research study were preparing to teach in intermediate and secondary schools. The research study was conducted with third-year student teachers from the English Language Department in a university. This university was chosen because of its place in the capital city and because it is one of the biggest and leading universities in the country. The department was chosen because of the student teachers' ability to read, understand, and research materials on FA, most of which are published in English. As mentioned in the introduction, there is very little information published on FA in Arabic.

There were also other benefits of conducting this study within the chosen university and department. Because the researcher herself had graduated from the same university and the same department, this was helpful because the researcher was more aware about how teacher preparation, school placement and supervisions worked within university. Additionally, observing this group of student teachers from the English Language Department was beneficial to the study because the researcher was very familiar with the curriculum that the student teachers would be teaching during their training time. The researcher had previously taught English as a foreign language based on this curriculum for about ten years. It can be argued that this closeness and history with the department might have affected the researcher's critical distance. The time gap between the researcher's time at the university and the present research project, however, helped to ensure that this was not the case. The researcher no longer knew any members of the department. Moreover, the project was conducted in a way in which the researcher took care to ensure that the participants did not associate her with authority within the university and the department. This will be discussed more in the methodology chapter.

It is worthwhile here to note that English as a foreign language is not an optional or tangential subject in Saudi education, but an extremely important and central one. English as a foreign language is taught in schools from year four, in primary school, until graduation from secondary school. Some courses at the universities, especially scientific ones, such as medicine and mathematics, are taught in English, and almost all university courses have English as a foreign language (EFL) in their programmes.

The English Language course, like most undergraduate courses in Saudi Arabia, is a four-year course. Students attend lectures about English language and literature in all of the four years. School training and pedagogical education take place only in the last two years of the course: year 3 and year 4. School placement takes place in one term in both year 3 and year 4. Data was collected while these students were still in year 3. Because the participants in this study were in year 3, it might be beneficial to explain more about the context of school training in year 3.

Year 3 is divided into two terms and school training takes place in the 2nd term. The student teachers are divided into groups: each group consists of 3–6 girls. These groups of girls usually go to different schools during their school training period. School training is divided into two stages. The first stage is usually from the end of February until the end of March. All of the year 3 student teachers go once a week, every Sunday, to schools for five weeks to teach one lesson. The second stage consists

of two full weeks, starting from the beginning of April, in which students teach one lesson everyday for two weeks.

During this programme, student teachers are taught about teaching methods, assessment, evaluation and measurement. However, the nature of these programmes, which are broadly lecture based, emphasise the theoretical underpinning rather than practical application, as discussed previously. Moreover, assessment training focuses on summative assessment, such as exam writing, rather than other types of assessment (Alkatabi et al., 2005: 21). Formative assessment is only briefly introduced to them in name, and they are not asked to implement it during their school placements. Hence, the researcher's role in this study was to introduce formative assessment to the participating student teachers in detail and reinforce the use of FA during their school placements. This helped the student teachers to be consciously aware of the use of FA, and it enabled them to implement it more frequently during lessons.

2.8 Conclusion

This chapter has explored the context and structure of the educational system in Saudi Arabia. It showed that the educational system in Saudi Arabia, and in particular the system of assessment, has been through many changes and developments. In order to encourage student learning, the constructivist theory, which emphasises problem solving and discussion, has become more dominate in curriculums, which are now seeking to substitute memorising and copying methods with critical thinking and analysis. In other efforts to enhance learning and reduce anxiety, summative assessment in primary schools has been replaced with continuous assessment, and the requirements for passing tests across all levels has become more flexible.

Despite the fact that many educators have emphasised the importance of FA as an effective way to promote learning (e.g. Black and Wiliam 2006; Harlen 2006; Hertiage, 2010; Stiggins, 2007), all of these recent efforts to enhance Saudi pupils' learning have somehow managed to overlook FA. Besides FA, a consideration of other factors, which might affect student learning, have also been neglected: mixed abilities classrooms, as well as classroom layout, seem to be factors that might hinder the process of learning and the implementation of FA within the Saudi educational system.

The next chapter will discuss the theoretical foundation of this study. It will provide an in-depth review of formative assessment and student teachers' perceptions of FA, as well as teacher-training programmes.

Chapter Three

Literature review

3.1 Introduction

This study aims to explore a group of Saudi student teachers' perceptions in relation to FA by obtaining their views before, during and after their implementation of FA. This chapter provides the study's theoretical underpinning by reviewing the relevant literature surrounding three of the study's main areas: FA, teachers' and student teachers' perceptions of FA, and teacher training.

The researcher's review of the literature began by searching for studies about assessment as a whole. Research on FA attracted the researcher; in particular, FA's emphasis on raising achievement, discussion, and its focus on a student-centred environment, which promotes the development of independent learners. In Saudi Arabia, the educational system is teacher centred and driven by marks. As a professional teacher with ten years' teaching experience in Saudi Arabia, the importance of nurturing pupils who are critical of both others and themselves was an interesting approach to the researcher. In addition to this, the idea of substituting marks with feedback comments, which show the strengths, weaknesses and ways to improve, seemed to offer a useful approach which might be of interest in Saudi schools, especially as the Saudi educational system has recently turned its attention toward student-centred learning.

As the researcher investigated the literature, certain gaps appeared. First, the researcher found that there were very few studies about FA in the Arabian region, and no studies about student teachers' perceptions of FA in the Arabian region. This is significant because teachers' perceptions are crucial components which allow us to better understand FA and its relation to teaching and learning. As many researchers have argued, teachers' perceptions about assessment are essential to understand because their perceptions of assessment affect their classroom decisions and teaching

approaches (Brown 2004: 303; Chan, 2004: 1; Chan & Elliott, 2004: 817; James & Pedder, 2006a: 112; Nespor, 1987: 317; Winterbottom, Brindley, Taber, Fisher, Finney & Riga, 2008). Moreover, other research studies (Pilcher, 2001: 3; Shepard, 2000a; Shepard, 2000b) have also concluded that teachers' previous classroom experiences either assisted or hindered their ability to change their classroom assessment practices. Hence, James and Pedder (2006b: 28) argued that it is essential to obtain teachers' perceptions if we are serious about developing a better understanding of classroom assessment practices and if we want to bring about any useful development in assessment activities. The importance of teachers' perceptions, and the limited number of studies concerned with student teachers' perceptions regarding FA, and no studies about student teachers' perceptions of FA in the Arabian region, led to the overarching research question — what are Saudi student teachers' perceptions of FA? — and the development of the first research sub-question: 'What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?'

Although many researchers (see, for example, Black & Wiliam, 1998a, 1998b; OECD, 2005a: 69; Sliwka, Fushell, Gauthier & Johnson 2005: 114) agree that FA helps pupils to make progress, these are western studies, and the second research question considers what Saudi student teachers perceive about this widely held belief: 'Do the student teachers think that formative assessment can help school students to make progress?'

The literature also points to the difficulty of integrating the theory of FA into classroom teaching practices. Dylan Wiliam's research (2007), in particular, suggested that the way to successfully integrate FA into classroom practices is to focus on teacher quality; that is, to improve existing teachers through professional development. Wiliam (2007) admitted that this is only a 'short to medium term' (p. 187) solution. A long-term solution might perhaps be found in focusing on student teachers and developing teacher-training programmes, which would enable student teachers to understand and master assessment practices. Hence, the third and fourth research questions focus particularly on the student teachers' perceptions of their teacher-training programme and what they perceive that programme provided in relation to FA: 'What do the student teachers do during their teacher-training programme in connection with formative assessment?' and 'Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?'

As will be discussed below, the research literature recognises that there are many challenges surrounding the practice of FA. Therefore, the fifth research question focuses on what the student teachers perceived as problematic when they implemented FA during their school placements: ‘What are the challenges that the student teachers faced when applying formative assessment?’ Finally, based on the student teachers’ experience of implementing FA, the sixth research question seeks to understand how the participants of the present research study perceived this new approach: ‘Do the student teachers think that formative assessment should be implemented and why?’

These research questions are important because they allowed the researcher to explore not only the student teachers’ perceptions of assessment and FA, but more importantly, these perceptions, as suggested above, might be useful in helping to develop better teacher-training programmes, where assessment theories are successfully integrated into practice.

3.1.1 Overview of the chapter

In what follows below, this chapter will first define the key terms formative assessment and assessment for learning. In order to more precisely define FA, summative assessment is then described and tensions between FA and summative assessment are discussed. From there, the history and development of understandings of FA, as well as the nature of FA and the elements of FA (that is, integrating FA into teaching and learning; sharing and the learning outcomes and success criteria; questioning; feedback; peer-assessment and self-assessment; and day-by-day and minute-by minute use of FA) are all discussed. The chapter then moves on to examine FA and theories of learning, FA in foreign/second language classrooms, and the advantages of FA. The complexity and difficulty of practising FA, and critiques of FA, are also considered.

Given that the current research study is interested in the perceptions of student teachers in regards to FA, research studies which have considered student teachers’ perceptions of FA are discussed, whilst the researcher identifies gaps and tensions within these previous research studies. The researcher also explores different models which discuss the linkage between theory and practice. Finally, the chapter ends with a discussion of teacher education programmes and, in particular, how they conduct their training of assessment and FA. These programmes are important background, as the present study’s research questions are interested in both student teachers and their teacher-training programmes.

3.1.2 The researcher's approach to the literature

Vygotsky's 1978 publication, which is routinely cited by researchers (see, for example, Bennett, 2011: 9), seems to be one of the earliest and most important publications about how FA is an interaction between the teacher and the learner, which is based upon a constructivist theory of learning. Like many other researchers of FA who have relied upon Vygotsky's 1978 study (for example, Sach, 2012: 262; Torrance & Pryor, 1998: 15), the researcher also relied, to a certain degree, upon Vygotsky's (1978) work. Because of this, the researcher's review of the literature began with work published post-1978. There were, however, some exceptions to this: Bloom, Hastings and Madaus's 1971 publication, which importantly contained some of the earliest definitions of summative and formative evaluation, and Rowe's 1974 study on the importance and value of 'wait time'.

The researcher searched a variety of databases: Educational Resources Information Center (ERIC), ProQuest Education Complete, and the internet search engine Google and Google scholar. The researcher used the following research terms: assessment, formative assessment, assessment for learning, teachers, student teachers, teacher training, teacher preparation, teacher education and perceptions. The 'snowball' approach, that is, using the reference lists from relevant publications, was also an approach used by the researcher.

Certain research studies were more influential for the current research project. As described by Bennett (2011), Black and Wiliam importantly gave 'substantive definition and concrete direction to formative assessment' (p. 10). Hence, like many studies on FA, this research study was influenced by the landmark work of Black and Wiliam (1998a; 1998b), which made a vital case for the effectiveness of FA, whilst also providing the five elements of FA: sharing the learning outcomes, questioning, feedback, peer-assessment and self-assessment. Not only does this research study rely upon what they define as the five elements of FA, but Black and Wiliam are influential in that their work is fundamentally interested in how FA is put into practice. Unlike Black and Wiliam, however, this study is not interested in the effectiveness of FA, but in student teachers' perceptions of FA.

3.2 The term formative assessment

A handful of research studies helped to define the term FA, as it was used in this study. In this research study, the term formative assessment was partially based on the definition provided by Black, Harrison, Lee, Marshall and Wiliam (2003: 2): a practice

in which evidence and feedback from assessment activities ‘is used to adapt the teaching work to meet learning needs’ (p. 2). According to Black et al. (2003: 2), FA involves many different methods and can be used many times over a lesson. The researcher also partially relied upon Vygotsky’s (1978) study, which described this type of assessment as one which, based on a constructivist theory of learning, relies on the interactions between teacher and learner. As in Sach’s (2012) study, FA ‘is depicted as an informal and continuous process, embedded in teaching and learning and conducted by teachers as an integral part of their everyday classroom work’ (p. 262). In addition to this, the researcher employed the five elements of FA as defined by Black et al. (2003) to help better define FA: sharing the learning outcomes, questioning, feedback, peer- and self-assessment.

3.3 Complexity of definition

Although there are many definitions of FA, there is no clear agreement about the meaning of the term (Black & Wiliam, 2009: 5; Wiliam 2011b). As a whole, definitions of FA seem to distinguish between those which consider FA as a process, and those which consider FA as an instrument (Bennett, 2011: 6; Wiliam 2011a: 38). Cowie and Bell (1999) suggested that FA is ‘the process used by teachers and students to recognize and respond to students’ learning, during the learning’ (p.101). Similarly, Shepard et al. (2005) defined FA as ‘assessment carried out during the instructional process for the purpose of improving teaching or learning’ (p. 275). On the other hand, Kahl (2005) suggested that FA is

a tool that teachers use to measure student grasp of specific topics and skills they are currently teaching. It’s a “midstream” tool to identify specific students’ misconceptions and mistakes *while the material is being taught*. (p. 11)

While some researchers have considered FA as either a process or an instrument, Bennett (2011: 7) argued that FA is more than just an instrument or a process. He suggested that FA is a complex mixture of both, as a good process needs good instrumentation.

In the UK, the Assessment Reform Group (ARG) — an organisation which works to ensure that assessment policy and practices consider relevant research evidence — indicated (1999) that ‘the term “formative” itself is open to a variety of interpretations and often means no more than [...] assessment [which] is carried out

frequently and is planned at the same time as teaching' (p. 7). The ARG suggested replacing the term "formative assessment" with "assessment for learning" (AFL) (Wiliam, 2011a: 39). The ARG (2002) defined AFL as

the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there. (p. 2)

Because the ARG (1999) argued that FA is both ambiguous and that it does not adequately contain all of the characteristics which promote learning, they importantly supplied seven characteristics of assessment that promote learning and are found in AFL:

- it is embedded in a view of teaching and learning of which it is an essential part;
- it involves sharing learning goals with pupils;
- it aims to help pupils to know and to recognise the standards they are aiming for;
- it involves pupils in self-assessment;
- it provides feedback which leads to pupils recognising their next steps and how to take them;
- it is underpinned by confidence that every student can improve;
- it involves both teacher and pupils reviewing and reflecting on assessment data. (ARG, 1999, p. 7)

It is important to note that these characteristics of AFL are elements which have been considered to be strong practices of FA by many authors (such as Bennett 2011: 8; Gadsby 2012: 2; Gardner, 2006: 3; Wiliam 2010: 22). Moreover, replacing a term, such as AFL, with another term, such as FA, might actually lead to further confusion amongst researchers and teachers about the meaning of the terms which are being used. Bennett (2011:7) argued that substituting a phrase with another phrase does not help in solving the definition issue. Instead, Bennett (2009) suggested that a 'stronger definition [which] would arguably include a conceptual framework, a theory of action, and one or more instantiations' (p. 8), should be our focus, and not the particular name of the term. While Bennett's (2009) comments are useful, all of this seems to suggest that the debate surrounding the use of these terms has obscured the fact that FA and AFL both describe a similar process. This may also explain why many authors have used the terms

interchangeably. Despite this, and perhaps because of this, there is still confusion over the exact meaning of FA, and this may have led to some confusion in its practice.

3.3.1 Formative assessment and assessment for learning

Black et al. (2003: 2) and Stiggins (2002: 761) argued that assessment for learning (AFL) and FA are not the same. Black et al. (2003) suggested that AFL is any type of assessment that is used to promote students' learning and it 'becomes formative when the evidence is used to adapt the teaching work to meet learning needs' (p. 2). According to Wiliam (2009)

the term 'assessment for learning' speaks about the purpose of the assessment, while the term 'formative assessment' speaks about the function it actually serves. (p. 8)

Other researchers, such as Stiggins (2002), argued that AFL is more than conducting assessment in order to re-adjust teaching, but AFL 'must involve students in the process' (p. 761). Many other authors (see, for example, Bennett, 2011: 5; Hargreaves, 2005: 213; James & Pedder, 2006a: 109) have used these terms interchangeably. According to Bennett, because they refer to the same ideas and practices, either term can substitute the other. Following on from Bennett, in this study, FA will be the term that is mainly used; however when AFL is used, it will refer to the term FA.

3.3.2. Assessment vs. evaluation

Allal and Lopez (2005) have argued that the term "assessment" has 'progressively replaced "evaluation" when the object is student learning in the classroom' (p. 241). The term "assessment", however, has not been used as a substitute for "evaluation" by all authors. In order to reduce confusion about the uses of these two terms, James (2013: 3) has distinguished between the different uses of "evaluation" and "assessment" in the UK and the US. James (2013) suggests that:

In the UK the term 'assessment' is widely used for all these activities that involve eliciting evidence of student learning and drawing inferences as a basis for decisions. In the US, these processes are often referred to as 'measurement' (for the collection of evidence) and 'student evaluation' (for drawing of inferences and making judgements). (p. 3)

James (2013: 3) explains that in the UK and many other places around the world, the term 'evaluation' is usually used for the purposes of obtaining evidence in order to judge certain programmes and establishments, rather than judging the pupils' performance. Taras (2005) described the UK's use of 'assessment' as referring 'to judgments of students' work', while in the US this process would be called 'evaluation' (p. 466-467). These distinctions are important to understand articles and books written by different authors, especially American and British ones, about assessment. This study uses the UK understanding of the term 'assessment'.

3.4 Development of assessment

In order to better understand FA, it is crucial to consider how ideas of assessment have developed. According to Serafini (2000: 385), there are three main paradigms of assessment: assessment as measurement, assessment as procedure, and assessment as inquiry. The first paradigm, assessment as measurement, basically measures a student's level. This is generally done through summative assessment and assessment for accountability. Many researchers of assessment have suggested that assessment as measurement has controlled conditions and focuses on performance (Blanchard, 2009: 143). Moreover, this type of assessment does not require the learners' understanding of criteria, and it denies their active part in assessment (Blanchard, 2009: 143). In this paradigm, Serafini (2000) argued that 'objectivity, standardization, and reliability take priority over concerns of teacher and student involvement' (p. 385). Learners typically have little or no control over traditional assessment procedures, which often force them to be passive.

The second paradigm, assessment as procedure, primarily focuses on assessment procedures rather than the underlying purposes of assessment. Serafini (2000: 395) argued that although this paradigm shares many characteristics with its predecessor, assessment as measurement, the main difference is that the procedures in this second paradigm involve qualitative data collection methods. For both of these paradigms, however, 'teachers are still being asked to objectively measure students' abilities and report information in numerical form to external audiences' (p. 386).

In the early nineties, a new trend appeared, which consciously shifted the role of assessment towards promoting learning. For example, Glaser (as cited in Gipps, 1994: 10) argued that assessment must be used to support learning rather than to merely indicate current or past achievement. Similarly, Goldstein (as cited in Gipps, 1994: 11) insisted that there was a need to stop considering testing as a static activity, which has

no influence on the students. It is here that Serafini's (2000) third paradigm, assessment as inquiry, seems to appear. In this paradigm, the teacher uses various qualitative and quantitative assessment techniques in order to better understand 'particular learners and their learning processes' (Serafini, 2000, p. 387). Serafini (2000) described assessment as inquiry as 'a process of inquiry, and a process of interpretation, used to promote reflection concerning students' understandings, attitudes, and literate abilities' (p. 387). Unlike the previous two paradigms, which rely upon external audiences, inquiry assessment looks to people involved in the classroom, such as teachers and students. In this paradigm, students and teachers are active:

Instead of using tests to measure student abilities and compare children, teachers use these classroom-based assessment procedures to facilitate learning, direct curricular decisions, and communicate more effectively with students and parents. (Serafini, 2000, p. 387)

Assessment of inquiry is ongoing, it promotes reflection and self-assessment, and it helps to enable teachers to make decisions, which will promote learning experiences in the classroom (Serafini, 2000: 387-388). Reaching this final paradigm is not an easy process: as Serafini (2000) pointed out, making the shift 'from assessment as measurement to assessment as inquiry takes time' (p. 392).

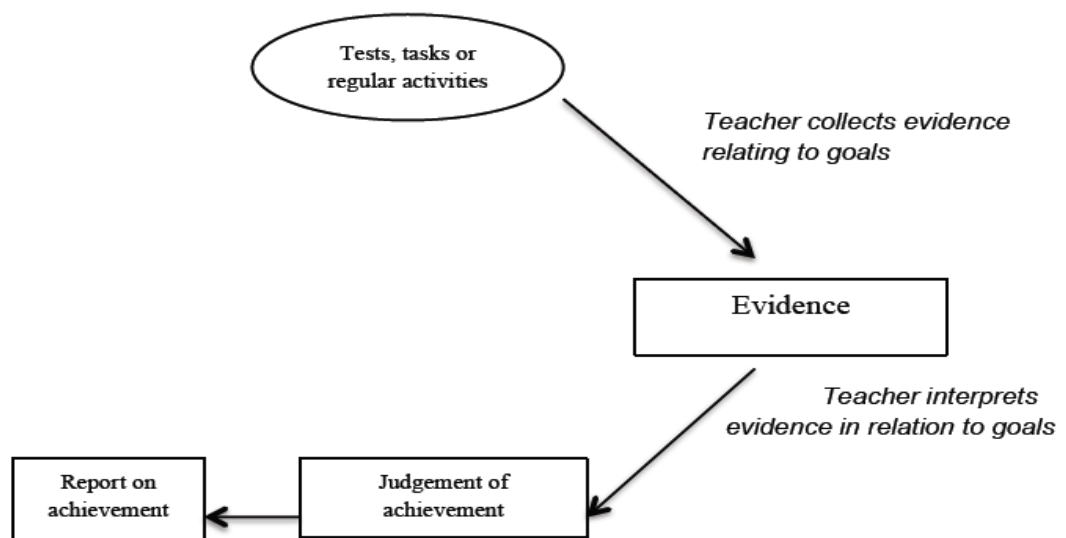
The features of what Serafini (2000) calls inquiry assessment are those generally recognised by other researchers to be the features and practices of formative assessment (see, for example, Harlen, 2000: 111; Black et al., 2003: 2; Fautley & Savage, 2008: 38). Like the inquiry paradigm, FA relies on questioning, feedback, sharing criteria and self-assessment; it is an ongoing process, which promotes learning. Both FA and assessment of inquiry are based upon constructivist theories of learning, which hold that knowledge is constructed by the individual. Both, too, are student centred.

3.5 Summative assessment

In order to better define FA and its importance, it might be useful here to consider summative assessment. Summative assessment is one of the main purposes of assessment. Sadler (1989: 120) and Askham (1997: 103) argued that summative assessment is about summing up the pupils' achievement and it is often negative, as it does not have a deep effect on pupils' learning. Summative assessment is conducted for the sake of certification (Sadler, 1989: 120). It is mainly used to provide a grade for a

pupil (Askham, 1997: 103; Eren, 2010: 29; Sadler, 1989: 120). Summative assessment, which has also been called assessment *of* learning, is different, in many ways, to FA. Summative assessment is used to provide judgements about the level of achievement at a particular point (Taras, 2005: 468, Haydn, 2005: 302). Harlen (2006) explained that when using summative assessment, assessors use the same criteria for all pupils because the aim is to ‘report achievement in a way that is comparable across students’ (p. 106). Therefore, summative assessment is a criterion-referenced assessment (Harlen, 2006: 106). Harlen (2006: 106) argued that pupils do not play an active part in this type of assessment and feedback is usually not part of summative assessment. Harlen (2000: 116) drew a simple and straightforward model of summative assessment to provide a clearer picture of its nature:

Figure 3- 1: Summative assessment (adapted from Harlen, 2000: 116)



Harlen (2006: 106) argued that despite the differences between FA and summative assessment, these variations are not necessarily obvious when it comes to practices. This is because data gathered to report achievement could also be used to adjust and help learning, and information collected to support learning could also be used to report achievement (Harlen, 2006: 106).

Many researchers in education, however, have suggested that summative assessment is not effective in promoting learning (see Black and Wiliam, 1998b; Irons, 2008: 14). These researchers have argued that marks have a negative impact on pupils, especially low achievers, and therefore pupils need to be provided with feedback and

not marks (see Butler as cited in Black & Wiliam, 1998b: 12-13). Falchikov (2005: 33-40) has identified numerous negative aspects related to summative assessment:

- Too much focus on tests.
- Problems related with reliability and teachers having a bias.
- It carries negative affect on pupils' motivation.
- Pupils try to focus on what they think will be in tests and exams.
- It encourages shallow learning rather than deep learning.
- It raises anxiety and stress amongst pupils.

In addition to this, Pelligrino, Chudowsky and Glaser (2001: 26-28) have discussed many of the problems associated with summative assessment:

- It ignores many of the cognitive aspects related to complex knowledge and skills.
- It provides little knowledge about the pupils' understanding and a limited amount of information that helps teachers to make appropriate decisions regarding their next steps.
- It reports pupils' achievement, rather than their development, over a period of time.

As Broadfoot (2000: x) pointed out, summative assessment has been widely criticised. As an attempt to reduce the negative effects of summative assessment, many educators have promoted FA (Taras, 2005: 469).

3.6 The relationship between summative and formative assessment

Yorke (2008: 10-11) explained that assessment has three main purposes: learning, certification and quality assurance. Harlen (2000: 108) argued that assessment varies based on its purpose, and these purposes can be divided into formative, summative and evaluation purposes. The most obvious tension between these purposes of assessment lies between FA and summative assessment (Hounsell, 2007b). The following sections will discuss the relationship between FA and summative assessment.

3.6.1 Distinguishing formative assessment from summative assessment

Many researchers have discussed the distinctions between summative assessment and FA (James & Pedder, 2006a: 109). Biggs (1998: 107) differentiated between the two by

arguing that FA helps to show pupils what to do next, whilst summative assessment shows where pupils are in their learning. Biggs (1998) argued that ‘differences between the two are not matters of principle so much as of timing’ (p. 107). On the other hand, Sadler (1989: 120) argued that the essential differences between formative and summative assessment are based on purposes and impact, and not on timing. According to Sadler (1989: 120), many of the characteristics related to summative assessment are not necessarily transferable to FA. Sadler (1989: 120-121) suggested that FA is using the data provided to enhance the quality and achievement of the pupils’ assignments. That is, if the information obtained from an assessment did not lead to a suitable action — for example, it was used as a summative grade — then it is not formative (Sadler, 1989: 121). If the learner uses the judgments to enhance the learning process, then this is FA; on the other hand, if the judgment stands alone, this is summative assessment. Hence, the learners’ ability to use feedback to improve his/ her learning is a distinctive feature between summative and formative assessment (Sadler, 1989: 121).

Taras (2008: 173) argued that although Sadler offered a logical theory of FA and feedback, his argument did not clearly show the relationship between FA and summative assessment. Taras (2005: 466; 2008: 173) insisted that there is a lack of clarity about the relationship between FA and summative assessment, and this has led to misunderstanding both types of assessments.

Harlen (2006: 103-104) argued that distinguishing between FA and summative assessment is based on who uses the evidence and how it is used, and this is why the terms “assessment *for* learning” and “assessment *of* learning” are sometimes preferred, respectively. Black (1998: 117) argued that many assessments applied by teachers are summative, because teachers do not use them to make changes to the learning process. Simply applying continuous assessment, however, does not necessarily mean that it is FA, because this assessment might lack effective feedback (Black, 1998: 117). Black (1998) argued that in order to determine whether a given assessment is formative or summative depends on how ‘they relate to the pupils’ work and to the way the results are interpreted and used’ (p. 117).

Harlen and James (1997: 365) argued that there are difficulties in distinguishing between summative and formative assessment because they often overlap in terms of practice. Harlen (2006: 115) argued that rather than trying to find distinctions between FA and summative assessment, it is perhaps better to discuss the different ways of practising FA and summative assessment. Harlen (2006: 114) described the relationship between FA and summative assessment as it appears in practice in the table listed

below. As seen here, formative and summative assessment could merge into one another. However, on the purely formative end of the spectrum, pupils are involved in the learning process to a greater extent, whereas on the purely summative end, the pupils' role is more likely to be passive. What Harlen referred to as 'formal' summative assessment only measures the pupils' achievement at particular times, while formative assessment is ongoing. Harlen (2006: 114) explained that 'formal' FA is applied with the whole class, and the teacher's purpose is to know where the pupils are in relation to the lesson plan or curriculum. In order to do this, teachers usually collect data by planning quizzes or certain tasks; the results are then used to make decisions about teaching (Harlen, 2006: 114). This process of 'formal' FA is similar to 'informal' summative assessment (Harlen, 2006: 114). However, the main difference between these two is in how data is used: if data is used to adapt teaching, then it is 'formal' FA, but if there is no feedback, it is 'informal' summative assessment, even if the evidence is obtained from the same task or quiz (Harlen, 2006: 114). The important distinguishing feature here is feedback, and how the information is used.

On the other hand, what Harlen (2006: 114) called 'informal' FA is not prepared ahead, as a quiz might be; it starts with a learning task, and its role is to support the learning of each student. 'Informal' FA is concerned with the cognitive aspects of both group and individual learning; feedback is done instantly, and both teachers and pupils benefit from it (Harlen, 2006: 114).

Table 3- 1: A possible dimension of assessment purposes and practices (adapted from Harlen, 2006: 114)

	Formative ←—————→ Summative			
	Informal formative	Formal formative	Informal summative	Formal summative
Major focus	What are the next steps in learning?		What has been achieved to date?	
Purpose	To inform next steps in learning	To inform next steps in teaching	To monitor progress against plans	To record achievement of individuals
How is evidence collected?	As normal part of class work	Introduced into normal class work	Introduced into normal class work	Separate task of test
Basis of judgement	Student referenced	Student and criterion referenced	Criterion referenced	Criterion referenced

Judged by	Student and teacher	Teacher	Teacher	Teacher or external marker
Action taken	Feedback to students and teacher	Feedback into teaching plans	Feedback into teaching plans	Report to student, parent, other teachers, etc.
Epithet	Assessment for learning	Matching	Dip stick	Assessment of learning

All the types of assessment discussed here by Harlen rely on the teacher's intention behind applying assessment. This information might be helpful for teachers: that is, knowing which type of assessment best matches their intention will allow teachers to choose the appropriate type of assessment at the appropriate time.

3.6.2 Formative and summative assessment tension

Formative assessment and summative assessment are often considered to be the opposite of each other and if one of them is used the other one will be neglected. Wiliam (2000) suggested that

in many countries [...] very few teachers are able or willing to operate parallel assessment systems — one designed to serve a 'summative' function and one designed to serve a 'formative' function. The result is always that the formative assessment system is 'driven out' by that for summative assessment. (p. 13)

In schools where summative assessment dominates, teachers usually tend to teach pupils to pass the exams, as pupils need to do well on these exams. Most teachers feel that these types of tests contradict FA practices (OECD/CERI, 2008: 3). Moreover, despite the fact that FA is important to develop pupils' learning, especially by providing comments rather than marks, some pupils might prefer to receive a mark or a grade rather than a comment. Findings from Smith and Gorard's (2005: 31) study showed that when year-seven pupils (11-12 years old) were provided with feedback as comments, they preferred to get their marks. All of this might be at the expense of learning, which is better understood as mastering knowledge (OECD/CERI, 2008: 3). The Organisation for Economic Cooperation and Development (OECD/CERI, 2008: 3) has suggested that poorly designed summative assessments, the lack of relation between assessment and

curriculum, and league tables, which compare performance data across schools, all might hinder the progress of learning amongst children.

However, Hargreaves (2005: 223) suggested that despite the recent debate about contrasting summative and formative assessment, these two are not necessarily the opposite of each other. Unlike Butler's 1988 study (as cited in Black & Wiliam, 1998b: 12-13), which found that students' performances significantly decreased when using a combination of FA and summative assessment, Biggs (1998) argued that 'there is a powerful interaction between FA and SA that could usefully be incorporated in an overall synthesis [...] [and] conceptualised within the same framework' (p. 106). In this framework, the effects of summative assessment would support feedback (Biggs, 1998: 106). For example, Biggs (1998) argued that the assessment portfolio, when 'used summatively and designed appropriately, it is very good at setting in motion metacognitive and reflective learning processes that generate much feedback (Biggs, 1996a,c, see ch. 9)' (p. 107). Biggs (1998: 107) explained that in this scenario, pupils are often able to pinpoint their weaknesses and difficulties even without the teacher's help. Although portfolios are often used here as a summative assessment, it might be important to know that this is an assessment which is ongoing.

Moreover, Wiliam (2000: 13) argued that teachers should integrate formative and summative functions of assessment rather than choosing one and neglecting the other. OECD/CERI (2008: 3) confirmed this idea suggesting that 'while teachers often express ambivalence or resistance to external summative tests, there is nothing inherent in summative assessment to prevent teachers from using formative methods. Indeed, summative results can be used formatively' (p. 3). Spendlove (2009: 4) argued that the use of FA does not mean that summative assessment should not be used at all. He (2009: 4) suggested that there must be a balance between the two, because summative assessment is a reliable tool, which enables teachers to obtain information about where their pupils are in their learning, so that they can help their students progress. Spendlove (2009: 4) further insisted that FA provides pupils with the opportunity to become active learners who are able to decide what steps should be taken in order to improve. All of these findings suggest that summative assessment can be used in a formative way, and neither formative nor summative assessment need to be neglected for the sake of implementing the other. As Stiggins (2002) argued 'assessments *of* and *for* learning are both important' (p. 761).

3.7 Development of FA

While definitions and understandings of formative and summative assessment help us to better understand FA, it is also crucial to consider, as it is relevant background to the present research study, how conceptions of FA have developed and why. Clarke (2008: 8), Allal and Lopez (2005: 241), and Bloom et al. (1971:17) have all pointed to Scriven as the first researcher in the late nineteen-sixties to use the term “formative evaluation” in relation to the curriculum. This idea was soon adapted by Bloom, who provided more details about its usages (Allal & Lopez, 2005: 241). Bloom et al. (1971:17) defined summative evaluation tests as a type of evaluation used at the end of a semester of teaching for the purposes of ranking, providing certificates and licenses for students, and for evaluating the effectiveness of a curriculum or a program. Formative evaluation was defined by Bloom et al. (1971) as the ‘type of evaluation which all who are involved — student, teacher, curriculum maker — would welcome because they find it so useful in helping them improve what they wish to do’ (p. 17).

In the late eighties, understandings of FA became more specific. This is reflected in Crooks’s (1988: 468) seminal article when he concluded that more focus needed to be on students’ learning while less focus needed to be on grading. Crooks (1988) also suggested that students

should be given regular opportunities to practice and use the skills and knowledge that are the goals of the program and to obtain feedback on their performance. (p. 470)

The importance of promoting learning, rather than focusing on summative assessment, in order foster pupils’ achievement, has been highlighted by previous authors, such as Bloom et al. (1971: 17) and Crooks (1988: 470). These ideas led on to further studies. Between 1987 and 1997, professors Paul Black and Dylan Wiliam, of King’s College London, conducted a large research review of 250 journal articles and publications to determine whether FA helps to raise academic standards in the classroom. The studies which they examined were conducted in numerous countries, and on a range of participants from five to eighteen years of age (Black et al., 2003: 2). Black and Wiliam (1998a: 17) concluded that focusing on FA helps to produce significant learning gains. Effect sizes ranged between .4 and .7, with FA apparently helping low-achievers, as well as other students (Black & Wiliam, 2001: 3; Cizek, 2010: 7). Based on their major academic review of research on the effectiveness of FA, which was eventually

published in the journal *Assessment in Education*, Black and Wiliam (1998b) went on to produce a booklet for teachers entitled “Inside the Black Box” (1998a). In the first part of “Inside the Black Box”, three questions were laid out (Black & Wiliam, 1998a): first, is there evidence that improving FA raises standards? Second, is there evidence that there is room for improvement? Finally, is there evidence about how to improve FA? Black and Wiliam’s (1998a) answer to all three of these questions was yes. The second research question, which probes the student teachers’ perceptions concerning the effectiveness of FA in helping pupils to make achievement, engages with and develops out of this past research.

FA is an integrated part of teaching and learning, which is often used by teachers in many different ways due to their differences in teaching styles (Black et al., 2003: 2). It can be done informally — such as in classroom observations, oral questioning and classroom discussions — or formally, such as when used in quizzes or homework assignments (Moore & Stanley, 2010: 24). Although it can be argued that FA is not a new idea and it is something that all teachers, to some extent, do within their teaching, since the late 1960s, as demonstrated above, the term FA, and a conscious reflection on what these practices means, begins to emerge. In order to be able to contribute to studies on FA, it is vital to understand both the research of major contributors on the subject and the development of FA.

3.8 The nature of formative assessment

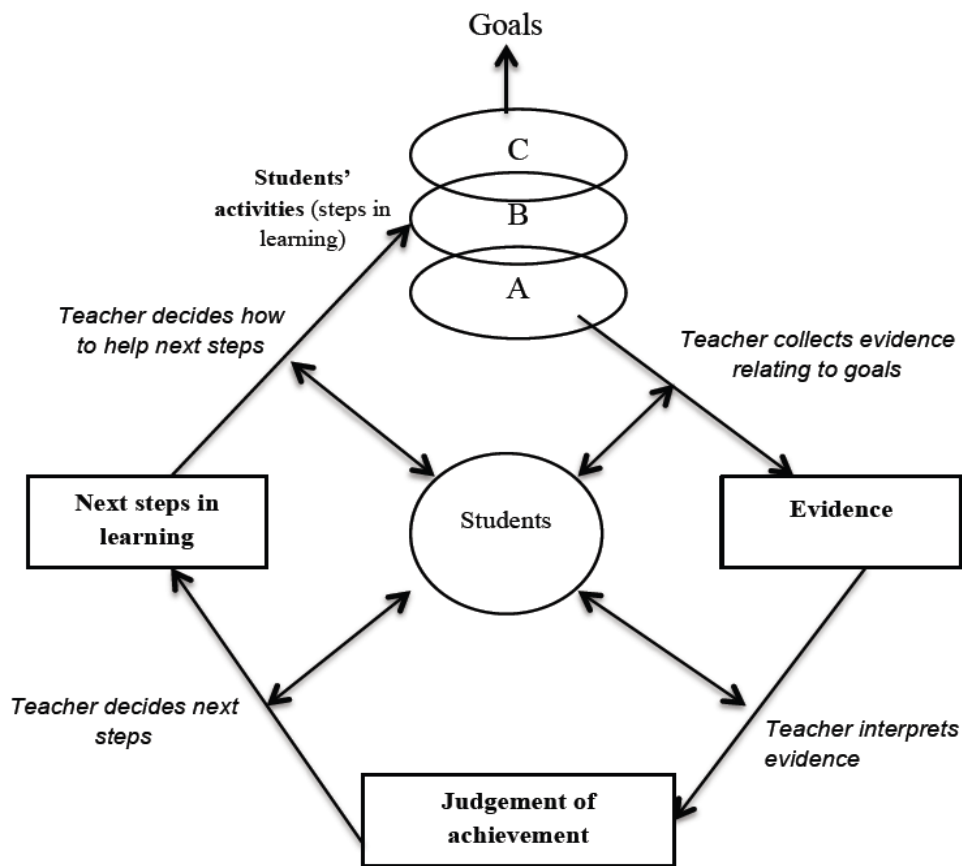
One of the best descriptions of FA ‘in action’ (p. 114) can be found in Harlen’s (2000) work, and it is this understanding of FA which the present research study partially relies upon. Harlen (2000: 111) described FA as an ongoing assessment, which is integrated into teaching, and carried out by teachers to help them to determine what would best promote learning in a particular context. It is important to note that regular assessment is not necessarily formative in function. Harlen (2000: 115) argued that how information is used determines whether a certain assessment is formative or not. In order to be able to understand what FA is in practice, it is crucial to understand ‘the wider principles underpinning AfL’ (Gadsby, 2012, p. 13). According to Harlen (2000: 115), the following are the main features of FA:

- It is integrated into teaching to raise comprehension amongst pupils. When it is not used in the classroom, the type of teaching and learning becomes different.
- It is concerned with enhancing learning.

- It is concerned with individual progress (ipsative) assessment and based on criteria.
- It could be used in all learning contexts and uses information about learning outcomes to take appropriate steps to support progression.
- Students play an active role in assessing their responses and deciding appropriate next steps.
- It is concerned with validity rather than reliability.

FA is described by many authors, such as Harlen (2006: 104) and Heritage (2010: 10), as a cycle of actions. This cyclical movement closes the gap between where the learner currently is, and where the teacher thinks this learner can be in his/her learning (Heritage, 2010: 10). Harlen (2000: 112) provided a useful model, which clearly depicts FA. This is shown in the figure below. Beginning with activity A, the teacher collects evidence using different techniques with the help of the students (Harlen, 2000: 113). The teacher then interprets the evidence based on the lesson goals, the students' previous experience, and the students' performance (Harlen, 2000: 113). This means that FA is ipsative as well as criterion-referenced (Harlen, 2000: 113). An understanding of the development in relation to the goal is needed for this interpretation; therefore, knowing where pupils are in their learning is important to decide the following step (Harlen, 2006: 104). The teacher provides help and support, which is further enhanced by the students' peer- and self-assessment. This leads to activity B, which is a technique in which evidence of existing learning is fed back into the teaching and learning (Harlen, 2006: 104). This feedback serves as an aid to direct teaching so that learning goals are amended to ensure the maximum involvement of the pupils (Harlen, 2006: 104). This feedback is importantly for both parties, teachers and pupils, and is an integral part of teaching and learning (Harlen, 2006: 104). Harlen (2000: 114) argues that although the process in the figure is described as 'steps', in real life it needs to be understood as a whole, which might not all take place in one lesson. Harlen's clear description of FA, which was useful for the present research study, was employed by the researcher to explain the conception of FA to the Saudi student teachers.

Figure 3- 2: Formative assessment (adapted from Harlen, 2000: 112)



3.9 Elements of formative assessment

In order to better understand FA, it is vital to understand the elements of FA. Integrating FA into teaching and learning is one of the major goals of FA, and it is here that the elements are important. There are many elements of FA, which have been discussed by researchers. Some essential elements of FA are questioning, feedback through marking, and peer- and self-assessment (Black, Harrison, Lee, Marshall & Wiliam, 2002: 5; Clarke, 2001; Wiliam, 2007: 192). In addition to these above elements, clarifying outcomes to the students is another essential element of FA (Clarke, 2001:6-7; Wiliam, 2007: 192). Drawing on existing research studies, these elements, which will be discussed in detail below, were the elements introduced to the student teachers and observed by the researcher in this present study. It was these research findings which led the researcher to focus on these particular elements.

3.9.1 Integrating formative assessment into teaching and learning

Integrating FA into teaching and learning is the main idea of FA. Careful attention needs to be given when planning lessons in order to enhance students' learning (Black,

Harrison, Lee, Marshall and Wiliam, 2004: 18). Hence, Black et al. (2004: 19) argued for the need for better lesson planning before introducing new lessons. The aim of doing this is to help develop better teacher actions in the classroom (Black et al., 2004: 19). Classroom activities and questions need to be planned prior to class in order to enhance learning (Black et al., 2004: 19). On the other hand, Black et al. (2004: 19) argued that although different types of activities might be planned before teaching, putting plans into practice in order to serve the aims of the lesson might not be an easy task, as there is no certain method to follow when doing this. On the whole, Black et al. (2004: 19) suggested that developing good practices of FA could only be achieved by helping each teacher to find their own method of implementing the following elements of FA into their classroom activities:

- Sharing and clarifying outcomes and success criteria to students
- Questioning
- Feedback
- Peer-assessment and self-assessment
- Regular assessment day-by-day and minute-by-minute

3.9.2 Sharing and clarifying outcomes and success criteria to students

In order to provide a clear idea about sharing and clarifying outcomes and success criteria to students, it might be useful to discuss how this essential element could be conducted in an effective way, and how helpful it might be in promoting classroom learning. Sharing outcomes with the students is often the first element of FA that teachers put into practice (Clarke, 2001: 19). This important element needs to be used across all subjects, and in every lesson, otherwise students might think that some lessons or some subjects do not have any goals (Clarke, 2001: 19). Research studies have shown that there are many advantages to sharing outcomes. Both teachers and students might benefit from sharing these outcomes (Fautley & Savage, 2008: 47). This element raises students' motivation and helps students to make better decisions when handling a task (Clarke, 2001: 19). Clarifying learning outcomes may also help in improving the quality of a student's work (Clarke, 2001: 35). Moreover, when it is used, students are often more eager to learn and their behaviour improves (Clarke, 2001: 35). In addition to this, sharing learning outcomes helps teachers to concentrate on quality and focus on the intention of the lesson (Clarke, 2001: 36). Finally, sharing learning

outcomes helps teachers to be more critical and to choose appropriate activities and success criteria for the particular learners in their classroom (Clarke, 2001: 36).

The learning outcomes need to be visually available throughout the entire lesson to remind the students of the goals of the lesson (Fautley & Savage, 2008: 50). Hence, it might be helpful to write learning outcomes in a precise and direct way (Fautley & Savage, 2008: 50). Learning outcomes are shared with the students in order for them to understand what the teacher is looking for and hoping to achieve. While learning outcomes need to be written and visually available to all the students at the start of a lesson (Clarke, 2001: 23; Fautley & Savage, 2008: 50), it is important to note that sharing learning outcomes needs to be more than simply declaring what is written on the teacher's lesson plan (Clarke, 2001: 19; Fautley & Savage, 2008: 48). When displaying the learning outcomes, the language needs to be understandable (Clarke, 2001: 21; Fautley & Savage, 2008: 48). Moreover, in order to help students to understand the goals, teachers might want to discuss the learning outcomes with their students (Fautley & Savage, 2008: 50). The tasks must be related to the learning outcomes and feedback should focus on the learning outcomes (Clarke, 2001: 19). Sharing the learning outcomes might have a significant affect on students' understanding and improvement if they contain success criteria and are utilised by the students in their activities (Clarke, 2001: 20; Fautley & Savage, 2008: 50-51).

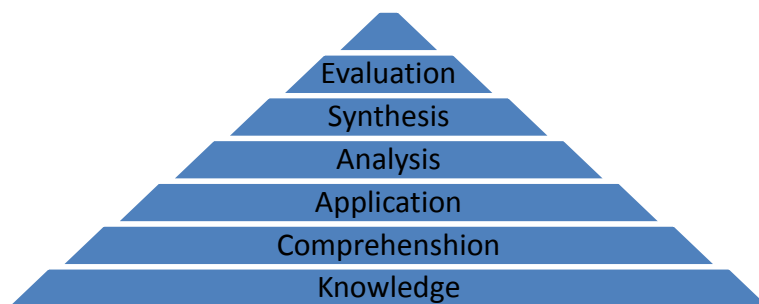
Success criteria also need to be visually displayed and available to the students (Clarke, 2001: 22). The aim of using success criteria is to help students to recognise how the teacher is going to judge their work and what he/she is looking for (Clarke, 2001: 22). Research studies have indicated that students need to be aware that outcomes are not all that teachers are looking for, but they want to understand how their students achieved certain goals (Fautley & Savage, 2008: 51). Thus, the most crucial step in sharing outcomes is providing success criteria, which might be helpful in showing students how to handle a task successfully. Therefore, careful planning is needed in order to get useful success criteria and good learning outcomes (Fautley & Savage, 2008: 47).

3.9.3 Questioning

The element of questioning is more than the teacher simply asking questions. There are many aspects surrounding questioning, such as the types of questions, forming questions, waiting time, "no hands up" strategy and providing a supportive climate (Black et al. 2003: 40-41). These aspects of questioning will be discussed below.

When framing questions, it might be helpful to describe the types of questions that are most commonly used. There are two major types of questions that teachers use in classrooms: open questions and closed questions (Briggs, Woodfield, Martin & Swatton, 2008: 23). Open questions ask for more extended explanations, while closed questions usually do not (Briggs et al., 2008: 23). Closed questions often require very brief answers (Briggs et al., 2008: 23). Both types of questions are important (Briggs et al., 2008: 23). Research studies have shown that while questioning takes up a large part of the lesson, most of these questions are closed (Fautley & Savage, 2008: 38). In order to offer pupils the opportunity for deeper discussions that provoke thinking, open questions need to be utilised more often in the classroom. There are many models which teachers can turn to in order to help them in designing questions. Bloom's landmark *Taxonomy of educational objectives of the cognitive domain*, which was first published in 1950, presented a categorisation of the different levels of thinking that could be useful to consider when forming questions (Fautley & Savage, 2008: 40).

Figure 3- 3: Bloom's Taxonomy (adapted from Fautley & Savage, 2008: 40)



From the bottom of the pyramid to the top, this classification represents a development of cognitive thinking (Fautley & Savage, 2008: 41). Evaluation, synthesis and analysis are mainly related to higher-order thinking, whereas knowledge, comprehension and application are related to lower-order thinking (Fautley & Savage, 2008: 41). When forming questions, teachers should first consider which category of thinking they want to foster. Classroom teachers should then decide what are the most suitable questioning methods to achieve that level of thinking (Fautley & Savage, 2008: 41).

Another essential aspect of questioning that teachers might want to consider is allowing pupils time to answer questions (Black et al., 2004: 11; Fautley & Savage, 2008:41). Results from Rowe's (1974: 81) study, which was conducted in elementary science classes in the US, showed that the mean time that teachers waited for a response after asking a question was less than one second. Rowe (1974: 81) found that when

teachers allowed more “wait time” when seeking a response, numerous advantages took place:

- Longer answers were given
- More suitable answers were offered
- Fewer pupils failed to respond
- More confidence in responses
- Different explanations were provided by pupils
- Pupils were able to add to their peers’ responses

The advantages of increasing “wait time” needs to be taken into consideration, as it might improve classroom environments and make them more productive places.

The third aspect in questioning is the “no hands up” strategy. This means that because the teacher calls upon students randomly, all pupils can expect to be asked questions at any time. Jones and Wiliam (2008) argued that giving pupils the chance to decide whether or not to raise their hand ‘increases the achievement gap between the lowest- and highest-achieving students’ (p. 6). Jones and Wiliam (2008: 11) suggested that choosing pupils to give answers at random has many benefits and it raises the level of class participation as a whole (Jones & Wiliam, 2008: 11). Moreover, implementing the “no hands up” strategy might help to involve students who suffer from lack of confidence (Jones & Wiliam, 2008: 6). Because pupils need to give a response even if they do not know (Black et al. 2003: 40), this often gives students the opportunity to share knowledge which they might not have been aware that they possessed. Also, Jones and Wiliam (2008) have pointed out that it helps to provide the teacher with a better idea of the class’s development, as answers which are taken randomly are ‘likely to be more representative’ (p. 11).

While this strategy may appear to be straightforward, its implementation can be problematic (Jones & Wiliam, 2008: 7). First, many teachers often tend to choose students who are able to provide the right answer, so that they can quickly move on with their teaching (Jones & Wiliam, 2008: 7). Some teachers have solved this problem by writing the names of their pupils on lollipop sticks or cards and choosing them randomly (Jones & Wiliam, 2008: 7). Second, pupil feedback has shown that the “no hands up” strategy is often a shock to the student, which they find stressful (Jones & Wiliam, 2008: 7). Jones and Wiliam (2008) have suggested that this issue might be

alleviated if, for example, the teacher allows pupils who are chosen to use certain options when answering: “phone a friend”, “ask the audience” or ‘go “50-50”’ (p. 7).

The last aspect of questioning is providing a supportive climate. This means that students should not be afraid to give wrong answers (Black et al., 2003: 40). Providing a supportive climate has many positive effects on learning. In Black et al.’s (2003: 40) study, one of the teachers explained that this aspect of questioning helped her pupils to feel less anxious about giving incorrect responses. This teacher also added that her pupils recognised that incorrect answers might be as helpful as the correct answers, as these can be discussed and often provide learning opportunities (Black et al., 2003: 40).

3.9.4 Feedback

Feedback is one of the major elements of FA. According to Sadler (1989), feedback ‘is usually defined in terms of information about how successfully something has been or is being done’ (p. 120). Sadler (1989: 121) argued that there are three features of useful feedback: first, students need to know the aim behind doing a certain task; second they need to be aware of the extent to which they have achieved those aims; and finally, they need to understand what actions to take in future lessons and activities to improve. Feedback includes oral and written comments to students (Black et al., 2002: 8). Teachers need to pay attention to the nature of the comments more than the amount of comments (Black et al., 2002: 8). They need to advise students on how to enhance their learning, and avoid comparing them with others (Black & Wiliam, 1998a: 9).

Black et al. (2002: 1) have argued that grades usually have a negative impact, especially on less successful students who may have been led to think that their lack of ability was the reason behind their poor success. Butler (as cited in Black & Wiliam, 1998b: 12-13) conducted a research study on forty-eight 11-year-old Israeli students. Butler (as cited in Black & Wiliam, 1998b: 12-13) divided these students into three groups in which the first group was given comments only, the second group was given grades only, and the third group was given grades and comments. The results from Butler’s study (as cited in Black & Wiliam, 1998b: 12-13) showed that the scores of the group that received comments only increased between the first and the second session and remained at the same higher level for the last session; the scores of the group that received grades only decreased between the first session and the third session; finally, the scores of the group that received comments and grades showed a significant decrease across the three sessions. Butler (as cited in Black et al., 2002: 8) suggested

that grades might impact students' progress negatively because many students might ignore and even fail to read the comments when they see the grade.

According to Hounsell (2007a), successful feedback can develop learning in three substantial ways:

- by *accelerating learning*, i.e., speeding up what can be learned by the students within a given period of time, and so enabling learning to take place more rapidly, or in greater depth or scope, than would otherwise be the case;
- by *optimizing the quality of what is learned*, i.e., helping to ensure that the learning outcomes achieved and evinced by the students meet the standards hoped for or required;
- by *raising individual and collective attainment*, through enabling the students to attain standards or levels of achievement higher than those which they might otherwise have reached, i.e., without recourse to the scaffolding afforded by feedback. (p. 101)

Feedback is central to the learning process, and when handled effectively it can be one of the most powerful ways to enhance student learning. However, the role of feedback in learning has received a great deal of attention, because the conditions under which it is effective are tremendously complex (Butler & Winne, 1995: 254). Much feedback in higher education comes too late for students to be able to make significant use of it. In a survey conducted in Britain by Hounsell et al. (2005: 7), the results indicated that students' concerns about guidance and feedback ranged from the consistency and helpfulness of teachers' comments, to the timing and frequency of feedback, to the adequacy of guidance about assessment expectations and criteria. Hodgson and Bermingham's (2004) report on law students and their perceptions of feedback also found that the students perceived that feedback was generally inconsistent in quality and timeliness.

Another interesting effect of feedback was discussed by Hattie and Timperley (2007: 102), who found that feedback, when it comes in the shape of praise, has a negative effect. As Hattie and Timperley (2007: 102-103) argued, praise makes pupils afraid of failure, and rather than putting in more effort, they avoid the risk of dealing with challenging tasks which may only lead to failure.

Researchers have attempted to find a way to make feedback more effective. For example, Gibbs and Simpson (2004) provided eleven conditions that might help in applying effective feedback. However, they (2004: 17) importantly pointed out that

there is no universal rule for effective feedback, but providing feedback is always dependent upon the type of subject that is being taught. As research has shown, however, focusing on effective feedback might be more productive in raising students' attainment than other classroom practices.

3.9.5 Peer-assessment and self-assessment

Peer-assessment is usually seen by many researchers as a complementary element to self-assessment (Black et al., 2004). Both elements, however, are essential in FA, and peer-assessment is, on its own, an essential aspect of FA. Noonan and Duncan (2005) suggested that although there have been many definitions of peer-assessment, researchers usually define this as 'one student's assessment of the performance or success of another student' (p. 2). Within peer-assessment, students benefit from peer-feedback and peer-learning as well (Falchikov, 1995: 175). This essential element of FA has many advantages. It might help the students to be independent (Clarke, 2001: 39). Black et al. (2003: 51) argued that when students take on the role of the teacher and mark each other's work, their learning can improve. Peer discussions, also part of peer-assessment, can be helpful as responses come from a group to the teacher, and this usually helps to build strong communication between the students and the teacher (Black et al., 2003: 50). Another advantage of peer discussions is that students usually accept comments from one another more readily than from their teachers (Black et al., 2003: 50). Hence, peer-assessment might help in raising students' motivation to pay more attention to their work (Black et al., 2003: 50). It might also help them to raise their self-esteem and control their own learning (Clarke, 2001: 44).

However, implementing peer-assessment to enhance students' learning might not be an easy strategy. Black et al. (2003: 52) argued that peer-assessment might only work if students develop the necessary skills. This might prove difficult as many students may need guidance on how to act in a group-work setting (Black et al., 2003: 52), and all the students will need to develop habits of listening to others and taking turns (Black et al., 2003: 50). Hence, Black et al. (2003: 52) found that teachers need to teach their students how to work together as a group and how to cooperate with each other in order to benefit from peer-assessment.

Self-assessment is also an essential component of FA, and it should not be seen as merely an extra thing to do (Black & Wiliam, 2001: 7). Boud (1991) defined self-assessment as

the involvement of students in identifying standards and/or criteria to apply to their work and making judgments about the extent to which they met these criteria and standards. (p. 5)

Boud (1991: 15) argued that self-assessment involves students judging themselves and their performance relying on evidence from themselves and other people. The evaluation that they make needs to be about what they have achieved, what they need to achieve, and how they can achieve it (Boud, 1991: 15). Thus, it is only through clear goals that students might be able to assess themselves (Black & Wiliam, 2001: 7). Black and Wiliam (2001: 7) suggested that one of the main problems of self-assessment was that students often did not have a clear idea about the learning targets and therefore they failed to evaluate themselves. They (2001: 7) suggested that students needed to be trained to use self-assessment in order to be able to comprehend the aims of their learning and how to achieve those aims. Andrade (2011: 12) suggested that even primary school children are able to recognise the quality of their work, and if they do not, it is possibly because one or more of the features of self-assessment have not been applied. Andrade (2011: 12) pointed out that successful self-assessment often takes place when:

- Pupils are aware of the importance of self-assessment.
- Pupils have access to clear success criteria — this can often be met by providing a rubric.
- Pupils are provided with a certain assignment or performance to assess.
- Pupils are provided with examples of self-assessment.
- Pupils are provided with clear explanations and help regarding self-assessment.
- Pupils are trained to assess themselves.
- Pupils are provided with clues regarding when it is suitable to assess themselves.
- Pupils are provided with the chance to revise and develop their assignments.

Self-assessment might be useful for the teacher and the learner (Clarke, 2001: 44). Clarke (2001: 44) showed that research studies have indicated that self-assessment helps to raise students' self-esteem. Self-assessment also helps students to be independent learners (Black et al, 2003: 53). Clarke (2001: 44) found that students enjoyed implementing self-assessment, as it helped them to discover what thoughts and problems their classmates shared. Teachers also indicated that self-assessment helped

them to know what the students' needs were, and self-assessment helped these teachers to develop better lesson plans to meet those needs (Clarke, 2001: 46). All in all, peer-assessment and self-assessment are both essential aspects of FA. Peer-assessment and self-assessment are connected to each other and can benefit both the teacher and the learner.

3.9.6 Day-by-day and minute-by-minute

Many researchers such as Haydn (2005: 315) and Wiliam (2007: 200-201) have suggested that minute-by-minute and day-by-day assessment might be the most essential aspect of FA because it helps to raise students' attainment. Research studies have found that this approach might be more cost effective than any other strategy, such as reducing class size, in raising achievement (Wiliam, 2007: 184). Teachers need to assess students regularly and many times during a class in order to know what their pupils have learned (Wiliam, 2007: 184). It is only through this information that teachers might be able to make adjustments to their teaching (Wiliam, 2007: 184). These changes need to be made during the lesson or before students arrive to class the next day, otherwise it might be too late (Wiliam, 2007: 184). Thus, assessing students at the end of a chapter or a term might not have a major impact on their achievement (Wiliam, 2007: 184). Assessing students minute-by-minute and day-by-day needs to be conducted using the five elements, which have been discussed above: clarifying learning outcomes, questioning, feedback, peer-assessment and self-assessment. These elements are essential aspects of FA, and they are strongly related to each other. In order to raise students' achievement, these strategies need to be practised effectively.

As mentioned above, the researcher's understanding of FA's elements developed from these previous studies, which have been discussed here, and it was this understanding of the elements of FA that was provided to the student teachers. Moreover, the researcher's observation schedule was primarily interested in how the student teachers implemented these elements during their school placement. The fifth and six research questions partially developed here, as these questions are concerned with the student teachers' perceptions of actually implementing FA: v) what are the challenges that the student teachers faced when applying FA? and vi) do the student teachers think that FA should be implemented and why? What elements did the student teachers perceive as problematic, and what elements did they perceive as particularly useful and important, were driving concerns behind these questions.

3.10 Formative assessment and theories of learning

Assessment is strongly associated with learning. FA is described above as mainly concerned with promoting pupils' learning by using different strategies, especially feedback. It is heavily associated with pupils' learning, which is promoted through an interaction between student and teacher. Therefore, although it is essential to discuss the empirical evidence of FA brought up mainly by Black and Wiliam (1998a), it is also important to discuss, as it is important background to this study, the theoretical aspects of FA and learning. Most FA approaches seem to be situated under two main views: behaviourist and constructivist (James, 2013: 84; Torrance & Pryor, 1998: 14). These two main perspectives will be discussed below.

3.10.1 Behaviourist view and formative assessment

Earlier perspectives of learning were more related to behavioural theory (Shepard, 2000a: 4; Torrance and Pryor, 1998: 13). James (2013: 84) and Torrance and Pryor (1998: 14) pointed out that behaviourist approaches help to master learning because they encourage the teacher to specify the objectives and the criteria, which are achievable. Skinner, who was instrumental in developing the behaviourist theory, (as cited in Shepard, 2000a: 5) argued that learning takes place when teachers gradually introduce complex and broad knowledge, and when they assess pupils after introducing each new part of knowledge to make sure that the introduced knowledge, although small, is mastered before moving on to explain the next point. Torrance and Pryor (1998: 15) pointed out that behaviourists see learning as a linear process, as pupils need to master "A" before introducing "B". Hence, it might be useful in some subjects, such as maths, rather than other subjects, such as geography (Lambert and Lines, 2000: 129). This type of learning is often related to grades (James 2013: 45; Torrance and Pryor, 1998: 15). Lambert and Lines (2000: 129) described this approach by highlighting two of its features: it is about displaying the learning objectives and success criteria explicitly, while making sure that the pupils understood them; it also involves discussing the test results with the pupils and providing them with feedback, which reflects their strengths, weaknesses and how they overcome their difficulties. James (2013) argues that the behaviourist approach is based on 'stimulus, response and reinforcement' (p. 85). The behaviourist approach helps the teacher to know what pupils have acknowledged, and feedback is often offered to reflect what was achieved, while also helping to close the gap as its emphasis is on practice and instant reinforcement (James, 2013: 85). While this approach helps to reinforce knowledge, Lambert and

Lines (2000: 129) have argued that the behaviourist approach is not concerned with pupil-teacher interaction.

As the behaviourists see learning as a step-by-step process, which builds on the pupils' knowledge, this approach has often been criticised because it neglects cognitive skills, which view learning as a social process (Torrance and Pryor, 1998: 15). Researchers (see, for example, Black and Wiliam, 1998b: 32; James, 2013: 85-86; James & Pedder 2006b: 32, Shepard, 2000a; Shepard, 2000b, Torrance and Pryor 1998: 15) have argued that learning better takes place in a constructivist classroom environment, as these environments encourage learners to be active. This type of approach will be discussed below.

3.10.2 Constructivist view and formative assessment

Torrance and Pryor (1998: 15) described the constructivist perspective of FA as an aspiring approach because it considers the interaction between the teacher and the pupil in the learning process. Torrance and Pryor (1998: 15) explained that in this approach the interaction between teachers and learners means that teachers help the learners to understand new ideas, rather than just discussing the pupils' assessment results. Black (2001: 14) suggested that the constructivist approach helps learners to be active in analysing knowledge. James (2013) compares the two approaches:

From a constructivist perspective, formative assessment is viewed rather differently. It focuses not so much on behaviour as on cognition (thought), generated in a social context. In particular it is interested in promoting *learning with understanding*, which is actively understood and internalised by the learner. (p. 85)

Cognitive theory is when a pupil links the information which is provided with prior information already present in his/her mind, in order to make sense of the knowledge which they have been given; recognising these links is dependent upon how active the pupil is in making these links and how familiar he/she is with the introduced knowledge (James, 2013: 85). The constructivist approach importantly treats learners as individuals who are trying to make sense of the knowledge that has been introduced to them (Hall & Burke, 2004: 5). In this approach, understanding is the process of building and rebuilding knowledge, because a constructivist approach supports the learners and helps them to make sense of what they already know (James, 2013: 85). It is essential that

teachers try to know how their pupils relate new information to ideas which are already present in their minds (James, 2013: 85). Lambert and Lines (2000: 130) described the different characteristics of the constructivist approach: it helps pupils to comprehend new knowledge, it refines old ideas, and it ought to have feedback, which should include feed-forward notions. Feed-forward notions focus not only on what pupils have achieved, but what they might achieve (Torrance and Pryor, 1998: 15).

Vygotsky (1978) argued that to teach in the 'zone of proximal development' (ZPD) (p. 86) means that it is important to know not just where pupils are in their learning, but also what they might be able to achieve with the help of an instructor or a peer. The constructivist approach emphasises teacher-pupil interaction, a collaborative model where the teacher works as the facilitator of the learning process (Torrance and Pryor, 1998: 15). This approach needs time in order to be applied successfully and, because of this, it might be difficult to apply in modern educational systems, which emphasise immediacy and results (James, 2013: 86). Lambert and Lines (2000: 130) argued that adopting the constructivist perspective should not mean avoiding the use of other approaches, such as the behaviourist approach. In order to be able to apply FA successfully, both approaches are important (Lambert and Lines, 2000: 130).

The above suggests that a constructivist rather than a behaviourist approach is appropriate for the current research project. Although it is not possible, given the limited space of this thesis, to develop a full discussion about the authors who have been influential to this study, it might be worthwhile to refer briefly and rather generally to three key figures by way of a conclusion to the reflections on the nature of constructivism and its relevance to the present research. In the context of ideas about learning developed by Piaget, Bruner and Vygotsky, the researcher was able to reflect on the nature of constructivism. Piaget broadly has allowed for reflection on the stages and levels of learning that are possible; Bruner's conceptual focus has influenced the researcher's thinking in relation to the quality of learning and the possibility that students have to learn about the fundamental building blocks of a subject or approach; and the work of Vygotsky has helped the researcher to reflect on the processes that are associated with formative assessment in the drive towards the achievement of higher standards.

3.11 Formative assessment in foreign/second language classrooms

The present research study was conducted in language classrooms, and therefore it is important to consider what research studies have suggested about FA and second

language classrooms. Meskill (2010) argued that in many of the foreign or second language (L2) classrooms around the world, assessment is conducted as ‘a continuous, ongoing formative assessment of the linguistic development of each of their English language learners’ (p. 198). Jones and Wiliam (2008: 1-2) argued that although FA strategies — sharing the learning outcomes, questioning, feedback, peer- and self-assessment — work as well in L2 classrooms as they do in other subjects, such as mathematics or science, learning in an L2 classroom is different from learning in other school subjects’ classrooms. Meskill (2010) explained that learning another language is a complicated matter and it depends on the ‘linguistic, cultural, educational, and familial backgrounds’ (p. 198).

Miskell (2010: 198) argues that the ongoingness of FA, with its focus on individual development, is essential in L2 classrooms in order to determine which instructional decisions would be useful to enhance learning. In their research pertaining to year 9 pupils in L2 classrooms, Lee, Buckland and Shaw (1998: 3-4) suggested that pupils in these classrooms do not know what they are suppose to achieve and they are not sure what learning a language actually means. As Jones and Wiliam (2008: 3) later suggested, sharing the learning outcomes and success criteria with the pupils in a clear way, and making sure that they understood these outcomes and criteria, will help to guide the pupils through the learning process, while also building independent learners, which is a fundamental goal of language learning. In addition to this, Mercer, Dawesb, Wegerifa and Samsa (2004: 359) concluded that classroom discussions and pupils’ interaction have a positive effect on pupils’ understanding and reasoning. This interaction and discussion might be difficult for the learners in an L2 classroom (Ur, 1996: 121). Moreover, while pupils might use their mother tongue to engage in a useful discussion about certain topics, this is not the end goal of an L2 classroom. Cook (2001: 402) suggested that using one’s mother tongue on some occasions could help learners to develop their understanding of the target language. Jones and Wiliam (2008: 4) supported Cook’s view, but they also emphasised that most L2 teaching needs to be in the target language.

Feedback is also considered to be an important principle in L2 classes. Educators have conducted research studies to find out what types of comments are the most effective in these classes. The most used type of written feedback in L2 writing classes has been about error correction (Srichanyachon, 2012: 8). Truscott (1996: 327) argued that error correction could damage learners’ fluency and their overall writing quality and should be abandoned. He argued that L2 teachers need to adopt a

‘correction-free approach’ in their courses. This approach, suggested by Truscott (1996: 327), has been rebutted by other researchers, who argued that learners benefit from error correction feedback. For example, Ferris and Roberts (2001) conducted a research study to examine the effects of teacher feedback amongst university L2 learners. Three kinds of feedback were provided: errors marked with codes, errors underlined with no codes, and no error feedback at all. They found that both groups provided with error feedback significantly outperformed the no error feedback control group.

Ferris and Roberts (2001: 163-164) also explained that feedback, and especially written feedback, could be provided in direct and indirect ways in L2 classrooms: direct feedback means that the teacher directly corrects the pupils’ mistakes by providing the correct grammar or words; indirect feedback means that the teacher does not provide a direct correction, but they point out that an error occurred and then leave it to the pupil to correct the mistake. Educators have argued that indirect feedback is more helpful than the direct feedback because it helps pupils to be active learners and encourages problem-solving (Ferris & Roberts, 2001: 163-164). Findings from research studies (such as Ferris, 2006: 98; Lalande, 1982: 140) showed that indirect feedback was more useful in enhancing the pupils’ accuracy over time. There are very few studies which are concerned with learners’ preferences for certain types of feedback; however, previous studies (such as Ferris, 1995: 33; Ferris & Roberts, 2001: 177; Hedgcock & Lefkowitz, 1994: 150) have suggested that learners were in favour of obtaining teacher feedback, rather than obtaining no feedback. In some studies, such as Ferris and Roberts (2001: 177), learners indicated that they preferred indirect feedback with errors being either marked and coded or marked as incorrect, but not corrected.

Research studies of peer-assessment have showed that it was used in a range of ways in L2 classrooms (Cheng & Warren, 2005: 94). Many research studies valued the use of peer-assessment in L2 classrooms, especially when used to improve the learners’ writing skills (see, for example, Caulk, 1994; Jones, 1995; Mangelsdorf, 1992; Mendonca & Johnson, 1994; Villamil & De Guerrero, 1996). There are, however, fewer studies on peer-assessment and oral skills. Research studies, which have been done in this area, such as Mitchell and Bakewell’s (1995: 364) study, reported significant enhancement in performance when peer-assessment took place and when oral presentation skills were being used.

Some studies, such as Topping’s (1998), compared teacher-assessment and peer-assessment of writings skills in L2 classrooms. Topping (1998) argued that, when used to assess writing, peer-assessment appeared ‘capable of yielding outcomes at least as

good as teacher assessment and sometimes better' (p. 262). Other studies focused on the learners' attitudes towards peer-assessment. Roskams (1999) reported that peer-assessment was preferred by most L2 learners. However, students were skeptical about how accurate peer-assessment was if it was used as an instrument for assessing students, while they accepted it if it was used as a way of learning. Studies, such as Newkirk's (1984: 309-310) and Jacobs's (1987) suggested that teachers need to prepare their students for peer-assessment. This shows that although learners feel that peer-assessment is helpful, they need time to develop the necessary skills.

All of these studies, discussed above, indicate what researchers have suggested is of value when it comes to implementing FA elements in L2 classrooms. These previous studies have focused on learners' perceptions and preferences. The second and the six research questions partially developed here, as they are interested in the student teachers' perceptions of the value of FA practices: ii) do the student teachers think that FA can help school students to make progress? and vi) do the student teachers think that FA should be implemented and why?

3.12 Advantages of FA and its current state in UK schools

As discussed above, there are many advantages of FA. Askham (1997) has argued that FA is ongoing and that it 'helps to promote deep learning' (p. 301). Black and Wiliam (2001) have drawn attention to the fact that FA is an 'essential feature of classroom work and that development of it can raise standards' (p. 13). They (2001: 3) argued that developing FA practices could raise students' test scores, with low attainers benefiting the most from its use. They (2001) also claimed that FA 'would raise England from the middle of the 41 countries involved to being one of the top 5' (p. 3). Moreover, research studies conducted by the OECD on implementing FA in various schools in eight educational systems (Australia, Canada, Denmark, England, Finland, Italy, New Zealand and Scotland) revealed many positive results (OECD, 2005a). FA helped to raise students' performance, and it allowed teachers to focus on the needs of low attainers (OECD, 2005a: 69; Sliwka, Fushell, Gauthier & Johnson 2005: 114). Teachers indicated that FA helped them to save time (OECD, 2005a: 69). The practice of FA promoted equity of treatment amongst students (Voogt & Kasurinen, 2005: 162). It also assisted in improving the relationship between students and teachers (Looney & Wiliam, 2005: 142). When the teachers in these studies integrated FA into their classroom practices, a supportive classroom climate developed, which encouraged students to be involved in classroom interactions without being afraid of making

mistakes (OECD, 2005a: 47). In these research studies, pupils focused on making progress rather than competing with their colleagues (OECD, 2005a: 47). They became more independent learners (OECD, 2005a: 72). Mischo and Rheinberg (as cited by OECD, 2005a: 48) have also suggested other advantages of implementing FA, such as intrinsic motivation and self-esteem. Finally, FA encouraged teachers to evaluate their teaching methods and to use practices which worked well, while abandoning those that did not (OECD, 2005a: 72).

FA, which is also known as assessment for learning, has been adopted by many developed and developing countries around the world. In the UK, teachers are encouraged to practise this type of assessment: part of the UK National Strategies are to support teachers as they develop FA practices in their classrooms. The educational systems in many other countries, including the US, are also turning their focus to FA (Bennett, 2009). Yet despite this, FA is still not being implemented properly in schools (Gadsby, 2012: 5). The Ofsted Annual Report (2010) showed that the use of assessment to support learning in many UK secondary schools was mainly satisfactory, which is second lowest ranking, with only inadequate below it. These findings raise questions about why FA is not being effectively implemented in schools, and what difficulties or barriers might be present. Wiliam (2009: 17) suggested that while many teachers had sufficient knowledge about FA, they did not know how to apply that knowledge in the classroom. According to Gadsby (2012: 13), the complexity of FA's terminology might provide a reason behind the problems and difficulties that arise when implementing FA.

3.13 Issues of practising formative assessment

Black et al. (2003) have highlighted some issues that could surround the practice of FA: these are 'teacher change, students' perspectives and the central concept of feedback' (p. 13). Hence, in order to improve the use of FA in classrooms, major changes need to be made amongst teachers. These changes need to be in both the teachers' point of view and the part that they play towards their students and their classroom routine (Black et al., 2003: 13). In other words, teachers must change their way of thinking about teaching and learning, and they must embed these changes in their daily routines and practices.

Feedback can also be an issue when implementing FA. Tunstall and Gipps (as cited in Black et al. 2003: 13) argued that many students might not be able to identify comments as advice, which is meant to help them to close the gap between what they have learned and what they can achieve. Moreover, some students might misunderstand

what the teacher wants to convey to them and, as a result, they do not benefit from the formative feedback.

Two additional problems have been suggested by many secondary schoolteachers who highly approve of the idea of FA (OECD, 2005a: 69). These secondary schoolteachers' main concerns were class size and curriculum requirements (OECD, 2005a: 69). Another issue was that FA was perceived as a time-consuming process (Carmona, Stroup & Davis, 2006; Hunt & Pellegrino, 2002: 75; Neesom, 2000: 5-6). Teachers need to evaluate and diagnose students' individual difficulties and needs, whilst also responding to them (Hunt & Pellegrino, 2002: 75) and this is often very difficult to do. The present research study's fifth research question partially developed here, as the student teachers' perceptions of the challenges and issues that they faced when applying FA might be useful in developing better practice and better training programmes. Moreover, do Saudi student teachers' perceptions of the challenges and issues surrounding the implementation of FA confirm or contradict previous studies.

3.14 Critiques of FA

Not all researchers agree that FA and dialogic learning are necessarily the best way to facilitate and promote learning. Christodoulou's recent book, *Seven Myths about Education* (2014) advocates a return to traditional instruction, rote learning and testing. A research study conducted by Smith and Gorard (2005) argued that FA does not have a positive impact on pupils' achievement. Smith and Gorard (2005) found that pupils who were provided with formative feedback, which contained comments but no marks, did not perform any better than students who received marks. Black, Harrison, Hodgen, Marshall and Wiliam (2005a: 14) questioned Smith and Gorard's (2005) findings, arguing that their study did not offer any evidence that FA took place or that it was even promoted in their study. As Black et al. (2005a) pointed out: 'by the authors own admission, there has been no formative assessment involved' (p. 14).

Even when FA is utilised, it might not be the sole factor involved in raising achievement. In her review, Elwood (2006: 227) criticised FA, arguing that FA is not the only means to raise students' scores. Elwood (2006) argued that

research warns us that such gain scores must always be discussed within margins of measurement error, that they are likely to fluctuate in the long term, will be susceptible to other influences and that the 'cause and effect' of rising scores cannot be placed on formative assessment methods alone. (p. 227).

Similarly, Dunn and Mulvenon (2009) pointed out that although many research studies have argued that FA has a positive impact on pupils' performance, there is limited empirical evidence to support these findings. They (2009: 9) suggested that research studies need to conduct their research using better-organised methodologies and projects in order to obtain more definite findings.

Other researchers, such as Bennett (2011), have argued that while FA is a promising approach, there are aspects of it which need to be improved. Bennett (2011) critically examined six issues related to FA, which he argued must be addressed in order to move 'this promising concept forward' (p. 5): 'the definitional issue, the effectiveness issue, the domain dependency issue, the measurement issue, the professional development issue, and the system issue' (p. 5). Bennett (2011: 5) explained that the meaning behind the term FA and how it should be implemented and practised is still ambiguous. Bennett (2011) also argued that statistics regarding the effect size of FA ranging between 0.4 and 0.7 might not be very sensible because some of these findings are derived from 'untraceable, flawed, dated, or unpublished sources' (p. 5). Bennett (2011) further argued that in order to be able to recognise the value of FA, researchers need to focus on 'conceptualising well-specified approaches built around process and methodology rooted within specific content domain' (p. 5). He (2011: 5) added that these conceptualisations need to consider the basic principles, which allow tutors and learners to realise the nature of assessment. Bennett (2011) suggested that 'time and professional support [are] needed if the vast majority of teachers are to become proficient users of formative assessment' (p. 5). Finally, Bennett (2011) emphasised that in order to obtain a maximum benefit, FA needs to be 'conceptualised as part of a comprehensive system in which all components work together to facilitate learning' (p. 5). Bennett (2011) concluded that FA, like many other educational developments

is both conceptually and practically still a work-in-progress. That fact means we need to be more sensible in our claims about it, as well as in our expectations for it. That fact also means we must continue the hard work needed to realise its considerable promise. (p. 21)

Even strong proponents of FA, like Black and Wiliam, have acknowledged that FA might not always be the best means to promote student achievement. As Black, Harrison, Hodgen, Marshall and Wiliam (2005b) were careful to note:

We do not claim that formative assessment leads to improved student achievement in *all* classes, with *all* teachers on *all* occasions. [...] Our claim is that formative assessment *in general* is an effective intervention, although we do not underestimate the difficulties in translating the theory into practice. (p. 7)

All of these critiques of FA show how different researchers have perceived FA's effectiveness and usefulness. These debates demonstrate that, like many other educational reforms, more attention from researchers is needed if FA is to reach its maximum benefit. The present research study aims to contribute to this end by exploring Saudi student teachers' perceptions of FA.

3.15 Perceptions of formative assessment

The following sections will examine the literature which has discussed perceptions of FA. This study relies upon the definition of perception, as defined by Neisser (as cited in Hayes, 2000): 'an active cycle of cognitive activities which are directly concerned with making sense out of experience' (p. 59). Perceptions are cyclic because they are 'directed by what we expect to find as well as what we have already found' (p. 59). Neisser (as cited in Hayes, 2000) explained that 'the perceiver actively explores the perceptual world, picking up relevant information and ignoring that which is unimportant' (p. 59). In the current research study, the researcher anticipated that the student teachers' perceptions of FA would be effected by their experiences of implementing it during their school placements. Hence, the research questions were designed to engage with their evolving perceptions. That is, the first research question was interested in the student teachers' initial perceptions of assessment and FA, while later research questions sought to explore the student teachers' perceptions of FA after their implementation of FA strategies.

3.15.1 Teachers' perceptions of assessment and formative assessment in particular

Torrance and Pryor (1998: 21) conducted a study to obtain teachers' perceptions of assessment. Their (1998: 21) aim was to know how teachers perceived assessment, how they tended to practise assessment in classrooms and how they used that data further. The results from their study showed that the teachers described assessment as a practice that is separate from teaching, and as an activity that is done to obtain data, which is then provided to other people, rather than information used by the teacher or the learners. Assessment was perceived as a practice that has negative effects, rather than

positive effects, on the learners (Torrance & Pryor, 1998: 43). It is worthwhile to note that, even after FA was promoted in the UK post-1988 (Gipps, McCallum, Hargreaves & Pickering, 2006: 48), ten years later, teachers were still describing assessment summatively.

A study conducted in 2000 by the England Qualifications and Curriculum Development Agency (QCA) focused on teachers' perceptions of FA. In this study, Neesom (2000), on behalf of the QCA, examined teachers' perceptions of FA through a questionnaire. Neesom investigated what features of FA teachers perceived as valuable; how frequently it was applied in the classroom; and how supportive the administrative staff were regarding the implementation of FA. Neesom (2000: 4) reported that the teachers in the study perceived FA to have numerous benefits in relation to learning; FA was perceived as a basic factor in improving the quality of teaching and learning. In relation to teachers, FA was perceived to help teachers to know the difficulties that pupils faced; it fostered teamwork; and it helped to check pupils' progress. In relation to pupils, they perceived that FA helped students to become independent learners, as it was perceived to raise their self-confidence and motivation (Neesom, 2000: 4). Most teachers, however, were not sure about the differences between FA and summative assessment (Neesom, 2000: 4). Many teachers perceived FA as something extra to do, rather than an integral part of teaching and learning (Neesom, 2000: 4). Moreover, the teachers in the study perceived FA as time consuming, and they also perceived that the number of pupils in the classroom could be a problem (Neesom, 2000: 5-6). According to this study, the teachers also perceived that parents did not seem to be sure about how to interpret FA information that they received about their child's progress (Neesom, 2000: 6). Finally, the teachers felt that FA training is necessary for better practice and understanding (Neesom, 2000: 7). This relates to James and Pedder (2006b: 28), who argued that a fundamental change in teachers' perceptions about classroom assessment and the nature of teaching and learning is important in order to be able to implement FA effectively. Thus, developing better teacher-training programmes is vital to improving the implementation of FA.

A more recent study conducted by Sach (2012) investigated teachers' perceptions of FA in order to explore the ways in which FA helps to raise pupils' performance. Using quantitative and qualitative methods to conduct the study, Sach (2012: 261) suggested that teachers perceived FA to be helpful in enhancing pupils' learning. However, Sach (2012: 261) reported that in relation to FA, 'teachers were less confident than they claimed to be in putting actual strategies in place' (p. 261). The

findings also revealed that the teachers' perceptions were affected by the year group that they were teaching (Sach, 2012: 268). Sach (2012: 268) further found that the years of teaching experience held by each teacher also affected their perceptions of FA: 'teachers with over 20 years of experience had the highest overall ranking in relation to this perception statement ['all children can make progress in learning'] and teachers with 0–3 years of experience had the lowest' (p. 268).

These studies show the importance of obtaining the teachers' perceptions of assessment and FA in particular. These perceptions are essential if we are serious about developing classroom assessment practices. Moreover, teachers' perceptions regarding assessment and FA might be useful in formulating better teacher-training programmes that addresses teachers' as well as student teachers' needs. As Bennett (2011: 5) argued, it is essential to invest time and support to help teachers to develop better practices of FA and to enable FA to be 'conceptualised as part of a comprehensive system in which all components work together to facilitate learning' (p. 5). In order to do this, it is crucial that we think formatively. Obtaining teachers' perceptions regarding assessment and FA are data which might be useful in starting this process of development.

3.16 Research studies about student teachers' perceptions of FA

The researcher used the words: perceptions, conceptions, views, understanding, value, student teachers, trainee teachers, preservice/pre-service teachers, formative assessment and assessment for learning to search for previous studies which have been conducted to explore student teachers' perceptions of FA. The results from this search found over one hundred studies that were conducted with student teachers and related to assessment. The researcher considered all of the studies that were interested in how student teachers' perceive FA as a learning tool in the classroom. Twenty-seven of the one hundred studies were relevant. As the researcher was interested in student teachers' perceptions of FA, studies which did not consider FA were excluded. Studies that were related to student teachers' perceptions of assessment as a whole in specific subjects, which did not include English, were excluded. Studies that focused on preparing teachers, rather than eliciting their perceptions about FA were excluded as well (Otero, 2006; Carmona, Stroup & Davis, 2006; Morrison, 2005). Studies that examined the gap between how student teachers are trained regarding assessment and the policy aim of teachers' implementation of FA in schools were also excluded (Mitchell, 2006).

There were seven studies which focused, to some degree, on student teachers and FA. Two of these seven studies were mainly about student teachers' conceptions

and understandings of FA (Keen, 2005; Taber, Riga, Brindley, Winterbottom, Finney & Fisher, 2011) and these will be discussed in detail below. The five remaining studies, which will also be discussed below, were related to student teachers' perceptions of FA in a more indirect way: three of them were related to student teachers' practices of FA (Brandom, Carmichael & Marshall, 2005; Cowan, 2009; Luttenegger, 2009); and two were related to student teachers' perceptions and practices of assessment, which included FA (Eren, 2010; Winterbottom et al., 2008).

Eren's (2010) and Winterbottom et al.'s (2008) research studies were conducted to find out what classroom assessment practices were valued by student teachers, and to what extent their teaching made use of these values. Both of these studies were interested in the gap between value and practice. In particular, they explored student teachers' perceptions about FA as well as summative assessment. Both studies investigated how student teachers valued both types of assessment, and which of these types of assessment they practised most frequently in their classrooms.

Both Eren (2010) and Winterbottom et al. (2008) relied upon James and Pedder's (2006a) study on teachers' perceptions of assessment. Eren (2010) and Winterbottom et al. (2008) made use of James and Pedder's (2006a) survey, which divided teachers' perceptions of assessment into three components: 'making learning explicit, promoting learning autonomy and performance orientation' (p. 129). Making learning explicit means gathering data and acting based on the data obtained, and working with pupils to improve learning; promoting learning autonomy means helping pupils to be independent learners through self- and peer-assessment; and performance orientation means supporting pupils by using closed questions and marks so that they can reach the curriculum goals (James & Pedder, 2006a: 122-123). The first two dimensions — making learning explicit and promoting learning autonomy — are related to FA, while the third dimension, performance orientation, is related to summative assessment (James & Pedder, 2006a: 123-124). The first two dimensions were based on the five elements formative assessment: sharing the learning outcomes, questioning, feedback, peer- and self-assessment (James & Pedder, 2006a: 110).

Eren's (2010: 27) study, which explored student teachers' perceptions of formative and summative assessment, found that Turkish student teachers valued a constructivist approach to learning, making learning explicit, and promoting learning autonomy more than they applied in their classrooms. On the other hand, they applied the traditional teaching approach and performance orientation more than they valued. In other words, they seemed to value FA more than summative assessment, but they

tended to practise summative assessment more than FA. Winterbottom et al.'s (2008: 197-198) findings showed that student teachers valued promoting learning autonomy, using open questions, using formative feedback, peer-assessment, self-assessment and open discussions based on success criteria and critical thinking. However, similarly to Eren (2010), Winterbottom et al. (2008: 193) found that the student teachers valued promoting learning more than they practised it, while they practised performance orientation more than they valued. Winterbottom et al. (2008: 205) also found that there was a significant gap between value and practice for student teachers, which they did not find with qualified teachers. They (2008: 205) argued that they anticipated the gap between value and practice amongst student teachers, as it might be the result of limited school placement time and other restrictions, which may have hindered the student teachers from implementing what they valued. The fourth research question in the current study is not interested in the gap between value and practice; rather, this research questions seeks to discover the student teachers' perceptions about how their teacher-training programmes helped them in developing their professional practice of FA.

Taber et al. (2011: 181) explored student teachers' perceptions of assessment using interviews. Most of the student teachers involved in their study (2011: 176) described assessment as summative rather than formative. Although some student teachers reported that pupils did not care about the comments provided to them and they only became motivated when they saw their marks (Taber et al., 2011: 177), most of the student teachers thought that the pupils focused on feedback comments rather than the grade (Taber et al., 2011: 179). Taber et al. (2011: 178) found that when the student teachers were asked about FA, they described the five elements articulated by Black and Wiliam (1998b). Most student teachers thought that FA was a continuous assessment, which happened daily, and that FA contained feedback on written and verbal tasks (Taber et al., 2011: 179). The student teachers seemed to prefer FA more than summative assessment because FA was perceived to put less pressure on pupils, whilst also helping pupils to enhance their learning through feedback (Taber et al., 2011: 180). Most of the student teachers thought that lack of time, the excessive use of summative assessment and the number of pupils in the classrooms were the main obstacles that they faced when implementing FA (Taber et al., 2011: 180). What issues the student teachers in the present research study perceived as problematic were the focus of the fifth research question, which partially developed here: v) what are the challenges that the student teachers faced when applying formative assessment?

Taber et al.'s (2011) results indicated that the student teachers felt that their experiences during school placement did 'not match up to the ideals that are widely discussed in the academic and professional literature they read, and the official guidance issued to them' (p. 181). This shows not only a gap between theory and practice, but serious discrepancies in training which might foster disillusionment. Taber et al. (2011) concluded that assessment is an area of 'professional learning [that] is difficult and challenging for many trainee teachers' (p. 182). It is interesting to note, however, that when given the chance to reflect on the issues regarding the gap between theory and practice, student teachers were able to do so. For example, Brandom et al.'s (2005: 202) study showed that student teachers were able to reflect upon the issues of implementing FA, and they were able to identify the gap between value and practice in relation to FA when they were given the opportunity to do so. The third and fourth research questions engage with this research, as they ask the student teachers to reflect on their teacher-training programme and its usefulness: iii) what do the student teachers do during their teacher-training programmes in connection with FA? and iv) do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of FA?

The findings from all of the three previous studies, Taber et al.'s (2011: 181), Eren's (2010) and Winterbottom et al.'s (2008), show that whilst student teachers might value certain theories in education, their particular circumstances and environments affect both their perceptions and the practices that they apply. Even if they value FA and have a full understanding of FA, their practices might not necessarily reflect that understanding because of particular circumstances, such as short school placement time and a need to pass their teacher-training programme.

Keen's (2005) research study focused on student teachers' understanding of FA, and in particular, trainee English teachers' understanding of the use of writing in FA. Keen (2005: 241-242) found that the student teachers' ability to identify performance, strengths and points for development in their pupils' work became more sophisticated and sensitive over time. Keen (2005) also found that the student teachers were more able to use data to adapt their teaching. This means that the student teachers use of FA might develop over time.

Cowan's (2009: 71) research study compared the use of FA strategies during the school placements of two groups of student teachers: The first group was implementing FA at secondary schools, while the second group was implementing FA at primary schools. The findings showed that the student teachers who implemented FA at primary

schools were more enthusiastic, and they implemented more FA strategies than the student teachers who implemented FA at secondary schools (Cowan, 2009: 81). Cowan (2009) argued that according to the student teachers who were placed at primary schools, integrating FA 'strategies was seen as an important aspect of their normal professional practice' (p. 81). The student teachers who implemented FA at secondary schools felt less confident than the other group of student teachers. Cowan (2009: 81) suggested that the concentration on tests in secondary schools may have contributed to this result. According to the student teachers at primary schools, lack of time was reported to be one of the main factors which hindered them from implementing FA. Another aspect which hindered student teachers when implementing FA was indicated in Luttenegger's (2009: 300) research study, which suggested that the lack of understanding about FA impeded student teachers from implementing FA in their daily teaching routine.

While there are very few studies on FA and student teachers, the findings from these research studies, which have been discussed above, are important because they provide an idea about how FA is perceived by student teachers and why it might have been perceived and implemented in certain ways. Moreover, these past research studies have been instrumental in helping the researcher to finalise some of the research questions.

3.17 Research studies of assessment and FA in the Arabian region

There have been some profiles and reports published on the history of assessment and the current system of assessment in different Arabian countries (for example, Al-Sadan, 2000; Hargreaves, 2001; Vlaardingerbroek & Shehab, 2012). However, there have been only a handful of empirical research studies focused on assessment in the Arabian region. Thus, while there are many research studies about assessment and FA conducted in western countries, there has been a limited amount of research conducted on FA in the Arabian region. While some of these studies have been interested in students' and teachers' perceptions of assessment, this has only loosely included FA (Al-Kadri, 2011; Qassim 2008). In Oman, some researchers, such as Moheidat and Baniabdelrahman (2011) focused on self-assessment, but this is only one aspect of FA. Al-Kindy's (2009) research study focused on year 12 English teachers' attitudes towards continuous assessment by asking if continuous assessment changed their ideas about teaching and learning. FA is continuous assessment, but continuous assessment is not always FA. As Black (1998: 117) has pointed out, continuous assessment is not necessarily FA, as this

assessment might lack effective feedback. Harlen (2000) also argued that assessment which is carried out continuously ‘does not necessarily mean that assessment serves a formative purpose’ (p. 111).

In addition to the limited research on FA, there are almost no publications on FA in Arabic, and this may have contributed to confusion about what the term actually means. For example, Al-Rumaih’s (2009) unpublished MA thesis explored the effectiveness of FA in primary schools in Saudi Arabia, but the term FA was used interchangeably and confused with continuous assessment, which is a practice that has been more recently adopted in the Saudi primary schools, as discussed in the context chapter. The present research study is important because it is the first to focus on student teachers’ perceptions of FA in the Arabian region.

3.18 Teacher education

3.18.1 Teacher education programmes and their issues

The current research study is interested in student teachers and therefore teacher-education is of vital importance. Teacher education is rooted in existing educational systems and it is partly conducted in schools (Snoek & Zogla, 2009: 13). Therefore, teacher education reflects the features and adheres to the rules of a national educational system (Snoek & Zogla, 2009: 13). The previous chapter explored the nature and rules of the Saudi educational system, but it is important to put this information in a wider context, as the nature of initial teacher-training programmes differs from one country to the next. For example, in Germany teacher education consists of two phases: the first phase takes place in the university, whilst the second phase is carried out in the schools and takes between 18 to 24 months (Viebahn, 2003: 89). In England, the most common two routes into teaching are through undergraduate and post-graduate education (Department of Education, 2013). If a person already has a degree, he/she joins a Postgraduate Certificate in Education (PGCE) course, but if a person does not have an undergraduate degree, he/ she can complete a bachelor of education/art/ or science with a qualified teacher status (QTS) course (Department of Education, 2013). Both postgraduate and undergraduate courses are provided by universities and colleges. These courses help the students to complete their initial teaching-training (ITT) course, which anyone who desires to teach must complete (Department for Education, 2013). The ITT course consists of 39 weeks, and around two-thirds of this time is spent working in schools (ARG, 1999: 9).

The length of the programme also differs between countries. The following table shows the duration of teacher education programmes in several countries.

Table 3- 2: Number of years of post-secondary education required to become a teacher in 2001 (OECD, 2005b: 107)

	Primary education	Lower secondary education	Upper secondary education
Austria	3	4	5
Belgium (Wallonia)	3	3	4½
Belgium (Flanders)	3	3	5
Czech Republic	4½	5	5
Denmark	4	4	6
England & Wales	4	4	4
France	5	5	5
Germany	5½	5½	6½
Greece	4	4½	4½
Finland	5	5½	5½
Hungary	4	4	5
Iceland	3½	3½	4
Ireland	3	4	4
Israel	4	4	4½
Italy	4	7	7
Netherlands	4	4	5
Norway	4	4	6
Portugal	4	5½	5½
Scotland	4	4	4
Slovak Rep.	4	5	5
Spain	3	6	6
Switzerland	3½	4½	6
Turkey	4	-	4½

The above table demonstrates that, in general, teacher education courses for secondary level have longer programmes than primary level. Teacher education programmes differ in length, and can reach up to seven years in some countries. In many countries, teacher education programmes require bachelor qualifications; others require a master's, such as in Finland and Portugal (Snoek & Zogla, 2009: 13). However, in other European countries, the level of qualification depends on the level of teaching: teacher qualifications for junior high are a bachelor's qualification, and those for high school are a master's, such as in Flanders and the Netherlands (Snoek & Zogla, 2009: 13). In most European countries, people cannot teach without first obtaining a teaching license after a bachelor's or master's degree (Snoek & Zogla, 2009: 13). The EU is currently exploring encouraging teacher education programmes to provide PhD courses (Snoek & Zogla, 2009: 13).

The OECD (2005b: 105) has noted that there is a tendency in many countries to increase the length of their initial teacher-training programmes (OECD, 2005b: 105). This tendency to have longer pre-service educational training programmes was a response to two issues: first, the expanded duties of, and demands on, teachers; second, a pressure which came from the belief that teaching qualifications needed to match those from other professions (OECD, 2005b: 105). While both of these are important concerns, longer initial teacher-training programmes often cost more money, while they do not necessarily promise better effectiveness (OECD, 2005b: 105). Adding on to the number of years in the teacher training-programme might, perhaps, even make the situation worse. For example, it might discourage people from working in the teaching profession, especially as teachers' salaries are often lower than other professions which take a similar amount of time to complete. However, it is still important to frequently evaluate teacher-training programmes, and the quality of those programmes, as this might help in maintaining and promoting their quality.

Menter et al. (2010) argued that 'there is little evidence of evaluative research in teacher education' (p. 46). Additionally, Kirby, McCombs, Barney and Naftel (2006: 25) pointed out that although research on teacher education is full of original theories, unfortunately, there is little substantial evaluation of teacher education. Otero (2006: 254) argued that

preparing teachers is not a matter of determining whether our preservice teachers get it or they don't. Instead, it is a project of finding out what they do know at various points in time throughout their teacher education so we can use this knowledge to inform our own methods for preparing teachers for further learning. (p. 254)

Otero (2006: 254) suggested that teachers and teacher educators need to see themselves as learners who obtain, analyse and use data provided by their students, rather than tutors who provide information to their students. This would help them to reflect and enhance their students' learning. Otero (2006) suggested that in order to do this 'theory and practice should not be taught as separate entities' (p. 250). Otero (2006: 250) explained that teacher education programmes should provide the opportunity for student teachers to relate educational theories to their teaching practices and their previous experiences in away that makes sense to them. The present research study seeks to do this by employing traditions of action research, which will allow the student teachers to implement new approaches as part of a self-reflective process. Linking theory to practice is in approach which has been seen to be very useful by many authors. This approach will be discussed in the following section.

3.18.2 Theory and practice approach in teacher education

The traditional approach in teacher education programmes has focused on providing student teachers with theory at the university, while there has been little attention placed on practice (Korthagen & Kessels, 1999: 4). As discussed in the context chapter, this traditional approach is the dominant method utilised in teacher-training programmes in Saudi Arabia. Korthagen and Kessels (1999: 5) have suggested that teacher education programmes in many countries have continued to focus on theory without much emphasis on practice despite numerous research studies, which have indicated that the focus on theory and the lack of focus on practice have had negative effects on student teachers' practices. Moreover, this limited focus on practice might become problematic when student teachers actually begin their teaching career. As Ben-Peretz (1995) argued:

The hidden curriculum of teacher education tends to communicate a fragmented view of knowledge, both in course-work and in field experiences. Moreover, knowledge is 'given' and unproblematic. These views of knowledge are likely to become quite problematic as teachers gain experience. (p. 546)

In other words, when information is provided to student teachers during their teacher-training programmes, these theories seem to be straightforward and easy to apply. However, when these student teachers are asked to implement theories in the classroom as teachers, they tend to find it more complicated and difficult than they expected. A research study conducted in the late 1970s by the Konstanz Research Group in Germany showed that during their first year of teaching, new teachers are caught up in trying to adapt their teaching to existing practices at their school rather than applying the latest pedagogical theories of teaching and learning in their practice (Korthagen & Kessels, 1999: 5). Because of this problem, Korthagen and Kessels (1999: 5) pointed to a study conducted by Brouwer in Netherlands in the late 1980s, which emphasised the importance of integrating theory and practice in teacher education programmes. Over the last few decades, relating theory to practice in teacher education has become of interest to many educators (Kessels & Korthagen, 2001: 21). Korthagen and Kessels (1999: 4) suggested that although the debate is often about whether to begin with theory or practice in teacher-training programmes, the real dilemma is about how to help student teachers to integrate theory into practice.

Exploring how can theory be integrated into practice in teacher-training programmes, Vreugdenhil (2005: 119) highlighted three problems: first, an understanding of a theory does not always lead to successful practice; second, pre-service teachers cannot always utilise theories, which they have received, for their classroom practices; third, schools' contexts are different and they are not always suitable for certain theories, which may have been introduced during the teacher education programme (Vreugdenhil, 2005: 119). Another issue in relating theory to practice in teacher education programmes might be attributed to the experiences and perceptions that student teachers bring with them to these programmes (Ashton, 1999: 213; Britzman, 2003: 70; Lortie, 2002: 56). Thus, how student teachers perceive and understand theories is heavily reliant upon their past individual experiences. Based on these suggestions from other researchers, it seemed crucial that the first research question ought to probe these current and past perceptions: i) what do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?

Darling-Hammond (2008: 93) argued that in order to help student teachers to develop as teachers, teacher-training programmes need to: provide student teachers with the necessary knowledge; offer student teachers the opportunity to apply what they have

learned; and enable student teachers to reflect upon their work (Darling-Hammond, 2008: 93). This type of teacher education can neither take place solely at the university nor can it be divorced from practice (Darling-Hammond, 2008: 93). Thus, Shulman (1998) pointed to the importance of perceiving teachers as professionals, as did John Dewey, who compared 'professional education for teachers to the education of other professionals, especially physicians' (p. 511). Building on this idea, Darling-Hammond (2008: 94) argued that schools, like teaching hospitals, need to be organised to train new professionals by constantly relating theory to practice.

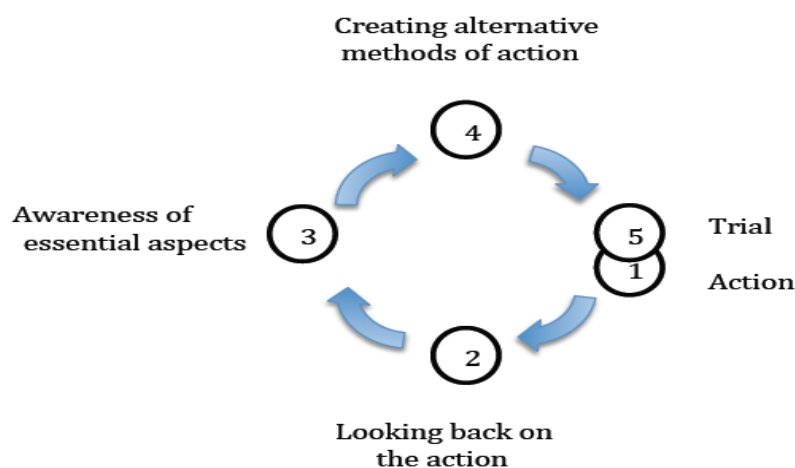
A reflective process has been identified as a fundamental factor in linking theory to practice. Humphreys and Susak (2000) pointed out that the emphasis on a reflective approach was established by the work of Dewey and Schon, who encouraged an approach to learning which relied upon 'the integration of experience with reflection and of theory with practice' (p. 79). Thus, many educators have designed models which emphasise reflection as a means to link the role of the university, which is theoretical, to the role of the school, which is practical (see for example Hutchinson and Allen, 1997; Korthagen and Wubbels, 2001; Vreugdenhil, 2005). This explains why many researchers have supported the use of a reflective approach in teacher education (Brookfield, 1995; Larrivee, 2000; van Manen, 1995; Schön 1983, 1987; Zeichner & Liston, 1987).

There are numerous models of the reflective approach in teacher education, which are important to consider here as the current study utilises a similar approach. Myck-Wayne (2007: 61) suggested that because researchers have different perspectives regarding the process of reflection, various models might be helpful in providing a foundation to identify the process of reflection in teacher education programmes. Hutchinson and Allen (1997: 226) argued that helping student teachers to reflect on their work might enhance their learning not only as student teachers but also throughout their teaching career. Hutchinson and Allen (1997: 226) designed a reflective process, which they called the Reflective Integration Model (RIM). Their (1997: 226) model consisted of four components: (i) pre-experience, (ii) experience, (iii) reflection and (iv) integration. The pre-experience component emphasises the theory and the skills, strategies and goal behind that theory (Hutchinson and Allen, 1997: 228). Hutchinson and Allen (1997: 229) suggested that in relation to the second component, experience, it is important to choose or design a context that serves the specific goal of the experience. Hutchinson and Allen (1997: 229) added that if the student teachers are well prepared for their experience, it is more likely that the goal will be achieved (Hutchinson and

Allen, 1997: 229). The third and most important component is reflection. Hutchinson and Allen (1997: 229) suggested that reflection helps student teachers to link theory to practice, because it enables the student teachers to re-evaluate their practices during school placement (Hutchinson and Allen, 1997: 230). Reflection can be done through a variety of techniques, such as reading, sharing experiences, discussing and observing (Hutchinson and Allen, 1997: 230). The integration component is employed by using a three-level approach: the student teachers first think about what they have learned; they then describe their experience; finally, they think about their experience in relation to a larger social context (Hutchinson and Allen, 1997: 231).

Unlike Hutchinson and Allen’s (1997) reflective model, which begins with theory and moves to practice, Korthagen and Wubbels’s (2001) model begins the process of reflection with practice. Korthagen and Wubbels (2001: 44) explained the process of reflection by using what they called the ALACT model, which stands for: 1) action; 2) looking back on the action; 3) awareness of essential aspects; 4) creating alternative methods of action; and 5) trial. The ALACT model is an approach, which relied on the pre-service teachers’ ‘own perceptions, their thinking and feeling about concrete teaching situations in which they were actively involved, and their needs and concern’ (Korthagen and Wubbels, 2001, p. 45).

Figure 3- 4: The ALACT model (adapted from Korthagen and Wubbels, 2001: 44)



The figure above shows the ALACT model, which Korthagen and Wubbels (2001: 45) argued was the most suitable description of the reflection process. According to Korthagen and Wubbels (2001: 45), theory ought to be introduced at the third stage of the process. This theory can be introduced by the supervisor, but it is important that it is related to the specific needs of each teacher/student teacher (Korthagen and Wubbels,

2001: 45). Thus, in the ALACT model, teacher-training programmes begin with school placement and then integrate theory into a practice which has already begun. In the present research study, ALACT model was particularly useful during the student teachers' school placement: that is, the student teachers in the present study were asked to constantly reflect upon and look back on their actions to consider what aspects of FA were useful and what was problematic before deciding what to apply the next time.

Vreugdenhil (2005: 119) also argued that linking theory to practice in teacher education can be done through a reflective process. Vreugdenhil (2005: 119) argued that the reflective process is based on three components: information, subjective theory and practice. Vreugdenhil (2005) argued that

reflection is oriented to each of the components: thinking about the essentials and structures of information, about one's own thoughts, ready knowledge, values, routines and emotions, and about the characteristics of practice. (p. 119)

Vreugdenhil (2005: 119) provided a schedule to explain his idea:

Table 3- 3: Vreugdenhil's schedule about the reflective process (adapted from Vreugdenhil, 2005: 119)

Information	Subjective theory	Practice
To take in	to open up	to experience
to arrange/ prepare for use	to share	to work through (a situation)
		to do/ to perform
		to make/ to design
	to reflect	
	to integrate	

Vreugdenhil (2005: 120) explained that the information component comprises of the theories and knowledge about how these theories are practised. The subjective theory

includes the perceptions that the student teachers bring with them to the teacher education programme (Vreugdenhil, 2005: 121). It is important to note that these perceptions do not always match the theories which are introduced in training programmes. Vreugdenhil (2005) argued that educators need ‘adjust their objective information to the subjective theories of the student teachers, while the latter must be conscious of their innate theories’ (p. 121). That is, student teachers need to be encouraged to criticise, correct and reconstruct these theories in a way which will best suit their needs (Vreugdenhil, 2005: 121). Moreover, student teachers must be prepared to accept new knowledge and perceptions by reflecting on their views and feelings towards certain classroom practices (Vreugdenhil, 2005: 121). Explaining the third component, which is practice, Vreugdenhil (2005: 122) compared student teachers to artists or craftsmen, arguing that student teachers need to adapt what they have learned to the different situations that they find themselves in. Vreugdenhil (2005) argued that

the student teacher has to connect the selected information or the subject matter through the rearranged filter of his subjective theory with the characteristics of the real situation in which he will be teaching. In doing so, the gap between theory and practice can be bridged quite acceptably. (p. 122)

Vreugdenhil’s (2005) model views theory and practice as richly intertwined via the perceptions and past experiences of the individual. This last model encourages student teachers to critically engage with and restructure theories in a way which best suits their needs. All of the three models of reflection, which have been discussed above, are similar in that they all encourage linking theory to practice through reflection. The latter two models, in particular, emphasise the individual and their perceptions, thoughts, feelings and experiences.

These three reflective models might help teacher educators to support their pre-service teachers as they attempt to connect educational theories to their classroom practices. These models of reflection might also help student teachers to adapt what they have learned to the different situations by reflecting back on their practices. While all three of the reflective models begin with either theory or practice, the researcher developed a model for this study, which will be discussed in detail in the methodology chapter, which began with reflection. Because a research study seeks to discover, beginning with theory is not viable as this suggests, within the context of the present research study, that the researcher is teaching something in order to achieve a certain

end. Moreover, beginning with practice was also not possible, as this suggests that the researcher is merely observing what is already going on, and the purpose of this study was to explore student teachers' perceptions of FA, which is a new approach in Saudi Arabia. Therefore, beginning with reflection seemed to be the most suitable approach because it gave the researcher information about the student teachers' past experiences, whilst also providing the researcher with important information useful to introduce FA in a way that was suitable for a particular group of participants within a particular context.

3.18.3 Teacher training and assessment

Because the present research study is interested in both student teachers and assessment, it is important to consider what researchers have suggested in relation to teacher training and assessment. Rust (2002: 147) argued that more focus on assessment in the UK is crucial, as there are major inconsistencies in assessment practices. Despite this, however, there have been only a few research studies conducted worldwide which evaluate how effective teacher-training programmes are in developing student teachers' understanding and practices of assessment (Greenberg & Walsh, 2012: 4). A recent large-scale US study conducted by the National Council on Teacher Quality (NCTQ) showed that teacher preparation programmes actually did not teach much about assessment (Greenberg & Walsh, 2012: 18). These findings are supported by Stiggins (2002: 762). Greenberg and Walsh's (2012: 13-16) report about the NCTQ's review of a representative sample of teacher-training programmes and schools of education showed that:

- Only 21% of the programmes in the sample adequately taught student teachers the basics of assessment.
- Only 1% of the programmes in the sample adequately taught student teachers how to analyse assessment.
- Less than 2% of the programmes in the sample adequately taught student teachers how to use the data to adjust and direct future instruction (Greenberg & Walsh, 2012).

Stiggins (2010: 233) also argued that most teachers did not receive useful training regarding assessment, either during their teacher preparation programmes or during their careers. Stiggins (2010: 233) has suggested that this has been a problem for many years and, as a result, many teachers have not been able to develop some of the

important practices of assessment. In fact, in many places, assessment courses are not required for teachers as part of their certification (Schneider & Randel, 2010: 251).

The use of the word assessment literacy by some educators, such as Stiggins (1999: 198) and Popham (2009), might indicate how important it is for teachers to have adequate knowledge about assessment and how it affects their pupils' achievement. While Schneider and Randel (2010) suggested that 'proficiency in assessment is considered an area of importance for highly skilled teachers' (p. 251), Stiggins (2010: 233) has argued that raising pupils' achievement is related to how teachers handle their classroom assessments to support learning. Popham (2009: 4) further argued that an educator's lack of knowledge regarding classroom assessment would affect the quality of education negatively. Therefore, teaching assessment in teacher education programmes needs to be considered in order to raise achievement and promote learning (Stiggins, 2010: 233). In Finland, for example, which is famous as one of the most successful educational systems in the world (Sahlberg, 2012: 1), there is a high-level system, which is used to train student teachers in the use of assessment (Greenberg & Walsh, 2012: 4).

Schneider and Randel (2010: 521) have recommended stand-alone assessment courses in teacher-training programmes, instead of an integrated topic of assessment; they argued that this would help teachers to master assessment. Andrade (2010a: 348) emphasised that teaching student teachers about the different purposes of different types of assessments is essential, in order to develop their understanding about which type of assessment is appropriate under certain circumstances. For example, Harlen (2005: 220-221) has argued that providing courses about assessment is essential because it helps teachers to distinguish between summative and formative assessments; it helps to develop teachers' skills in interpreting the pupils' results of FA; and it helps teachers to adjust their instructions based on the information that they have received.

Mitchell (2006) suggested that 'student teachers are at the intersections of perhaps four communities of practice in relation to assessment' (p. 188): first, student teachers have experienced classroom assessment as pupils; second, as students they are assessed by a higher education criteria; third, as pedagogues, they are introduced to theories of assessment; and finally, as schoolteachers, during their school placements, they are observing how other teachers are assessing pupils' work. Mitchell (2006: 188) emphasised that teacher educators need to recognise that these four different situations create tension and confusion amongst student teachers, which might affect their practices of assessment negatively.

Similarly, the ARG (1999: 9) argued that student teachers' previous experiences in schools might lead them to perceive assessment as summative rather than formative. The ARG (1999) found that educational systems are often more interested in pupils' levels of achievement, rather than making use of data in order to make suitable decisions in the classroom. Because of this, they recommended that more attention be given to AFL in teacher-training programmes (ARG, 1999: 9). Mitchell (2006: 189) has suggested, however, that although considerable work has been published in the UK regarding the effectiveness of FA and its implementation in schools, little is known about how teachers, and especially how student teachers, can actually improve these strategies.

3.18.4 The importance of preparing teachers and student teachers to implement FA

Many educators have highlighted the importance of providing professional preparation, for both student teachers and teachers, in relation to FA (Andrade, 2010a: 348; Harlen, 2005: 220-221; Heritage, 2007: 142; Mitchell, 2006; Morrison; 2005; Sadler, 1998: 82; Schneider and Randel, 2010: 252; Wiliam, 2007: 187). While Andrade (2010a: 348) discussed the need to train teachers to implement FA, and to assess them regarding their knowledge about FA, Schneider and Randel (2010: 252) have also emphasised the necessity of training teachers to practise FA. They (2010) suggested that teachers who are not provided with adequate training in FA 'may measure low-level skills in their content area' (p. 252). Despite this emphasis on the importance of FA training, Luttenegger (2009: 300) has found that student teachers are not prepared to implement FA.

Heritage (2011) suggested that the effective implementation of FA 'depends on the knowledge and skills of teachers to implement this approach in collaboration with their pupils' (p. 19). Heritage (2007) highlighted the following types of knowledge that teachers need in order to understand FA: '1) domain knowledge; 2) pedagogical content knowledge; 3) knowledge of previous learning; and 4) knowledge of assessment' (p. 142). Heritage (2007: 144) identified the following types of skills that teachers need to master in order to understand FA: 1) an ability to create a classroom environment that allows for successful assessment; 2) an ability to teach the students to assess themselves and others; 3) an ability to interpret evidence obtained from assessment; and 4) an ability to adapt teaching to fill the gap. Heritage (2007: 145) added that these types of knowledge and skills, which teachers must know in order to understand FA, are not

enough for the successful implementation of FA. In addition to all of the above, Heritage (2007: 145) argued that teachers also need to have a suitable attitude towards FA; they need to acknowledge the important role of FA in teaching and learning; and they need to recognise how vital FA is in obtaining important data about pupils' learning (Heritage, 2007: 145). Heritage (2007) explained that 'teachers must view formative assessment and the teaching process as inseparable and [they] must recognize that one cannot happen without the other' (p. 145).

Despite the importance of preparing teachers to implement FA, this is not an easy process and it is often focused on teachers rather than student teachers. For example, Wiliam (2007: 187) argued that it is beneficial to focus FA training on teachers who are already teaching in schools. Because it is difficult for existing teachers to change their teaching practices, Wiliam (2007: 196) suggested some methods which might help teachers to effectively implement FA. He (2007: 196) argued that most teachers who tried to implement more than three FA techniques at the same time failed and went back to what they had been doing previously. In the long-term, teachers who took smaller steps and were gradually making changes were those who were able to successfully adapt their teaching to include FA practices (Wiliam, 2007:196).

While Wiliam (2007) suggested more time was necessary in training teachers to better implement FA, he also admitted the difficulty in changing the practices and habits of experienced teachers. Perhaps this highlights the need to focus FA training on student teachers rather than teachers, as student teachers are young, open, and they are enthusiastic and willing to learn and practise new ideas. Whilst good penmanship can be easily taught, improved and corrected when one is learning to write, it is not so easily relearned or adapted after habits of writings have been formed. Therefore, training student teachers to embed FA in their teaching practices might not be as difficult or timely a process. The present research study's six research questions are interested in obtaining student teachers' perceptions, as this might help us to better understand how to successfully implement FA into teaching practices.

3.19 Chapter summary

Numerous key points have appeared from the review of literature on formative assessment and teacher training. First, this chapter began by clarifying the terms formative assessment and assessment for learning. The evolution of assessment and FA was discussed, as well as the nature, elements, advantages and complexity of FA. Previous research has demonstrated that FA is a very important approach in teaching

and learning. While the meaning and process of FA is debated amongst researchers, it is still recognised by many researchers as an important approach in helping to raise pupils' achievement. As discussed above, FA does not contradict with summative assessment, and both types of assessment are essential for classroom learning.

Many researchers have suggested that FA is best utilised in a constructivist environment, where a student-centred approach is applied and more teacher-student interaction takes place. While the constructivist perspective has been recently adopted by the Saudi educational system, summative assessment still remains dominant and FA has been overlooked. Why FA has been neglected is not quite clear, as FA might be both suitable and beneficial for the new curriculum in Saudi Arabia, which emphasises problem solving, analysis and research. However, before assuming that FA will be widely accepted, it is important to obtain Saudi teachers' perceptions of FA after implementing it in their classrooms. Because, as discussed above, there has been little focus on student teachers' perceptions of FA in previous literature, and no studies on student teachers' perceptions of FA in the Arabian region, this current research project focuses on a group of Saudi student teachers' perceptions of FA.

Moreover, as discussed in this literature review, assessment — which is an essential aspect of teaching and learning — is often not an essential part of teacher-training programmes. Because of this, more attention needs to be paid to assessment and FA. Teachers' and student teachers' perceptions regarding assessment and FA are very important to consider when designing teacher-training programmes. Obtaining student teachers' perceptions might help those who are developing teacher-training programmes, as they may suggest what teachers need in order to develop their understanding of assessment and FA. Moreover, these perceptions will help educators to know the difficulties that teachers and student teachers might face and how these difficulties might be overcome. This research study is important as it draws attention to the need to develop current teacher-training programmes to help student teachers to be more confident when applying FA strategies. As the review of literature has shown here, research on FA tends to debate the term's meaning and its effectiveness; more research studies need to address how FA can be implemented into classroom practices and how FA can be taught in teacher-training programmes. Obtaining student teachers' perceptions, this project suggests, is an important way in which to do this.

Chapter Four

Methodology

4.1 Introduction

The aim of this study is to explore a sample of Saudi student teachers' perceptions about formative assessment. In order to do this, this study adopted a mixed method approach and drew upon work associated with traditions of action research. Data was collected through a variety of ways: interviews, questionnaires and observations, which were all conducted over a period of time while the researcher worked closely with the student teachers.

This chapter will explain what methods were used to conduct this study and how and when they were used; it will also describe the procedure of data collection. First, this chapter will revisit the research questions before discussing the rationale behind using mixed methods and action research. After this, each instrument used in this research study will be considered. Explanations of how the researcher drew upon and developed methods from other sources will also be presented. Finally, ethical issues will be discussed.

4.2 Scope of the research

Given the lack of empirical evidence found in research literature about student teachers' perceptions of FA, this study set out to explore Saudi student teachers' perceptions in relation to FA in order to find out how FA might be perceived and practised over a period of time. This study is unique in that it sets its focus on student teachers rather than teachers and it is conducted in a context where summative assessment currently predominates assessment methods.

As discussed in the literature review, this study was designed to explore the following research questions:

- i) What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?
- ii) Do the student teachers think that formative assessment can help school students to make progress?
- iii) What do the student teachers do during their teacher-training programme in connection with formative assessment?
- iv) Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?
- v) What are the challenges that the student teachers faced when applying formative assessment?
- vi) Do the student teachers think that formative assessment should be implemented and why?

In order to address the above six research questions, a mixed methods research design using both quantitative and qualitative methods was used. The researcher also drew upon traditions of action research. While the main participants were student teachers, tutors' perceptions were also obtained. The researcher designed and developed the research methods to be related to each other to certify a fully integrated research design. Moreover, the use of mixed methods and data triangulation helped to ensure validity and reliability.

Five instruments were utilised in this study: first interviews, observations, questionnaires, second interviews and tutors' interviews. Each method helped to partially answer some or all of the research questions. Data was collected over a period of time. The first semi-structured interviews were conducted before school placement and helped to obtain the student teachers' perceptions about assessment as a whole and FA in particular. These interviews were followed by classroom observations, which were conducted by the researcher during school placement. After school placement, three instruments were conducted with different participants: the questionnaires and the second interviews were applied with the student teachers, and another semi-structured interview was conducted with the tutors. The questionnaires were designed for two purposes: to conduct a direct comparison between the student teachers' perceptions before and after their school placements, and to provide preliminary insight into the student teachers' perceptions regarding FA. The second semi-structured interviews were designed to obtain a more in-depth understanding of the student teachers' perceptions expressed in the questionnaires, and to explore the student teachers' perceptions about further issues surrounding the practice of FA.

4.3 Rationale for using mixed methods

Before there can be a discussion of the instruments used in this research study, it is important to have an understanding of the wider theoretical issues and the researcher's rationale for using a mixed methods approach whilst also utilising traditions of action research. Bryman (2012) has suggested that over the last decade, the use of a mixed methods approach has been widespread, especially in social research, and it appears that this strategy helps 'the various strengths to be capitalized upon and the weaknesses offset somewhat' (p. 628). Creswell, Plano, Clark, Gutmann and Hanson (2003: 211) have argued that while all research methods have their limitations, using a mixed method approach helps to minimise the disadvantages that are present when only one method is used. Creswell et al. (2003) defined a mixed method approach

the collecting or analysis of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research. (p. 212)

Bryman (2006: 97) has argued that a mixed method approach can be used in different ways. He (2006: 105-107) further suggested that a mixed method strategy could be used for many reasons: i) triangulation, which increases validity; ii) helping to increase the strengths and decrease the weaknesses of the quantitative and the qualitative method when both are used together in one study; iii) when a more comprehensive answer to the research questions is needed; iv) when the quantitative and the qualitative approaches are needed to answer different research questions; v) when one approach is used to explain the results obtained from the other; vi) for credibility, which means that applying both approaches would give more credibility to the data collected; vii) obtaining different perceptions from different groups of people using quantitative and qualitative approaches to allow the researcher to understand the perspectives of the participants. All of these reasons explain why the researcher employed a mixed method approach in this research study. Hence, a mixed methods approach using interviews, observations and questionnaires was adopted in order to explore the student teachers' perceptions about assessment as a whole and FA in particular. This included whether the student teachers perceived that FA helped the pupils to make progress and whether FA should be implemented in Saudi schools. Furthermore, it contained what the student teachers did during their teacher-training programme in connection with FA, including

the challenges that they faced, and how they perceived their teacher-training programme to relation to FA.

4.4 Rationale for utilising action research

According to Elliott's (1991) 'widely cited' definition,

the fundamental aim of action research is to improve practice rather than to produce knowledge. The production and utilisation of knowledge is subordinate to, and conditioned by, this fundamental aim. (Elliott, 1991, p. 49; 2007, p. 203)

As this definition suggests, action research is more concerned with 'action' and change rather than the production of knowledge. Although the aim of this study was not to improve the student teachers' practice of FA during their school placements, the researcher was interested in the student teachers' perceptions of their practice of FA rather than their knowledge of FA. Because of this, the researcher drew upon the traditions of action research to conduct the current study.

Robson (2011: 188) suggested that action research is used when the researcher desires to instigate a certain change. This is, of course, not to suggest that the researcher wanted the student teachers to practise FA in particular ways. Rather, the researcher wanted to know what issues and perceptions the student teachers had about FA, which is widely valued in other contexts, in a Saudi Arabian context. In order to explore these perceptions, the researcher had to introduce FA at the beginning of the study and discuss it with the participants throughout the study. This is because FA was a new approach for the participants, as it did not seem to have been part of their teaching-training programme or their previous educational experiences. Ernie Stringer (as cited in Brydon-Miller, Greenwood and Maguire, 2003: 14) suggested that in action research the researcher's job would be to

provide people with the support and resources to do things in ways that will fit their own cultural context and their own lifestyles. (Brydon-Miller, Greenwood and Maguire, 2003, p. 14)

Utilising an action research approach in this study was important because it helped the researcher to be able to do this whilst answering the overarching research question, which is exploring the student teachers' perceptions of FA.

Kemmis and Wilkinson (1998: 23) argued that the common characteristics of action research involve cycles of ‘planning a change, observing the process and consequences of the change, reflecting on these process and consequences, and then re-planning, and so forth’ (p. 21). Kemmis and Wilkinson (1998) claimed that although these steps seem to be taking place in a certain sequence, ‘in reality the process is likely to be more fluid, open and responsive’ (p. 21). The current study shared this cyclical approach of action research: FA was the change that was introduced to the student teachers before their school placements; the researcher then observed the student teachers’ implementation of FA during their seven weeks of school placement. Before and after each observed lesson, discussions took place between the researcher and the student teachers in order to better understand and reflect on their perceptions of FA and their practices of FA. Kemmis and Wilkinson (1998) suggested that action research aims to ‘help people change reality in order to investigate it’ (p. 21). This aspect of action research helped the researcher as this study introduced changes to classroom practices in Saudi Arabia, through the implementation of FA, in order to investigate how FA would be practised and perceived by Saudi student teachers. It is important to note that reflection was a vital aspect of this study, and it was used right from the beginning of the current study in the first interview. The use of reflection will be discussed in detail in the following section (**sec. 4.4.1**).

Before school placement, the researcher explained and discussed FA with the student teachers on two occasions. FA was first briefly introduced to the student teachers during the first interview in which the researcher explained and discussed FA. After this, FA was later expounded upon in a two-hour session, in order to help the student teachers to obtain a better understanding of FA. The researcher introduced FA by using videos from other educators and researchers. The student teachers were then provided with the opportunity to discuss FA and come up with different techniques, which would help them to apply FA during their school placements. The researcher then recommended other resources of research to the student teachers.

During school placement, the researcher also promoted the student teachers’ continual reflection on and discussion of their practices. Reason and Bradbury (2001) argued that action research

seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities. (p. 1)

At the beginning of their school placements, the researcher assembled the eleven student teachers and asked them to reflect on their practices in a group discussion. This was done in order to provide them with the opportunity to discuss the challenges that they faced when implementing FA for the first time, and to offer them a forum in which they could provide each other with suggestions and solutions to some of their problems. Unlike tradition lectures, this meeting was collaborative. While the researcher acted as more of a facilitator for these discussions, she did provide advice when she was directly asked. For example, the student teachers sought advice, during the one-to-one discussions between each student teacher and the researcher, which took place before and after each observation. These brief discussions were useful for the researcher to obtain a better understanding of the student teachers' perceptions of FA. The researcher conducted these conversations mainly through a series of questions. As the student teachers became more confident with the concept of FA, they seemed to rely less on the researcher.

Considering the relationship between the researcher and the participants, Brydon-Miller et al. (2003: 11) and Robson (2011: 188) described action research as a collaboration between the researcher and those participating in the research. This idea of collaboration was reflected when the researcher introduced FA to the participants, as described previously, and through the discussions between the researcher and the student teachers, as well as the discussions between the researcher and the tutors. The researcher avoided discussing the student teachers' work with their tutors because she did not want the participants to equate her with authority in their university. The student teachers in this study were asked by the researcher and their tutors to implement FA during their school placements. While feedback and support was provided to them when needed, the student teachers were encouraged to apply FA in a manner, which they best saw fit. Moreover, they were reminded that they had the option to quit the study at any time. One participant did quit during school placement because she thought that the practice of FA added more work and she felt that this might affect her other marks negatively. The rest of the group seemed excited about what they were doing and continued to be part of the study until the end of the project. The following table shows when the researcher drew upon action research traditions throughout the study, the purposes, the date and the total population.

Table 4- 1: Summary of occasions when action research was utilised

Time in relation to school placement	Occasions where action research was Drew upon	Purpose	Date	Total Population
Before school placement	Introducing FA very briefly during the first interview.	In order to be able to obtain initial perceptions of FA.	February 2011	11 student teachers Time spent explaining FA in each interview was 10-15 minutes.
	Introducing FA in a separate session. Explanations, discussions and videos were part of this session.	In order to provide a deeper understanding of FA and its five elements.	February 2011	11 student teachers (whole group) 120 minutes
	Introducing FA through telephone conversations.	In order to provide a deeper understanding of FA and its five elements.	February 2011	9 tutors Time spent explaining FA in each conversation was 120 minutes.
During school placement (1st phase: consisting of five weeks)	Group discussion about initial experiences of implementing FA.	In order to share experiences and challenges.	March 2011	11 student teachers (whole group) 90 minutes
	One-to-one brief discussions before each classroom observation. One-to-one brief discussions after each	To help the researcher understand and reflect on their practices.	March 2011	11 student teachers 11 observations 22 discussions 15-30 minutes for each discussion

	classroom observation.			
During school placement (2 nd phase: consisting of two weeks)	One-to-one brief discussions before each classroom observation. One-to-one brief discussions after each classroom observation.	To help the researcher understand and reflect on their practices.	April and May 2011	11 student teachers 22 observations 44 discussions 15-30 minutes for each discussion

4.4.1 The researcher's approach to fostering reflection

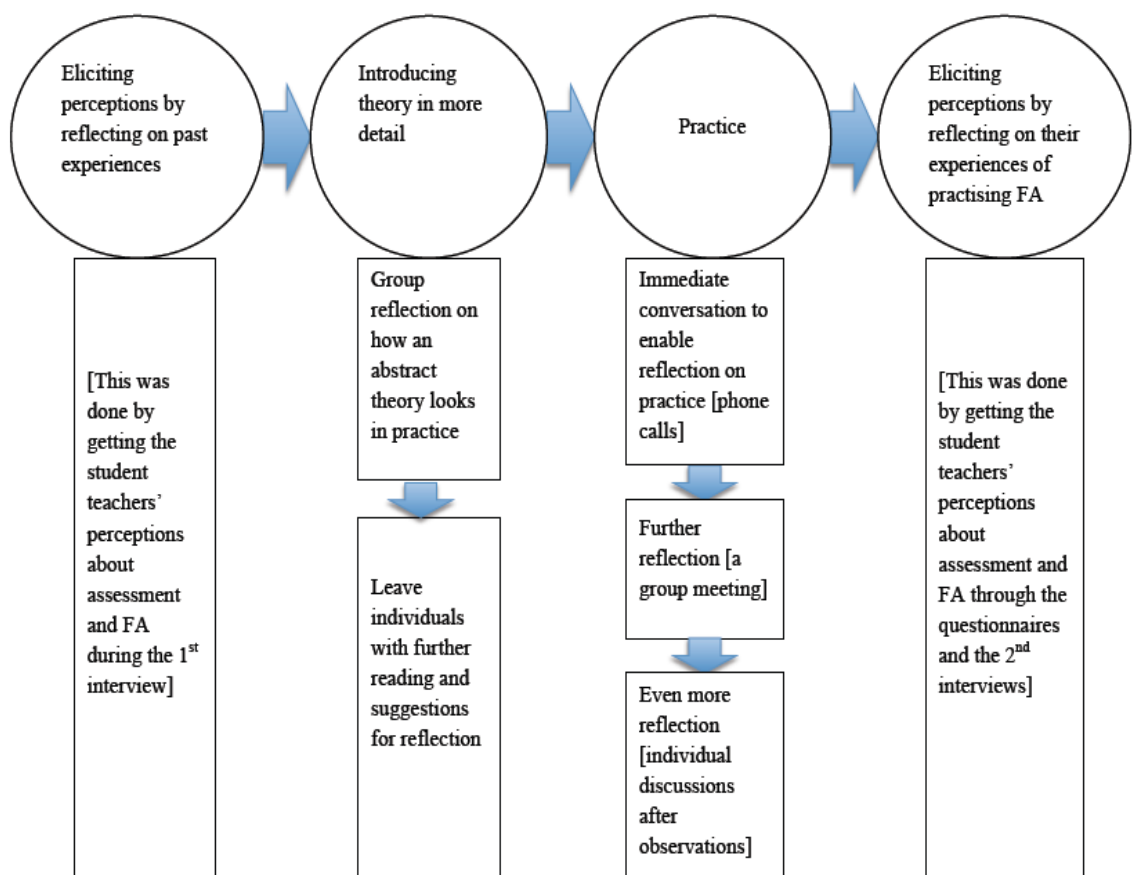
As researchers have suggested, reflection is an important element of action research. At all of the three stages of this research study, the researcher sought to foster reflection in order to better integrate theory and practice. Using the research instruments, the researcher developed a reflective model, which began with reflection rather than theory or practice. For example, the researcher began this study with individual interviews in which each participant was asked about her perceptions of assessment and by doing so, each student teacher was prompted to reflect upon her past experiences and perceptions of assessment. It is important to note that these perceptions were based on their previous experiences of assessment and not on any experience of consciously integrating a theory into practice. After this first interview, the theory of FA and its skills and strategies were explained in more detail in a group meeting. During this meeting, discussions took place in which the student teachers were asked to come up with different techniques about how to implement FA. Before moving to integrate this theory into practice, the researcher further encouraged the student teachers to reflect upon the theory through further reading and observing.

The second stage of the present research study was during school placement. The student teachers were asked, during their school placement, to implement FA in their classrooms. Before the student teachers were observed by the researcher, each participant was contacted by the researcher via telephone. These pre-observation calls were designed to allow the participants the opportunity to further discuss and reflect upon how they might integrate the theory of FA into practice. After each observation, the researcher had a discussion with each participant to further assess their perceptions

of their experiences, and to probe them to reflect more upon those perceptions and experiences. After their first experience of teaching and their first experience of integrating the theory FA into practice, a group reflection took place. During this meeting, the student teachers shared their experiences, which is an important part of Hutchinson and Allen's (1997) reflective model, as discussed in the literature review.

Finally, after school placement, the student teachers were asked to reflect upon their perceptions of assessment and FA, and their perceptions of implementing FA in the classroom, through questionnaires and second interviews. As in the integration stage of Hutchinson and Allen's (1997: 231) reflective model, these two research instruments asked the student teachers to think about what they had learned throughout the study, to describe their experiences, and to then think about their experiences in relation to a larger social context.

Figure 4- 1: The researcher's reflective model



4.5 Participants

4.5.1 First group of participants: student teachers

This research study used purposive sampling. According to Babbie (2010: 193) purposive sampling provides the opportunity to choose the subjects based on the researcher's information about population. Purposive sampling is a 'sample selected because the individuals have special qualifications of some sort, or because of prior evidence of representativeness' (Fraenkel & Wallen, 1996, p. 111). In this study, the participants were twelve Saudi Year 3 undergraduate female students. These students were enrolled on an English Language and Education course. It is likely that their ages were around twenty-one. Students from the top percentiles were chosen from a group, which consisted of eighty students. During school placement, the selected students were divided into groups by the university and sent to different schools. All the student teachers taught language classes where the level of the pupils' achievement was good to average. The schools deliberately placed the student teachers in these classes. However, because the student teachers were teaching in different schools with different levels, some of these classes seemed to be performing at a higher level than others. None of the classes where the student teachers taught were below average.

The group of student teachers in this study were chosen for numerous reasons. First, the participants shared many qualities, which might help in obtaining more reliable data. In addition to this, Black et al. (2003) argued that the establishment of 'good formative assessment practices in classrooms requires that most teachers make significant changes' (p. 2). Numerous research reports suggest that it might be difficult for teachers who have been practising for some time to make substantive changes to their classroom practices. Thus, a group of trainee teachers was chosen because they had no prior teaching experience. They were young, open and most likely eager to learn new ideas. Moreover, focusing on student teachers might provide a long-term solution to training teachers to properly implement FA into their teaching practices. High attaining trainee teachers were chosen because they were more likely to be able to quickly understand the ideas and issues of FA. Finally, all participants were practising FA, as discussed above, in good or average classes. This was beneficial for the study because the results might have been skewed if the focus was on the less able, who might be struggling, or the more able, who might have achieved whatever they were asked under any circumstance. The final sample for analysis consisted of eleven student teachers. One of the student teachers had withdrawn from the group during school

placement, as mentioned above. The rest of the eleven student teachers did not seem to face any problems, and they were willing to be part of the study.

4.5.2 Second group of participants: tutors

The second group of participants were the tutors of the eleven student teachers. Before school placement, the researcher telephoned the nine tutors to explain both the research programme and FA. The tutors agreed to observe and support their student teachers while they were implementing FA during their school placements. Only tutors who were supervising the subjects of this study were chosen to participate. From the nine supervisors, six were interviewed. One was not asked to participate because the subject had withdrawn in the middle of the research study. Another tutor was not interviewed due to health problems. Finally, a third tutor refused to be interviewed. These six tutors supervised seven of the eleven student teacher participants in the study. Each tutor supervised one student teacher in the sample, except one tutor, who supervised two student teachers.

Of the six tutors who were interviewed, three of them were school English teachers, who had been teaching for more than ten years. The other three tutors were university tutors in the English Language Department. FA is not part of the Saudi teacher-training programme and student teachers are not generally asked to implement it in classrooms. All the supervisors in this study offered the participants the opportunity to implement FA during school placement. While the supervisors may not have been able to give sufficient feedback to the participants due to their lack of knowledge about FA, they appeared to support the students as much as they could.

4.6 Pilot study

A pilot study of the first interview was done in Arabic with two female participants. This Arabic translation was done by the researcher before the pilot study was run. The first participant was an education tutor who teaches assessment at one of the Saudi universities in Riyadh. The other participant was a former student teacher who had recently graduated. Some comments were obtained from the two participants about the translation, and ambiguous parts were revised and rewritten again. The translation was again revised by two native Arabic speakers. One of them is a native Arabic faculty member who works at King Saud University in Saudi Arabia as an English language tutor; the other one works as an Arabic language teacher in one of the secondary schools in Riyadh. The pilot study helped the researcher to clarify some of the interview

questions. Question number 3 and 2 were slightly altered. Question number 3 was initially: **“3) From the following list about elements of assessment please specify which of these elements is taking place right now, which you think should take place, and which of these you have experienced yourself. Then please explain the intended purpose behind using those elements and their actual impact”**. This was changed to: **“3) From the following list please specify which of these elements are related to assessment. Then, please justify the process for applying each assessment element (i.e. explain the intended or perceived purpose for using each one)”**. Question number three was changed because the results of the pilot study showed that it was confusing for the participants and they found it too difficult to answer. Question number two initially was:

“Now please do the following.

A) Explain the reasons behind choosing the statements in the first question.

B) Do you think that some of these purposes of assessment (statements) are more important than others? Or do you think that they are equally important but applied differently at different times with different people?

C) If you think that some are more important than the others then please,

D) According to importance: first rank the parts in general then rank the statements in each part.

II) Explain the reasons behind ranking the parts and the statements in each part that way”.

After the pilot study, question number two was changed to:

“a-Why did you choose those statements in particular?

b-Could they be ranked according to importance? If yes please rank them starting from the most important to the least important?

c-Choose the reason or reasons behind ranking them in this way:

1-Because this is what school should be about.

2-Relying on how often this purpose is used in classrooms by teachers.

3-Relying on sequence (i.e. the first depends on the second and the second cannot be done unless the first one is done and so on).

4-Relying on what you think is the best for pupils’ learning.

5- Other reasons”.

These changes were made to question two because it made it easier for the researcher and for the student teachers to identify the reasons behind their ranking.

In order to check how effective and useful the observation schedule was, a pilot study was conducted. This pilot study took place in the UK because FA is already a familiar approach to many teachers in the country. An English language teacher was

asked to be observed in her classroom. The purpose of this observation was explained to her in a telephone conversation. The observation schedule was then sent to her by email. This observation schedule was used to observe the English language teacher practising FA in her classroom. After this observation, some changes were made to the observation schedule: “learning objectives” was changed to “learning outcomes” (**Appendix 5**) because outcomes better described what occurred in a particular lesson, while objectives seemed to relate to more long-term outcomes. When recording the number of times an evidence item was used, “11+” was changed to “8-10+” because the researcher found that “11+” was often too much, while “8-10+” was more likely to occur, while also communicating the large number of instances that occurred (**Appendix 5**). This pilot study also showed that discussions before and after the lesson were essential for the researcher to determine the student teachers’ perceptions.

There were no pilot studies for the remaining instruments. This is because the questionnaire, the second interviews and the tutors’ interviews were all designed immediately after school placement.

4.7 Data collection

Data was collected from the beginning of February until the end of May 2011. It was collected within three main stages: before school placement, during school placement and after school placement. The following sections will show when and how data was collected at every stage. This will be followed by discussions about each method used for data collection.

4.7.1 Before school placement

The first stage, which was before school placement, took place at the university. The student teachers spent three weeks at the university, attending lectures and sessions. The researcher conducted two meetings and the first semi-structured interview with each student teacher during this first stage. The first semi-structured interviews with the student teachers took place in the university in February 2011. However, before conducting the semi-structured interviews, the researcher had an initial meeting with the participants. During this first meeting, the researcher introduced herself and explained what the study was generally about. The student teachers seemed to be excited to have the opportunity to learn about and implement FA. After obtaining the student teachers’ agreements for participating, arrangements for interview meetings were made.

The first semi-structured interviews took place during the first week of the second term. The timing of these interviews was helpful because university lectures and sessions had not yet begun. The interviews were conducted in a quiet setting, and the researcher asked each participant what language they would prefer to hold the interview in. Some of them preferred both English and Arabic during discussions, while others preferred Arabic only. The interviews were audiotaped.

During this first interview, the researcher first established the student teachers' perceptions of assessment as a whole before moving on to discuss FA with the student teachers. This was done in order to better understand what perceptions the student teachers held about assessment as a broad category. The researcher then had to explain the concept and theory of FA to them during this first interview. This was because this sample of Saudi student teachers had a lack of knowledge about FA, as it was not part of their university-based teacher preparation programme or their personal educational experiences. The researcher introduced FA and its five elements: sharing the learning outcomes, questioning, feedback, peer-assessment and self-assessment. After this, the researcher then moved on to obtain the student teachers' perceptions of FA.

It is important to note that whilst conducting the first interviews before school placements, it became clear to the researcher that the student teachers lacked knowledge regarding assessment types, which in turn affected their understanding of the statements regarding the purposes of assessment. The first-interview questions had been revised and piloted, as discussed above, before they were presented to the student teachers. Despite the fact that the first interview questions were piloted and revised accordingly, and the revised version was presented in both Arabic and English to the participants, the student teachers still had many queries regarding the meaning of the questions. The researcher therefore had to explain the questions and statements to the participants. In order to avoid influencing the student teachers' perceptions, these explanations were carefully provided: a stable tone of voice was used by the researcher, and explanations without commentary were given. Furthermore, the researcher repeatedly clarified that there were no right or wrong answers.

The student teachers appeared willingly and enthusiastic in these first interviews. Each interview took around sixty to ninety minutes. After their interview, each participant was asked not to talk about the interview with any of her colleagues because this might affect their perceptions. All of the participants appeared cooperative and agreed to do so. At the end of the interview, interviewees were thanked for their cooperation.

After conducting the first semi-structured interviews, emails were sent to the subjects in order to arrange another group meeting, which would introduce FA. The second meeting took place in the second week of term. The student teachers appeared to be excited to attend this meeting and they seemed to want to know more about FA. This second group meeting lasted for two hours. Videos were used, and elements, techniques and issues of FA were explained in detail. Thorough discussions took place, and many questions were asked. After the meeting, all of the materials, which had been used, were sent to the student teachers by email. They were also emailed the observation schedule.

When the student teachers were assigned tutors for their school placements, the researcher contacted each of these tutors via the telephone in order to discuss the general aims of the study, to explain FA, and to find out if they were willing to observe their student teachers and participate in an interview post-school placement. During this conversation, it became apparent to the researcher that none of the tutors were sure what FA was. While the university tutors may have heard of the term and had some vague idea about what it is, it was a totally new and foreign concept to the schoolteachers. The researcher had to explain and discuss FA and its five elements during this conversation.

Another essential step done by the researcher before school placement was to obtain a supporting letter from the university. This letter asked school principals to allot the student teachers with one class rather than different groups. This request was made in order to help the student teachers build a rapport with the pupils. The researcher also felt that this would help the student teachers to implement FA in their classes without any interference from another English teacher, who might prefer traditional teaching methods and ignore the use of FA. The student teachers appeared to be happy with this request that the researcher made on their behalf. After their school placements, the student teachers perceived that this better enabled most of the pupils in their classes to become familiar with FA practices.

4.7.2 During school placement

4.7.2.1 The first phase

The second main stage of the research was during school placement. There were two phases to this second stage. The first phase lasted for five weeks, and as Sunday is a working day in Saudi Arabia, Sunday was the based day during this first phase. The researcher arranged the timetables for observations during the first phase of school placement, which took place in March 2011. The first observations for each participant

took place in the first phase of school placement. Three subjects were observed on the first Sunday. These three student teachers were selected as they were all placed in the same school, and this made it possible for the researcher to observe them all on the same day. The researcher wanted to observe as many student teachers as possible on this first day, in order to be better prepared for the third group meeting in which all of the participants discussed their experiences. This third meeting was conducted at the university at the end of the first week of school placement. The positive and negative aspects that they perceived when implementing FA were discussed. This meeting lasted for ninety minutes.

The researcher telephoned every participant before their first observation. Thorough discussions took place about the lesson that they would be teaching. Feedback provided by the student teachers after this study suggested that ten of the participants thought that this conversation was helpful. The researcher made it clear that she was available for advice throughout the first phase. The participants were encouraged to communicate with the researcher by email, telephone or text if needed.

4.7.2.2 The second phase

The second phase, which was in late April and early May 2011, consisted of two full weeks of teaching placement. The second observation took place in the first week of this second phase. The third observation for each participant took place in the second week of this phase. During the second phase, the researcher again made it clear that she was available for advice. Three participants contacted the researcher to discuss their teaching preparation before the second and third observations took place. Pre-observation discussions and post-observation discussions took place before each of the two observations in this second phase. All the observations and discussions were audiotaped. Each discussion lasted for about fifteen to thirty minutes. The researcher provided each student teacher with feedback and suggestions for further development when implementing FA. The observation schedule was only completed after the post-observation discussion, and after the researcher listened to the audiotapes of the observation and discussion.

4.7.3 After school placement

After the researcher had observed each student teacher three times, interviews were held with their tutors. These semi-structured one-to-one interviews with the tutors were conducted in two places. The three schoolteachers were interviewed at the schools

immediately after the third observations took place. However, the three university tutors were interviewed at the university several days after school placement: one supervisor was interviewed three days after school placement, the other was interviewed ten days after school placement, and the third one was interviewed eighteen days after school placement. This was because there was some difficulty in arranging appointments with the university tutors to conduct the interviews. All of the six interviews were face-to-face and audiotaped. Each interview lasted for about sixty to ninety minutes. All of them seemed to like the idea of FA, even though some of them were unsure that their student teachers had properly implemented FA. After school placement, there was still some confusion surrounding FA. For example, a university tutor was not able to differentiate between feedback and self-assessment. The purposes behind self-assessment were not clear to her, therefore the researcher had to explain this.

After school placement, questionnaires were sent to the student teachers by email. The student teachers were asked to complete and return the questionnaire by hand. The researcher explained that some of their answers would be discussed in the second semi-structured interview. The participants were encouraged to ask any questions by using any means of communication if they needed to do so. However, only a few participants called and asked questions. During the second semi-structured interviews with the student teachers, it became apparent to the researcher that the student teachers had not read the first and the second questions of the questionnaire correctly. These questions were about assessment in general. The student teachers, however, had assumed that these questions asked about FA rather than assessment. It is not clear how they came to this conclusion, because FA was not mentioned in the question, and they had an Arabic translation. This confusion may have occurred because the overall research study, in which they had been participating, was focused on FA. This misunderstanding was resolved at the beginning of the second interview: participants were asked, now that the meaning of these questions was clarified, to review their initial responses to these first questions in the questionnaire and make additions or changes if needed. It is important to note that the researcher did not suggest or force participants to change their responses. Because the researcher and the interviewees had to go through their answers again, each interview lasted for about one and half to two hours.

The second issue, which became apparent to the researcher at the beginning of the second interview, was the student teachers' continued lack of knowledge regarding assessment as a whole. It seemed that there was still some confusion regarding the

statements about the purposes of assessment. In order to overcome this difficulty and to obtain their perceptions in relation to assessment, the researcher had to explain the statements to the participants. The researcher was careful not to influence their perceptions: as mentioned before, this was done by using a stable tone of voice, by providing them with explanations without any extra commentary, and by stressing that there were no right or wrong answers. After the student teachers appeared to understand the statements, they were able to clarify their initial responses to the questionnaire. This explains why the interview results differ, in some aspects, to the original questionnaire responses. It is these amended responses that are discussed in the results.

All of the interviews were audiotaped and conducted at the university in a private room for confidentiality and to ensure that there were no interruptions. These interviews were conducted in both English and Arabic. The student teachers were assured that it was acceptable to disagree with the researcher at any point. The researcher kept reminding each participant that the study was being carried out to obtain honest answers and not to please the researcher or locate areas of agreement.

4.8 Data collection methods

Data were collected from the first semi-structured interviews, classroom observations, questionnaires, semi-structured interviews, and the tutors' interviews. The following table displays these research methods, the purposes of conducting them, the date and the total population.

Table 4- 2: Summary of data collection methods

Time in relation to school placement	Method	Purpose	Date	Total population
Before school placement	1 st interviews	Obtain perceptions about assessment as a whole and FA in particular, before implementing FA.	February 2011	Student teachers 11 interviews 60-90 minutes
During school placement	Observations	Help to obtain a deeper understanding of the student	March, April and May 2011	Student teachers 33 observations

		teachers' perceptions regarding FA.		45 minutes
After school placement	Questionnaires	1) Conduct direct comparison between the student teachers' perceptions before and after school placement. 2) Simple indication of their views, which they will be asked to explain in the second interview.	May 2011	Student teachers 11 questionnaires
	2 nd interviews	1) Deeper understanding of their views presented in the questionnaires. 2) To obtain the student teachers' perceptions about issues surrounding FA.	May 2011	Student teachers 11 interviews 90-120 minutes
	Tutors' interviews	For data triangulation, and to obtain the tutors' views about the student teachers' understanding of FA.	May 2011	Tutors 6 interviews 60-90 minutes

4.9 First semi-structured interview conducted with the student teachers before school placement

The researcher conducted the first semi-structured interview as one-to-one and face-to-face interviews. In order to pre-empt confusion and misunderstanding, the first interviews were conducted in both Arabic and English. These interviews, which were tape-recorded, were conducted with the student teachers in order to obtain their initial perceptions about assessment as a whole and FA in particular. Perceptions from these first interviews were compared with later perceptions to show the developments and changes of the student teachers' perceptions in relation to FA. The first interview schedule helped the researcher to answer the first and the sixth research questions:

- i) What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?
- vi) Do the student teachers think that formative assessment should be implemented and why?

During this interview, the researcher asked the student teachers to answer seven questions. The first question was about purposes of assessment, which were divided into three parts: learning, certification and quality assurance. These purposes of assessment were taken from Yorke (2008:10-11).

The items in questions three, four and five were based primarily on the researcher's understanding of current literature, while also taking into account the educational practices in the current Saudi system. Although the first interview might appear to have used questionnaire style items in that the student teachers were provided with lists to examine and choose from, this process required considerable reflection as they were asked to engage with and comment upon their selection with the researcher. The interview was designed in this way because the participants were expected to have limited or no information about FA. Because of this, a generous amount of time was allotted for each interview.

4.10 Observation schedule conducted during school placement

The observation schedule was designed to observe all of the eleven student teachers while they were teaching in public female intermediate schools in Saudi Arabia during their school placements. Each participant was observed three times during school placement. They were observed once in the first phase of school placement, and twice in the second phase of school placement. All of the observed lessons were audiotaped.

The observation instrument that was used by the researcher was sent to the student teachers by email prior to their observations in order to clarify what the researcher would be observing.

The purpose of conducting the observation was not to judge the student teachers' performance, but to explore and understand their perceptions of FA. This was made clear to the student teachers throughout the study. The observations helped the researcher to answer the third and the fifth research questions:

- iii) What do the student teachers do during their teacher-training programme in connection with formative assessment?
- v) What are the challenges that the student teachers faced when applying formative assessment?

The observation schedule was mainly based on the elements of FA, which have been previously discussed in the literature review: sharing learning outcomes, questioning, feedback, peer-assessment and self-assessment. The observation instrument was designed relying on the observation schedule that appeared in the Sandwell Metropolitan Borough Council document (**Appendix 10**) and Black and Jones (2006). The observation instrument used in this study was divided into eight columns. The elements of FA were laid in the first column. The key features of FA, which were adopted from the observation schedule that appears in the Sandwell Metropolitan Borough Council document (**Appendix 10**), were laid in the second column. The third column listed evidence items, which were also adopted from the observation schedule that appears in the Sandwell Metropolitan Borough Council document (**Appendix 10**) and Black and Jones (2006). Some evidence items from the Sandwell Metropolitan Borough Council document were used, while other evidence items relied upon Black and Jones (2006). For example, evidence item 1.1.1 was adopted from the observation schedule that appears in the Sandwell Metropolitan Borough Council document (**Appendix 10**), while 3.1.1 was adopted from Black and Jones (2006: 7). The evidence items, which were chosen from these two sources, were selected because they were thought to be more likely to happen than other practices, and because they were broad in their meaning. If the student teachers in this study used evidence items, which appeared beyond these two sources, the researcher noted them in her comments. One additional evidence item that was noted by the researcher was translating the learning outcomes in order to help the pupils better understand the objectives of the lesson.

A fourth column was added to incorporate the researcher's and the student teachers' perceptions of the use of evidence. This included both how they perceived they used the items and how useful the evidence items were for determining their practice of FA. These perceptions were recorded after the researcher's discussions with each of the student teachers. The fifth column showed when evidence items took place during the class. This column was only used when certain evidence items were used at an unusual time. For example, if a student teacher shared the learning outcomes with the pupils at the end of the lesson instead of the beginning of the lesson, the researcher recorded the time the evidence item was used. Because this information was not always relevant, for example in regards to peer-assessment the time used in the lesson is often not important, this column was not used for all the elements. This column helped the researcher to analyse how effective the evidence item was and why it was done at a particular time.

The sixth column showed the number of times that each evidence item was employed. While this information was not used in the results, it was important data, which helped the researcher to discuss the student teachers' perceptions and also to know how their perceptions equated with what was actually done in the classroom. The seventh column showed the researcher's and the student teachers' perceptions of the adequacy of the number of times that each evidence item was used. Obtaining the student teachers' perceptions was an essential step because this helped the researcher to avoid being an inspector. The eighth column was about the techniques used to implement FA in the classroom. This column allowed the researcher to note more specifically how evidence items were being used. For example, if a student teacher applied the "no hands up" strategy, the researcher would record in the eighth column how this evidence item was applied. The ninth and final column was used to record additional comments.

4.11 Semi-structured interviews conducted with the tutors after school placement

The tutors' interviews were conducted as one-to-one and face-to-face interviews, at the end of school placement. Six of the eight supervisors agreed to be interviewed and audiotaped. As mentioned above, three of them were university tutors and three of them were schoolteachers. These supervisors had been observing the student teachers from the beginning of their school placements. Between these six tutors, they were supervising nine of the eleven student teachers who participated in the research study. The purpose of conducting these semi-structured interviews was to better understand

how the tutors perceived the student teachers were implementing FA. The tutors' perceptions of the student teachers' understanding and ability to implement FA in the classroom helped to provide a context for the student teachers' perceptions. Although these interviews were not the main area of research, the tutors' perceptions were important for data triangulation.

The tutors were asked to answer nine questions about the student teachers. Some of these questions were based on the same statements used in the student teachers' questionnaire, which was also conducted after school placement (for example, see PART 3, question 1, section C). Ten strategies of FA, which were used in the student teachers' questionnaire, were discussed with the tutors:

1. Assessing students many times in the class.
2. "No hands up" strategy, except for asking questions.
3. Using more open-ended questions that provoke thinking.
4. Helping students to be active learners (more student discussion and less teacher dominance).
5. Declaring the learning outcomes in a clear way.
6. Using success criteria for peer-assessment.
7. Pupils' self-assessment during or at the end of a lesson.
8. Providing effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing.
9. No marks are used as feedback, only comments are used as feedback.
10. Providing the opportunity for learners to respond to feedback either orally or written.

Because the tutors seemed to have a limited and vague understanding of FA and its elements, the researcher had to explain these strategies. The tutors found that statement number three, "using more open-ended questions that provoke thinking", and statement number four, "helping pupils to be active learners (more pupil discussion and less teacher dominance)", were most likely to happen together. The researcher also observed this to be true. As a result of these observations, and to avoid confusion, these two

strategies were merged into one strategy. The second change was to display statements number eight, nine and ten under one heading called “feedback”. This was an attempt by the researcher to help the tutors better understand the aim behind applying these three strategies. Finally, further explanations were added to clarify the meaning and purpose of each strategy when needed. The edited list now read:

1. Assessing students many times during the class.
2. “No hand up” strategy, except for asking questions.
3. Using more open-ended questions that provoke thinking (make students talk more about their ideas and opinions, which helps them to participate more in lessons instead of just sitting and listening). This leads to helping pupils to be more active learners. More pupil discussion and less teacher dominance.
4. Declaring the learning objectives in a clear way to pupils.
5. Using success criteria for peer-assessment.
6. Pupils’ self-assessment during or at the end of the lesson.

Feedback

7. Provide effective comments that initiate thinking and help the pupils to overcome the difficulties that they are facing. Comments should not only reflect the negative and positive aspects of the pupils’ work, but comments should go beyond that to guide the pupils in solving the problems that they have in learning.
8. No marks are used as feedback. Only comments are used as feedback.
9. Provide the opportunity for learners to respond to feedback orally or written.

The tutors’ interviews helped to answer the following research questions:

iii) What do the student teachers do during their teacher-training programme in connection with formative assessment?

v) What are the challenges that the student teachers faced when applying formative assessment?

4.12 Justification for using a combination of a questionnaire and an interview after school placement

In order to be able to compare and contrast the student teachers' perceptions before and after their school placements, it was essential to conduct a second interview. For this second interview, a combination of a questionnaire and a semi-structured interview was conducted. The questionnaire (**Appendix 3**) helped the researcher to have some indication of the student teachers' views, and the second semi-structured interview (**Appendix 4**) helped the researcher to obtain a more in-depth understanding of these perceptions. Bryman (2004: 452) suggested that a combination of both approaches might help a researcher to utilise the best advantages of both strategies, while reducing the disadvantages that might occur from using only one strategy. Bryman (2004: 452) also pointed out that studies conducted with a combination of both approaches have been increasing.

4.12.1 Questionnaire conducted with the student teachers after school placement

The student teacher questionnaire, which was conducted after school placement, was divided into five parts. The first part covered the purposes and elements of assessment as a whole and the advantages and the challenges of FA. These items were similar to the ones discussed in the first interview, which was conducted with the student teachers before their school placements. The similarity between the first part of questionnaire and the first interview helped the researcher to make a direct comparison between the student teachers' perceptions before and after school placement.

The second part of the questionnaire asked the student teachers to consider whether or not they perceived that FA can help school students to make progress. The third part asked the student teachers about how they perceived their teacher-training programme in relation to FA. This third part was divided into sections A, B, and C. Section A was about what the university programme provided the student teachers with in relation to FA, and how coherent and useful this was. Section B was about what the researcher provided them with in relation to FA, and how coherent and useful this was. Finally, section C was about what the student teachers did during their school placements.

The fourth part of the questionnaire was about the challenges that the student teachers faced when applying FA. The fifth and final part asked what the student teachers thought about implementing FA in Saudi schools. The questionnaire focused on all the research questions:

- i) What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?
- ii) Do the student teachers think that formative assessment can help school students to make progress?
- iii) What do the student teachers do during their teacher-training programme in connection with formative assessment?
- iv) Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?
- v) What are the challenges that the student teachers faced when applying formative assessment?
- vi) Do the student teachers think that formative assessment should be implemented and why?

4.12.2 The second semi-structured interview conducted with the student teachers after school placement

The second semi-structured interviews were also face-to-face and one-to-one audiotaped interviews. The interview schedule was divided into five parts. These five parts had many questions, which matched the questionnaire. Some of the questions in this second interview schedule related to the interviewees' answers from the questionnaire. The questionnaires, which had been completed by the participants, were brought to the second interview, and the student teachers were asked to explain why they had chosen to answer some questions in a particular way. This was because the second interview questions were designed to ask the participants to elaborate on their perceptions. The overall interview, and in particular the first part of the second interview, was set up to explore the student teachers' perceptions after implementing FA. This data further helped the researcher to contrast and compare the student teachers' perceptions of FA before and after school placement.

The second part of the second interview explored whether the student teachers perceived that FA helps school students to make progress. The third part of the second interview questioned what the student teachers did during their teacher-training programme in connection with FA, and how coherent the programme was in relation to FA. This third part contained questions, which related to sections A, B, and C of part three in the questionnaire: section A considered what the university programme provided the student teachers with in relation to FA and how coherent and useful this was; section B questioned what the researcher provided them with in relation to FA and

how coherent and useful this was; and section C, as in the questionnaire, was about what the student teachers did during their school placements. The fourth part of the second interview explored the challenges that the student teachers faced when implementing FA. The fifth part of the interview asked the student teachers to further explain what they thought about implementing FA in Saudi schools. This second interview helped the researcher to answer all of the research questions.

4.13 Data analysis of the first interview conducted with the student teachers

The purpose of the first interview was to obtain information about student teachers' perceptions of assessment as a whole and FA more specifically. The first interview consisted of seven questions. These seven questions helped the researcher to focus on the following research questions:

- i) What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?
- vi) Do the student teachers think that formative assessment should be implemented and why?

The first research question was partially answered by six of the questions in first interview. The sixth research question was partially answered by the sixth and seventh interview questions. The first interview contained both multiple-choice and open-ended questions. Data analysis was mainly quantitative. For quantitative data, the Statistical Package for the Social Sciences (SPSS, version 19.0) was used. Statistics, including means and standards deviations, were conducted for analysing the first and the fourth questions from the first interview. Frequencies were used for analysing the third and the fifth questions from the first interview. For qualitative data, the eleven participants' responses were briefly summarised. The participants' answers will be discussed in detail in the results chapter. The data were analysed from eleven semi-structured interviews. This data was compared directly with data obtained after school placement. This comparison will be discussed in more detail in chapter five.

4.14 Data analysis of the observation schedule

The purpose of observing the student teachers during school placement was, as mentioned above, neither to judge their teaching nor to assess their performance when implementing FA, but to obtain their perceptions of FA. The observation schedule was based on the five elements of FA, which have been previously discussed in the literature

review: sharing outcomes, questioning, feedback, peer-assessment and self-assessment. For each element there were evidence items, which better allowed the researcher to measure how each element was done during school placement. The researcher spent six months analysing the observation data. This analysis was done in four stages, and it was done thoroughly and carefully to make sure that errors were minimised. The first and second stage of analysis took place in Saudi Arabia. During the first stage, the observation schedule was initially completed during the lesson. Notes were written throughout the lesson, especially when issues occurred surrounding the evidence items. Discussions were held with each of the student teachers before and after each observation. These conversations were taken into consideration by the researcher when editing the data in the observation schedule.

During the second stage of analysis, the researcher carefully listened to the audiotapes of the observed lesson and the conversations within a twenty-four hour period. The researcher thought that this was an important step for more data accuracy. Because this analysis was done on the same day, the researcher was better able to remember and picture the observation in her mind. This step helped the researcher to edit her notes and revise the data in the observation schedule.

The third stage was the longest stage of analysis, and it was done after all the data had been collected. Statistics, including frequencies and percentages, were conducted for analysing data in the observation schedule. This final stage of analysis took place in UK. During this stage, the researcher analysed the observation data in detail (**Appendix 9**). Some audiotaped lessons were listened to again when needed. Data tables for each participant covered around fifteen pages, while the data tables for all participants covered around one hundred and sixty-five pages. This third stage was essential because it helped the researcher to analyse the data more thoroughly, and to find out what the student teachers were doing during their school placements. The final stage used the Statistical Package for the Social Sciences (SPSS, version 19.0) and Mac Excel 2011 to analyse quantitative data. Observation quantitative data was analysed by looking at what had been done without issues (WOI), what had been done with issues (WI), and what had not been done (N). Data were analysed based on the five elements of FA and the twenty-four evidence items. It is important to note that during the analysis process, one evidence item was excluded: this was 5.1.3 “Something else” (**Appendix 5**). This evidence item had been added to the observation schedule by the researcher before the research was conducted. However, this evidence item was not

observed to be used at all. As a result, the researcher decided to exclude it from the data analysis, as it might skew the results.

The data was analysed statistically using all the evidence items shown in the observation schedule (**Appendix 5**). There was, however, one evidence item which was substituted with its key feature: “1.1.1 Pupils can rephrase and explain” was substituted with “1.1 Are the L.O.s shared with the pupils in a way they can understand?” (**Appendix 5**) and (**Appendix 9**). This step was essential because sharing the learning outcomes was rarely done by asking the pupils to rephrase and explain. However, other techniques were applied in the classroom to make sure that the learning outcomes were shared with the pupils in a way that they could understand. For example, this was done by translating the learning outcomes to the pupils’ native language or by writing the learning outcomes in different way.

4.15 Data analysis of the questionnaire

Questionnaire data was quantitative, and for this data the Statistical Package for the Social Sciences (SPSS, version 19.0) was used. The questionnaire was divided into five parts. The first part was designed to compare the student teachers’ responses before and after school placement in relation to assessment as a whole and FA more specifically. In order to be able to make a comparison between the questionnaires and the first interviews, the first section of the questionnaire was designed to have identical questions to the ones that were used in the first interview. These questions were about purposes of assessment, its elements, FA’s advantages and disadvantages, and the challenges that teachers might face when introducing FA in to Saudi schools. For more accuracy, data from this section was analysed statistically in a similar way to the first interview using the Statistical Package for the Social Sciences (SPSS, version 19.0). Statistical analyses with the means and standard deviation were conducted to compare the participants’ responses before and after school placement, regarding the purposes of assessment and the advantages and disadvantages of FA. However, statistics with frequencies were only used to analyse the participants’ responses about the elements of assessment as a whole, and the challenges that teachers might face when introducing FA to Saudi schools.

In order to measure if there had been any significant changes in the student teachers’ perceptions during their school placements, a suitable statistical test was needed. The researcher recognised that the sample size was relatively small, which made its power limited for many parametric tests. Furthermore, because the sample did

not meet the principles suggested for statistical analysis as stated by Stevens (1996: 72) and Tabachnick and Fidell (1996: 132), and because of its lack of normal distribution, the researcher determined that it would be appropriate to use a non-parametric rather than a parametric statistical test. Therefore, the researcher used Wilcoxon Signed Ranks Test to measure the differences in the student teachers' responses, in relation to the purposes of assessment and the advantages and disadvantages of FA, before and after school placement. Wilcoxon Signed Ranks Test is an equivalent test for Paired-samples t-test (Field, 2009: 552). Paired-samples t-test, which are also called repeated measures, are used when the researcher is interested in the differences between two sets of scores for the same people at two different times, often before and after an event (Pallant, 2007: 103). Although the results from the Paired-samples t-test were the same as the Wilcoxon Signed Ranks Test (see **Appendix 16**), the Paired-samples t-test was not used, however, as it is a parametric test, which requires that data is normally distributed. One of the reasons for this was that the sample used in this research study was not large enough. In order to make sure that the results were correct, the researcher sought support from the Maths Centre at the University of York. Assessments were conducted regarding the techniques that were used to obtain the main averages and normality of distribution. It was agreed that Wilcoxon Signed Ranks Test would be the most suitable test, as data did not meet the assumptions of parametric tests. This test was only used for analysing data from the first part of the questionnaire. It is important to note that only frequencies were used for analysing the other four parts of the questionnaire.

4.15.1 Justification for using two different instruments to compare the participants' perceptions

Based on the researcher's previous experience of working in Saudi schools, it seemed likely that the participants might have many questions regarding assessment. Hence, the researcher thought that conducting pre-placement, one-to-one interviews would give the student teachers the opportunity to ask questions about assessment if necessary. Moreover, the discussions about assessment in these first interviews helped the researcher to better design the sessions where FA would be discussed in detail. The data from the first interviews helped to shape the questionnaire instrument. That is, many of the same questions were used in order to notice if there were any changes in the student teachers' perceptions after implementing FA during their school placements. A questionnaire was used as the researcher wanted an instrument which could be conducted without the researcher being present. It should be noted that the researcher

was not teaching the student teachers about assessment, but rather, the researcher was exploring the student teachers' perceptions about assessment and FA. Questionnaires can be completed by participants on their own, and therefore this might limit the researcher's influence.

The researcher used many of the same questions in each of these two instruments, the first interviews and the questionnaires, in order to be able to observe and explore any development in their thinking regarding assessment and FA. During their school placements, the student teachers gained experience assessing pupils, whereas before this, many of their ideas were based on prior experiences and expectations. It was important to the researcher to see if their ideas changed, and if so, in what ways and why.

4.16 Data analysis of the second interview and the tutors' interviews

Cohen, Manion and Morrison (2011) suggested that there is no specific way to analyse qualitative data and that the process of analysis should be decided based on the issue of '*fitness for purpose*' (p. 537). Before deciding the process of analysis, the researcher conducted numerous methods to analyse the qualitative data obtained from the semi-structured interviews. In order to address the research questions, the researcher needed to decide the appropriate way for translating, transcribing, analysing and coding the data.

McLellan, MacQueen and Neidig (2003: 67) have suggested that transcripts could be conducted in multiple ways, but they ultimately need to help the researcher in analysing his or her data properly in order to better answer their research questions. Atkinson and Heritage (as cited in McLellan, MacQueen & Neidig, 2003) have

stressed that the production and use of transcripts are "research activities" and should not be approached as merely a "technical detail" that precedes analysis. (McLellan, MacQueen & Neidig, 2003, p. 64)

For the sake of authenticity, the researcher took care to ensure that the data did not lose its meaning during the analysis process. Initially, the researcher began by literally transcribing data which would later be translated. The researcher found, however, that analysing data after transcribing it was not helpful. The researcher's reliance on the transcribed or written text often caused her to miss some of the meaning, which could be only obtained when combined with the audio-recording. The change in the tone of

the voice and the stress placed on certain words appeared to be important to the data analysis. Strauss and Corbin (1990: 31) have suggested that when transcribing texts, the researcher needs to consider the analytical contribution it will offer to the research study. The researcher, therefore, decided to begin her analysis of the oral record while transcribing. This means that the researcher was translating, transcribing and analysing at the same time. Practicality of time and authenticity meant that it was the best method to apply. This method helped the researcher to write her thoughts while listening to the oral speech; it also helped the researcher to remember and visualise the interview. This process took around ten hours for each recorded hour. All of this was important information, and it helped the researcher when analysing the data. Cohen et al. (2011: 537) suggested that qualitative data is usually loaded with interpretations and as a result multiple interpretations need to be made. McLellan, MacQueen and Neidig (2003) added that 'transcripts benefit by including appropriate labelling and content-related information' (p. 67). This might help explain why the researcher's plan to analyse data after transcribing and translating it did not work.

The researcher listened to the audiotaped interviews many times and translated them into English as she transcribed them. This approach seemed to be more practical and more authentic. The researcher translated and transcribed the conversations that were related to the research questions, and overlooked data that were not related to the topic (e.g., conversations about how difficult transportation was in the country were excluded). McLellan, MacQueen and Neidig (2003: 66) argued that for some data analysis it might not be essential to transcribe the whole interview. In this study, the researcher translated and transcribed the interviews and attempted to stay as close as possible to the speakers' meaning. The researcher, did not, however, transcribe every utterance or describe every remark. This is because the current research is not studying languages or phonetics.

For reliability, the researcher checked what she has transcribed with a university English Literature lecturer in Saudi Arabia who was a native Arabic speaker. The researcher chose this person because she was fluent in both languages, and she understood the Saudi culture and accent. The researcher provided her with a copy of the interviews instruments and an idea of the overall research study. Although there was some minor disagreement about the translation, this source confirmed that conducting the analysis while transcribing and translating was the most suitable method for this research study.

One of the main issues of a semi-structured interview is the large amount of data that needs to be organised in certain themes and categories (Cohen et al., 2011: 559). In order to address this issue, content analysis was used. Content analysis is a process by which ‘many words of texts are classified into much fewer categories’ (Weber, 1990, p. 15). Flick (1998) argued that categories are one of the main procedures of content analysis, and that the ‘goal here is to reduce the material’ (p. 193). In content analysis, texts could be lightly coded or heavily coded (Cohen et al. 2011: 559). A code is a name or a description that the researcher provides for a piece of text, which has certain data; some of these codes are broad, while others are specific (Cohen et al. 2011: 559). In order to be able to do this as sufficiently as possible, the researcher has to go through the data line by line and categorise information by labelling it with different codes. Researchers can do coding either by hand or by using computer programmes (Delamont 2002: 174). In this research study, coding was done by hand. Delamont (2002) identified three types of hand coding: ‘multiple coding’, ‘multiple copies of data’ and ‘data indexing system’ (p. 175). According to Delamont (2002), multiple coding means that coloured highlights are used and notes are written on the edges; multiple copies of data means that ‘everything relating to a particular category is filed together in a box, or ring binder’ (p. 175); data indexing system ‘leaves data untouched except for page and line numbers’ (p. 175).

When analysing the interview data, the researcher used the multiple coding system. The researcher used coloured highlighter pens to underline the participants’ responses in the scripts. Different colours were used for different themes. For example, responses that were direct answers to the interview questions were highlighted in yellow, and data highlighted in pink indicated extra details related to the direct answers. Data underlined with pencil suggested further details, which might help to explain the participant’s response.

Under each interview question, key issues, similarities and discrepancies between patterns in their answers were highlighted again and categorised. Qualitative data analysis encompasses organising, interpreting and explaining data; this means making sense of the data through themes, classifications and regularities (Cohen et al., 2011: 537). Once the categorising was done, the information was reported using a thematic approach. The thematic approach is the most frequently used approach of analysis (Guest, MacQueen & Namey, 2012: 11). Using the thematic approach means that texts could be as simple as a statement or a word: selected statements, or parts of

speech that are related to the research questions might actually be what is needed (Emerson, Fretz & Shaw 1995: 175).

4.17 Validity

Validity is an essential feature in research and a requirement for both quantitative and qualitative research (Cohen et al., 2011: 179). Cohen et al. (2011: 198) suggested that enhancing validity could be done through many things, which include:

- Selecting a suitable period of time to conduct the study.
- Making sure that appropriate resources are available to conduct the research study.
- Applying suitable strategies to answer the research questions.
- Choosing suitable instruments to collect information.
- Conducting the study with suitable participants.

The researcher took into consideration all the details listed above before conducting the study. For example, in this study the participants shared many qualities. The first group of participants were the student teachers. These students were around the same age; they had a lack of teaching experience, but all of them were high achievers. The second group of participants were the tutors who supervised these student teachers. To ensure that appropriate strategies and instruments were used, the instruments in this study were piloted and translated. As mentioned above, the first interview instrument, which was conducted before school placement, was piloted with a university faculty member, who teaches in a teacher preparation programme. For more validity, the instrument was translated into Arabic and the translation was checked by someone who specialises in the Arabic language. This was done to make sure that the instrument was neither misleading nor ambiguous.

The observation schedule was designed based on the observation schedule that appeared in the Sandwell Metropolitan Borough Council document (see **Appendix 10**), and Black and Jones (2006). In order to obtain accuracy, the observation schedule was divided into eight columns. These columns moved from general information to more specific information: beginning with the five elements of FA, which were laid in the first column, and ending with more specific columns, such as techniques used in the classroom and comments. The observation schedule was piloted and edited to avoid technical problems.

The questionnaire, second interviews and the tutors' interviews were designed immediately after school placement, in order to explore the participants' perceptions after school placement. The timing when designing these three instruments was important because all of the issues observed by the researcher during school placement were still fresh in her mind. All the research instruments were connected to each other. For example, many of the questions in the questionnaire were used before school placement during the first interview. The second interview was designed to obtain more detailed answers about the student teachers' responses from the questionnaire, and the tutors' interviews were designed to obtain their perceptions about the participants' understanding of FA and how it was implemented during school placement. Some of the same inquiries from the tutors' interviews were used in the questionnaire as well. Cohen et al. (2011: 179) suggests that validity does not necessarily ensure reliability. Therefore, the following section will discuss the reliability of this research design.

4.18 Reliability

Bryman (2012: 47) suggests that reliability means consistency of instruments used to conduct a study. Cohen et al. (2011: 199) suggests that reliability means that if the research is conducted again with a similar group of participants in a similar context, then similar findings will be obtained. However, this does not mean that the same exact results will occur, because two researchers in a single research study might come up with different results (Cohen et al., 2011: 202). Both sets of results, however, are reliable (Cohen et al., 2011: 202). Kvale (1996: 181) suggests that qualitative research might be interpreted in different ways. As all of these arguments suggest, different researchers might, and often do, come up with different results. In order to ensure reliability, in this study triangulation was used. Triangulation might be defined as using a mixed method approach which could help in enhancing reliability (Cohen et al. 2011: 195). Cohen et al. (2011: 195-196) and Miles and Huberman (1994: 266) argued that when the findings of the different instruments were similar to each other, then the researcher will be assured about the results of the conducted study. In this research study, results from the tutors' interviews, the student teachers' interviews and the researchers' observations were compared and contrasted to enhance reliability. These results were often similar to each other. Data analysis was useful for cross validating the findings and reducing bias.

The interviews were one-to-one, face-to-face, tape-recorded, semi-structured interviews. This provided the opportunity for the researcher to see the student teachers'

facial expressions and gestures. Furthermore, conducting the interviews in this way helped the researcher to have direct communication and therefore obtain a better understanding of the participants' perceptions. Although the study utilised action research, the researcher took precautions to ensure that her presence did not overly affect the reliability of the study. The researcher insisted that there were no right or wrong answers, and she took extra care not to influence the student teachers' with her views. The researcher used a neutral tone of voice and she tried to avoid any extra commentary when answering certain inquiries. The participants' responses from the questionnaires were double-checked with them during the second interviews. This is because the second interview, as explained previously, was based on their responses from the questionnaire. This increased the reliability of the results from the questionnaire. It also helped to ensure that what the student teachers answered was actually what they meant to say.

The quantitative results of the questionnaire and the observations were calculated by using a SPSS statistical package. In order to reduce errors and increase the reliability of the results, the results were checked with the Mathematics Centre at the University of York. The qualitative analysis was checked by another faculty member in one of the universities in Riyadh, who speaks fluent English and Arabic.

4.19 Ethical considerations and limitations of the study

This research study had some limitations related to research design, sampling and data collection instruments. A general limitation of this study was that it was conducted in one university with a small group of student teachers. Moreover, FA was only able to be applied over a limited period of time, due to the limited school placement time. This means that the findings obtained from this research cannot be generalised.

There were other limitations associated with this research. First, this project focused on the perceptions of the student teachers. Working with this group of participants may have limited the study, as student teachers have limited teaching experience. Also, because this empirical study observed student teachers implementing FA during their school placements, the study was confined to the short period of school placement time. That means that these participants were only teaching a total of fifteen times. This is a limitation as both teachers and pupils need time to adapt to FA practices. The limited time period also meant that the researcher was unable to pilot the questionnaire, the second interview and the tutors' interviews, all of which had to be quickly written and immediately conducted directly after school placement. Finally,

because FA is a relatively new concept, the researcher had to act as both a distant observer and the party who needed to actively introduce and explain FA. Although this study drew on traditions of action research, the fact that the researcher had to assume two roles and possibly influence the participants was another limitation to the study.

The researcher also made some changes throughout the study. First, after the pilot study, some of the questions in the first interview instrument were changed for more clarity. Also, as discussed above, some changes were made in the observation schedule. In addition to this, changes to the researcher's observations of the data, again which were also discussed above, were made when it was deemed to be appropriate.

Ethical strategies were derived from the University of York, Department of Education ethical guidelines. This included voluntary participation, confidentiality, and anonymity. The Ethics Committee at the University of York granted an ethical approval to the researcher before she began to conduct the empirical study. Before commencing this study, a letter was sent to the Saudi university to seek their permission and approval. A sample of student teachers was chosen according to their level of academic achievement. High achievers were chosen to participate in this study. This purposive sample was selected confidentially with the cooperation of the university. The student teachers, schoolteachers and university tutors were asked to sign consent forms. According to Cohen, Manion and Morrison (2007: 55) and Sarantakos (as cited in Creswell (2009:89) an informed consent form involves the purpose of the research, the right to withdrawal at any time and the confidentiality of the subjects' identities. These forms must also declare what the participants will be involved in during the research, as well as information about the identity of the researcher and the institution sponsoring him or her [Sarantakos (2005) as cited in Creswell (2009:89)]. To help ensure understanding about the project, in this study the researcher gathered the student teachers and explained what the project was about and what was required from them. Questions and inquires were discussed before signing the forms. The tutors were later telephoned after they were identified, and the whole project was explained to them. They were provided with consent forms to sign. Confidentiality of data collected from observations, interviews and questionnaires was guaranteed. Data were kept in a safe place. All participants were referred to anonymously as A, B or C, etc. (see for example, **Figure 7-12**).

However, an additional issue regarding ethical concerns was that more student teachers were interested in the study than the researcher could include. Although these student teachers were eager to know more about FA and its practices, their requests

were rejected. Allowing more student teachers to be part of the study was impossible for the researcher because every student teacher needed to be observed at least three times during school placement, and this was not likely to happen if more student teachers were involved in the study. In order to ensure ethical fairness, the researcher made sure that she explained and discussed the concepts of FA with these student teachers. They were allowed by the researcher, their supervisors and the participants to observe the study's participants implementing FA in the classroom. Some supervisors offered to support these student teachers if they wanted to implement FA in their classes.

4.20 Chapter summary

This study focuses on a group of Saudi student teachers' perceptions of FA. This chapter has discussed the scope of the research, the rationale for choosing a mixed methods approach, the reasons for utilising action research, when and how data was collected, data analysis, and important strategies applied by the researcher to ensure authenticity, validity and reliability. A mixed methods strategy is important for both validity and credibility, but it can also be useful, as discussed above, for triangulation. In this research study, the researcher examined the researcher's observations together with the student teachers' perceptions and the tutors' perceptions in order to better explore the student teachers' perceptions about assessment as a whole and FA in particular. Because FA is a new approach in Saudi Arabia, this research study drew on traditions of action research, as it was necessary for the researcher to introduce FA and discuss it with them throughout the study, in order to be able to explore the student teachers' perceptions of FA. The following four chapters will present the findings of this study.

Chapter Five

Questionnaire data analysis with direct comparison to the pre-placement interviews

5.1 Introduction

As discussed in previous chapters, this study aims to explore a sample of Saudi student teachers' perceptions in relation to formative assessment. This chapter discusses the student teachers' perceptions of FA by comparing the data from the first interviews, which were conducted *before* their school placements, with the data from the questionnaires, which were completed *after* the student teachers' school placements. The results from these two instruments are presented together because the same questions were used in both the first interview and the questionnaire, as discussed in detail in chapter four (see **sec. 4.12.1** & **sec. 4.15**).

The current chapter is divided into two major parts. Part 1 of this chapter compares the responses from the questionnaires to the first interviews. This comparison partially answers the following research questions:

- What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?
- Do the student teachers think that formative assessment should be implemented and why?

Part 2 of this chapter then goes on to look at the responses to questions from the questionnaire, which do not correspond with the interview questions. This partially answers the following research questions:

- Do the student teachers think that formative assessment can help school students to make progress?
- What do the student teachers do during their teacher-training programme in connection with formative assessment?
- Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?
- What are the challenges that the student teachers faced when applying formative assessment?

Some of the questionnaire results, which are presented in both part one and part two of this chapter, are referred to in chapter six, which will discuss the results from the second interviews, which were also conducted after the student teachers' school placements.

5.2 Part I: Comparing the questionnaire data with the first interview data

5.2.1 Comparing the student teachers' perceptions of the purposes of assessment as a whole

Part one of this chapter begins by discussing the Saudi student teachers' perceptions of assessment as a whole, by comparing their perceptions before and after their school placements. The purposes of assessment were divided into three groups: learning (L1-L6), selection (C1-C7) and certification, and quality assurance (Q1-Q7), and the elements of assessment (see **Appendix 1 & Appendix 3**).

The student teachers were asked what they thought formed the elements of assessment: learning, selection and certification, and quality assurance. The results from the first interviews showed that the most common perception was that the purpose of assessment was to enable students to learn (**Mean=0.70**) (see **Figure 5-1**). When the student teachers were asked to explain the reasons behind choosing the statements that

they had selected in the first interview, all of the participants replied that their decisions were made based on which elements they thought were most important to and related to assessment. Additionally, when the student teachers were asked to rank the purposes of assessment according to their importance (see **Appendix 1**), all of the participants, except two, thought that the purposes of assessment could not be ranked in order of importance. The two participants who *did* think that the purposes of assessment could be ranked, represented as A and B in **Table 5-1**, ranked the purposes of assessment according to their order of implementation, beginning with learning, and then selection and certification, followed by quality assurance. These two student teachers thought that assessment follows a sequence, since each element relies on the one that comes before. Furthermore, their ranking here suggests that learning is assessed through marking. For example, the first interviewee (A) (**Table 5-1**) perceived that assessment is done to “diagnose strengths and weaknesses”, which would then lead to “grading or ranking”. The latter would then reflect how “effective the learning environment was”. This is similar to what is currently thought in the Saudi educational system: that is, learning is perceived to be closely linked to marking and cannot be achieved without the existence of marks. According to interviewee A, ranking and marking will also raise motivation.

On the whole, however, the results show that the student teachers were able to recognise the purposes of assessment to a certain extent, although they tended to relate these purposes to summative assessment.

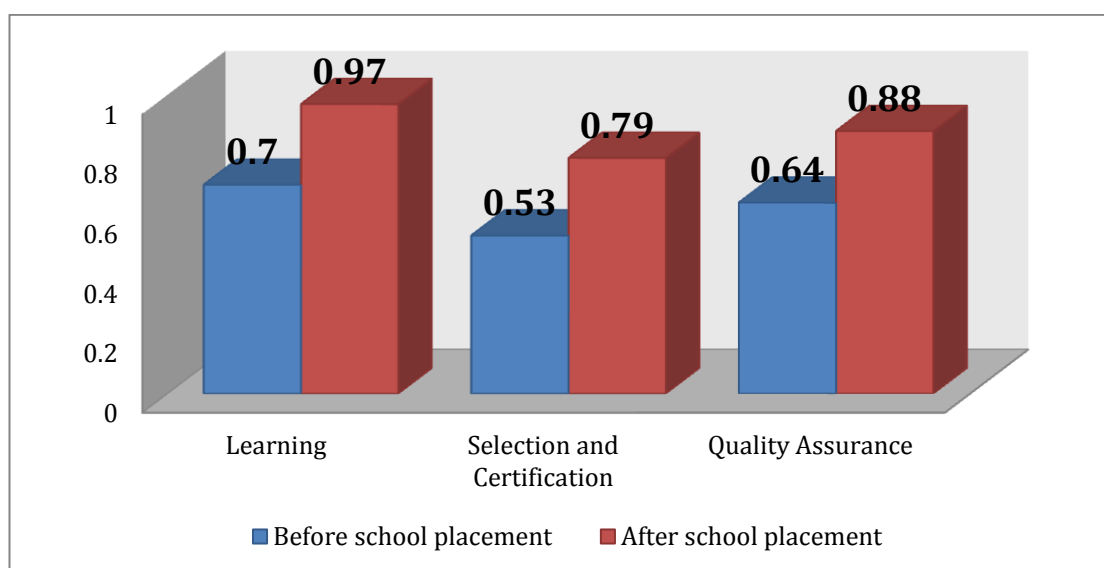
Table 5- 1: Ranking of the purposes of assessment

Purposes of assessment ranked according to importance, starting with the most important		Reasons behind ranking them this way
A	<p>L2: To diagnose strengths and weaknesses. C3: To grade or rank a student. L1: To motivate students. Q2: To judge the effectiveness of the learning environment.</p>	Both participants reported that they have ranked the purposes of assessments as a sequence (i.e. the second depends on the first, and this cannot be done unless the first one is done and so on.)
B	<p>L1: To motivate students. L3: To provide feedback. L6: To establish the level of achievement at the end of a unit of a study. L4: To consolidate work done to date. L5: To help students to develop their capacity for self-assessment. C2: To pass or fail a student. C1: To establish the level of achievement at the end of a programme of study. C5: To demonstrate conformity with external regulations, such as those of a professional or statutory body. C4: To underwrite a ‘license to practice’.</p>	

<p>C6: To select for employment, further educational activity, etc. C7: To predict future performance. Q7: To protect the public. Q6: To protect the relevant profession. Q5: To assure interested parties that the programme or unit of study is of an appropriate standard. Q2: To judge the effectiveness of the learning environment. Q1: To assess the extent to which the programme's aims have been achieved.</p>	
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Comparing the student teachers' choices regarding the purposes of assessment before and after their school placements, the results show that post-placement, there was more recognition of the purposes of assessment in relation to learning, selection and certification, and quality assurance (see **Figure 5-1**). Before their school placements, the means of learning, selection and certification, and quality assurance were **M=0.7**, **M=0.53** and **M=0.64**, respectively. However, after school placements, the purposes of assessment in relation to learning, selection and certification, and quality assurance were recognised with the means: **M=0.97**, **M=0.79** and **M=0.88**, respectively. These results were expected because of the discussions that took place during school placements. Thus, it might be suggested that practising FA helped to develop the student teachers' understanding of the nature of assessment.

Figure 5- 1: Comparing the overall mean of the student teachers' perceptions of the purposes of assessment in relation to the three parts before and after placement: learning, selection and certification, and quality assurance



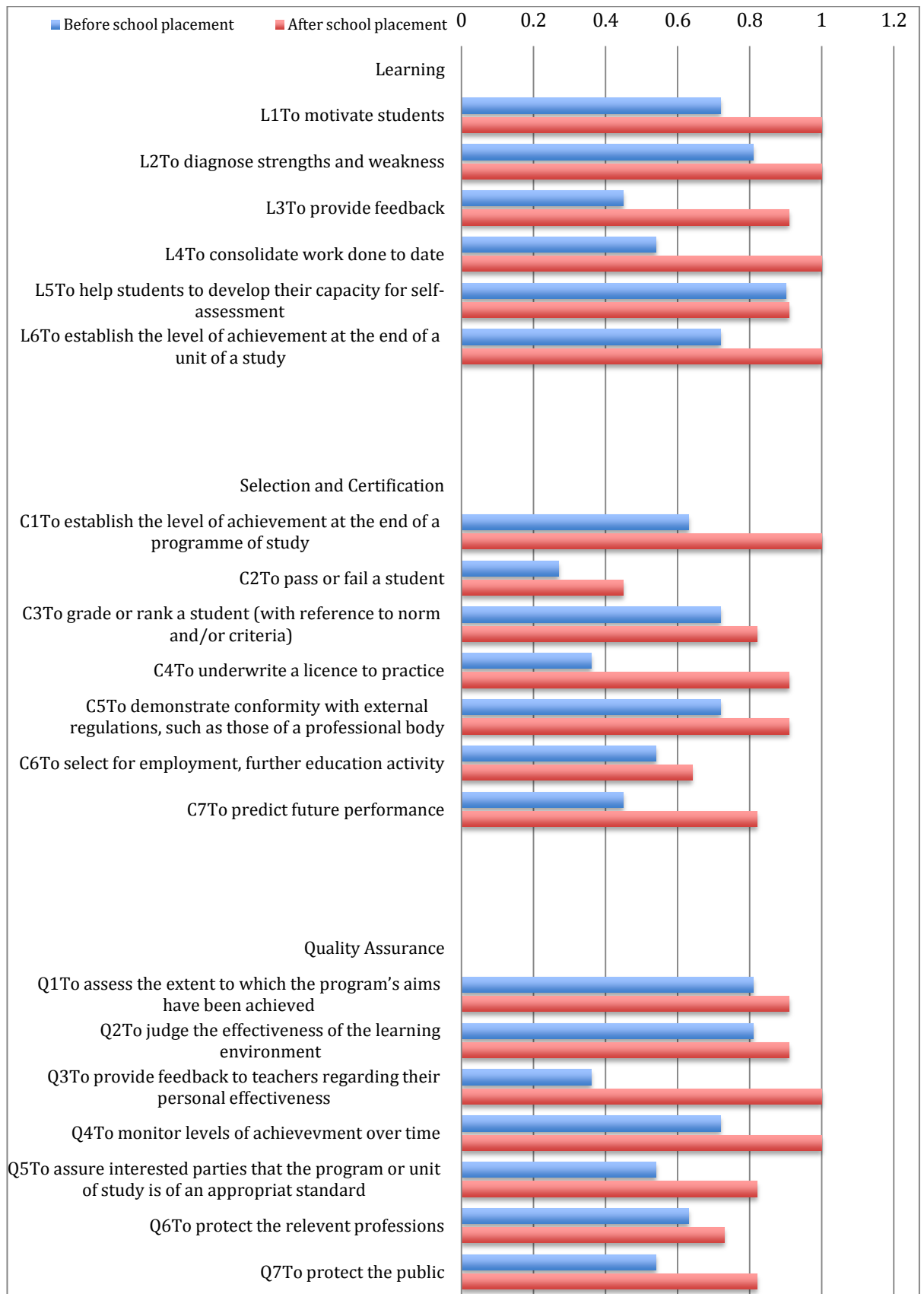
The figure below shows that none of the statements about purposes of assessment elicited agreement from *all* of the participants. The most agreed upon statement, with a

mean of **M=0.90**, was “**L5** to help students to develop their capacity for self-assessment”. However, after their school placements, there was an obvious full agreement on many of the purposes of assessment, mainly those statements concerning learning.

After school placement, all of the participants thought that the purposes of assessment were (**L**= Learning; **C**=Selection and Certification; **Q**=Quality Assurance):

- “**L1** to motivate students”
- “**L2** to diagnose strengths and weaknesses”
- “**L4** to consolidate work done to date”
- “**L6** to establish the level of achievement at the end of a unit of a study”
- “**C1** to establish the level of achievement at the end of a programme of study”
- “**Q3** to provide feedback to teachers regarding their personal effectiveness”
- “**Q4** to monitor levels of achievement over time”

Figure 5- 2: Comparing the student teachers' choices of each purpose of assessment in relation to the three parts: learning, selection and certification, and quality assurance, before and after school placement



5.2.2 Significant differences in the student teachers' perceptions of the purposes of assessment

In the following section, the results from the first question in the first interview and the results from the first question in the first part of the questionnaire are compared, by focusing on the purposes of assessment that are related to learning, selection and certification, and quality assurance.

The Wilcoxon Signed Rank Test is used to find out whether there are any significant differences between the student teachers' choices before and after their school placements in terms of the three purposes of assessment. The Wilcoxon Signed Rank Test was used because after conducting a test of normality, it was found that the data was not normally distributed. The researcher had consulted the Maths Skills Centre at the University of York, as discussed in the methodology chapter, where the calculations of averages were checked, assessment of normality was conducted, and there was general agreement that using the Wilcoxon Signed Rank Test was suitable for this comparison. The data revealed that there was a statistically significant development in the participants' grasp of the nature of assessment. The results might suggest a highly significant development of understanding of assessment in relation to learning (sig=0.017, $p < 0.01$), selection and certification (sig= 0.046, $p < 0.05$), and quality assurance (sig=0.046, $p < 0.05$) with the same significance level (see **Table 5-3**).

Table 5- 2: Comparing the overall mean of the three types of assessment before and after school placement

PreSP (Pre-School Placement) & ASP (After-School placement)

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
ASP Learning Mean – PreSP Learning	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	7 ^b	4.00	28.00
	Ties	4 ^c		
	Total	11		
ASP Certification Mean – PreSP Certification	Negative Ranks	3 ^d	2.67	8.00
	Positive Ranks	7 ^e	6.71	47.00
	Ties	1 ^f		
	Total	11		

ASP Quality Mean - PreSpQualityAssurance	Negative Ranks	2 ^g	3.75	7.50
	Positive Ranks	8 ^h	5.94	47.50
	Ties	1 ⁱ		
	Total	11		

- a. Learning Mean < PreSPLearning
- b. Learning Mean > PreSPLearning
- c. Learning Mean = PreSPLearning
- d. Certification Mean < PreSPCertification
- e. Certification Mean > PreSPCertification
- f. Certification Mean = PreSPCertification
- g. Quality Mean < PreSpQualityAssurance
- h. Quality Mean > PreSpQualityAssurance
- i. Quality Mean = PreSpQualityAssurance

Table 5- 3: The variation in the student teachers' perceptions of the purposes of assessment, before and after school placement

Test Statistics^a

	Learning Mean – PreSPLearning	Certification Mean - PreSPCertification	Quality Mean – PreSpQualityAssurance
Z	-2.388 ^b	-1.995 ^b	-2.057 ^b
Asymp. Sig. (2-tailed)	.017*	.046	.040

- a. Wilcoxon Signed Ranks Test
- b. Based on negative ranks.

To conclude, it can be suggested that the Saudi student teachers' understanding of the nature of assessment developed after their school placements. These changes led to a strong recognition of the purposes of assessment. Most of these purposes were related to learning.

5.2.3 Comparing the student teachers' perceptions of the elements of assessment

This section compares the findings in relation to the student teachers' perceptions of the elements of assessment before and after their school placements. This comparison is

done to explore whether there is any development in their perceptions. During the first interviews, which were conducted before school placement (see question 3, part A in **Appendix 1**), and in the questionnaires, which were completed after school placement (see part 1, question 2 in **Appendix 3**), the student teachers were asked to choose from a list the elements that were related to assessment as a whole. There were seventeen items on the list. Frequencies were used for analysing the data obtained from this question, both before and after school placement.

The findings show that before their school placements, the student teachers perceived that assessment is part of teaching and learning. They identified questioning and feedback as part of the assessment process, and they perceived that assessment is based on achieving the learning outcomes and following the pupils' progress. According to the student teachers, assessment as a whole is more formal than informal. When explaining the intended purpose of using each element of assessment (see **Appendix 7**), their responses showed that grading and marking were the main reasons behind assessment. Their responses also indicated that the concept of self-assessment was understood to mean simply how pupils perceive they have performed on a particular test or quiz. Feedback was reported to be used for giving marks.

After their school placements, the questionnaire results showed that the student teachers were more aware of the nature of assessment. All the subjects agreed that assessment is done to provide students with feedback that reflects their weaknesses and strengths, whilst also showing them how to overcome their difficulties. The participants concurred that assessment can be done in different ways depending on the goal. Almost all of the participants agreed that assessment can be done informally; that is, it can be integrated into teaching and learning to include sharing the learning outcomes, questioning, feedback, peer-assessment, and following the development of the pupils' learning. It is interesting to note that post-placement, the least chosen item was number five, "teachers teach and then they assess later on", which describes a traditional way of teaching. Thus, it can be suggested that after implementing FA, the student teachers were more aware of the nature of assessment and its possible elements.

Table 5- 4: Comparing the student teachers' choices of elements of assessment, before and after school placement

Before school placement	Elements of assessment	After school placement
No. of subjects		No. of subjects
10	1- Assessment is done as an oral formal exam.	7
9	2- Assessment is done as a written formal exam.	7
7	3- Assessment is done informally in a written way.	8
9	4- Assessment is done orally in an informal way. For example, when a teacher listens to the student's answer in the class and gives feedback that is called assessment.	10
5	5- Teachers teach and then they assess later on.	5
10	6- Assessment is part of teaching. It is integrated in teaching and lesson planning. It is part of lessons and could be done many times during a lesson.	10
8	7- Assessment is done to provide pupils with marks.	7
6	8- Assessment is done by the pupils themselves (individually). Students are asked to say which objectives they have achieved and which they have not.	7
6	9- Pupils could assess each other: that is, read the work of each other and give feedback.	10
7	10- Assessment is done to provide students with feedback that reflects their weaknesses and strengths, while showing them how to overcome the difficulties they have.	11
7	11- It involves sharing objectives with pupils and helping them recognise the standards they are aiming for.	10
9	12- It involves open-ended questioning that provokes thinking rather than closed questioning.	10
9	13- We use assessment in order to know to what extent students have achieved the outcomes (criteria assessment).	10
6	14- Learning outcomes are not important in assessment. We should use assessment that compares students in one group to each other. We assess students according to their performance in a group (norm referencing).	6
10	15- Assessment is neither based on achieving the learning outcomes nor comparing a student to the group. It is based on noticing the performance of a student over the whole year. If a student's performance becomes better the results would be better and so on (Ipsative assessment).	10
7	16- Assessment is continuous, such as the one practised in	8

	Saudi primary schools.	
11	<i>I7- Assessment is done in different ways and that depends on the purposes of assessment.</i>	11

5.2.4 Comparing the student teachers' perceptions of FA

In the previous sections of this chapter, the results have focused on the student teachers' perceptions of the purposes and elements of assessment as a whole. This section examines the student teachers' perceptions of the advantages and disadvantages of FA, and the challenges that teachers might face when introducing FA into the Saudi schools. Data obtained before and after school placements is compared.

Before school placement, the student teachers lacked knowledge about FA. The researcher had to introduce FA to them in a general way during the first interview in order to obtain the student teachers' initial perceptions about this form of assessment. This general account of FA was not the only description of FA that was provided to them by the researcher. For the sake of this study, two full sessions took place after the first interview to discuss FA with the participants, as FA was not part of their teacher preparation programme. Introducing FA to the student teachers in a general way at the beginning of the study during the first interview was a necessary step to conduct the first interview with the student teachers. Since the student teachers' lacked knowledge about FA, it is essential to state that before their school placements, their perceptions about the advantages and the challenges of FA were based on their expectations rather than their experiences and subsequent reflections.

5.2.4.1 Comparing the student teachers' perceptions of the advantages and disadvantages of FA, before and after school placement

The same question was used in the first interviews and the questionnaires. This was done in order to be able to compare the student teachers' responses before and after their school placements. Before school placement, the same statements regarding the advantages and disadvantages of FA were introduced. Their responses, as discussed above, were most likely influenced by the subjects' expectations of the advantages and disadvantages of FA, rather than their actual experiences of using it (see **Appendix 1**). Conversely, after their school placements, the same statements were used, however this time the responses were based on the subjects' experiences of practising FA in Saudi classes (see **Appendix 3**).

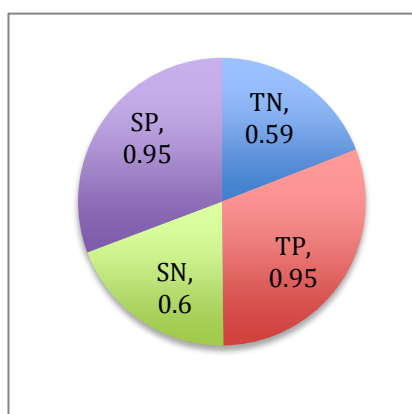
In both research instruments, the first interviews and the questionnaires, the statements related to this question were divided into four sections relating to the advantages and disadvantages for teachers and the advantages and disadvantages for students.

To show the participants' perceptions of the advantages and the disadvantages of FA in relation to teachers and students, the mean of the student teachers' choices was calculated. Averages were used because the researcher intended to see whether there was any significant difference in the student teachers' perceptions before and after their school placements. This was discussed in detail in the methodology chapter (see **sec. 4.13**).

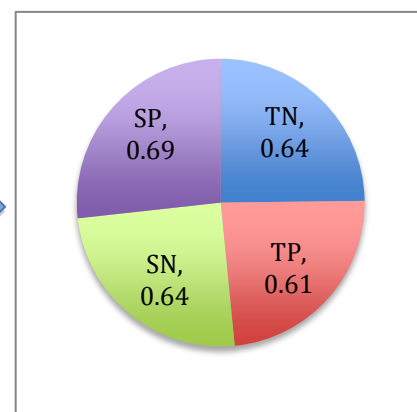
The findings show that before their school placements, the student teachers expected FA's advantages in relation to students and teachers (**M=0.95**), to highly exceed its disadvantages in relation to students and teachers (**M=0.60**). After school placements, the student teachers perceived that there were fewer advantages of FA, in relation to pupils (**M=0.69**) and teachers (**M=0.61**), indicating a change in their perceptions. Conversely, the perceived disadvantages of FA remained almost the same in relation to students and teachers (**M=0.64**).

Figure 5- 3: Comparing the overall mean of the student teachers' choices regarding the advantages and disadvantages of FA, before and after school placement

Before school placement



After school placement



TN = Teacher Negative = the disadvantages of implementing FA in relation to teachers; TP = Teacher Positive = the advantages of implementing FA in relation to teachers; SN = Student Negative = the disadvantages of implementing FA in relation to students; and SP = Student Positive = the advantages of implementing FA in relation to students.

5.2.4.2 Significant differences in the student teachers' perceptions of FA's advantages and disadvantages, before and after school placement

The Wilcoxon Signed Rank Test was used here to find out whether there were any significant differences between the student teachers' perceptions of the advantages and disadvantages of FA before and after their school placements. The Wilcoxon Signed Rank Test was applied because assessment for normality reflected that data was not normally distributed. As mentioned previously, the researcher consulted the Maths Skills Centre at the University of York about this data. An assessment of normality was conducted, and it was thought that the Wilcoxon Signed Rank Test was the most suitable test for this comparison.

After analysing the Wilcoxon Signed Rank Test, the results show that the student teachers' perceptions of the advantages of FA in relation to pupils and teachers both significantly changed. Statistical analysis shows that before school placement, the participants expected FA to have many advantages for teachers and pupils (**M=0.95**). However, after practising FA, the participants' perceptions changed: less positive aspects of FA were found in relation to teachers (**M=0.61**) and pupils (**M=0.69**). Their experiences of practising FA seemed to have a significant influence on their perceptions of the advantages of FA (see **Table 5-6**): the significance variation of the advantages of FA in relation to teachers was $\text{sig}= 0.006^*$, $P < 0.01$ and the significance variation of advantages of FA in relation to pupils was $\text{sig}= .007^*$, $P < 0.01$. The results show that the Saudi student teachers did not perceive that FA had as many advantages as they had expected before their school placements.

Moreover, before implementing FA, the Saudi student teachers expected it to have limited disadvantages in relation to teachers and pupils (**M=0.60**). However, after school placement, they perceived that the disadvantages had risen slightly, for both teachers and pupils (**M=0.64**). Therefore, it can be said that the Saudi student teachers found that FA had slightly more negative aspects in relation to teachers and pupils than they had expected.

To conclude, practising FA seemed to change the Saudi student teachers' perceptions of FA. In general, their responses in relation to the advantages of FA declined, but their responses regarding the disadvantages of FA rose. More specifically, after implementing FA in Saudi schools, most of the student teachers perceived that FA had more advantages for pupils than disadvantages, but slightly more disadvantages for teachers than advantages. On the whole, after school placements, the student teachers perceived FA to have almost as many advantages as disadvantages.

Table 5- 5: Comparing the overall mean of the perceptions of advantages and disadvantages of FA, before and after school placement

Wilcoxon Signed Ranks Test

PreSP (Pre-School Placement); ASP (After-School placement); TN (Teacher Negative=Disadvantages of FA likely to happen to teachers); TP (Teacher Positive= Advantages of FA likely to happen to teachers); SN (Student Negative= Disadvantages of FA likely to happen to students); and SP (Student Positive= Advantages of FA likely to happen to students).

**P<0.0

Ranks				
		N	Mean Rank	Sum of Ranks
ASP Teacher Negative (TN) – PreSP TeacherNegative (TN)	Negative Ranks	4 ^a	5.50	22.00
	Positive Ranks	5 ^b	4.60	23.00
	Ties	2 ^c		
	Total	11		
ASP Teacher Positive (TP) – PreSP TeacherPositive (TP)	Negative Ranks	9 ^d	5.00	45.00
	Positive Ranks	0 ^e	.00	.00
	Ties	2 ^f		
	Total	11		
ASP Student Negative (SN) – PreSP StudentNegative(SN)	Negative Ranks	3 ^g	3.00	9.00
	Positive Ranks	3 ^h	4.00	12.00
	Ties	5 ⁱ		
	Total	11		
ASP Student Positive (SP) – PreSP StudentPositive (SP)	Negative Ranks	9 ^j	5.00	45.00
	Positive Ranks	0 ^k	.00	.00
	Ties	2 ^l		
	Total	11		
a. Teacher Negative Mean < PreSPTeacherNegativeMean				
b. Teacher Negative Mean > PreSPTeacherNegativeMean				
c. Teacher Negative Mean = PreSPTeacherNegativeMean				
d. Teacher Positive Mean < PreSPTeacherPositiveMean				
e. Teacher Positive Mean > PreSPTeacherPositiveMean				
f. Teacher Positive Mean = PreSPTeacherPositiveMean				

g. Student Negative Mean < PreSPStudentNeagtiveMean
h. Student Negative Mean > PreSPStudentNeagtiveMean
i. Student Negative Mean = PreSPStudentNeagtiveMean
j. Student Positive Mean < PreSPStudentPositiveMean
k. Student Positive Mean > PreSPStudentPositiveMean
l. Student Positive Mean = PreSPStudentPositiveMean

Table 5- 6: The variation in the student teachers' perceptions of the advantages and the disadvantages of FA, before and after school placement

Test Statistics^a

**P<0.0

	ASP Teacher Negative (TN) – PreSP TeacherNegative (TN)	ASP Teacher Positive (TN) – PreSP TeacherPositive (TP)	ASP Student Negative (SN) – PreSP StudentNegative (SN)	ASP Student Positive (SP) – PreSP StudentPositive (SP)
Z	-.061 ^b	-2.762 ^c	-.333 ^b	-2.716 ^c
Asymp. Sig. (2-tailed)	.951	.006*	.739	.007*

a. Wilcoxon Signed Ranks Test.

b. Based on negative ranks.

c. Based on positive ranks.

5.2.4.3 Comparing the student teachers' perceptions in terms of each statement about the advantages and disadvantages of FA, before and after school placement

The results show that the student teachers' perceptions of the disadvantages of FA regarding pupils remained almost the same after their school placements. One of these perceptions which remained the same were: “pupils desire a mark instead of only comments”, which many student teachers agreed upon before school placement, with the mean **M=0.81**, and after the school placement, with the mean **M=0.73**. Additionally, “pupils fail to give useful feedback to each other and interpret it correctly”, was relatively agreed upon before their school placements, with means of **M=0.54** and **M=0.45**, and after their school placements, with **M=0.55** and **M=0.64** respectively.

However, the student teachers' perceptions of the disadvantages of FA for the teachers all noticeably changed, except for the perception that teachers are not able to practise FA due to lack of training, which remained relatively stable both before and after school placements with means of **M=0.81** and **M=0.82** respectively. The perceptions that remained stable confirm the idea of the importance of teacher training

in relation to FA. Other perceptions drastically changed. Two perceptions, in particular, showed a dramatic decrease after school placement. These were: the number of pupils in the classroom, which showed almost total agreement before school placement ($M=0.9$) and decreased to nearly half after school placement ($M=0.55$). In addition, the perception that teachers are not able to write useful feedback changed from some agreement before school placement ($M=0.45$) to almost no agreement after school placement ($M=0.09$). This decrease in numbers suggests that the Saudi student teachers' self-confidence in being able to provide useful feedback to pupils increased, and, in contrast to many of the student teachers' expectations before practising FA, class size was not perceived to be an issue when implementing FA. Two other perceptions showed a noticeable shift towards agreement after school placement. These were: teachers were not able to practise FA due to time limitations, which changed from some agreement before school placement ($M=0.63$) to a total agreement after school placement ($M=1$); and FA adds more work to the teacher, which changed from little agreement before school placement ($M=0.18$) to an increase in agreement after school placement ($M=0.73$). This seems to suggest that after practising FA, most of the participants found that FA created more work for the teacher. Lack of time also was perceived to be an issue by all the participants.

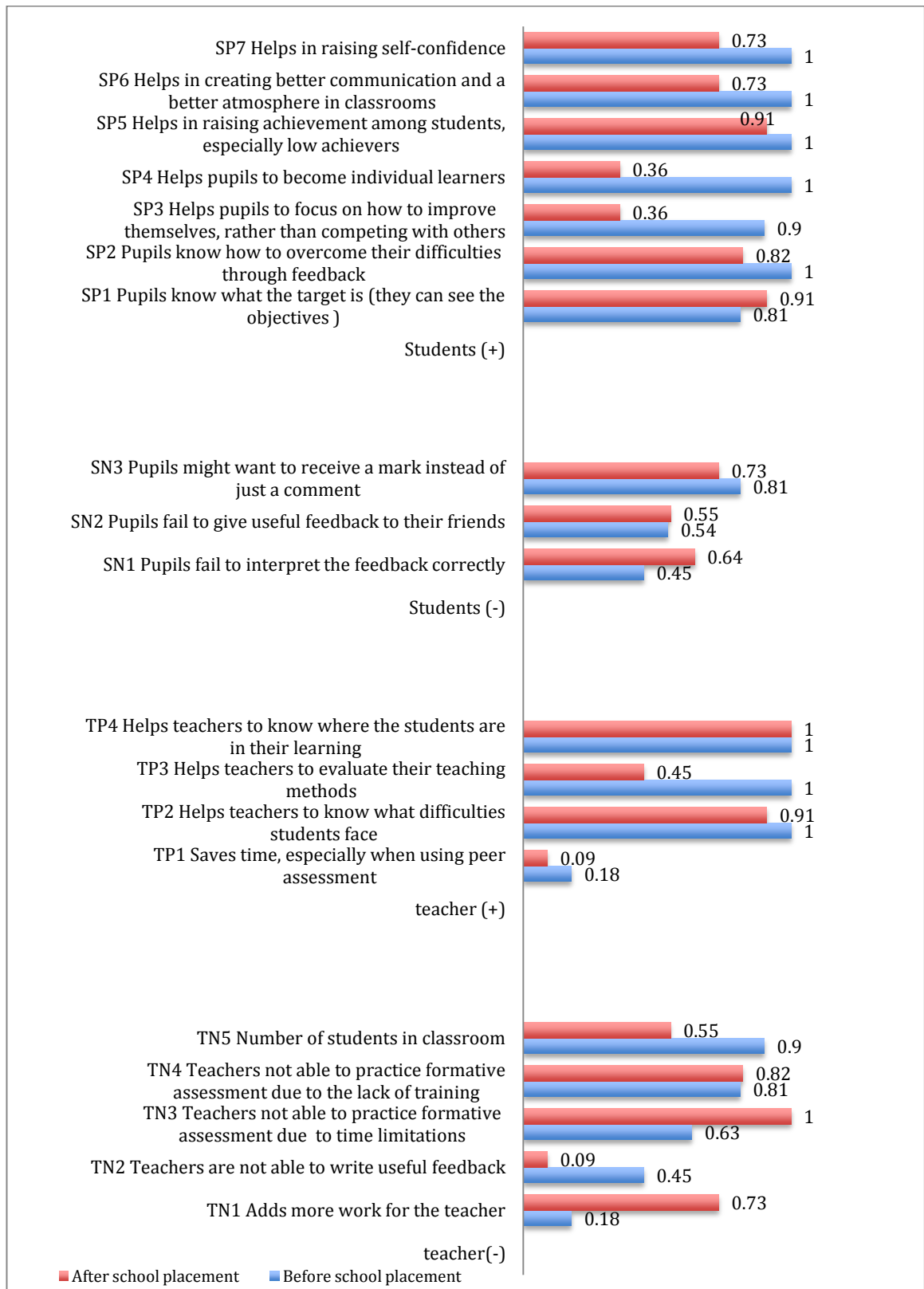
The student teachers' perceptions of the advantages of FA for the teacher remained almost the same, except for the perception that FA helps teachers to evaluate their teaching methods. This latter perception significantly changed after implementing FA during their school placements; it changed from total agreement before school placement ($M=1$) to some agreement ($M=0.45$). Two perceptions showed almost total agreement both before and after school placement. These were: FA helps teachers to know where their students are in their learning and what difficulties they face with both showing $M=1$ before school placement, and with $M=1$ and $M=0.91$ respectively after school placement. In contrast, one perception, which was that FA saves time, especially in peer-assessment, showed little agreement both before and after school placement with $M=0.18$ and $M=0.09$ respectively.

The student teachers' perceptions of the advantages of FA pertaining to students remained relatively high both before and after their school placements. There were however, two perceptions that radically declined from almost total agreement, before school placement, to less than half of the participants, after school placement. These were that FA helps pupils to become individual learners, which changed from $M=1$ to $M=0.36$, and that FA helps pupils to focus on how to improve themselves rather than

competing with others, which shifted from $M=0.9$ to $M=0.36$. Other perceptions, for example the notion that FA helps pupils increase in confidence, and that FA helps to create better communication in classrooms, only declined moderately from total agreement ($M=1$) to general agreement ($M=0.73$).

Although the statistics reflect that there were significant changes in the perceived advantages of FA, most of the perceptions of the advantages of FA remained high. However, the findings show that more changes in the student teachers' perceptions relating to the disadvantages of FA for teachers occurred after their school placements.

Figure 5- 4: Comparing the student teachers' perceptions of the advantages and disadvantages of FA, before and after school placement



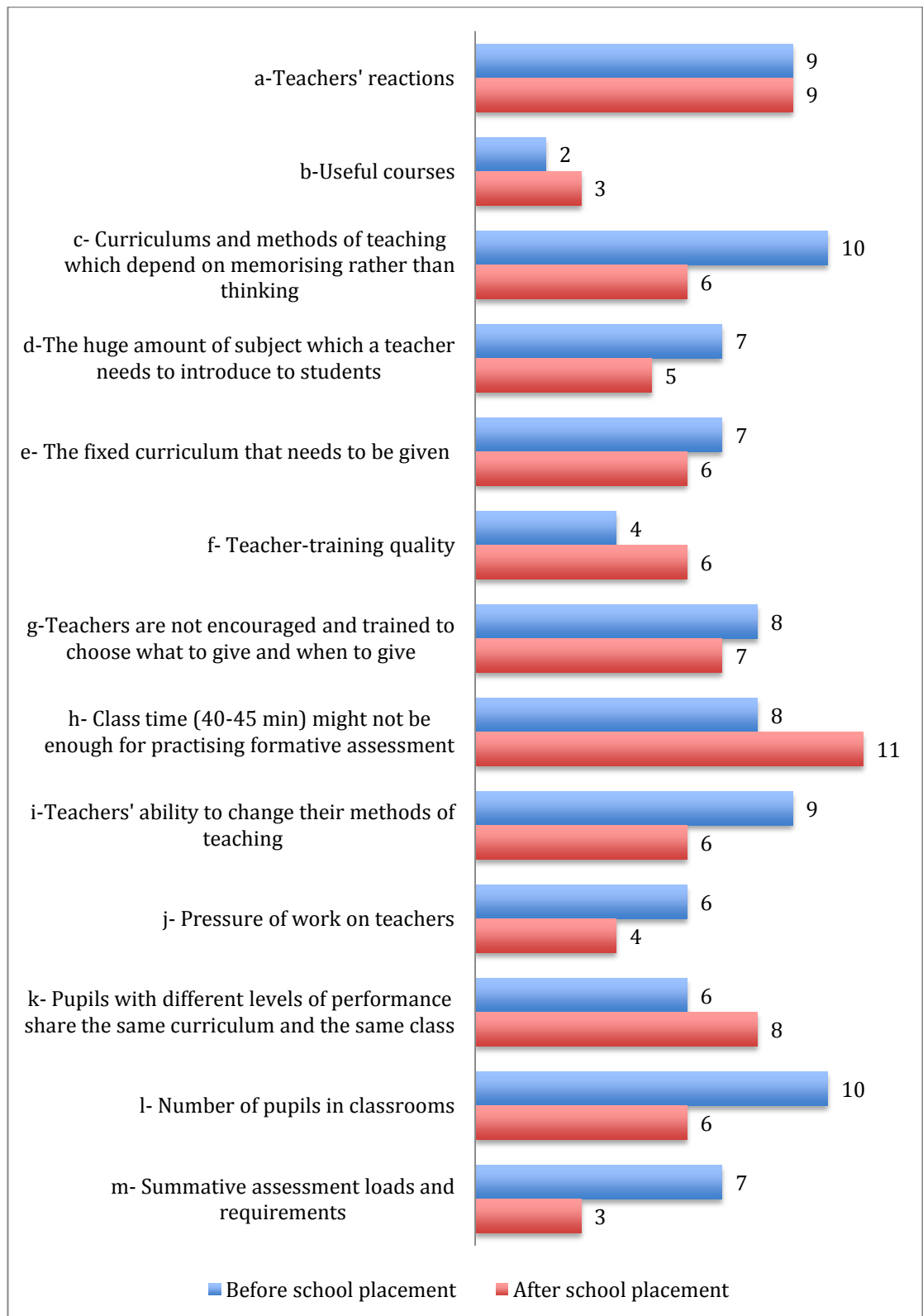
TN = Teacher Negative = the disadvantages of implementing FA in relation to teachers; TP = Teacher Positive = the advantages of implementing FA in relation to teachers; SN = Student Negative = the disadvantages of implementing FA in relation to students; and SP = Student Positive = the advantages of implementing FA in relation to students.

5.2.4.4 Comparing the student teachers' perceptions of the challenges when introducing FA into the Saudi system, before and after the school placement

In order to understand the participants' perceptions of FA, the student teachers' views in relation to the challenges that one might face when introducing FA into the Saudi context was also obtained. The same question was addressed to the participants before and after their school placements. There were thirteen perceived items (see **Appendix 1** question five and **Appendix 3** question 4). As shown in the figure below, the findings show that fewer challenges were perceived by the student teachers after practising FA. Before their school placements, the results from the first interview show that almost all of the student teachers, except either one or two, expected the curriculum, the methods of teaching, teacher reaction and class sizes to be the most challenging aspects that teachers would face if FA were to be introduced into the Saudi educational system. However, after their school placements, the results from the questionnaire show that short lesson time, teacher reaction and classes with mixed abilities were perceived to be the most likely challenges that would be faced if FA were to be introduced into the Saudi system.

This means that the subjects' perceptions regarding the challenges of FA shifted after their school placements. Although the student teachers still agreed that teacher reaction would be a major challenge when introducing FA to Saudi classrooms, short class time and mixed abilities classes were also considered to be amongst the top challenges that teachers might face.

Figure 5- 5: Comparing the student teachers' perceptions, before and after school placements, of challenges teachers might face if formative assessment were to be introduced into the Saudi system

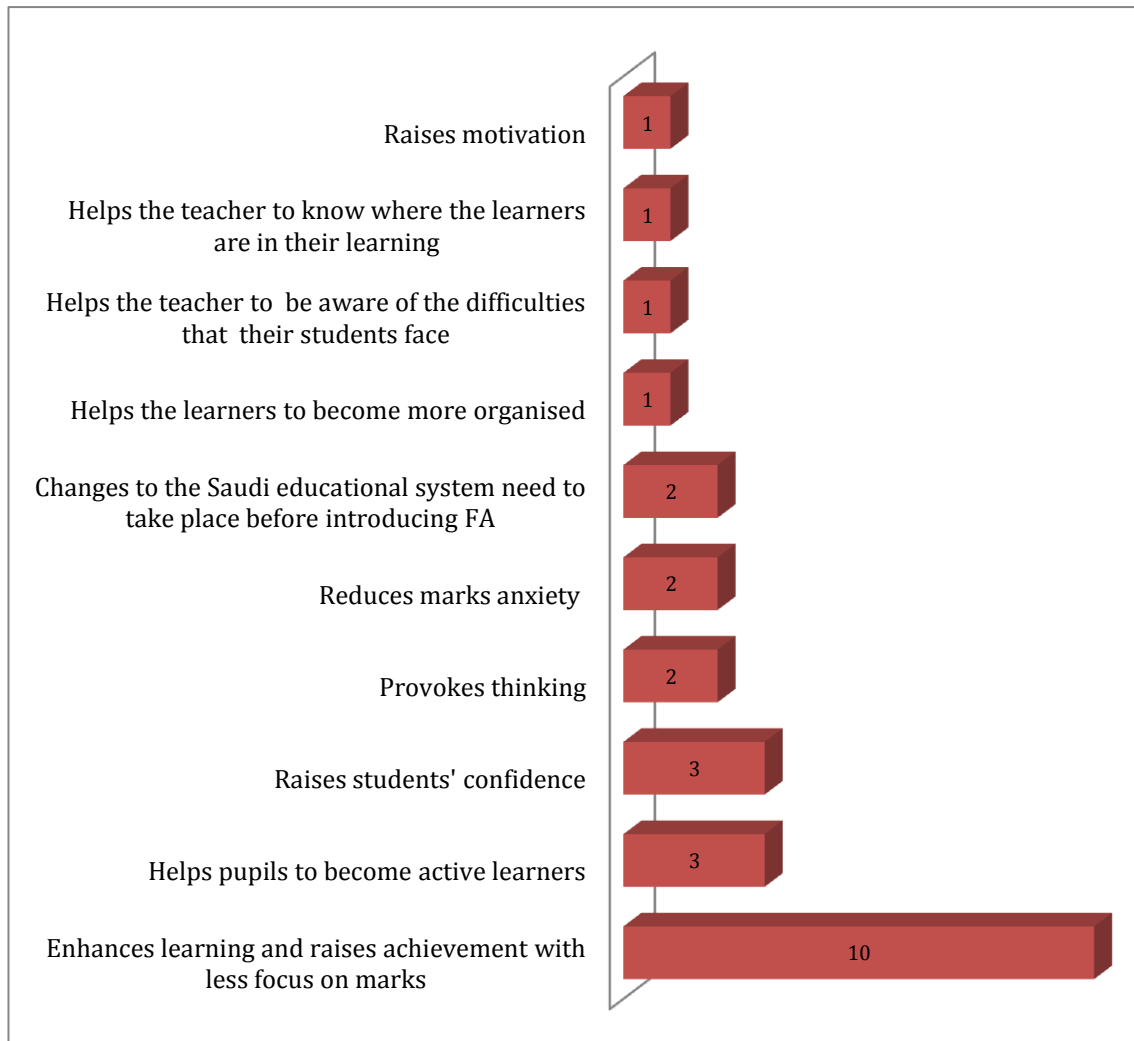


5.2.4.5 Student teachers' perceptions on whether formative assessment should be implemented in Saudi schools

Before their school placements, question 6 and question 7 in the first interview showed that all of the interviewees were enthusiastic about implementing FA. Two of them added that it would be slightly challenging, especially since school placement time might not be long enough to develop a good practice of FA. The interviewees made many positive comments. They hoped to see FA implemented in Saudi schools, and they wished that effective training would be provided to teachers in order to help them to develop their FA skills. They perceived that FA can help pupils to overcome their fear of making mistakes, and thereby help raise self-esteem and the motivation to learn.

After practising FA, all of the student teachers suggested that FA should be implemented in Saudi schools. Many reasons were provided (see **Figure 5-6**). All of the participants, except one, thought that FA would help to raise achievement levels and enhance learning. Nine other reasons were provided: for example, FA helps pupils to become active learners, it helps raise pupils' confidence, it provokes thinking, it reduces anxiety regarding marks, it helps learners to become more organised, it helps teachers to be aware of the difficulties that their students face, it helps teachers to know where the pupils are in their learning, and it raises pupils' motivation. After their school placements, two of the participants suggested that some changes (see chapter six) needed to be considered before introducing FA into Saudi schools.

Figure 5- 6: Reasons for the student teachers' desire to implement formative assessment in Saudi schools, after school placement



5.3 Part 2: Questionnaire results only

The following four sections partially answer the second, third, fourth and fifth research questions.

5.3.1 Student teachers' perceptions of FA in relation to helping pupils make progress

In the second part of the questionnaire, one major statement was addressed (**Appendix 3**): “Formative assessment can help school students to make progress”. Participants were asked to respond according to a five-point Likert Scale indicating their level of agreement or disagreement (e.g., strongly agree, agree, etc.). All of the student teachers agreed that FA does help pupils to make progress, with the majority of them strongly agreeing.

5.3.2 Student teachers' perceptions about whether their training programme is coherent and useful in helping them to develop their professional practice of FA

In order to avoid confusion, the researcher inquired about the university programme and the researcher programme separately. Part three, section A and B of the questionnaire helped to obtain data regarding the student teachers' perceptions of their teacher-training programme and how coherent and useful they perceived it to be in relation to FA. Section A inquired about what the university programme had done to help the participants to develop their understanding and practice of assessment in general and FA more specifically, and how useful and coherent training was. Section B asked what the researcher had done to help the participants to develop their understanding and practice of FA, and how useful and coherent this training was. Participants were required to respond to the questions according to a five-point Likert Scale, indicating their level of agreement or disagreement (e.g., strongly agree, agree, etc.) (**Appendix 3, Part 3**).

The results show that only one participant agreed that the university programme, as a whole, was useful and coherent in helping to develop a good practice of FA. Half of the student teachers did not agree, and three of them neither agreed nor disagreed. However, most of the student teachers agreed that the university programme was useful and coherent in developing their understanding of the nature of assessment in general. Conversely, all of the participants agreed that the researcher programme, as a whole, was coherent and useful in helping them to develop a good practice of FA.

Table 5- 7: Student teachers' perceptions about the university programme in relation to formative assessment

Student teachers' perceptions of the university programme in relation to assessment as a whole and to FA in particular						
I. Things that are done at the university such as sessions, books, handouts, assignments, etc.	SA	A	N	D	SD	Total
A) About assessment in general						
1. At the university, the university programme was <i>useful</i> in developing my <i>understanding</i> of the nature of <i>assessment</i> .	2	6	1	1	1	11
2. At the university, the university programme was <i>coherent</i> in developing my <i>understanding</i> of the nature of <i>assessment</i> .	1	6	3	1	0	11
B) About formative assessment						
	SA	A	N	D	SD	Total

3. At the university, the university programme was <i>useful</i> in developing my <i>understanding of formative assessment</i> in particular.	0	2	1	7	1	11
4. At the university, the university programme was <i>coherent</i> in developing my <i>understanding of formative assessment</i> in particular.	0	1	4	6	0	11
II. Things that were done during school placement.	SA	A	N	D	SD	Total
5. <i>Sufficient</i> feedback was provided by the university supervisor or school supervisor, in relation to formative assessment, <i>during school placement</i> .	2	3	3	2	1	11
6. <i>Useful</i> feedback was provided by the university supervisor or school supervisor, in relation to formative assessment, <i>during school placement</i> .	2	4	2	2	1	11
7. Adequate support for helping you to develop <i>good practice</i> in your teaching, in relation to formative assessment, was provided by supervisors <i>during school placement</i> .	3	4	1	2	1	11
III. Judging the university programme as a whole	SA	A	N	D	SD	Total
8. As a whole (at the university and during school placement), the university programme was <i>coherent</i> in helping to develop <i>good practice</i> of formative assessment.	1	1	3	5	1	11
9. As a whole (at the university and during school placement), the university programme was <i>useful</i> in helping to develop <i>good practice</i> of formative assessment.	1	1	3	6	0	11

Table 5- 8: Student teachers' perceptions of the researcher programme in relation to formative assessment

Student teachers' perceptions of the researcher programme in relation to formative assessment						
I. Things that are done at the university such as sessions, books, hand-outs, assignments...etc.	SA	A	N	D	SD	Total
10. At the university, the researcher's programme was <i>useful</i> in developing my <i>understanding of formative assessment</i> in particular.	7	3	1	0	0	11

11. At the university, the researcher's programme was <i>coherent</i> in developing my <i>understanding</i> of <i>formative assessment</i> in particular.	7	3	1	0	0	11
II. Things that were done during school placement.	SA	A	N	D	SD	Total
<i>12. Sufficient</i> feedback was provided by the researcher in relation to formative assessment <i>during school placement</i> .	8	3	0	0	0	11
<i>13. Useful</i> feedback was provided by the researcher in relation to formative assessment <i>during school placement</i> .	10	1	0	0	0	11
14. Adequate support for helping to develop <i>good practice</i> in teaching in relation to formative assessment was provided by the researcher <i>during school placement</i> .	10	1	0	0	0	11
III. Judging the researcher's programme as a whole	SA	A	N	D	SD	Total
15. As a whole (at the university and during school placement), the researcher's programme was <i>coherent</i> in helping to develop <i>good practice</i> of formative assessment.	10	1	0	0	0	11
16. As a whole (at the university and during school placement), the researcher's programme was <i>useful</i> in helping to develop <i>good practice</i> of formative assessment.	9	2	0	0	0	11

5.3.3 Student teachers' perceptions about what they did during their school placements

Most and least used strategies

Part three section C of the questionnaire asked the student teachers about what they did during their school placements. Ten sentences that were related to the elements of FA were stated. The participants had to indicate how often they used these strategies using a five-point Likert Scale (e.g., always, frequently, etc.) (See **Appendix 3**, part three section C).

Most of the participants thought that they had *always* used "declaring the learning objectives in a clear way". Most of them thought that they had used "pupils' self-assessment", "assessing students many times in the class" and "no hands up" strategy, except for asking questions". In addition, the results show that they perceived "using success criteria for peer-assessment" and "providing the opportunity for learners

to respond to feedback orally or written” to be the least used. The following were perceived as being more moderately used:

- Using more open-ended questions that provoke thinking.
- Helping students to be active learners (more student discussions and less teacher dominance).
- Providing effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing.
- No marks are used as feedback, only comments are used as feedback.

Table 5- 9: Student teachers' perceptions about what they did during school placement

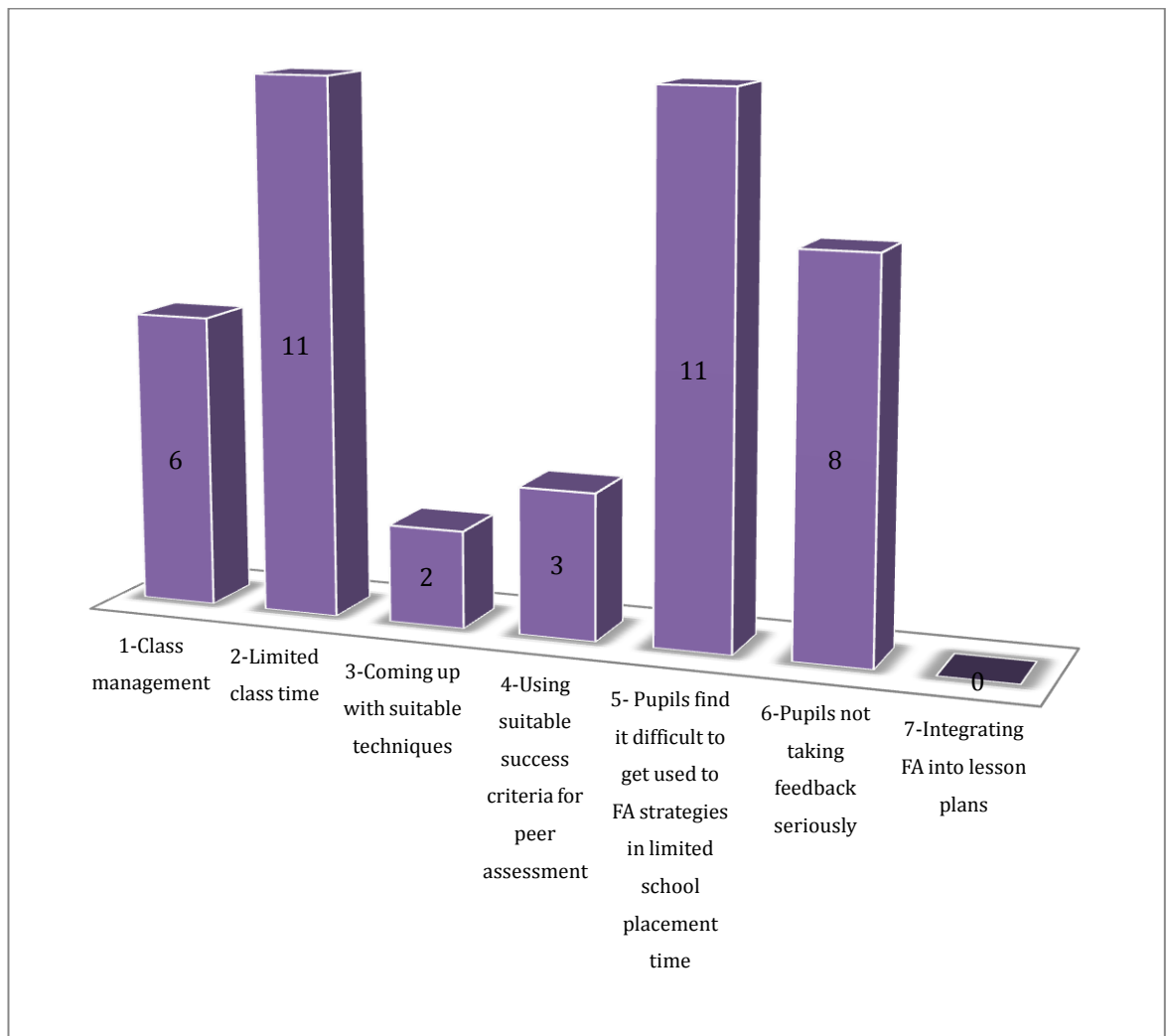
Student teachers' perceptions of what they did during school placement		A	F	S	O	N	Total
1.	Assessing students many times in the class	5	4	2	0	0	11
2.	“No hands up” strategy, except for asking questions	5	4	1	1	0	11
3.	Using more open-ended questions that provoke thinking	1	5	2	2	1	11
4.	Helping students to be active learners (more student discussions and less teacher dominance)	3	4	4	0	0	11
5.	Declaring the learning objectives in a clear way	9	1	1	0	0	11
6.	Using success criteria for peer-assessment	3	1	1	5	1	11
7.	Pupils' self-assessment during or at the end of a lesson	6	4	1	0	0	11
8.	Providing effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing	4	2	3	2	0	11
9.	No marks are used as feedback, only comments are used as feedback	5	0	4	2	0	11
10.	Providing the opportunity for learners to respond to feedback orally or written	2	2	1	3	3	11

5.3.4 Challenges perceived by the student teachers when practising FA

All of the student teachers perceived time limitations — both in terms of the short class time for lessons and limited school placement time — as challenges when trying to get pupils used to FA strategies. They perceived these as the main challenges of practising FA. Eight of them considered pupils not taking feedback seriously also to be a challenge. Six of them considered classroom management to be a challenge. Three of

them perceived using suitable success criteria for peer-assessment to be a challenge. Finally, two of them perceived that coming up with suitable techniques was a challenge. However, none of the student teachers thought that integrating FA into their lesson plans was a challenge.

Figure 5- 7: Challenges considered by student teachers when practising FA



5.4 Conclusion

This chapter directly compared the student teachers' perceptions of assessment as a whole and FA in particular before and after their school placements. The results here seem to suggest that the student teachers' perceptions of assessment and FA developed during their school placements. There was a shift in some of their perceptions pertaining to the purposes and elements of assessment as a whole, the advantages and disadvantages of FA, and the potential challenges of introducing FA into the Saudi educational system. Although there were some changes in their perceptions, all of

the student teachers were enthusiastic about FA and the prospect of its presence in Saudi education. All the participants perceived that FA helps pupils to make progress. Most of the student teachers perceived that their university programme was useful and coherent in helping them to develop their ideas about assessment in general, but not FA. The researcher's programme, however, was perceived to be more useful and coherent than the university programme, by most of the participants, in helping the student teachers to develop their understanding of FA.

Most of the participants perceived that the FA strategies that they applied most frequently were: declaring learning outcomes in a clear way, pupils' self-assessment, assessing pupils many times in the class, and the "no hands up" strategy. The strategies that were perceived as the least used were: using more open-ended questions, helping students to be active learners, providing effective comments that initiate thinking, and no marks are used as feedback, only comments are used as feedback. All of the student teachers perceived that short lesson time and short school placement time were the main challenges that they faced when implementing FA.

Chapter Six

Second interview data analysis

6.1 Introduction

6.1.1 Data collected after school placement

This chapter discusses the findings from the second interviews, which were conducted after the student teachers' school placements. These one-to-one semi-structured interviews were conducted with all the student teachers in the study. The main purpose behind conducting this second interview was to obtain a thorough understanding of the subjects' perceptions of assessment in general, and of FA in particular, after they had experience of implementing FA during their school placements. This interview instrument helped to partially answer all of the research questions, which are listed again below:

- i) What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?
- ii) Do the student teachers think that formative assessment can help school students to make progress?
- iii) What do the student teachers do during their teacher-training programme in connection with formative assessment?
- iv) Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?
- v) What are the challenges that the student teachers faced when applying formative assessment?
- vi) Do the student teachers think that formative assessment should be implemented and why?

Some of the interview questions were based on the questionnaires, which were also provided to the student teachers after their school placements. Additional questions asked at the interview were designed to help the researcher better answer the six research questions. In order to show the subjects' perceptions of assessment and FA, the interview questions were divided into six sections, each section centring around one of the six research questions. The letters A, B, C, D, E, F, G, H, I, J and K represent the eleven interviewees.

6.2 Student teachers' perceptions of assessment as a whole and FA in particular, after the school placement

In order to be able to understand the participants' perceptions of the purposes of assessment, the first interview question asked the student teachers to explain their reasons behind choosing certain purposes of assessment over others, which had been provided to them in a list in the questionnaire (see **Appendix 3**). As explained in the methodology chapter, the purposes of assessment were divided into three categories: learning, selection and certification, and quality assurance. The findings show that three out of the eleven participants explained that their choices were based on their experiences during their school placements. Eight participants said that their answers were based on what they believed were the purposes of assessment, and not on their actual teaching experience.

The second and third questions in this second interview were also based on the questionnaire. These questions helped the researcher to gain more information about the subjects' perceptions of assessment in general and FA in particular. These two questions were based on seventeen items, which had been stated in the questionnaire. While the first question inquired about the purposes of assessment, the second and third questions, discussed here, were interested in the elements of assessment as a whole. The results show that most of the student teachers who chose the following elements of assessment thought that these could be applied as either formative or summative assessment depending upon whether marks or feedback were given:

- Assessment is done as an oral formal exam.
- Assessment is done as a written formal exam.
- Assessment is done informally in a written way.
- Assessment is done orally in an informal way. For example, when a teacher listens to the student's answer in the class and gives feedback, that is called assessment.

Most of the student teachers that chose the following elements thought that these could be applied to FA more than to summative assessment:

- Assessment is part of teaching. It is integrated into teaching and lesson planning. It is part of lessons and can be done many times during a lesson.
- Assessment is done by the pupils themselves (individually). Students are asked to say which objectives they have achieved and which they have not.
- Pupils can assess each other: they can read each other's work and give feedback.
- Assessment is done to provide students with feedback that reflects their weaknesses and strengths, whilst also providing advice on how to overcome the difficulties that they have.
- Assessment is neither based on achieving the learning outcomes nor comparing a student to the group. It is based on noticing the performance of a student over the whole year. If a student's performance becomes better, then the results are better, and so on (ipsative assessment).

Finally, almost all of the student teachers who chose “**Assessment is done to provide pupils with marks**” thought that it this statement only applied to summative assessment. Thus, it can be concluded that, according to the student teachers in this research study, both formative and summative assessment can be formal or informal, depending on whether feedback or marks are given. Moreover, they thought that summative assessment depends heavily on marks and FA is related to four of the five aspects of FA (feedback, peer-assessment, self-assessment, questioning), as well as to following the progress of pupils. These five aspects of FA were discussed in detail in the literature review. There was also some awareness that summative assessment can also include the five aspects of FA. The participants' responses are displayed in **Table 6-1**:

Table 6- 1: Participants’ justifications for choosing each element of assessment

Elements of assessment	Total No. of subjects who chose element	No. of subjects categorizing the element as Formative(F), summative (S) or both (F&S)		Further explanation of their choices
1- Assessment is done as an oral formal exam.	7	Summative	2	In formal tests only marks are used.
		Both (F&S)	5	Depends whether marks or feedback are given.
2- Assessment is done as a written formal exam.	7	Summative	2	In formal tests only marks are given.
		Both (F&S)	5	Depends on whether marks or feedback are given.
3- Assessment is done informally in a written way.	8	Formative	2	In informal tests only feedback is given.
		Both (F&S)	6	Depends whether marks or feedback are given.
4- Assessment is done orally in an informal way. For example, when a teacher listens to the student’s answer in the class and gives feedback, then that is called assessment.	10	Formative	4	In informal tests only feedback is given.
		Both (F&S)	6	Depends whether marks or feedback are given.
5- Teachers teach and then they assess later on.	5	Summative	2	It is the traditional way of teaching
		Both (F&S)	3	Depends on whether marks or feedback are given.
6- Assessment is part of teaching. It is integrated into teaching and lesson planning. It is part of lessons and can be done many times during a lesson.	10	Formative	7	Through questioning, the teacher knows where the learners are in their learning.
		Both (F&S)	2	Depends on whether marks or feedback are given.

		No specified answer	1	Participant did not provide any answer.
7- Assessment is done to provide pupils with marks.	7	Summative	6	Because marks are given.
		No specified answer	1	Participant did not provide any answer.
8- Assessment is done by the pupils themselves (individually). Students are asked to say which objectives they have achieved and which they have not.	7	Both (F&S)	1	Depends on whether marks or feedback are given.
		Formative	6	Self-assessment and achieving learning outcomes are FA strategies.
9- Pupils can assess each other: they can read each other's work and give feedback.	9	Formative	6	Because peer-assessment is part of FA. Helps involve pupils in discussions.
		Both (F&S)	3	Depends on whether marks or feedback are given.
10- Assessment is done to provide students with feedback that reflects their weaknesses and strengths, whilst also providing them with advice on how to overcome the difficulties that they have.	11	Formative	7	It is done to help pupils improve.
		Both (F&S)	4	Depends whether marks or feedback are given.
11- It involves sharing objectives with pupils and helping them recognise the standards they are aiming for.	10	Formative	4	Help the pupils judge themselves and know what they are going to have in the lesson. It reduces confusion and helps the pupils to be organised.
		Both (F&S)	6	Could be applied in both kinds of assessment.
12- It involves open-ended questioning that provokes thinking rather than closed questions.	10	Formative	2	Used to assess students' way of thinking and their understanding.

		Both (F&S)	8	Depends whether marks or feedback are given.
13- We use assessment in order to know to what extent students have achieved the learning outcomes (criteria assessment).	10	Formative	5	Because it is concerned with achieving learning outcomes, unlike SA, which is about failing or passing pupils.
		Both (F&S)	5	Depends whether marks or feedback are used.
14- Learning outcomes are not important; we use assessment that compares students in one group to each other. Assess students according to their performance (norm referencing).	6	Summative	2	Comparing students contains marks.
		Both (F&S)	1	Depends whether marks or feedback are used.
		Formative	3	It is done to assess student ability.
15- Assessment is neither based on achieving the learning outcomes nor on comparing an individual student to the group. It is based on noticing the performance of a student, and if a student's performance is better, the results are also better, and so on (ipsative assessment).	10	Both (F&S)	4	Depends whether marks or feedback are used.
		Formative	6	Because it is continuous, no comparison amongst pupils. It checks the progress of each student in order to trace their learning development.
16- Assessment is continuous, such as practised in Saudi primary schools.	8	Both (F&S)	4	Depends whether marks or feedback are given.
		Formative	2	Because it is continuous.

		Formative but applied summatively	2	/
17- Assessment is done in different ways and it depends on the purposes of assessment.	11	Any type of assessment.	11	/

When the student teachers were asked to describe assessment, the most-used phrase was “**measuring a student’s achievement**”. The participants also related assessment to learning. All of their responses are listed in the **Table 6-2** below:

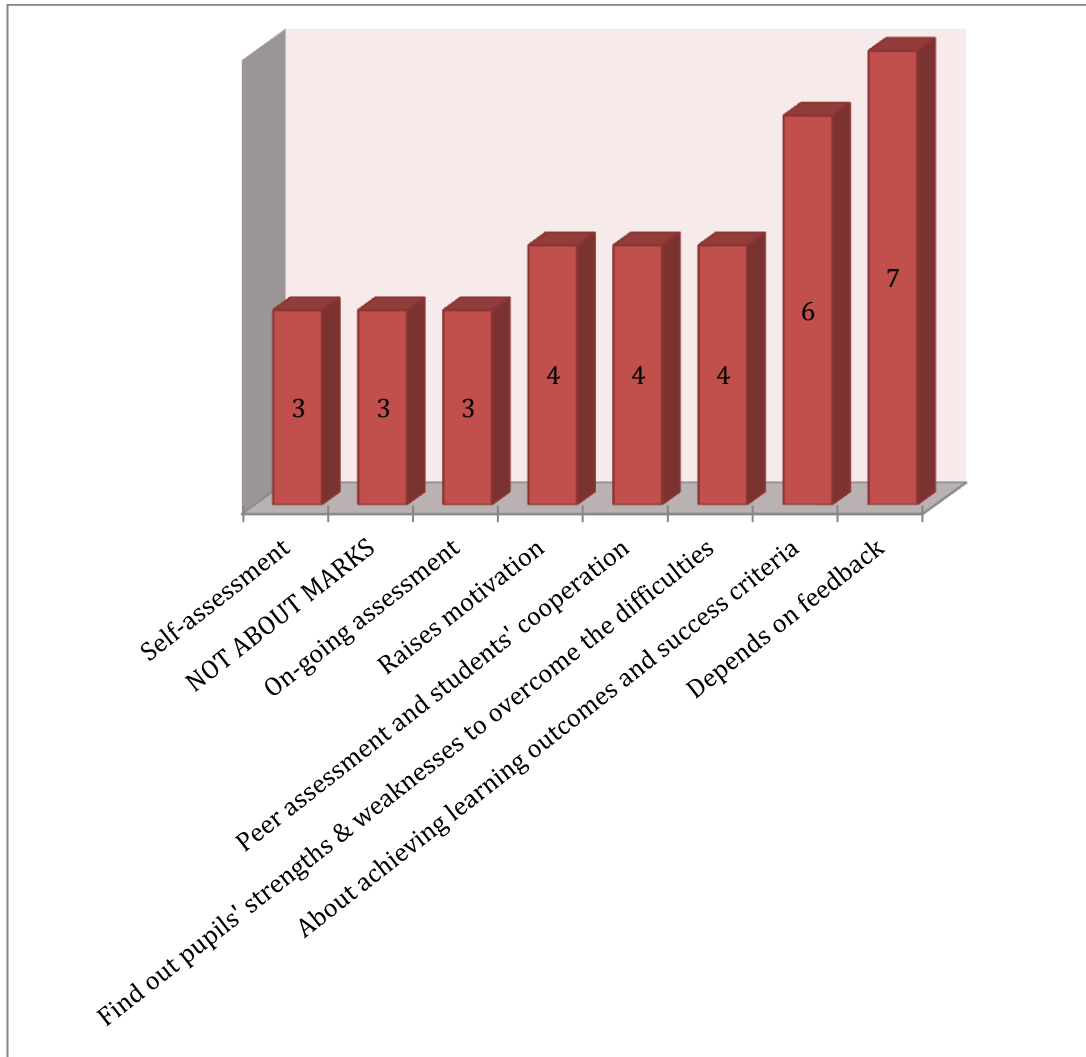
Table 6- 2: Participants' description of assessment

No. of Participants	The meaning of assessment in general
6	Measuring a student’s achievement.
2	Continuous.
5	Following the pupils’ development in their learning by checking objective achievement.
1	To see what the pupils have done and how they have done it.
5	To know the strengths and the weaknesses of the students and to help them overcome difficulties.
2	(Mentioning different types of assessment): <ul style="list-style-type: none"> • Could be with feedback or marks or anything else. • It could be measuring the students’ understanding of the material introduced to them. Another type of assessment is measuring whether the students have succeeded or failed.
1	To motivate the pupils to study.
1	It is a way to measure what the teachers are doing in their teaching. It is a way to see who is qualified for certain jobs.

After these initial questions about assessment as a whole in the second interview, the researcher then moved on to ask questions which related specifically to FA. When asked to describe their understanding of FA, the results show that most of the participants related FA to feedback, achieving the learning outcomes, and success

criteria. Some of them also described FA as an on-going form of assessment. **Figure 6-1** shows the participants' responses:

Figure 6- 1: Participants' descriptions of FA



6.2.1 Student teachers' perceptions of the elements of FA, after school placement

Question six in the second interview asked the student teachers to explain which strategies or elements they think are related to FA and the reasons behind using the five elements of FA: declaring learning outcomes, questioning, feedback, peer-assessment and self-assessment.

All of the participants reported, “declaring the learning outcomes” as an FA strategy, and thought that this strategy was used for two reasons: firstly, it helps pupils to know what they are going to have in the lesson, and secondly, it helps pupils to assess themselves in relation to the learning outcomes. Thus, it might be argued that all of the participants were aware, to some extent, of the reasons for using the strategy “declaring the learning outcomes”.

Seven of the eleven participants reported “questioning” as an element of FA. Five of these participants thought that questioning is used to check the pupils’ understanding, whilst only two thought that it helps pupils to be involved in classroom discussions. Although some participants did not report “questioning” as an aspect of FA, half of the participants were aware that “questioning” was used to check understanding.

All of the participants reported “Feedback” as an aspect of FA. Seven of the student teachers thought that feedback is provided to improve a pupil’s performance, while two student teachers perceived that it improved learning; two participants thought that it was only done between the pupils.

All of the participants stated that “peer-assessment” is an element of FA. Seven of the teachers thought this because, as they explained, pupils learn from each other more than from their teacher. A few of the student teachers mentioned two additional reasons: two of the teachers thought that it helps the pupils to be involved in discussions, whilst two other student teachers felt that it helps pupils to be more active in the learning process and more confident.

Eight participants reported “self-assessment” to be an aspect of FA. One student teacher listed “self-assessment” as an element of FA, but also explained that she was not convinced of the importance of using it. The other two student teachers did not mention this aspect at all. Four of the participants thought that it was used because it helps the pupils to know what they have achieved and it helps teachers to know where their students are in their learning. Three of the student teachers described “self-assessment” as being related to the learning outcomes, and one of the student teachers did not apply it because she was not convinced it was relevant. This suggests that although most of the participants were able to report “self-assessment” as an aspect of FA, some were still unable to do so after their school placements.

There were two additional strategies reported by the student teachers: “no hands up” strategy and “success criteria”. Seven participants reported “no hands up” as a FA strategy. All seven of the participants who chose this explained that the main reason behind using this strategy is that it makes learners alert and attentive. Two participants thought that it helps pupils to listen to the teacher and to participate, and one participant thought that it helps with classroom management. Three of the participants reported “success criteria” as a FA strategy. They said that it is used because it helps the teacher to assess the pupils’ work. None of the participants mentioned that pupils could also use it in assessing their peers’ work.

To conclude, the results from this question indicate that all of the participants were able to report three main aspects of FA: “declaring the learning outcomes”, “feedback” and “peer-assessment”. However, not all of them succeeded in reporting “questioning” and “self-assessment” as aspects of FA. Two additional strategies, which are not one of the five elements of FA, were considered to be: “no hands up” strategy and “success criteria”.

6.2.2 The student teachers’ perceptions of formative and summative assessment

The student teachers participating in this study were also asked to what degree they thought summative assessment and formative assessment differ and why. **Table 6-3** shows the subjects’ responses.

Table 6- 3: Differences between formative and summative assessment

No. of subjects stating the difference	Differences between formative assessment and summative assessment
11	The only difference is that no marks are given in FA (only comments) and marks <i>are</i> given in summative assessment.
4	Formative assessment is continuous. It is used during the whole year, but summative assessment is just used at the end of the year.
2	<i>Emotional difference:</i> Unlike summative assessment, formative assessment reduces the pressure on the students and the teacher because pupils are not shy in answering or afraid to lose marks.
2	Formative assessment is concerned with pupils’ understanding whilst summative assessment focuses on results.
1	Summative assessment is broader and asks about general information, whilst formative assessment asks more about specific information because it is interested what has been understood and what has been not been understood.
4	<i>Added details:</i> Because I can apply formative assessment strategies in summative assessment as well: peer-assessment, self-assessment, declaring the learning outcomes and success criteria can be applied with summative assessments.

All of the participants thought that there are differences between FA and summative assessment. They all agreed that the main differences were about marks and feedback. Four of the student teachers explained that all of the aspects of FA, except feedback, could be applied to both formative and summative assessments. Conversely, they perceived that feedback could only be applied to FA. Four of the student teachers perceived that FA is continuous, whilst summative assessment is not. A couple of the participants explained that FA helps the pupils emotionally, because it reduces their anxiety about marks. Two participants noted that FA is different because it is concerned with the pupils' understanding, whilst summative assessment is more about results. One participant perceived that summative tests are more general than FA.

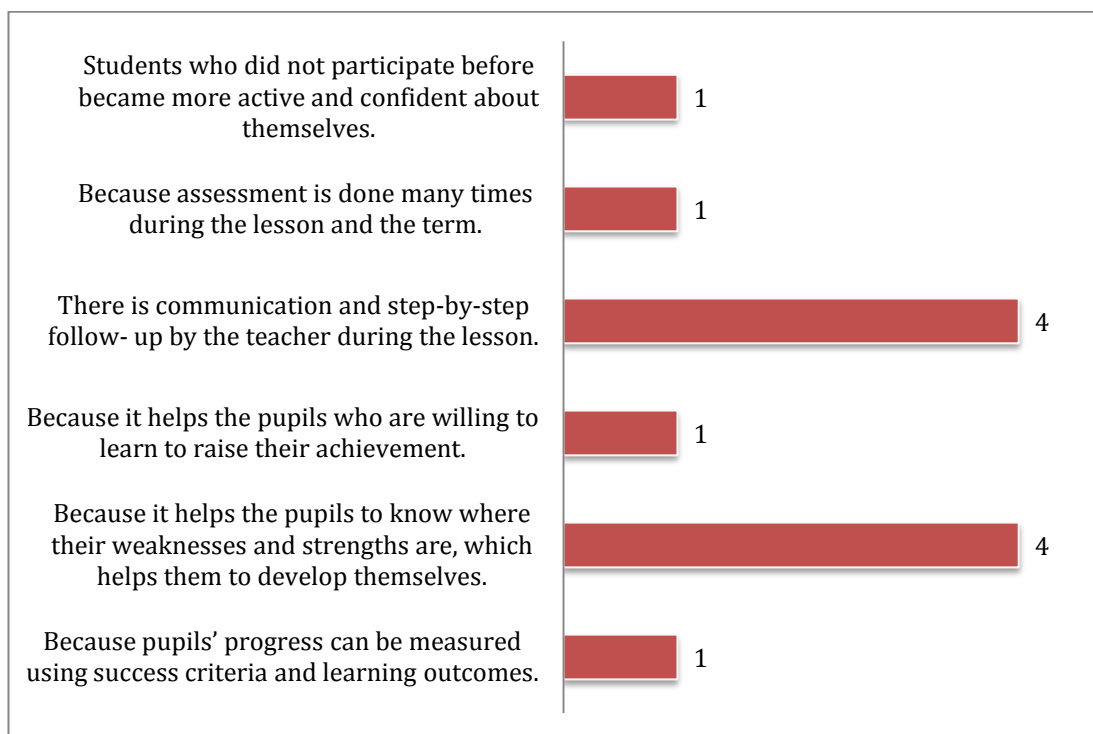
To conclude, the student teachers thought that marks and feedback are the main characteristics of summative assessment and formative assessment, respectively. Another main difference was that some of the student teachers perceived FA as continuous, whilst summative assessment is not done until the end of a unit. Some of the participants explained that FA elements, except feedback, could be utilised when using summative assessment.

6.3 Student teachers' perceptions of FA in relation to helping school students to make progress

The interview questions discussed in this section were formulated in order to elicit data that would respond to the second research question: "Do the student teachers think that formative assessment can help school students to make progress?" In the questionnaire, the participants were asked to respond to the statement, "formative assessment can help school students to make progress", by using a five-point Likert Scale indicating their level of agreement (e.g., strongly agree, agree, etc.).

The questionnaire results show that all of the participants either agreed or strongly agreed that FA can help school pupils to make progress. **Figure 6-2** shows the student teachers' perceptions of why, as explained in the second interview, they think FA helps students to make progress.

Figure 6- 2: Reasons FA helpful for progress



According to **Figure 6-2**, the main reasons that the student teachers provided were:

- Because it helps the pupils to know what their weaknesses and strengths are, which helps them to develop themselves.
- There is communication and step-by-step follow-up by the teacher during the lesson.

Although it was difficult for the participants to determine whether FA helped the pupils in their class to make progress, due to the limited school placement time, some of the student teachers were able to describe what they had observed, and also able to identify the ways in which FA helped pupils in their class to make progress, as **Table 6-4** shows.

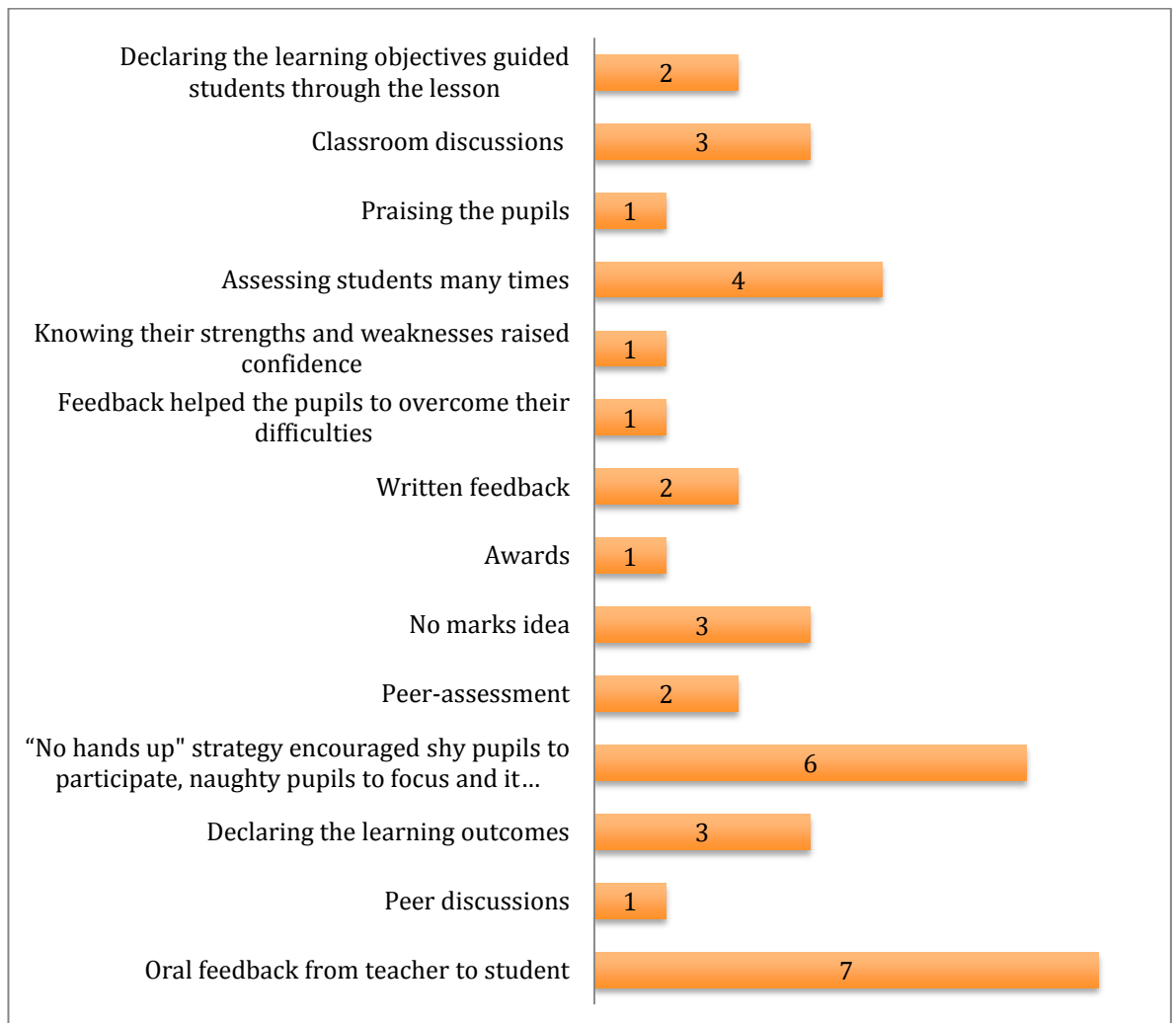
Table 6- 4: Participants' perceptions of whether FA has helped pupils to make progress

No. of subjects stating reasons	Reasons
2	Find it hard to tell because of the short period of school placement time, but the pupils seemed to be trying to overcome their difficulties and to make progress.
1	<ul style="list-style-type: none"> • “No marks” strategy made the pupils positive about participating. • “No hands up” strategy made them alert.

	<ul style="list-style-type: none"> Knowing why a response was wrong and how to overcome the difficulties through feedback was so helpful because many students were shy about asking.
2	Yes, partially. Even if it was only some of them, but yes.
1	This was obvious from the written assessment that I did. Even their class teacher was surprised.
4	Yes.
1	Find it hard to tell because of the short period of school placement, but after the end of the school placement, I found that they were grasping the idea of formative assessment.

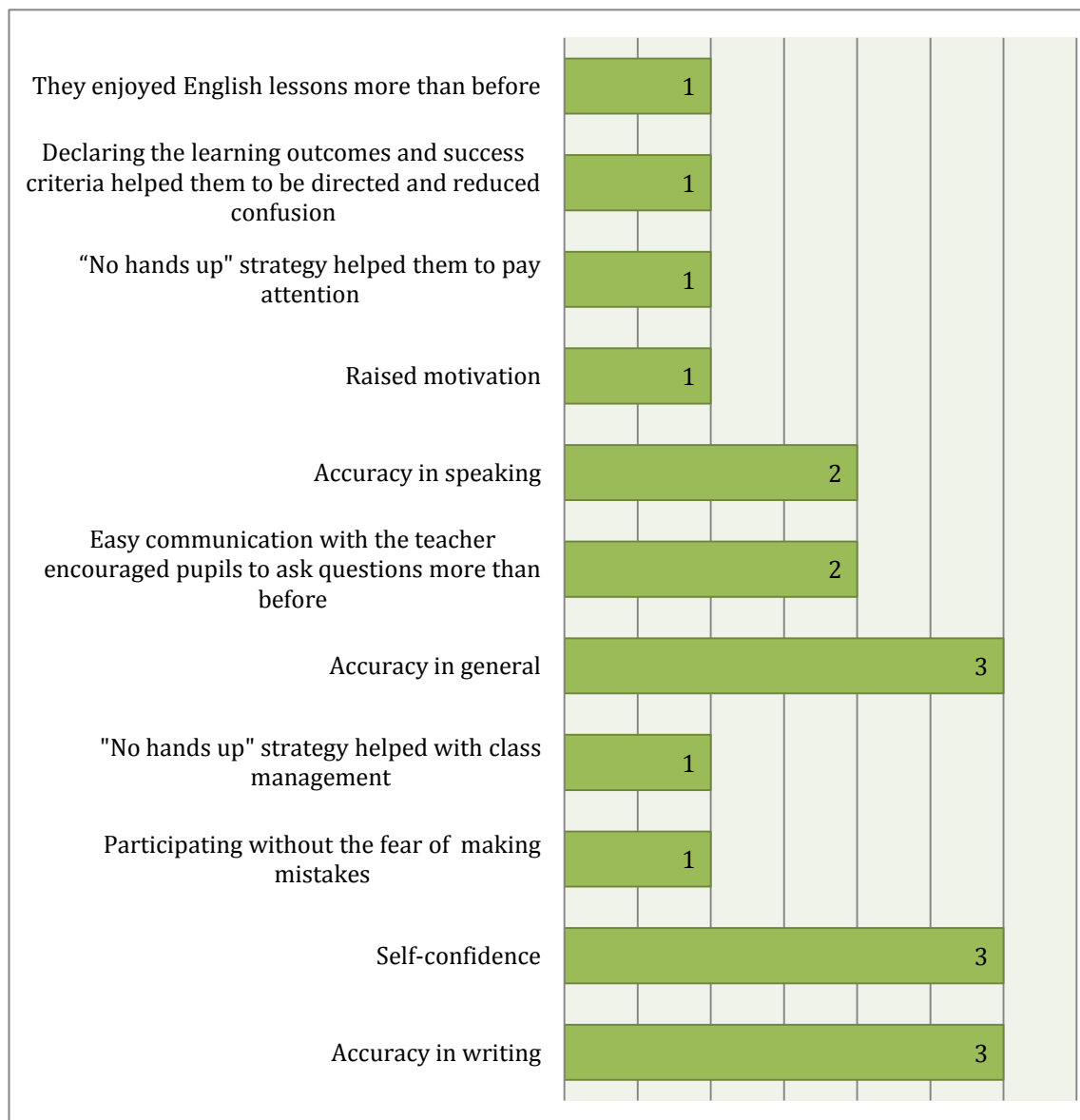
The participants were also asked to explain the measures that they took to ensure their pupils' progress. Their responses are listed in **Figure 6-3**:

Figure 6- 3: Participants' perceptions of practices that helped pupils to make progress



The results displayed in **Figure 6-3** indicate that most of the participants thought that oral feedback from the teacher helped pupils to make progress. The second strategy that most participants thought was helpful was the “no hands up” strategy. They explained that this practice encouraged the shy pupils to participate, while also helping all of the pupils to focus more during the lesson. **Figure 6-4** illustrates how the participants thought these practices helped their pupils to make progress.

Figure 6- 4: Participants' perceptions of how FA helped the pupils to make progress



Although the student teachers reported different responses when asked to articulate precisely in what ways FA had helped pupils to make progress, most of them reported that FA helped pupils to make academic progress, which was reflected in better

accuracy in general, and in their speaking and writing. Only three of them reported that FA helped pupils to raise their self-confidence.

When asked whether they thought that the measures they had taken had helped most of the pupils in their class to make progress, eight participants thought that FA had definitely helped most pupils in the class to make progress. Three of the participants thought that FA only helped some pupils in the class. The participants offered various reasons to explain why they thought most or only some of the pupils had made progress, as **Figures 6-5** and **6-6** show.

Figure 6- 5: Reasons provided by participants who thought most pupils made progress

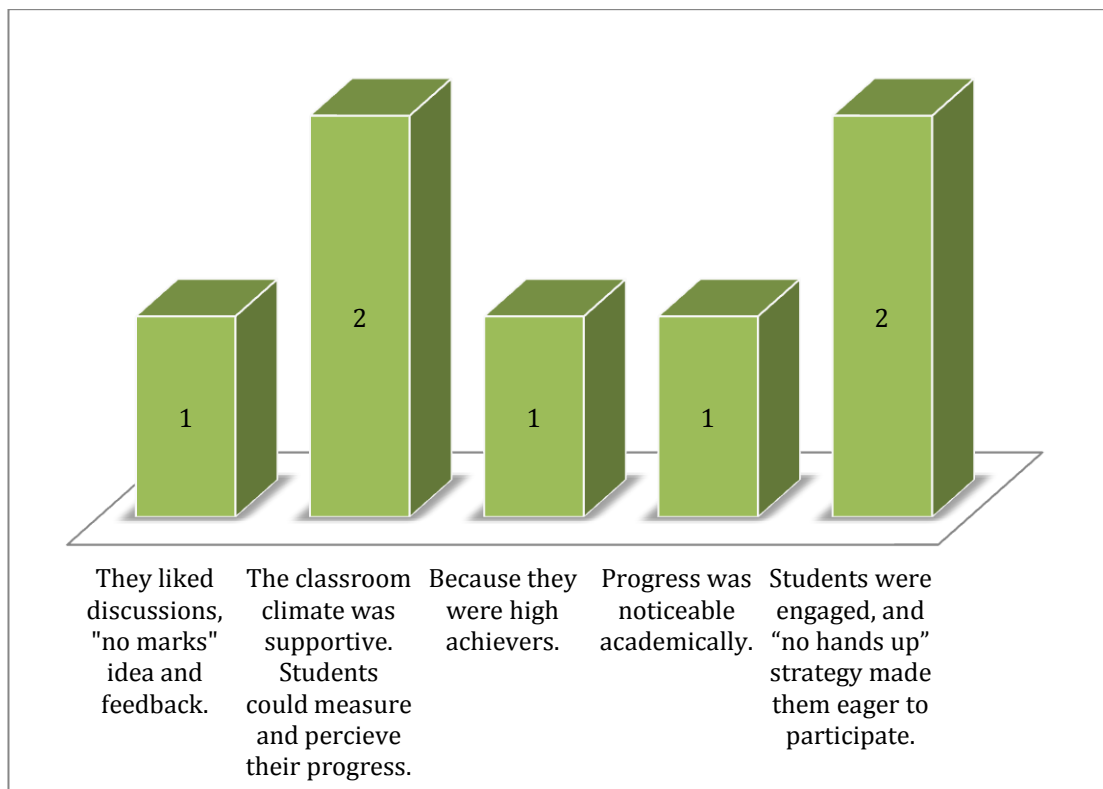
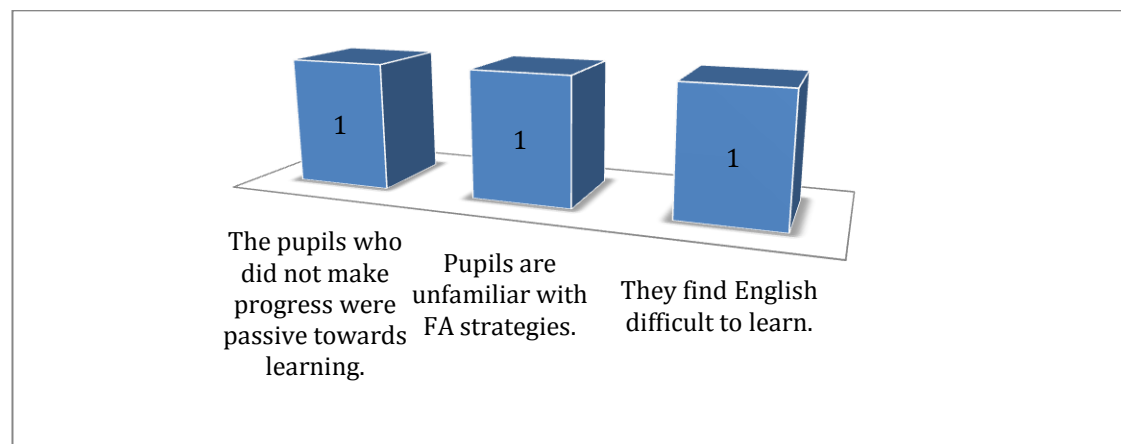


Figure 6- 6: Reasons provided by participants who thought only some pupils made progress



When asked which pupils, in particular, FA helped, the findings show that the participants perceived that it was the average pupils who were most positively helped by FA. One interesting comment regarding this was: *“I found that high achievers get easily bored. The low achievers need more help and support”*.

Table 6- 5: Participants' perceptions of who, in particular, FA helped

Subjects	Participants' explanations	Type of achievers			Total
		Low (L)	Average (A)	High (H)	
A	Self-assessment helped me to know what difficulties each student faced. This helped me to be ready for the next lesson and focus on their weaknesses.	√	√	√	All
B	High achievers wanted to dominate, but FA stopped them. Low achievers were too weak to make progress.		√		A
C	N/A	√	√	√	All
D	Average students. Because high achievers get easily bored, and low achievers need more help and support.		√		A
E	N/A		√	√	A+H
F	N/A			√	H
G	I remember one girl was refusing to answer because she thought she was rubbish in English but in the last lesson she was participating pretty well.	√	√		L+A
H	They were focusing more than before, and made progress in spelling. They were not tense because there were not any marks.	√			L
I	N/A		√		A
J	I remember one participant was refusing to do anything. She was passive. However, through success criteria she was able to make progress. Giving enough time was also helpful as.	√			L
K	Despite of the pupils' dislike of EFL, they started to care about learning it.	√	√	√	All

N/A: Not available

Table 6- 6: Total of participants' perceptions of who, in particular, FA helped

Levels effected positively	Number of participants reporting this	Calculating which level was effected the most positively		
		High level	Average level	Low level
High only (H)	1	5	8	6
Average only (A)	3			
Low only (L)	2			
All levels (L+A+H)	3			
Average and High (A+H)	1			
Low and Average (L+A)	1			

Beyond helping students to progress, the participants were further asked whether they thought FA was useful and why. All the participants thought that FA was useful both academically and emotionally for teachers and students alike (see **Table 6-7**). However two of the participants were more sceptical and thought that FA was useful only under certain circumstances (see **Table 6-8**).

Table 6- 7: Participants' perceptions of how FA could be useful

No. of subjects	Reasons	Type
1	1) Because it helps the teacher to know the strengths and weaknesses of their students.	Academically
1	2) Because the purpose of education is to help students to understand and achieve the goals, and this is what FA is about.	
1	3) Because a sense of achievement is felt by both the teacher and the students.	
1	4) They were able to measure their progress in relation to the learning outcomes.	
2	5) In raising achievement.	
1	6) Because it assesses the students immediately. It does not wait until the end of term.	

1	7) It assesses students many times.	Emotionally
2	8) It helped me to be more organised.	
2	9) It helped me to think of each step in my lesson.	
1	10) It opened my mind to using open-ended questions instead of closed questions only.	
1	11) It helps pupils to participate because every answer is accepted but directed.	
2	12) Makes teachers feel more satisfied because students will appreciate learning more than before.	
1	13) "No marks" helped shy pupils to participate.	
1	14) To raise the students' motivation.	
1	15) The students were more relaxed because there were more discussions and fewer marks.	

Table 6- 8: Sceptical participants' perceptions of the conditions needed in order for FA to be useful

No. of subjects	Conditions
1	<ul style="list-style-type: none"> • It needs to be used with students for a long period of time in order to help them to get used to the strategies. • It needs to be applied in all subjects, not only one subject. This will help the students to get used to FA and not be confused. • Teachers need to be well trained in applying FA.
1	ONLY if the students want to learn, make progress and improve.

6.4 Student teachers' perceptions, after school placement, of whether their training programme is coherent and useful in helping them to develop their professional practice

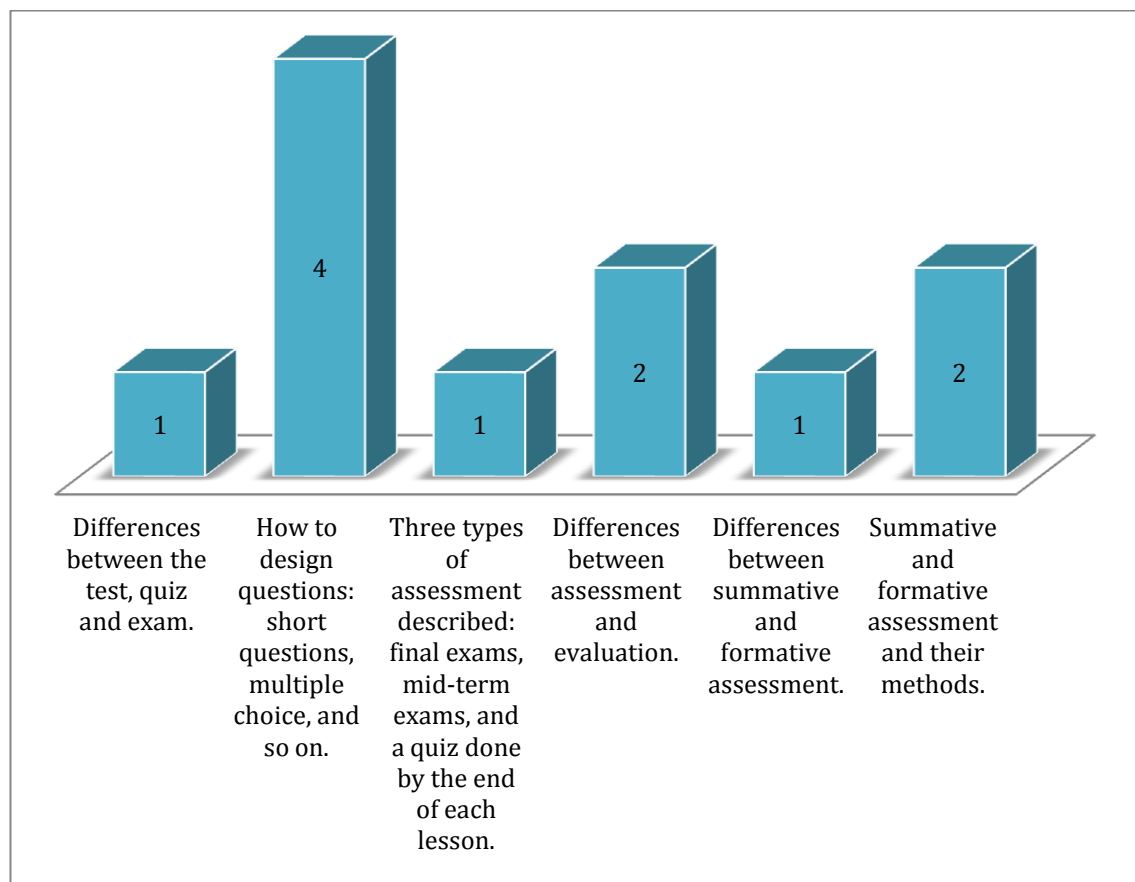
The following interview questions aimed to answer the fourth research question: "Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?" The results are presented in three sections: the student teachers' perceptions of whether their university training programme is coherent and useful in helping them to develop their professional practice in *assessment in general*; the student teachers' perceptions of whether their university training programme is coherent and useful in helping them to

develop their professional practice of *formative assessment*; and the student teachers' perceptions of whether the researcher's programme is coherent and useful in helping them to develop their professional practice of *formative assessment*.

6.4.1 Student teachers' perceptions, after school placement, of whether their university training programme is coherent and useful in helping them develop their professional practice of assessment in general

In the questionnaire, the subjects had been asked to respond to the statement, "at the university, the university programme was useful in developing my understanding about the nature of assessment", by using a five-point Likert Scale indicating their level of agreement or disagreement (e.g., strongly agree, agree, etc.). The questionnaire results show that most of the participants chose either agree or strongly agree. Only a few disagreed. At the second interview, the student teachers were asked to elaborate further on their questionnaire responses: they were asked to explain what they had learned at the university about the nature of assessment and the different types of assessment. Findings from the second interview show that the most reported response was that the university programme provided them with information about forming questions and the differences between exams, such as mid-term and finals. Other participants provided different responses, but none of these were directly related to the types of assessment. Only a few participants explained that they were provided with information in relation to formative and summative assessment. Therefore it can be suggested that there was lack of information in relation to the types of assessment, but there was reasonable information about forming questions and differences between exams (see **Figure 6-7**).

Figure 6- 7: Participants' perceptions of what the university introduced to them in relation to assessment and its types



During the second interview, the participants were also asked what the university programme had provided them with, specifically, that had helped them to understand assessment as a whole. There was no general agreement amongst the participants about what the university had provided to them. When asked about the number of sessions and their usefulness, the majority thought that there were two sessions, and only four of the student teachers commented on the degree of usefulness of the sessions. Almost all of the participants reported that they had received books and hand-outs, which half of them described as useful, while a few thought that the information in the books and hand-outs provided were not very clear. All of the participants, except one, said that no assignments were given. However, all of them agreed that they were tested on their understanding of assessment. The results are displayed in **Table 6-9**, according to each participant, from A to K.

Table 6- 9: Participants' perceptions in terms of number of sessions, discussions, books or hand-outs, assignments, and tests provided by the university in relation to assessment

	A	B	C	D	E	F	G	H	I	J	K
No. of sessions	One	Two	Two	Three, but very useful.	Two, but very useful.	None	N/A: cannot remember	Two	Two, but not useful.	½ session only. Very brief.	One
Discussion in those sessions	None	Specific questions addressed to the tutors. No real discussions.	Specific questions addressed to the tutors. No real discussions.	Discussions about how to write a test and then how to correct it.	We had group work. We practised different types of assessment.	None	N/A	Specific questions addressed to the tutors. No real discussions.	N/A	Brief	Brief
Books or hand-outs	About 3 pages only about assessment in general.	They were not very clear because they were very brief.	Very useful books and hand-outs	Very useful books and hand-outs	Very useful books and hand-outs. 10 pages about assessment types with examples.	Not very clear	N/A	About 7 pages, which were useful.	About 15 pages, which were useful.	Brief	20 pages of assessment and its types, which explained how to design questions.
Assignment	None	None	None	Comparing SA & FA.	Group work	None	None	None	None	None	None
Test	Included in the final test.										

When asked whether the university provided other information and/or resources to help them to understand assessment, all of the participants agreed that the university did not offer anything else that helped them to understand FA.

In the questionnaire, the student teachers had been asked to respond to the statement, “at the university, the university programme was coherent in developing my understanding of the nature of assessment”, by using a five-point Likert Scale indicating their level of agreement or disagreement (e.g., strongly agree, agree, etc.). The results from the questionnaire show that most of the participants chose either agree or strongly agree; few chose neither, and only one chose disagree. In the second interview, the participants were asked to elaborate on their different responses to the statement above. Their responses are displayed in **Table 6-10**:

Table 6- 10: Student teachers' explanations of how coherent the university programme is in relation to developing their understanding of the nature of assessment

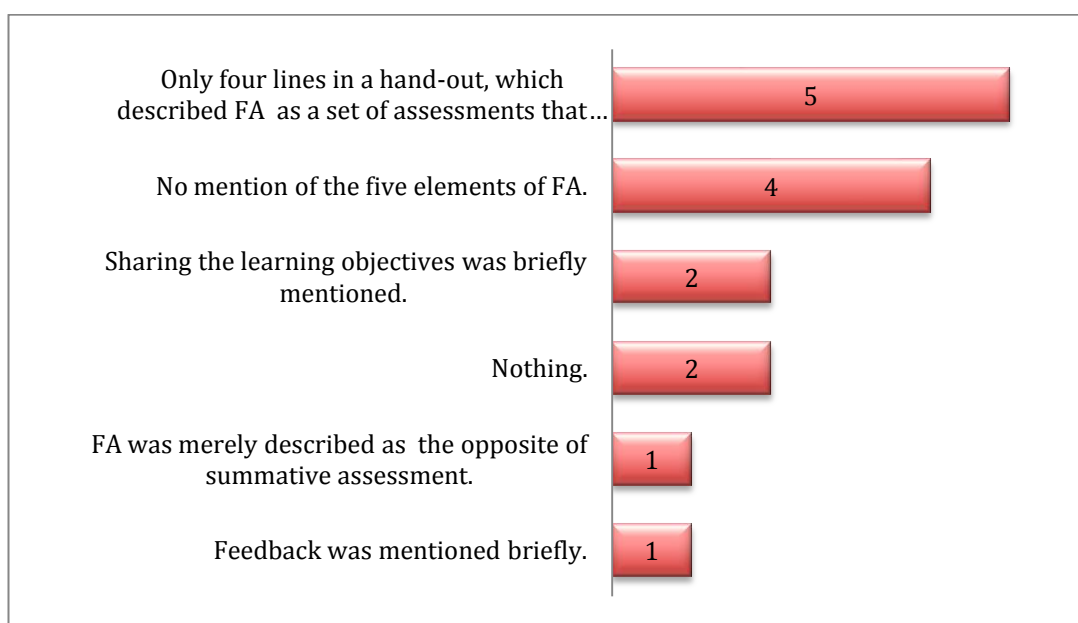
Number of subjects	<i>I. Responses of subjects who chose either “Agree” or “Strongly Agree”</i>
4	Coherent because it was done gradually, from general to specific, with sufficient information.
1	Information was coherent, but very brief.
1	Well planned from our tutor.
1	Because the hand-outs were clear and reflected what had been covered in the sessions.
Number of subjects	<i>II. Responses of subjects who chose “Neither”</i>
2	We did not learn much about assessment. There was very little information provided.
1	Because there was not any focus on assessment. The focus was only on curriculum.
Number of subjects	<i>III. The Response of subject who chose “Disagree”</i>
1	Because there were no sessions on assessment.

Most of the subjects who responded with “agree” thought that the university programme was coherent because the information had been presented in a logical and useful way.

6.4.2 Student teachers' perceptions, after school placement, about whether their university training programme is coherent and useful in helping them develop their professional practice of *formative assessment*

In the questionnaire, the participants had been asked to respond to the statement, “*at the university, the university programme was useful in developing my understanding of FA in particular*”, by using a five-point Likert Scale, indicating their level of agreement. Most participants chose either “disagree” or “strongly disagree”. Only two chose “agree”. During the second interview, they were asked to elaborate on their responses and to explain what they had learned about FA and its elements. Their responses are listed in **Figure 6-8** below.

Figure 6- 8: Participants' perceptions in terms of the information provided to them by the university in relation to formative assessment



According to the figure above, it can be concluded that this group of Saudi student teachers perceived that the information that the university provided to them about FA was scarce or non-existent. All of the participants, except one, thought that FA had not been introduced to them at all, or that it was only introduced to them in a very brief way (i.e. as just four lines in a hand-out). All of the participants, except one, agreed that the elements of FA were not mentioned at all. The participant who disagreed with her peers explained that she was provided with extensive information about FA, but she had not received information pertaining specifically to the elements of FA. These findings suggest that the subjects were provided with very little information and understanding of FA and its elements. Detailed results are displayed in **Table 6-11**, according to each participant, from A to K.

Table 6- 11: Participants' perceptions in terms of number of sessions, discussions, books, hand-outs, assignments and tests provided by the university in relation to FA

Subjects	No. of sessions	Discussions	Books or hand-outs	Assignments	Tests
A	1	None	4 lines about FA, but no information about the elements of FA.	None	1 paragraph included in the test.
B	None	None	None	None	None
C	None	None	4 lines about FA, but no information about the elements of FA.	None	1 paragraph included in the test.
D	1, useful.	It was about the advantages and disadvantages of FA.	3 books about FA, and a 3-page hand-out about FA.	Compare summative and formative assessment.	1 paragraph included in the test.
E	1, useful but brief.	None	4 lines about FA, but no information about the elements of FA.	None	1 paragraph included in the test.
F	None	None	None	None	None
G	Cannot remember.	N/A	4 lines about FA, but no information about the elements of FA.	NA	1 paragraph included in the test.

H	15 minutes only.	None	4 lines about FA, but no information about the elements of FA.	None	1 paragraph included in the test.
I	None	None	None	None	None
J	Part of a session. Very brief.	Differences between summative assessment and formative assessment. It was useful.	4 lines about FA, but no information about the elements of FA.	None	1 paragraph included in the test.
K	None	None	4 lines about FA, but no information about the elements of FA.	None	1 paragraph included in the test.

When asked if the university had provided other information and/or resources to help them understand FA, all participants said “no”.

In the questionnaire, the participants had been asked to respond to the statement, “*at the university, the university programme was coherent in developing my understanding about formative assessment in particular*”, by using a five-point Likert Scale, to indicate their level of agreement. More than half of the participants disagreed with this statement. Less than half of them stated “neither” and only one participant agreed. In the second interview, when asked to elaborate on their questionnaire responses, all of the participants, except one, replied that they did not think that the university programme was coherent because there was hardly any information about FA. One participant explained that she chose agree because they were given an assignment that asked them to compare FA and summative assessment; moreover, she perceived that they had been provided with ample information about FA. It became apparent during the second interview that this participant had been taught about assessment by a different tutor.

With regard to help offered by the university during their school placements, six out of eleven participants said that there was no help provided to them in relation to FA. Five participants out of the eleven said that their supervisors provided them with feedback in relation to FA, after introducing lessons.

In the questionnaire, participants had been asked to respond to the statements: “*as a whole (at the university and during school placement), the university programme was coherent in helping to develop good practice of formative assessment*”, and, “*as a whole (at the university and during school placement), the university programme was useful in helping to develop good practice of formative assessment*”. As before, the subjects were asked to respond by using a five-point Likert Scale, to indicate their level of agreement. Most of the participants chose either “disagree” or “neither”. Very few agreed with these statements. In the second interview, when asked to elaborate on their responses, most of the participants explained that, as a whole, the university programme was neither coherent nor useful in helping them to develop a good practice of FA, because there was little or no information about FA (see **Table 6-12**).

Table 6- 12: Participants' explanation of how coherent and useful the university programme was, as a whole

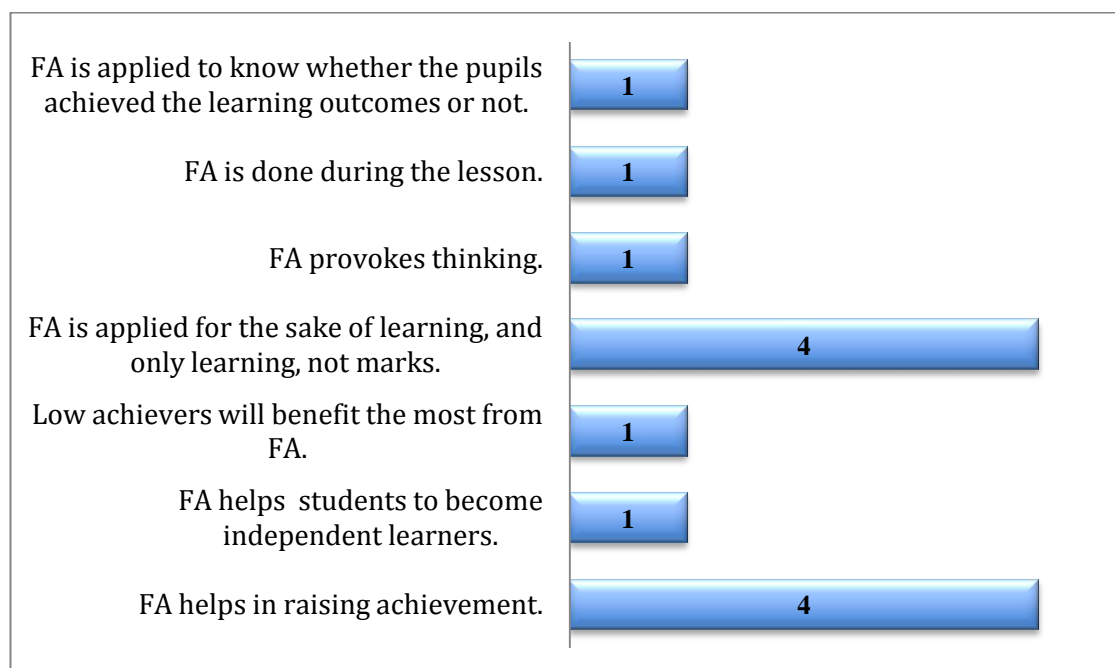
Number of participants	Participants' responses
9	Because there was no information about FA.
1	It was coherent, but we did not have time to apply everything the university asked us to do. It was not useful, because little information was provided about teaching.
1	I chose 'neither' for 'coherent' because there was no information about FA. The information was about assessment in general. However, I chose 'agree' for useful, because some information provided by the university, which helped with questioning and sharing learning outcomes.

When asked whether the university programme had prepared them to use FA when they qualify to become teachers, all of the participants felt that it had not, because they thought that FA had not been introduced to them either clearly or sufficiently.

6.4.3 Student teachers' perceptions, after the school placement, about whether the researcher's programme is coherent and useful in helping them to develop their professional practice of *formative assessment in particular*

Participants were asked to elaborate on their responses to the questionnaire statement, "at the university, the researcher's programme was *useful* in developing my *understanding about formative assessment in particular*", to which the subjects had responded by using a five-point Likert scale, to indicate their level of agreement. All of the participants had chosen either 'strongly agree' or 'agree', except one, who had chosen 'neither'. The participants' responses are displayed in **Figure 6-9** below and **Appendix 12**. **Figure 6-9** presents the subjects' ideas about what they perceived they learned about FA as a general concept from the researcher. **Appendix 12** presents the participants' perceptions of what they learned about the elements and strategies of FA from the researcher. Both are discussed below.

Figure 6- 9: Subjects' perceptions about what they learnt about FA from the researcher in general



According to **Figure 6-9**, almost half of the subjects perceived FA as a way of helping pupils to raise their level of achievement. Moreover, almost half of the participants perceived FA as a practice which is applied for the sake of learning and only learning. In relation to the student teachers' perceptions about what they learned from the researcher regarding the elements and strategies of FA (see **Appendix 12**), almost all of the participants mentioned most of the five elements of FA. This demonstrates a high awareness of the elements of FA. In addition to this, more than half of the participants considered the “no hands up” strategy as one of the five elements of FA. This finding has been previously stated in another part of the study (see **sec. 6.2.1**). A few of the participants also mentioned some additional strategies, such as: “*More time should be given to the pupils before answering, small boards, and thumbs up and thumbs down*”.

In this second interview, participants were asked to state what the researcher had done to help them understand FA. More than half of the participants thought that they had attended two sessions about FA conducted by the researcher. The remaining participants thought that there were three sessions. All of the participants thought that these sessions were useful, while a few added that they would have preferred more sessions, as they felt that this would have enabled them to master FA more effectively. In addition, their perceptions about the discussions that took place during these sessions were positive. Most participants described the hand-outs as very useful and full of information. The results are displayed in **Table 6.13** according to each participant, from A to K.

Table 6- 13: Participants' perceptions of number of sessions, discussions, books and hand-outs, provided by the researcher in relation to FA

Participants	Number of sessions	Discussions in those sessions	Books or hand-outs provided to you
A	2 sessions, very useful, but not enough.	Very helpful.	The hand-outs were useful, the assignment to find out the strategies was also very helpful. I benefitted from some of the other girls' work.
B	2 sessions, very useful. -We received general ideas about FA and its elements. - Some techniques were discussed in relation to these elements. - In practice, some of these elements were applicable while others were not. -I wished there had been more sessions about FA.	Discussions were very beneficial because everybody talked about their opinion and the researcher accepted all opinions.	The hand-outs contained lots of information.
C	2 sessions, very useful.	Discussions, very useful.	Very useful.
D	3 sessions. Two were before the school placement and one was during school placement. - Also the videos were useful.	Discussions about FA and about what had happened during the school placement to the three girls the researcher had observed. It was very useful to discuss other students' experiences of FA.	The hand-outs contained lots of useful information.

	- In practice, some of these elements were applicable while others were not, possibly due to time limitations.		
E	2 or 3 sessions. These were useful. They clarified what FA is about. -The sessions were not enough. Would like even more detail about effective feedback and more techniques about how to apply the five elements.	-Discussions were useful. - I wish that we had had the chance to practise FA at university before the school placement began.	Hand-outs were useful and enough.
F	2 sessions, very useful. - They contained explanations about FA. -Some videos and discussions.	Full of useful discussions.	Hand-outs were sent by email. They contained some useful websites related to FA. -Also, the techniques of FA were sent.
G	2 sessions, very useful.	Very useful.	Through email. They were very useful.
H	3 sessions, very useful. -The first one happened during the first interview. - The next sessions were about the strategies of FA.	Very useful in a very friendly way.	Through email. They were very useful.

I	<p>3 sessions, very useful</p> <ul style="list-style-type: none"> - The first session was an introduction. - The second was about FA. - The third one was more detailed with examples. -All the sessions were useful because they were direct, to the point and clear. It was sufficient. 	<ul style="list-style-type: none"> - It was useful as it applied information to actual experiences. -There were useful examples, and useful questions addressed by the student teachers. 	<ul style="list-style-type: none"> -There were hand-outs. - There were samples of techniques. Information on how to evaluate group work.
J	<p>3 sessions. They were very useful, especially the YouTube videos, which showed how FA is applied.</p>	<p>Very useful.</p>	<p>Hand-outs that were sent, were very useful and contained more detailed information about formative assessment.</p>
K	<p>2 sessions. They were very useful. For me, they were the main source of FA.</p>	<ul style="list-style-type: none"> - Very useful. - Student teachers were asked to come up with some techniques about how to apply FA. 	<ul style="list-style-type: none"> -1 useful hand-out about FA and its five elements. -The researcher also provided us with some techniques regarding success criteria. -Website.

When asked if the participants themselves and/or the researcher engaged in other activities that helped them to understand FA, all of the participants replied that the researcher sent them videos and websites, and they felt that these were very helpful. They also added that they were provided with an opportunity to come up with techniques for applying FA during a group meeting, and this sharing of ideas was extremely beneficial. A few of the participants said that they actually used some of the techniques that their peers had suggested.

Participants were asked to further elaborate on their responses to the questionnaire statement, “*at the university, the researcher’s programme was coherent in developing my understanding of formative assessment*”. The participants had responded to this statement by using a five-point Likert Scale to indicate their level of agreement. All of the participants responded that the researcher’s programme, at the university, was coherent because they perceived that it was done systematically: to begin, the general idea of FA was introduced in the first interview; then, they had another session explaining and discussing FA in more detail, with particular attention to techniques used in FA. After this, a third session took place, in which they discussed their initial experiences of practising FA during school placement. In particular, this third session focused on three of the student teachers already observed by the researcher. Finally, all the participants were observed during their school placements and feedback was provided in relation to FA.

When asked if there was anything that the researcher did during their school placements that they found helpful, all of the participants thought that brief discussions and feedback, which the researcher provided after an observed lesson, were very helpful. In addition to this, all of the student teachers, except one, thought that the discussions with the researcher via telephone before their observed lesson were useful.

When asked in the questionnaire to give their views on the statements, “*as a whole (at the university and during school placement), the researcher’s programme was coherent in helping to develop good practice of formative assessment*”, and, “*as a whole (at the university and during school placement), the researcher’s programme was useful in helping to develop good practice of formative assessment*”, by using a five-point Likert Scale to indicate their level of agreement, all of the participants indicated either “strongly agree” or “agree”. In explaining their responses during the second interview, all the student teachers gave similar answers: they perceived that the researcher’s programme, as a whole, was both coherent and useful because the theory of FA that was introduced, was always applied practically. They explained that the programme was done gradually; the

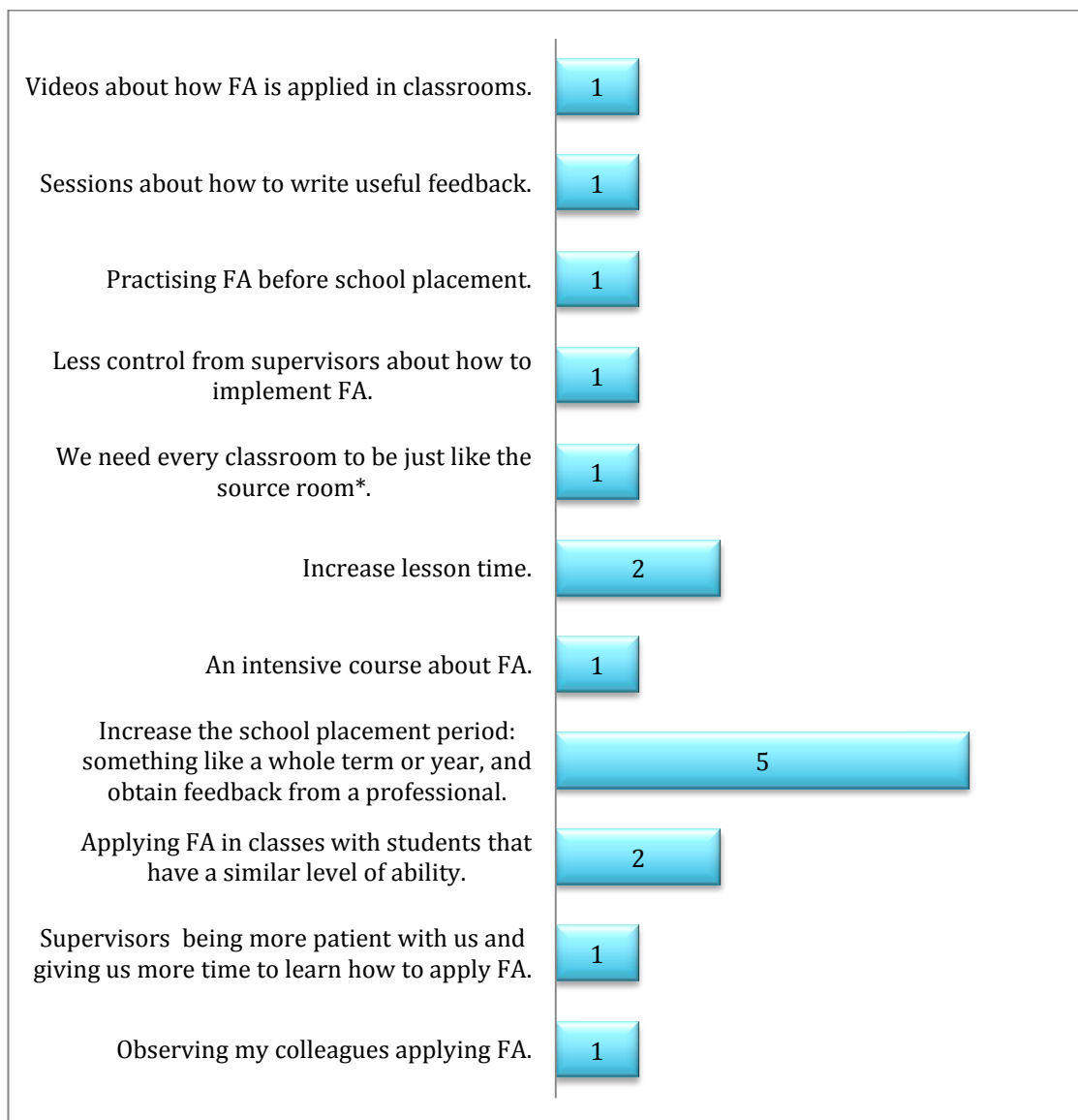
researcher began with a general background of FA and then introduced the elements of FA. After this, the researcher discussed techniques of FA. Finally, all of this information was applied practically, during school placement, and the researcher provided feedback.

When asked whether they thought that the researcher's programme had prepared them to carry out FA when they qualify as a teacher, all of the participants replied in a similar way: *"Yes. Because it almost taught me everything I need to apply formative assessment. In these 2 weeks, during school placement, I have learnt a lot about formative assessment."* One participant even added, *"Actually I liked formative assessment so much. I felt that I was a real teacher when I was applying it."* On the other hand, one participant felt that she still needed more practise to master FA.

When asked to consider what they would need, as a student teacher, to help them develop their understanding of FA, half of the participants stated that they would like an intensive course. Two subjects wanted two additional sessions about FA, including more videos and feedback. Another two subjects thought that observing teachers applying FA in Saudi classes would be helpful. One participant wanted more FA resources and another would have liked less technical language to have been used in the information provided about FA.

When the same questions, as above, were asked in terms of developing their *practice* of FA, the most reported response, as stated by half of the participants, was an increase in school placement time to a whole term or even a year, and obtaining feedback from a professional. A couple of participants thought that they needed to practise FA in classes with students who had a similar level of ability, and a couple of student teachers asked for more time in lessons.

Figure 6- 10: Student teachers' perceptions of things needed to develop their practice of FA



*The source room, as discussed in the context chapter, is a room designed in a different way to traditional classrooms: it contains round tables that can seat 8 pupils, a projector, a smart board and often some other teaching facilities, such as a mobile board.

6.5 Student teachers' perceptions of what they did during school placement

This section discusses the research questions focused on what the student teachers did during their school placements in connection with FA and the challenges that they faced when applying FA.

6.5.1 The most and least used techniques, and the reasons behind focusing on certain techniques

Participants were asked, during the second interview, to explain the strategies that they used the most and the least during school placement, and their reasons for using or not using these strategies. They were also asked to talk about any strategies they found difficult and the reasons behind this.

These interview questions were based on Part three, section C in the questionnaire, which asked the student teachers about what they did during their school placements. In the questionnaire, ten sentences relating to the elements of FA were given. The participants had to indicate how often they used these strategies by choosing from a five-point Likert Scale indicating level of frequency (e.g., always, frequently, etc.) (see **Appendix 3, part three section C**). Based on the list of ten statements in the questionnaire, the participants' responses are presented in the following ten tables: **Table 6-14, Table 6-15, Table 6-16, Table 6-17, Table 6-18, Table 6-19, Table 6-20, Table 6-21, Table 6-22 and Table 6-23**. Each table presents the responses where the strategy was reported to be used the *most* or the *least*. This means that the responses from participants who perceived to only use a strategy in-between are not presented here.

Table 6- 14: Reasons behind using “No hands up” strategy, during school placement

“No hands up” strategy					
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use	
5		1		1	
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason	Difficulties in use
5	It helped the pupils to pay more attention in class.	1	It is a kind of dictatorship. I should respect the pupils' right to choose to participate. I used it only if I found all of the	1	Because the pupils did not accept it. I felt that this was a ridiculous request to ask. I cannot imagine entering a class and asking the pupils not to
2	It helped with classroom management.				

2	No child should be left behind.		pupils in the class too lazy to participate.		raise their hands at all. Yes, I can apply it sometimes, but it does not sound reasonable to apply such a thing all the time.
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The findings here suggest that all of the subjects who used this strategy the most frequently, thought that the “No hands up” strategy was beneficial in helping pupils to pay more attention to their teacher. Finally, none of the participants had any difficulty in applying this strategy, except one student teacher, who thought that the “No hands up” strategy was kind of a “dictatorship”. However, this student teacher did comment that she used it when a class was completely passive.

Table 6- 15: Reasons behind using “Help students to be active learners (more student discussion and less teacher dominance)”

Help students to be active learners (more student discussion and less teacher dominance)				
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use
4		1		0
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason
2	Because FA is about engaging pupils in the learning process. It helped the pupils to be more involved in the lesson.	1	Useful, but time consuming.	None found.
2	Helped pupils to express their opinions and discuss them with the teacher and their classmates, instead of just sitting passively and listening.			

1	This was done through questioning.			
1	Helped to provoke thinking.			
1	It gave me the chance to interact with the students.			
1	Because I am against the traditional way of teaching that depends on repetition and memorisation.			
1	It helped them to assess themselves and assess their peers.			

The results here indicate that this strategy was perceived to be used frequently for different reasons. However, the most agreed upon statements were:

1. Because FA is about engaging pupils in the learning process. It helped the pupils to be more involved in the lesson.
2. Helps pupils to express their opinions and discuss them with the teacher and their classmates, instead of just sitting passively and listening.

No one thought this strategy was difficult, and almost no one used it the least, except one participant who thought that it was time consuming.

Table 6- 16: Reasons behind using “Providing effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing”

Providing effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing					
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use	
4		2		1	
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason	Difficulties in use
2	Although those comments were oral	2	Because of lack of	1	Because of time limitation. I was

	ones, they initiated thinking and helped the pupils to overcome the difficulties that they were facing.		time.		supposed to finish an entire lesson in every class.
1	The pupils appreciated the positive comments and they were happy to hear them.				
1	This helped them to learn for the sake of learning.				
1	This was done mainly orally. It helped shy pupils to participate whether they gave right or wrong answers.				
1	This helped them to think before and after providing an answer.				

The findings show that “Providing effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing” was perceived to be used for five reasons, which can be divided into two types: one type related to learning and thinking, and the other type related to the pupils’ physical and emotional attitudes in response to the strategy. The responses related to learning and thinking were:

- Although these comments were oral ones, they initiated thinking and helped the pupils to overcome the difficulties that they are facing.
- The effective comments helped them to learn for the sake of learning.
- The comments helped them to think before and after providing an answer.

The responses that were related to the pupils’ physical and emotional attitudes towards the strategy were:

- The pupils appreciated the positive comments, and seemed happy to hear them.
- The effective comments helped the shy pupils to participate.

However, “time limitation” was reported by three of the student teachers as the main perceived reason behind their limited use of this strategy, and it was the only difficulty related to applying this strategy.

Thus, it can be suggested that “Providing effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing” was perceived to be beneficial both pedagogically and emotionally. Despite this, a few participants thought that time limitation was an obstacle when applying this strategy.

Table 6- 17: Reasons behind using “Using success criteria for peer-assessment”

Using success criteria for peer-assessment					
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use	
3		5		4	
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason	Difficulties in use
3	It guided the pupils when assessing each other.	3	Because of lack of time, I didn’t use it. It takes time to explain it and let the pupils use it.	1	When pupils applied this strategy, I lost control of the class because I had too many pupils in the class (41) and because some of these pupils misbehaved a lot.
		2	Pupils didn’t take it seriously; they were just giving silly comments to each other in relation to the success criteria. They did not do it honestly.	1	Time limitation. I was supposed to finish an entire lesson as a whole in every class.
				1	The pupils were struggling to use them. This may have been because they didn’t understand the success criteria that I had written on the board, or maybe because they just

					didn't care about them. I don't know.
		1	The pupils didn't appear to like it. They were not willing to use it.	1	I did not use it, but I expected it to be difficult to use.

The results indicate that when the student teachers explained why they perceived that they used this strategy frequently, their only explanation was that it helped to guide pupils when they were assessing one another. However, half of the subjects reported using this strategy the least, and three reasons were given: the main reason was a lack of time and the other two reasons were related to the pupils' attitudes. This strategy was thought to be difficult, by almost half of the subjects, for four reasons: losing control of the class, time limitation, pupils struggling to use the success criteria, and the fear of using this strategy in the first place. Therefore, it might be suggested that applying success criteria was associated with many issues, not only for pupils, but also for the student teachers as well.

Thus, it was found that using success criteria for peer-assessment was not an easy strategy to apply. A high number of participants used this the least.

Table 6- 18: Reasons behind using “No marks are used, only comments”

No marks are used, only comments are used as feedback					
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use	
5		1		1	
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason	Difficulties in use
5	Because this was less intimidating.	1	Time limitation.	1	Because the pupils are so addicted to marks. They don't work hard if no marks are used.
1	This helped the pupils to be active learners, and it raised interaction between the pupils and the teacher.	1	The pupils did not take school seriously. They just wanted to see “excellent”,		

1	Because the comments were very important in helping the pupils to improve. Comments raised their motivation to participate without the fear of giving wrong answers.		“very good”, “good”, and so on.		
1	Helped to foster more concentration, more care regarding learning.				

The results show that half of the subjects perceived that they used this strategy frequently because they thought that it was less intimidating for the pupils. Conversely, one participant used this strategy the least because of time limitations and because the pupils did not seem to take school seriously when no marks were used. This latter reason was also mentioned as a difficulty when using this strategy.

Table 6- 19: Reasons behind using “Provide an opportunity for the learners to respond to feedback orally in the classroom or written”

Provide an opportunity to the learners to respond to feedback orally in the classroom or written					
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use	
2		6		1	
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason	Difficulties in use
1	Every time that I gave them feedback, I checked whether they had responded to it in order to check their understanding.	3	Because of lack of time.	1	Because of lack of time only. Because usually the teacher has a large amount of material to introduce and

1	This was done in an oral way only, and not written, especially when we did tasks in the classroom. It was done instantly to check understanding.	1	Pupils don't want to do this. Very passive toward this technique.		there is not time to apply such things.
		1	It didn't occur to me to do this.		
		1	It is too difficult for the pupils to do.		

The responses here show that the participants who reported using this strategy perceived that they did so because they thought it helped them, “to check pupils’ understanding”. On the other hand, more than half of the student teachers reported using this strategy the least for one main reason: lack of time. Other reasons were mentioned as well:

1. Pupils didn't want to do this. Very passive toward this technique.
2. It is too difficult for the pupils to do.

These explanations relate to pupils’ attitude and ability.

Table 6- 20: Reasons behind using “Declaring the learning objectives in a clear way”

Declaring the learning objectives in a clear way					
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use	
9		0		2	
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason	Difficulties in use
4	It helped pupils to follow what the teacher was saying. The pupils seemed to be more directed	0	None found.	1	Making sure that everyone had understood the learning

	and less confused.				outcomes.
3	It helped the pupils know what they were going to cover for the day.				
1	I felt that they concentrated more when I used this element.				
1	I applied it because you asked me to do so. I didn't think that the pupils cared about or paid attention to the learning outcomes.				
1	This helped me to save time. It provided a kind of short cut to help understand what was going to be introduced.				
1	This was used in every lesson.				
1	I applied it because you asked me to do so. Some of the learning outcomes were clear and didn't have to be declared.				
1	This helped the pupils to measure what they had achieved.				

The results here show that the majority of the student teachers thought that they used this strategy frequently because it helped the pupils to follow what the teacher was saying during the lesson, and because it clarified, for the pupils, what the lesson was going to cover. However, an interesting explanation was provided by two student teachers, who perceived that they had used this strategy the most because they were

asked to do so by the researcher. Thus, it might be suggested that although this reason was not mentioned by any of the other participants, this may have contributed to the high usage of this strategy. One of these two student teachers said that sometimes the learning outcomes were clear and they did not need to be declared. The other one explained that the pupils did not seem to care about the learning outcomes. Nobody reported using this strategy the least, and the one difficulty that was perceived was making sure that every pupil had understood the learning outcomes.

Finally, it might be suggested that there was a lack of recognition about the difficulties surrounding this strategy. Making sure that pupils have understood the learning outcomes is not an easy task, especially for beginners. However, this difficulty was recognised by only one participant.

Table 6- 21: Reasons behind using “Pupils’ self-assessment during or at the end of the lesson”

Pupils’ self-assessment during or at the end of the lesson					
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use	
6		1		1	
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason	Difficulties in use
2	This helped me, as a student teacher, to assess myself and to find out whether or not the pupils had understood a certain point.	1	Because I am used to an alternative method. I like to assess pupils by giving them exercises and then seeing what difficulties they have.	1	Pupils lack the ability to do so. This is because they are not able to assess themselves. Sometimes they think that they have understood everything, but in fact they have not.
2	It helped pupils to make sure that they had achieved the learning outcomes.				
1	This was very beneficial for pupils because it helped them to be				

	independent learners and know where they are in their learning.				
1	I was applying it because you asked me to do so. The pupils did not assess themselves honestly.				
1	This was very important because it helped me to know whether I needed to re-explain some points mentioned in the lesson or not, before moving on to the following lesson.				

The results show that more than half of the participants thought that they were using this strategy because it helped the teacher self-assess and identify the level of student understanding of a certain point, and because it helped pupils to make sure that they had achieved the learning outcomes.

One participant, however, who reported applying this strategy, thought that the pupils were not assessing themselves honestly; nevertheless, she applied this strategy because she perceived that she had been asked to do so. This perception that pupils were unable to assess themselves reliably was perceived as a difficulty in applying this strategy as well. Only one participant reported not using this strategy because an alternative strategy was applied, which she perceived better helped her to find out where her pupils were in their learning. Thus, it might be suggested that pupils' self-assessment was perceived to be a difficult strategy for pupils to apply, and more attention and help might be needed in relation to this strategy.

Table 6- 22: Reasons behind using “Assessing students many times in the class”

Assessing students many times in the class					
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use	
5		0		1	
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason	Difficulties in use
5	Because this is the core of FA. It helped me to know whether the pupils understood a certain point or not.	0	None found.	1	Time limitations.
1	Based on this information, I was able to help the students that needed help.				
1	Helped me to feel better about my teaching and class. It made me feel that I had done what every teacher needed to do.				
1	Helped to keep the pupils attentive.				

Half of the student teachers thought that they had used this strategy because they perceived it to be the core idea behind FA and because they thought that it helped them to discover whether pupils had understood certain points or not. All of the participants used this strategy, with the only difficulty being identified as lack of time. It could be concluded, therefore, that this group of Saudi student teachers considered this an essential strategy.

Table 6- 23: Reasons behind using “Using more open-ended questions that provoke thinking”

Using more open-ended questions that provoke thinking					
No. of subjects reporting using the strategy the <i>most</i>		No. of subjects reporting using the strategy the <i>least</i>		No. of subjects reporting difficulty in use	
2		4		2	
No. of subjects stating the reason	Reasons behind using the strategy the <i>most</i>	No. of subjects stating the reason	Reasons behind using the strategy the <i>least</i>	No. of subjects stating the reason	Difficulties in use
1	This helped me, especially when starting the lesson, to obtain more information from the pupils. I used it during the lesson to check their understanding.	2	Time consuming.	1	This was difficult to apply with low-level students like mine. They could not answer me at all, even in Arabic (their native language). The pupils were surprised and unfamiliar with this concept. The students told me that this is mission impossible!

1	Helped the students to express themselves. This enabled and fostered critical thinking. This strategy was also useful in teaching the pupils that often there is no right or wrong answer, but things are often in-between.	3	It was too difficult for the pupils. Even when I asked them to answer in Arabic (their native language), they did not respond to me. I think that maybe if this was done more frequently, they would be better at it.	1	When I used this strategy, misbehaviour started and I lost my control of the class.
		1	My lessons did not require this.		

Only a few of the participants reported using “using more open-ended questions that provoke thinking” frequently. On the other hand, more participants reported applying this strategy the least because it was difficult for pupils and because it was time consuming. The former reason was also stated as a difficulty when using this strategy. Another difficulty that was mentioned was misbehaviour. Thus, it might be suggested that this strategy was not easy to apply because the pupils seemed to lack the necessary familiarity and skills needed for open-ended discussions.

The student teachers were also asked to identify the things that either facilitated or obstructed their implementation of FA in their classes (see **Table 6-24**). The results from both of these questions indicate that the majority of the participants perceived that pupils’ acceptance and teaching aids, such as pictures, flash cards and charts, were the things that helped them to implement FA. Five participants stated that having a smaller class size helped them to implement FA. Four participants thought that using the source room helped, because the layout of this room enabled them to be able to go around the class and better observe their pupils.

On the other hand, all of the participants perceived that lesson time (which was 40-45 minutes) and mixed abilities classes were the main obstacles they faced when implementing FA. First, most of the participants explained that high achievers were bored, while low achievers were more active. Another issue was that the curriculum was

not suitable for all of the pupils. Other issues, stated by less than half of the participants, included students' acceptance and the number of pupils in the class.

Table 6- 24: Student teachers' perceptions, after school placement, about things that either facilitated or hindered them from implementing FA

Things that <i>facilitated</i> student teachers implementing FA		Things that <i>hindered</i> student teachers implementing FA	
No. of subjects stating this response	Responses	No. of subjects stating this response	Responses
4	Using the source room helped because I was able to go around the class and observe the pupils even better.	4	Students' acceptance (some of the students were refusing to accept things).
9	Teaching aids, such as pictures, flash cards and charts.	11	Lesson time (40-45 minutes) was very short.
10	Pupils' acceptance.	1	The school placement time was very short (2 weeks and 5 lessons) and it was not enough time to implement FA.
3	Acting and games.	4	The number of pupils in the class.
5	The number of pupils was helpful. There were not many students in my classroom.	1	Sometimes my supervisor did not want me to apply some strategies of FA.
2	My pupils were at a similar level of performance.	7	Students at different <u>levels of performance</u> . The high achievers were bored, while the low achievers were more active.
1	Supervisor's support facilitated the implementation of FA.	+	+
		4	Student <u>level of performance</u> was not suitable for the curriculum.
1	Work sheets and activities.	1	Lack of projector in the classroom.
		1	We need to be free in our decisions about teaching. I found that some supervisors wanted us to be a copy of them. Each one of

			them had her own way and asked her student to follow it. Some wanted us to use teaching aids, while others did not.
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6.6 Student teachers' perceptions, after school placement, about the challenges that they have faced when applying FA

When asked what they thought the MOE, schools, and programmes at the university could do to help minimise the challenges of implementing FA, the results show that all the participants thought that the MOE needed to increase lesson time and arrange pupils according to their level of performance. The results in section 6.5.1 **Table 6-24** indicate that for this group of Saudi student teachers, limited lesson time and having mixed abilities classes were the main issues which hindered the effective implementation of FA.

In terms of what might help student teachers, the results indicate that some student teachers would prefer more cooperation from school management. In addition, most of the participants stated that universities should perhaps consider changing school placement time to a separate term. Half of the student teachers felt that the opportunity to observe ten lessons, where FA was implemented, before beginning to teach would help. Others added that more FA courses were needed. The student teachers perceived that these suggested changes might help to minimise the challenges of implementing FA.

Figure 6-11: Student teachers' perceptions of what the Ministry of Education should do to minimise the challenges of implementing FA

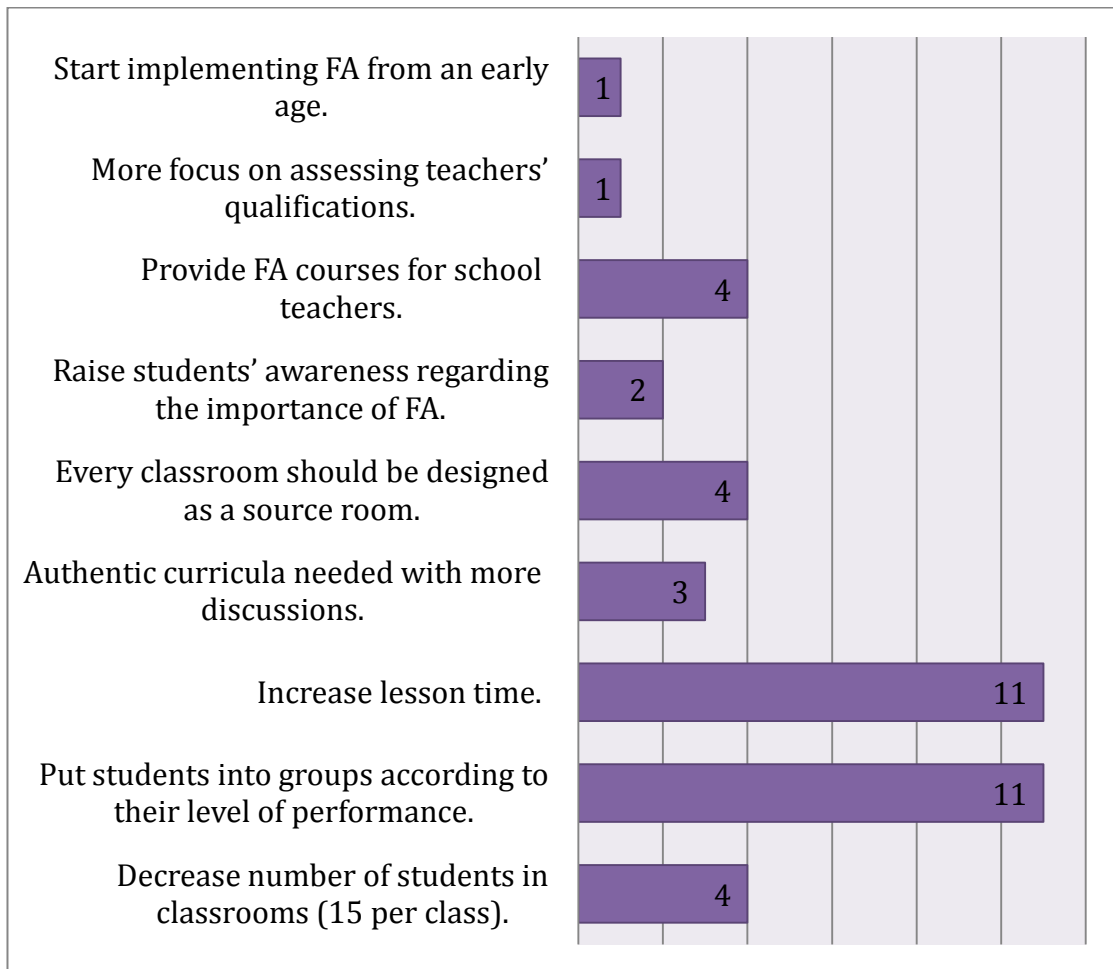


Figure 6-12: Student teachers' perceptions of what schools should do to minimise the challenges of implementing FA

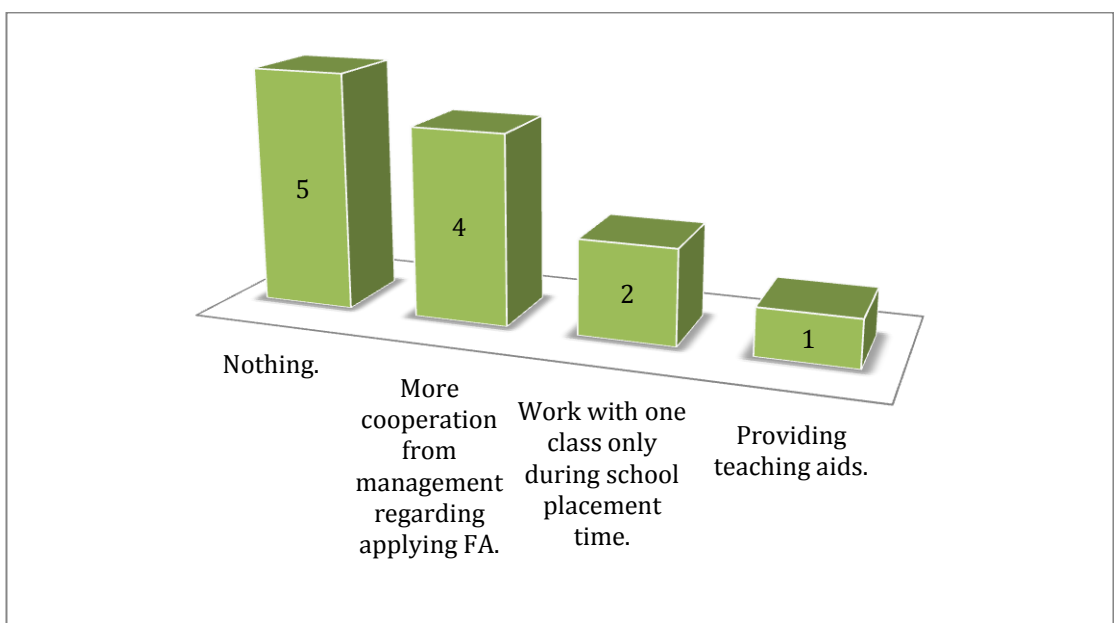
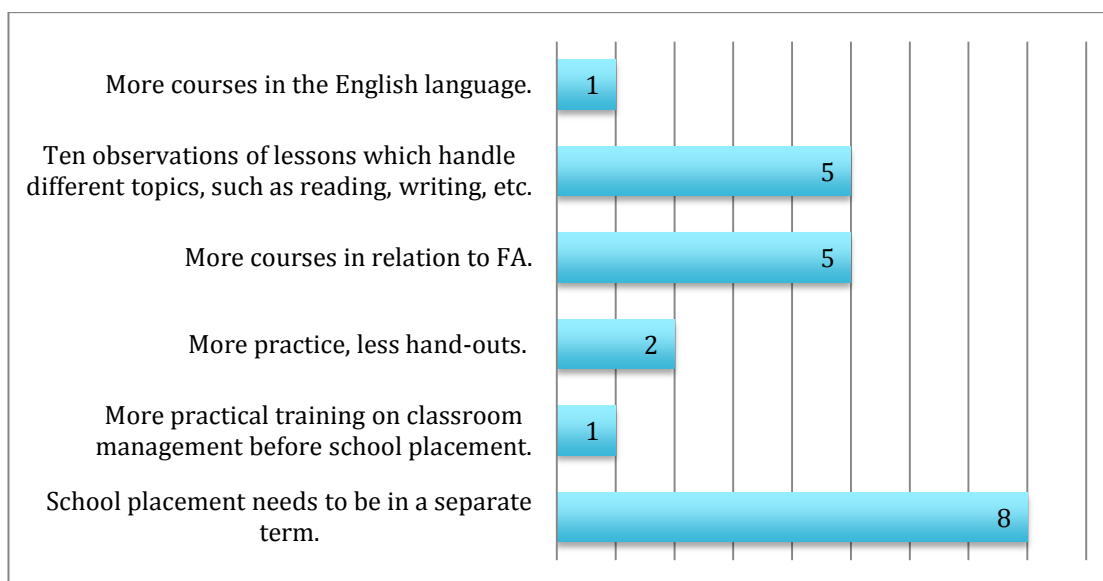


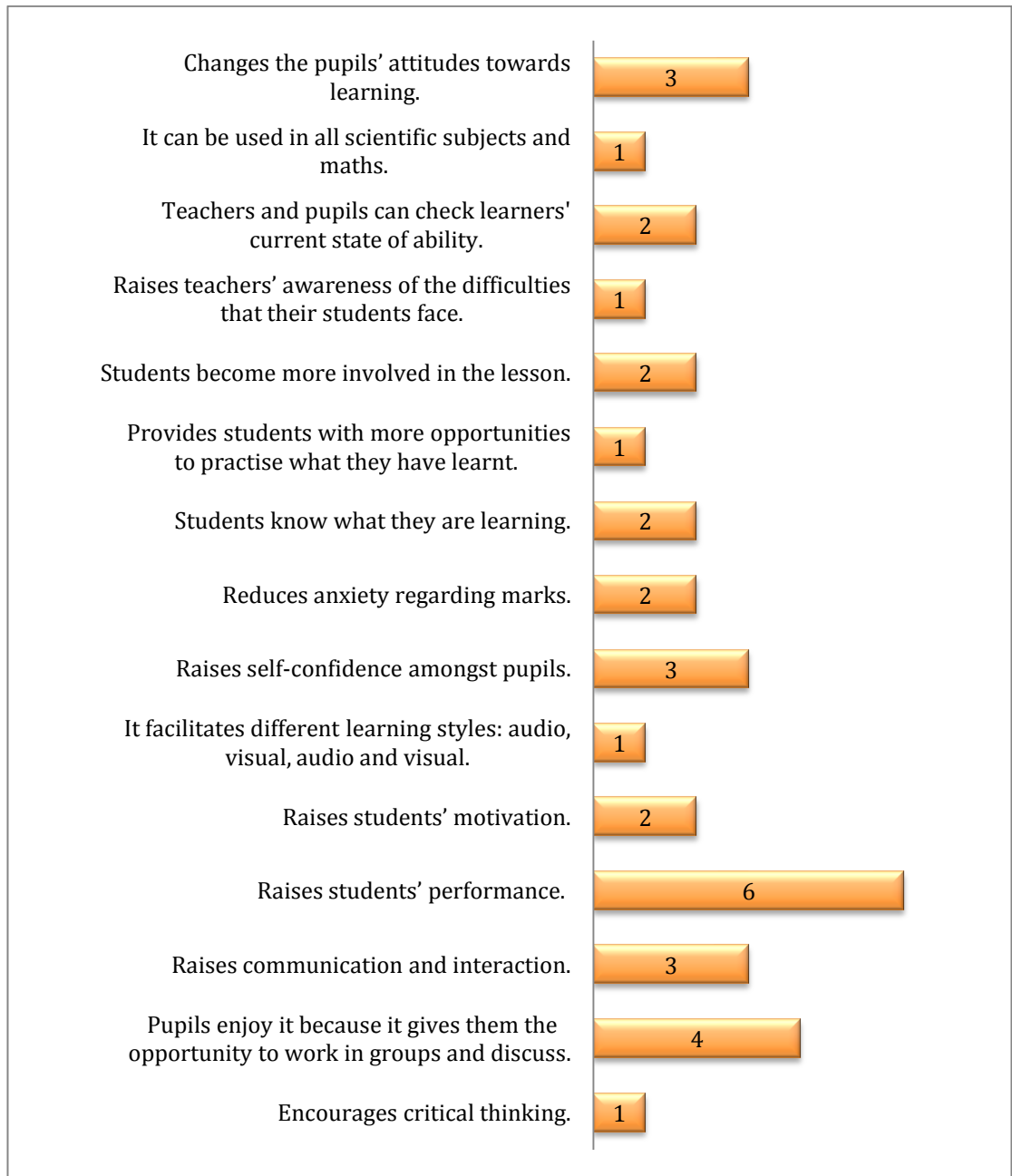
Figure 6-13: Student teachers' perceptions of what universities should do to minimise the challenges of implementing FA



6.7 Student teachers' perceptions, after school placement, about implementing FA in Saudi schools

In order to elicit data that would respond to the sixth research question regarding whether student teachers think FA should be implemented in Saudi Arabia, the participants were asked their reasons behind whether or not they felt FA should be implemented in Saudi schools. The researcher discussed the student teachers' answers from the questionnaire which responded to this issue. Of the fifteen reasons given by the Saudi student teachers in support of implementing FA in Saudi schools, "raising students' performance" was the most reported reason. One interesting response as to why FA should be implemented was "because it will help to change the pupils' attitudes towards learning". This suggests that FA offers a different perspective of learning, which differs from the longstanding Saudi cultural belief that learning means marks. It might be suggested that some of the participants were able to recognise the need to change this attitude. The participants' responses are displayed in the **Figure 6-14:**

Figure 6- 14: Student teachers' perceptions of why FA should be implemented in Saudi schools



6.8 Conclusion of the second interview results

The findings from the second interviews, which were conducted after school placements, helped to partially answer all of the six research questions. Moreover, the student teachers' perspective of perceptions helped with data triangulation. The findings also helped to offer a more detailed explanation of the student teachers' perceptions in relation to assessment and FA.

There was a development of knowledge regarding assessment as a whole and FA in particular. After their school placements, most of the student teachers perceived that assessment is about measuring achievement. Moreover, they were able to distinguish between formative and summative assessment. It was found that, according to many of the participants, assessment could be either formative or summative depending whether marks or feedback was used. It was found that FA was perceived to be mainly about raising achievement, especially for low achievers. The student teachers were also able to articulate the elements of FA. FA was frequently related to feedback, sharing the learning outcomes and success criteria, and many of the student teachers also considered the “no hands up” strategy to be one of the elements of FA.

The student teachers perceived that FA helps pupils, and especially average pupils, to make progress, and academic progress was mostly reported. It was also found that oral feedback and the “no hands up” strategy were the practices most perceived to help pupils to make progress. Moreover, most of the student teachers perceived that these practices helped pupils to find out their strengths, weaknesses and how to overcome their difficulties, whilst also encouraging communication.

According to the student teachers, they perceived that, during their school placements, they tended to use certain FA strategies more than others: “no hands up” strategy, declaring the learning outcomes, assessing students many times, pupils’ self-assessment and no marks. They perceived that the least used strategies were: using success criteria and open-ended questions. It was found that checking and making sure that pupils are following the teacher was the most reported reason behind using certain strategies more frequently, whilst lack of time was the main reason behind using some strategies the least.

When the researcher explored the student teachers’ perceptions of the university programme in relation to assessment as a whole and FA in particular, it was found that, despite their agreement that the university programme was useful and coherent in relation to designing assessment questions, most of the student teachers thought it did not provide them with either information about assessment and its types or about FA. Most of the student teachers thought that the university programme was neither useful nor coherent, and they perceived that it did not prepare them to implement FA as teachers. On the other hand, all of the student teachers perceived that the researcher’s programme prepared them to implement FA.

The challenges of FA were described under two categories: first, things which hindered applying FA during their school placements; and second, the role that the

MOE, schools and universities should play in minimising these challenges. The findings showed that the student teachers perceived lesson time and mixed abilities classes to be the main challenges when applying FA. With regard to the perceived role that the MOE, schools and universities might play in reducing these challenges, the student teachers thought that if the MOE increased lesson time to more than 40 minutes, whilst also putting pupils in groups according to their abilities, that this would help to minimise some of the challenges that teachers might face when implementing FA. Additionally there was a request for more cooperation from schools, and longer school placement time from universities.

In terms of the final research question — Do student teachers think that formative assessment should be implemented and why? — the findings from the second interview showed that the student teachers strongly accepted the idea of implementing FA, and they provided fifteen reasons why FA should be implemented in Saudi schools, which included their perception, after their school placements, that FA helps to raise pupils' performances.

Chapter Seven

Observation analysis

7.1 Introduction

This chapter will examine data, which the researcher collected during the student teachers' school placements. Participants were required to implement formative assessment during their school placements by using the five elements of FA: questioning, feedback, peer-assessment, self-assessment, and sharing the learning outcomes and success criteria. In order to explore the student teachers' perceptions regarding FA, thirty-three observations were conducted in order to know what the sample of Saudi student teachers were doing during their school placements. Every participant was observed three times: once during the first phase, which was five weeks, and twice during the second phase, which was two weeks.

Key features of the five elements of FA were further divided into specific evidence items. These evidence items were the main practices that the researcher observed. They were drawn up by relying on two sources: Black and Jones (2006) and the Sandwell Metropolitan Borough Council document (**Appendix 10**). As discussed in the methodology chapter, these sources were chosen as they seemed to use evidence items, which might allow the research to better see, understand and measure how FA manifests itself in the classroom. Black and Jones's (2006) study was especially useful for the purposes of the current research as its focus was on FA and teaching a foreign language.

Under each element of FA, there were a different number of evidence items: there were four evidence items related to learning outcomes, eight evidence items related to questioning, five evidence items related to feedback, four evidence items related to peer-assessment and only two evidence items related to self-assessment. Observation data analysis was based on whether these evidence items were not used (N), used without issues (WOI), or used with issues (WI) in all of the thirty-three observations. The analysis relied on finding out the amount of usage for each of the five

elements of FA by focusing on whether evidence items or practices were applied. Statistics were based on frequencies and percentages.

The data that was collected during these thirty-three observations partially helped to answer the third and fifth research questions:

- iii) What do the student teachers do during their teacher-training programme in connection with formative assessment?
- v) What are the challenges that the student teachers faced when applying formative assessment?

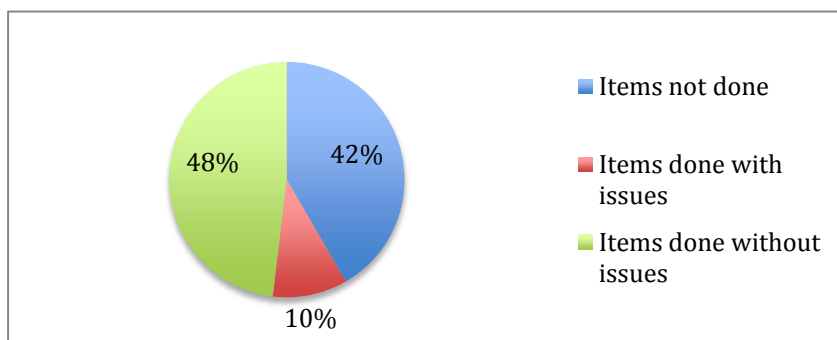
The results below begin by looking at the overall usage and trends of the five elements of FA: for example, what was the total use of FA across the whole database, and what were the most used elements of FA. To better understand the student teachers' usage of FA, this chapter then moves to consider which evidence items under each of the five elements of FA were practised. The findings showed a decrease of usage of certain evidence items. These evidence items were avoided in the last observation and this pattern largely contributed to the overall decrease in FA usage.

7.2. What do the Saudi student teachers do during their teacher-training programme in connection with formative assessment?

7.2.1 Total use of formative assessment across the whole observation database

Across the whole observation database, which consisted of thirty-three observations, it can be seen from the figure below that the Saudi student teachers were covering 58% of the observation schedule evidence items; this includes 10% of items which were done with issues.

Figure 7- 1: Total use of evidence items by all participants throughout the entire study



However, as illustrated below in **Figures 7-2, 7-3 and 7-4**, a 13% decrease in the usage of evidence items appeared in the last observation. This seemed to occur because most of the evidence items applied with issues in the first two observations were largely avoided in the last observation. This shows that the Saudi student teachers tended to avoid problematic items, whilst continuing with what they had applied successfully.

Figure 7- 2: Evidence items used in the first observation

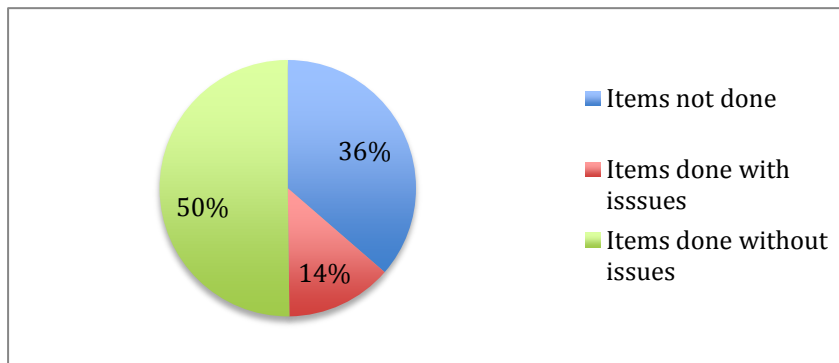


Figure 7- 3: Evidence items used in the second observation

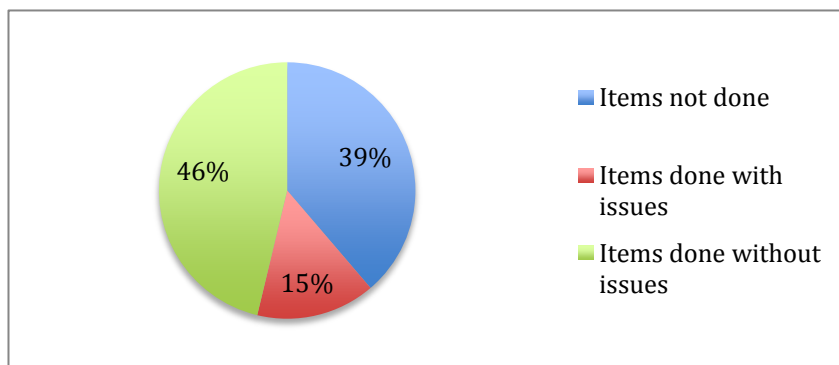
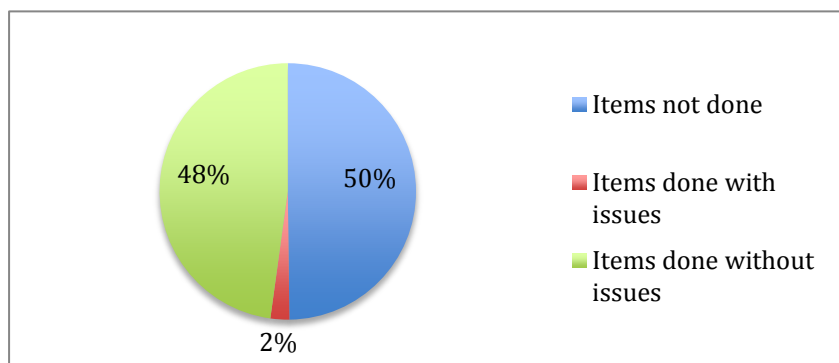


Figure 7- 4: Evidence items used in the third observation



7.2.2 Overall trends of the usage of the five elements of formative assessment

The following graphs examine the usage of the five elements of FA over the course of the study. The basic trend was the decrease of the use of elements which had been done with issues (WI), and the stability in usage of elements which had been done without issues (WOI). This confirms that the student teachers were focusing on practices which worked for them and avoiding practices which they found problematic. Although learning outcomes, as we will see below, appears to follow a different trend, it too was avoided after difficulties emerged during the second observation. The usage of self-assessment, however, slightly varied. While self-assessment was applied during the first observation with some issues, this number (WI) increased during the second observation, but by the third observation, it dropped again. This indicates that the student teachers did not avoid implementing this element even when it proved difficult; rather, after their problematic usage during the second observation, they continued to apply this element. This shows that the student teachers were able to master this issue over time, despite the drawbacks that they faced midway through the study.

Figure 7- 5: Learning outcomes use in every observation

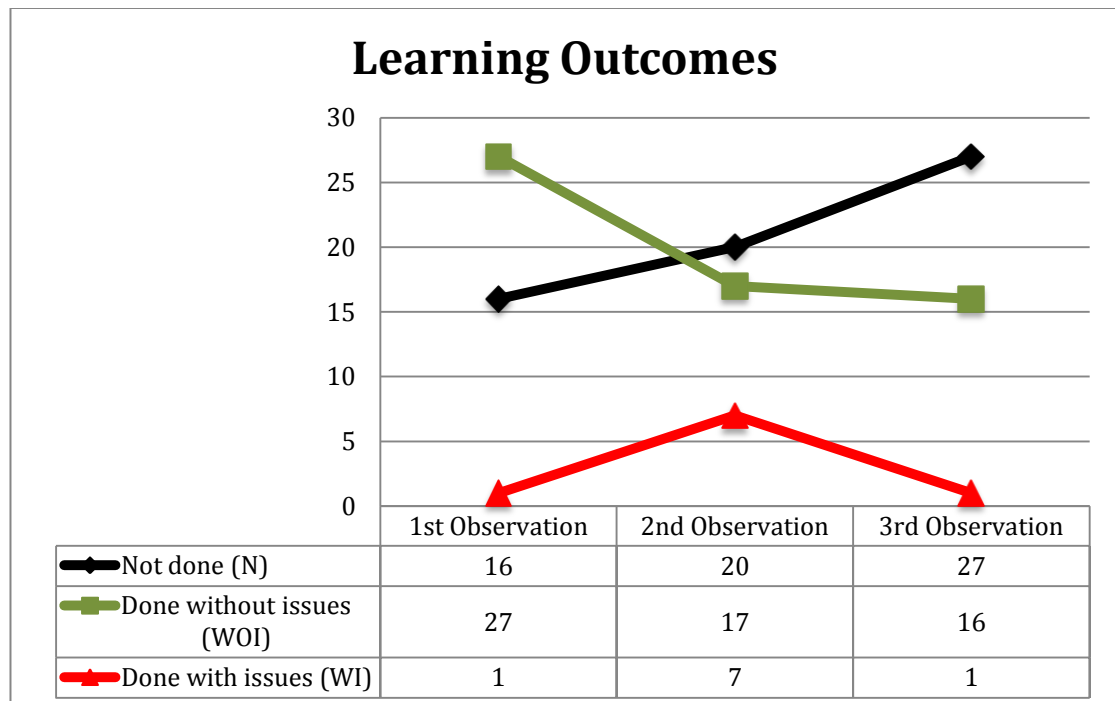


Figure 7- 6: Questioning use in every observation

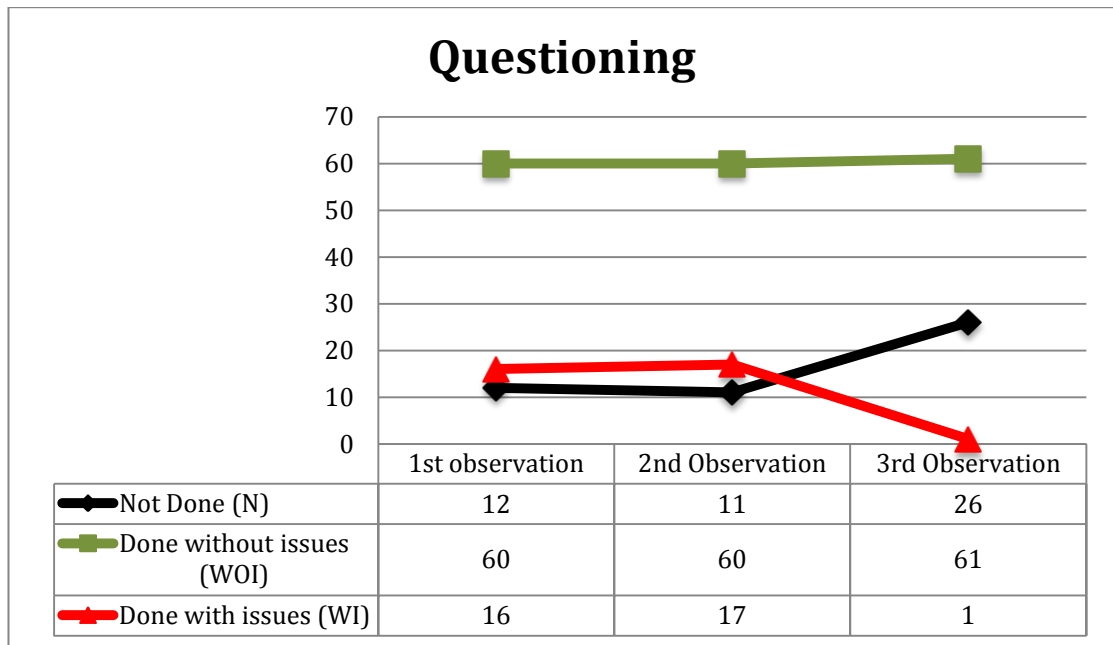


Figure 7- 7: Feedback use in every observation

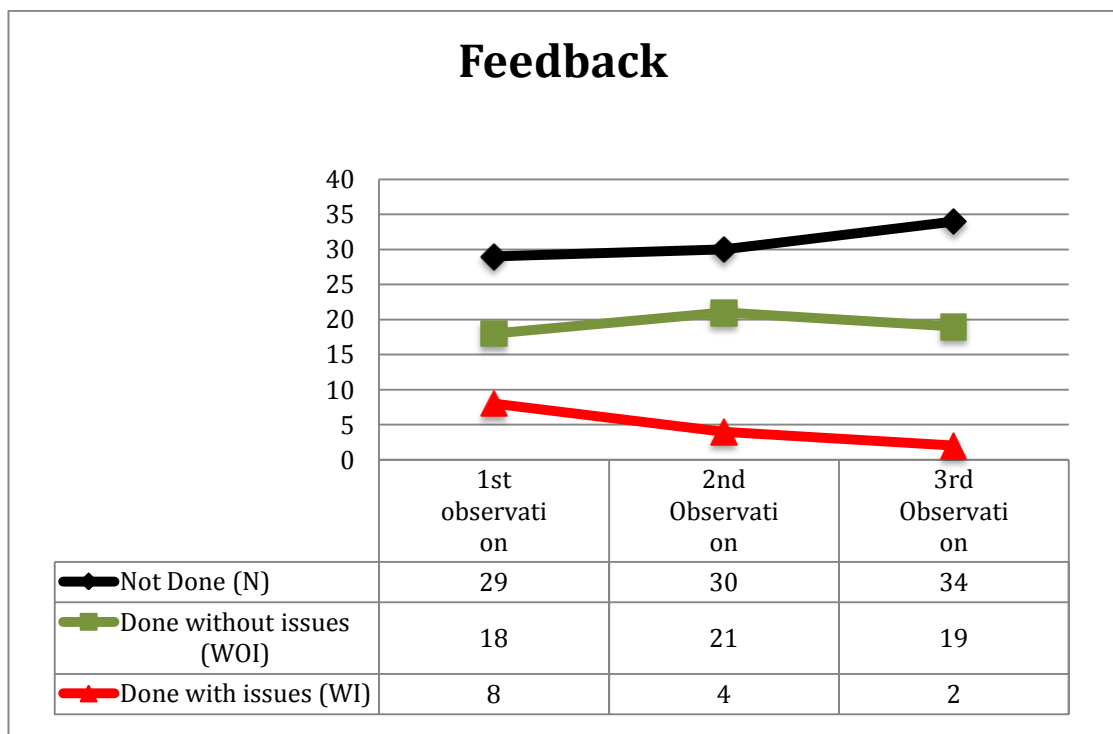


Figure 7- 8: Peer-assessment use in every observation

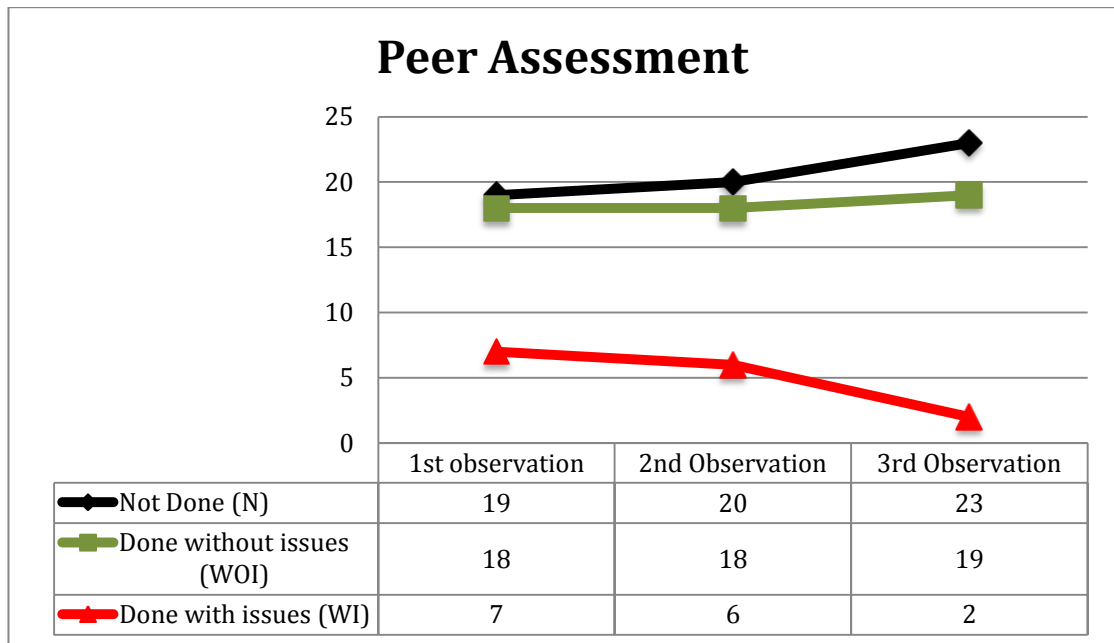
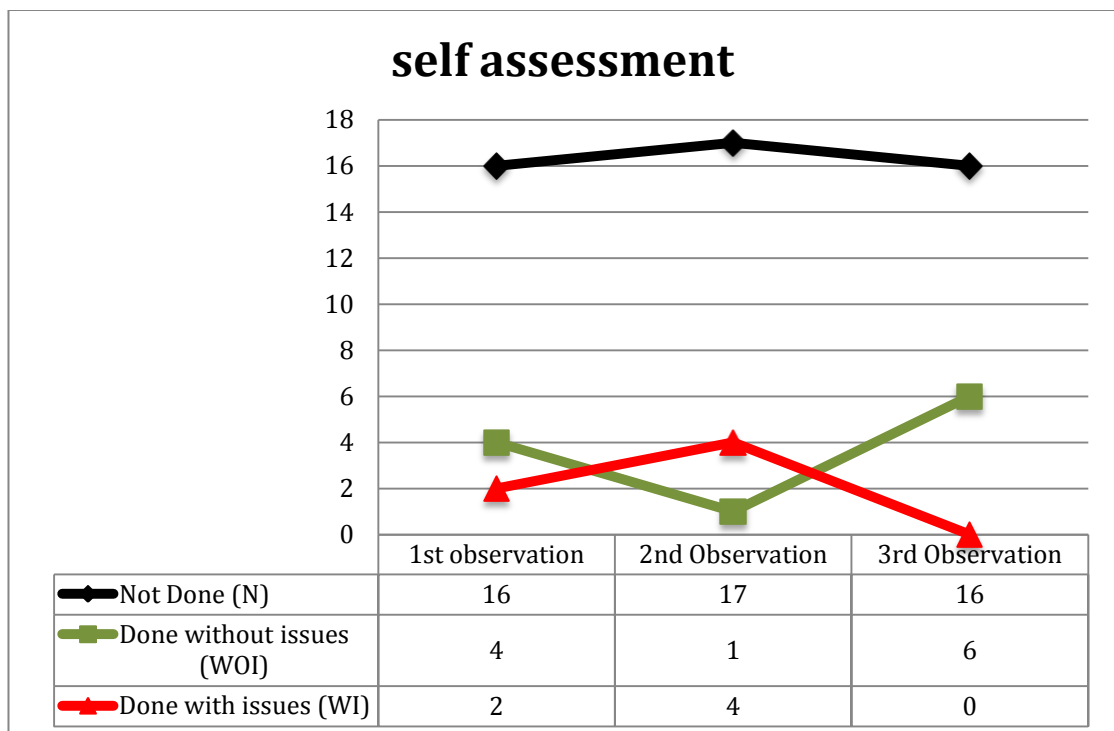


Figure 7- 9: Self-assessment use in every observation



7.2.3 Most-used elements of formative assessment

The following figure and table show what were the most used elements of FA over the school placement period. Because some of the five elements of FA had more evidence items than others, percentages were used when comparing the usage of FA elements. The results show that the most applied element of FA was questioning with 81%. Peer-assessment, with 53%, and learning outcomes, with 52%, came joint-second in their frequent application. Feedback came third with 44%. The least applied element was self-assessment with only 26%.

Figure 7- 10: Comparing the five elements of formative assessment

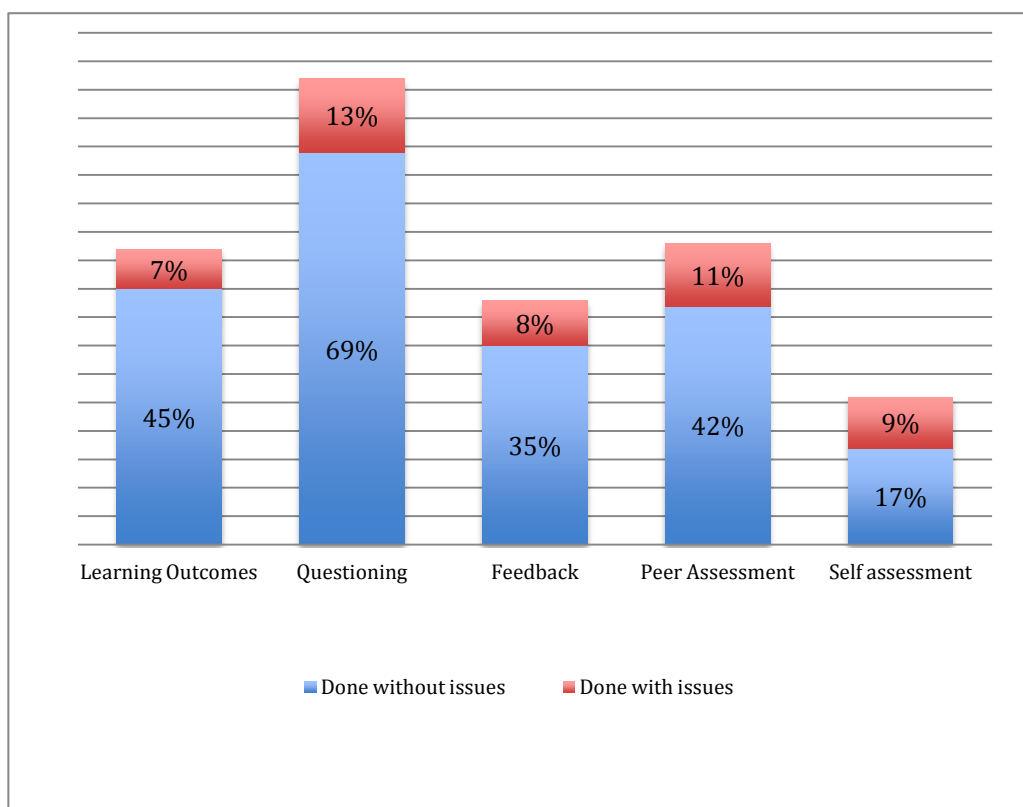


Table 7- 1: Comparing the five elements of formative assessment

Elements of Formative Assessment	Total number of evidence items in each element if applied by every participant in all 33 observations= (3 obs. x 11 p.) No. of evidence items in each element	No. of evidence items not done (N)	% of evidence items not done (N)	Number of evidence items done without issues (WOI)	% of evidence items done WOI	Number of evidence items done with issues (WI)	% of evidence items done WI	General use of evidence items including WOI+ WI	% of general use of evidence items including WOI+ WI	Ranking according to % of general use
1) Learning outcomes	132	63	48%	60	45%	9	7%	60+9= 69	52%	2
2) Questioning	264	49	19%	181	69%	34	13%	181+34= 215	81%	1
3) Feedback	165	93	56%	58	35%	14	8%	58+14=72	44%	3
4) Peer-assessment	132	62	47%	55	42%	15	11%	55+15=70	53%	2
5) Self-assessment	66	49	74%	11	17%	6	9%	11+6= 17	26%	4
Total number of evidence items	759	316		365		78				

7.2.4 Most-used evidence items

To better understand which FA practices were the most used during the student teachers' school placements, the data below looks beyond the five elements of FA to examine more closely which evidence items were done by the eleven participants in all three of their observations. The use of evidence items was divided into three categories to show its degree of usage: low use, moderate use and high use. These categories were obtained by dividing the total number of observations, thirty-three, by three. Evidence items that were used eleven times or less were described as low or no use; evidence items that were used twelve to twenty-two times were described as moderate use; and evidence items that were used twenty-three to thirty-three times over all of the thirty-three observations were described as high use.

The table below shows that the most highly used evidence items were from questioning, as we would expect, feedback and learning outcomes. Five questioning practices, three feedback practices and one learning outcome practice were the most highly used evidence items. Although feedback had an overall low usage rate, as seen above, when we break down the five elements into specific evidence items, we see that some feedback evidence items are among the most highly used practices.

Table 7- 2: Comparing the usage of each evidence item

Evidence item Number	Evidence items of the 5 elements of formative assessment/ Total results = 11 participants x 3 observations	Number of times evidence item not done	Number of times evidence item done WOI	Number of times evidence item applied WI	Number of times evidence item done in general/ both WOI+ WI	% of done WI in relation to number of times evidence item done in General	Ranking according to quantity	Degree of use
8.	<u>Questioning</u> Teacher asks questions throughout the lesson	0	33	0	33	0%	1	HIGH USE <u>9 items</u> <ul style="list-style-type: none"> • 5 items from Questioning • 3 from Feedback • 1 from Learning outcomes.
6.	<u>Questioning</u> Teacher uses a variety of techniques which ensure maximum participation	0	27	6	33	18%	2	
9.	<u>Questioning</u> Enough time is given to pupils to think before answering	2	27	4	31	13%	3	
10.	<u>Questioning</u> “No hands up” strategy	4	21	8	29	28%	4	

1.	<u>Learning outcomes</u> Are the learning outcomes shared with pupils in a way that they can understand?	6	21	6	27	22%	5	
12.	<u>Questioning</u> Does the teacher explain what good work looks like (i.e. clear about expected standards)? Teacher shares and discusses examples of pupils' work	8	21	4	25	16%	6	
13.	<u>Feedback</u> Does the feedback (both oral and written from peers and teacher) focus on learning outcomes or success criteria?	8	21	4	25	16%	6	

14.	<u>Feedback</u> Does the feedback provided close the gap? Teacher and peers provide oral or written feedback that helps the learner to overcome their difficulties	10	19	4	23	17%	7	
15.	<u>Feedback</u> Does feedback make pupils aware of achievements made regarding learning outcomes or success criteria Feedback is reflected through peer discussions or teacher-pupil discussions	10	18	5	23	22%	8	
5.	<u>Questioning</u> Teacher uses open-ended questions	11	19	3	22	14%	9	MODERATE USE <u>9 items</u> • 3 from
7.	<u>Questioning</u> Pupils ask questions of the teacher and of each	11	18	4	22	18%	10	

	other								<ul style="list-style-type: none"> • Questioning • 4 from Peer-assessment • 1 from Learning outcomes • 1 from Self-assessment
21.	<u>Peer-assessment</u> Pupils are observed discussing success criteria and their work with peers	11	18	4	22	18%	10		
3.	<u>Learning outcomes</u> Success criteria are written up somewhere accessible to pupils	12	20	1	21	5%	11		
11.	<u>Questioning</u> Encouraging open discussions (e.g. what can we add to Jim's answer?)	13	15	5	20	25%	12		
18.	<u>Peer-assessment</u> Pupils discuss success criteria and their work with peers	15	16	2	18	11%	13		
19.	<u>Peer-assessment</u> Pupils are using success criteria to judge each others' work	15	13	5	18	28%	14		

23.	<u>Self-assessment</u> Self-assessment written strategies, such as a small survey	17	11	5	16	31%	15	
20.	<u>Peer-assessment</u> Pupils comment on successful features and give advice for further development	21	8	4	12	33%	16	
4.	<u>Learning outcomes</u> Concrete example is used when needed to make success criteria clearer to pupils	22	10	1	11	9%	17	<p>LOW USE</p> <p><u>5 items</u></p> <ul style="list-style-type: none"> • 2 from Learning outcomes • 2 from Feedback. (one of them is NOT USED AT ALL) • 1 from Self-assessment
2.	<u>Learning outcomes</u> Pupils' discussions are about success criteria with peer and teachers	23	9	1	10	10%	18	
16.	<u>Feedback</u> Pupils given time to	32	0	1	1	100%	19	

	<p>respond to feedback?</p> <p>Learners read the comments on their work and discuss necessary improvements with teacher or peers.</p>							
22.	<p><u>Self-assessment</u></p> <p>Self-assessment strategies that are used orally, such as the use of traffic icons</p>	32	0	1	1	100%	19	
17.	<p><u>Feedback</u></p> <p>Pupils given time to respond to feedback?</p> <p>Using a sheet of paper to record comments. This might be slipped between the pages of the pupils' book and can initiate a written dialogue between the teacher and the learner.</p>	33	0	0	0	/	20 *This item was not done by all participants	

7.2.5 Most- and least-used evidence items under each element of FA

The following table examines each of the five elements of FA in order to better understand which were the most commonly used and which were the least commonly used evidence items under each element. The data here covers all thirty-three observations. The results show that the most commonly used evidence items tended to be practices that were based on teacher control and effort. For example, learning outcomes are shared by the teacher, questioning throughout the lesson is done by the teacher, feedback is provided by the teacher and during peer-assessment pupils are observed by the teacher. On the other hand, the least commonly used evidence items were either related to open discussions or based on pupils' efforts. This seems to suggest that the Saudi student teachers preferred evidence items that were less open-ended; they gravitated toward practices that they felt they had more control of. These preferences might also be explained by the student teachers' doubts that the pupils were able to have open discussions or contribute useful comments.

Table 7- 3: Most-and least-used evidence items in each element

Use	Learning outcomes	Questioning	Feedback	Peer-assessment	Self-assessment
Most common evidence item	Are the learning outcomes shared with the pupils in a way they can understand?	Teacher asks questions throughout the lesson	Does feedback (both oral and written from peers and teacher) focus on learning outcomes or success criteria?	Pupils are observed discussing success criteria and their work with peers	Self-assessment written strategies, such as a small survey
Total use WOI+WI	27	33	25	22	16
Least common evidence item	Pupils discussions are about success criteria with peer and teachers	Encouraging open discussions	Pupils given time to respond to feedback (NOT APPLIED AT ALL)	Pupils giving comments on successful features and advice on further development	Self-assessment strategies that are used orally, such as the use of traffic icons
Total use WOI+WI	10	20	0	12	1

7.2.6 Tracing the usage of each evidence item from the first to the last observation

The following tables trace the level of use of each evidence item from the first to the third observation. Each of the eleven participants either used or did not use a particular element during each of their three observations. High use is between seven to eleven, moderate use is five to six and low use is four to zero. This will help us to more finely determine what the participants' attitudes were in relation to each evidence item. Whereas **Table 7-2** above displayed the most-used evidence items in all thirty-three observations, the data here seeks to understand which practices were highly used, moderately used and the least during each of the three observations.

The second table below (**Table 7-5**) shows how the usage shifted over their school placements. Some evidence items remained highly used throughout, while other evidence items either dramatically increased or decreased.

The results from the first observation showed that there was a high use of evidence items from all the five elements of FA, except self-assessment. Half of these highly used evidence items remained highly used. Interestingly, these items were, as discussed above, practices that are mainly controlled by the teacher. For example, learning outcomes are provided by the teacher, the teacher asks questions, the teacher uses various techniques to ensure participation, and the teacher explains what good work looks like.

Some of the evidence items, which were initially highly used, were reduced to a moderate level of usage. Although these items are not necessarily reliant on the teacher's control, they are still moderately dependent upon the teacher. That is, pupils were given the chance to discuss things only based on the success criteria, which is provided and directed by the teacher. Finally, some evidence items decreased dramatically from high to low usage. These evidence items were mainly based on open-ended questions and discussions. Therefore, it might be suggested that the student teachers tended to avoid these items because they were practices that were more difficult to control and direct. On the other hand, the student teachers preferred practices that were more controlled by the teacher or based on certain frameworks, such as success criteria or learning outcomes.

Table 7- 4: Evidence items used in each observation

Observation 1	LO	LO	LO	LO	Q	Q	Q	Q	Q	Q	Q	Q	FB	FB	FB	FB	FB	P	P	P	P	S	S
	1.1.1.1	1.2.1	1.2.2	1.2.3	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5	2.1.6	2.1.7	2.2.1	3.1.1	3.2.1	3.3.1	3.4.1	3.4.2	4.1.1	4.1.2	4.1.3	4.1.4	5.1.1	5.1.2
Number of times Evidence Not done (N)		5	2	6	2	0	4	0	1	1	2	2	1	3	3	11	11	3	6	5	5	11	5
Number of times Evidence done Without issues (WOI)	8	5	9	5	8	10	4	11	8	7	5	7	6	6	6	0	0	7	4	3	4	0	4
Number of times Evidence done With issues (WI)	0	1	0	0	1	1	3	0	2	3	4	2	4	2	2	0	0	1	1	3	2	0	2
Total of usage/ (WOI) + (WI)	8	6	9	5	9	11	7	11	10	10	9	9	10	8	8	0	0	8	5	6	6	0	6
Observation 2	LO	LO	LO	LO	Q	Q	Q	Q	Q	Q	Q	Q	FB	FB	FB	FB	FB	P	P	P	P	S	S

	1.1.1.1	1.2.1	1.2.2	1.2.3	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5	2.1.6	2.1.7	2.2.1	3.1.1	3.2.1	3.3.1	3.4.1	3.4.2	4.1.1	4.1.2	4.1.3	4.1.4	5.1.1	5.1.2
Number of times Evidence not done (N)	1	8	4	7	2	0	2	0	1	0	3	3	2	4	3	10	11	6	4	8	2	10	7
Number of times Evidence done Without issues (WOI)	5	3	6	3	7	7	8	11	8	6	7	6	9	6	6	0	0	4	4	2	8	0	1
Number of times Evidence done With issues (WI)	5	0	1	1	2	4	1	0	2	5	1	2	0	1	2	1	0	1	3	1	1	1	3
Total of usage/ (WOI) + (WI)	10	3	7	4	9	11	9	11	10	11	8	8	9	7	8	1	0	5	7	3	9	1	4
Observation 3	LO 1.1.1.1	LO 1.2.1	LO 1.2.2	LO 1.2.3	Q 2.1.1	Q 2.1.2	Q 2.1.3	Q 2.1.4	Q 2.1.5	Q 2.1.6	Q 2.1.7	Q 2.2.1	FB 3.1.1	FB 3.2.1	FB 3.3.1	FB 3.4.1	FB 3.4.2	P 4.1.1	P 4.1.2	P 4.1.3	P 4.1.4	S 5.1.1	S 5.1.2

Number of times Evidence not done (N)	2	10	6	9	7	0	5	0	0	3	8	3	5	3	4	11	11	6	5	8	4	11	5
Number of times Evidence Done Without issues (WOI)	8	1	5	2	4	10	6	11	11	8	3	8	6	7	6	0	0	5	5	3	6	0	6
Number of times Evidence Done With issues (WI)	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	0	0
Total of usage/ (WOI) + (WI)	9	1	5	2	4	11	6	11	11	8	3	8	6	8	7	0	0	5	6	3	7	0	6

Table 7- 5: Comparing level of evidence use from the first observation to the third observation

Level of use in the first observation compared to the third observation	Evidence items
<p><u>High</u> level of use remained <u>high</u></p>	<p>LO1.1.1 Learning outcomes: Are the learning outcomes shared with the pupils in a way they can understand?</p>
	<p>Q2.1.2 Teacher use variety of techniques which ensure maximum participation.</p>
	<p>Q2.1.4 Teacher asks questions throughout the lesson.</p>
	<p>Q2.1.5 Enough time is given for pupils to think before answering.</p>
	<p>Q2.1.6 “No hands up” strategy used.</p>
	<p>Q2.2.1 Does teacher explain what good work looks like (i.e. clear about expected standards). Teacher shares and discusses examples of pupils’ work.</p>
	<p>FB 3.2.1 Does feedback provided close the gap? Teacher and peers provide oral or written feedback that helps the learner to overcome their difficulties.</p>
<p><u>High</u> level of use <i>decreased</i> to be <u>moderate</u></p>	<p>LO1.2.2 Success criteria are written up somewhere accessible to pupils.</p>
	<p>Q2.1.3 Pupils ask questions of teacher and of each other.</p>
	<p>FB 3.1.1 Does feedback (both oral and written from peers and teacher) focus on learning outcomes or success criteria?</p>
	<p>P4.1.1 Pupils discuss success criteria and their work with peers.</p>
<p><u>High</u> level of use <i>decreased dramatically</i> to <u>low</u></p>	<p>Q2.1.1 Teacher uses open-ended questions.</p>
	<p>Q2.1.7 Encouraging open discussions (e.g. what can we add to Jim's answer?).</p>

<u>Moderate</u> remained <u>moderate</u>	P4.1.2 Pupils are using success criteria to judge each others' work.
	S5.1.2 Self-assessment written strategies, such as a small survey.
<u>Moderate</u> use <i>increased</i> to <u>high</u>	P4.1.4 Pupils are observed discussing success criteria and their work with peers.
<u>Moderate</u> <i>decreased</i> to <u>low</u>	LO1.2.1 Pupils discussions are about success criteria with peer and teachers.
	LO.1.2.3 Concrete example is used when needed to make success criteria clearer to pupils.
	P.4.1.3 Pupils giving comments on successful features and advice on further development.
<u>Low</u> use remained <u>low</u>	FB3.4.1 Pupils given time to respond to feedback? Learners read the comments on their work and discuss necessary improvements with teacher or peers.
	FB3.4.2 Pupils given time to respond to feedback? Using a sheet of paper to record comments which is then slipped between the book pages to initiate a dialogue between teacher and pupil.
	S5.1.1 Self-assessment strategies that are used orally, such as the use of traffic icons.

7.2.7 Evidence items which all participants used or did not use

The evidence items which all the participants used or did not use will be shown in the following table. This information is taken from **Table 7-4**. The table below shows which evidence items the participants used or avoided in all three observations. It will also show which evidence items were used by all participants and in which observation. The results show that almost all of the student teachers used the following:

- Q2.1.2 Teacher uses a variety of techniques, which ensure maximum participation
- Q2.1.4 Teacher asks questions throughout the lesson
- Q2.1.5 Enough time is given to pupils to think before answering

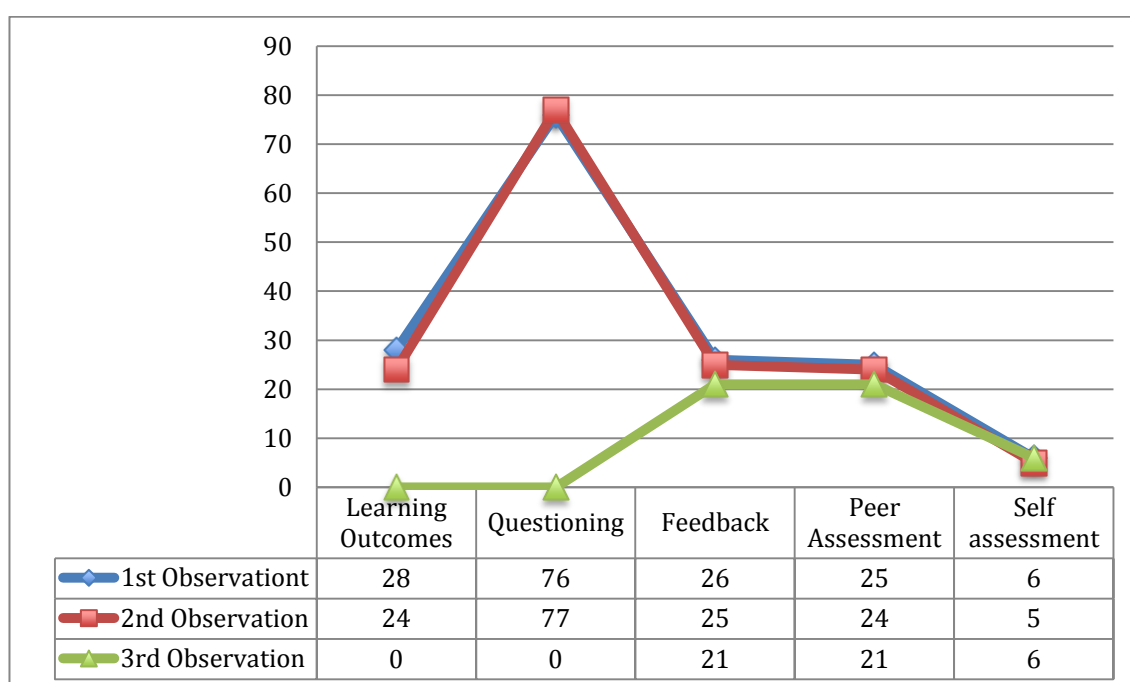
Table 7- 6: Evidence items all participants used or did not use

Observations	Evidence items all participants used or not used								
	Evidence items that at least 10 of the participants and often all 11 <u>Used</u>						Evidence items <u>not</u> used by the majority or total group		
	LO1.1.1 Are the learning outcomes shared with pupils in a way that they can understand?	Q2.1.2 Teacher uses a variety of techniques which ensure maximum participation	Q2.1.4 Teacher asks questions throughout the lesson	Q2.1.5 Enough time is given for pupils to think before answering	Q2.1.6 “No hands up” strategy	FB3.1.1 Does Feedback (oral or written from peers & teacher) focuses on learning outcomes or success criteria	FB3.4.1/3.4 Pupils given time to respond to feedback? Learners read the comments on their work and discuss necessary improvements with teacher or peers	FB3.4.2/ 3.4 Pupils given time to respond to feedback? Using a sheet of paper to record comments that helps to initiate a dialogue between teacher & pupil	SF5.1.1 1 Self-assessment strategies that are used orally such as the use of traffic icons
1 st Observation only		√	√	√	√	√	√	√	√
2 nd Observation only	√	√	√	√	√		√	√	√
3 rd Observation only		√	√	√			√	√	√
All of the 3 observations		√	√	√			√	√	√

7.2.8 Evidence items which were largely avoided in the last observation

The results from the figure below show that in the third observation there was a widespread decrease in the usage of most of the five elements of FA. The decrease in the usage of learning outcomes and questioning was particularly noticeable. In the first observation, learning outcomes and questioning were 28 and 76 respectively. In the second observation, these numbers were 24 and 77. These numbers dropped in the last observation to 17 and 62. The decline in the usage of these two elements of FA had a major impact on the overall decrease of the use of FA, which was reflected in the last observation.

Figure 7- 11: Comparing the use of the five elements over time

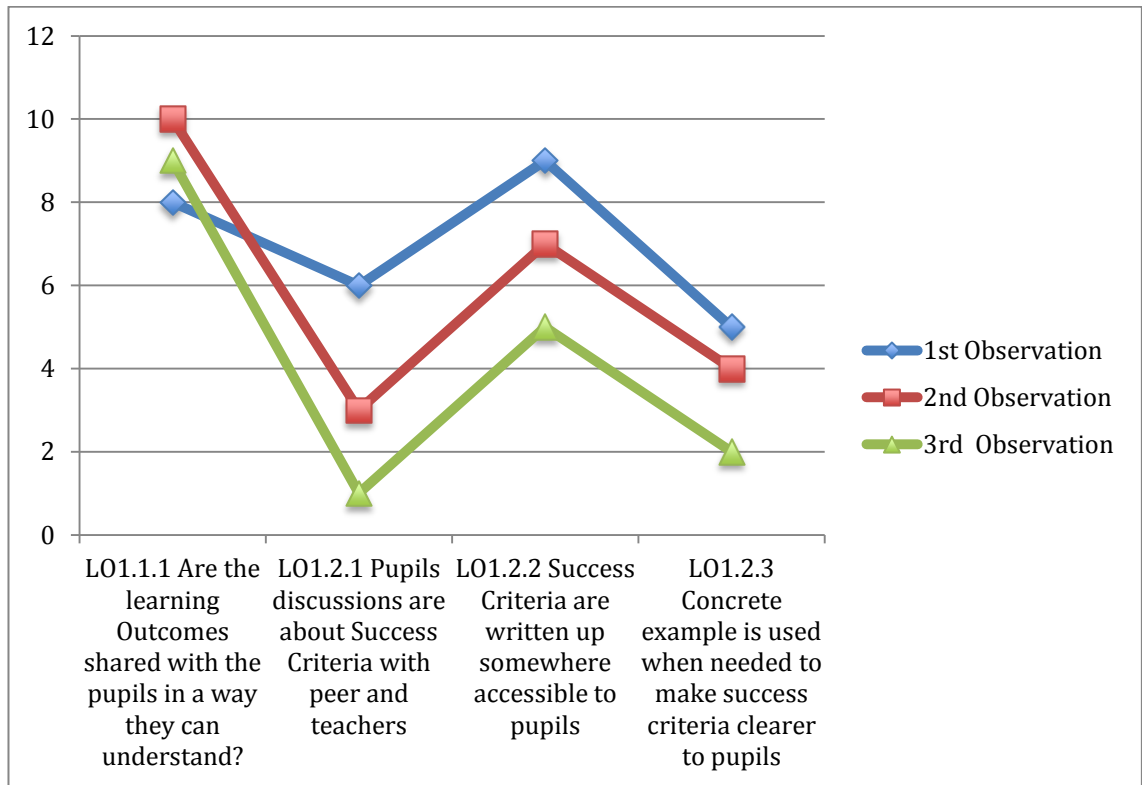


It might be interesting to know what makes the usage of learning outcomes and questioning decline. In order to determine this, the use of each evidence item related to these elements will be analysed in the figure below. The results here show a decline in in three evidence items:

1. Pupils discussions are about success criteria with peer and teachers
2. Success criteria are written up somewhere accessible to pupils
3. Concrete example is used when needed to make success criteria clearer to pupils

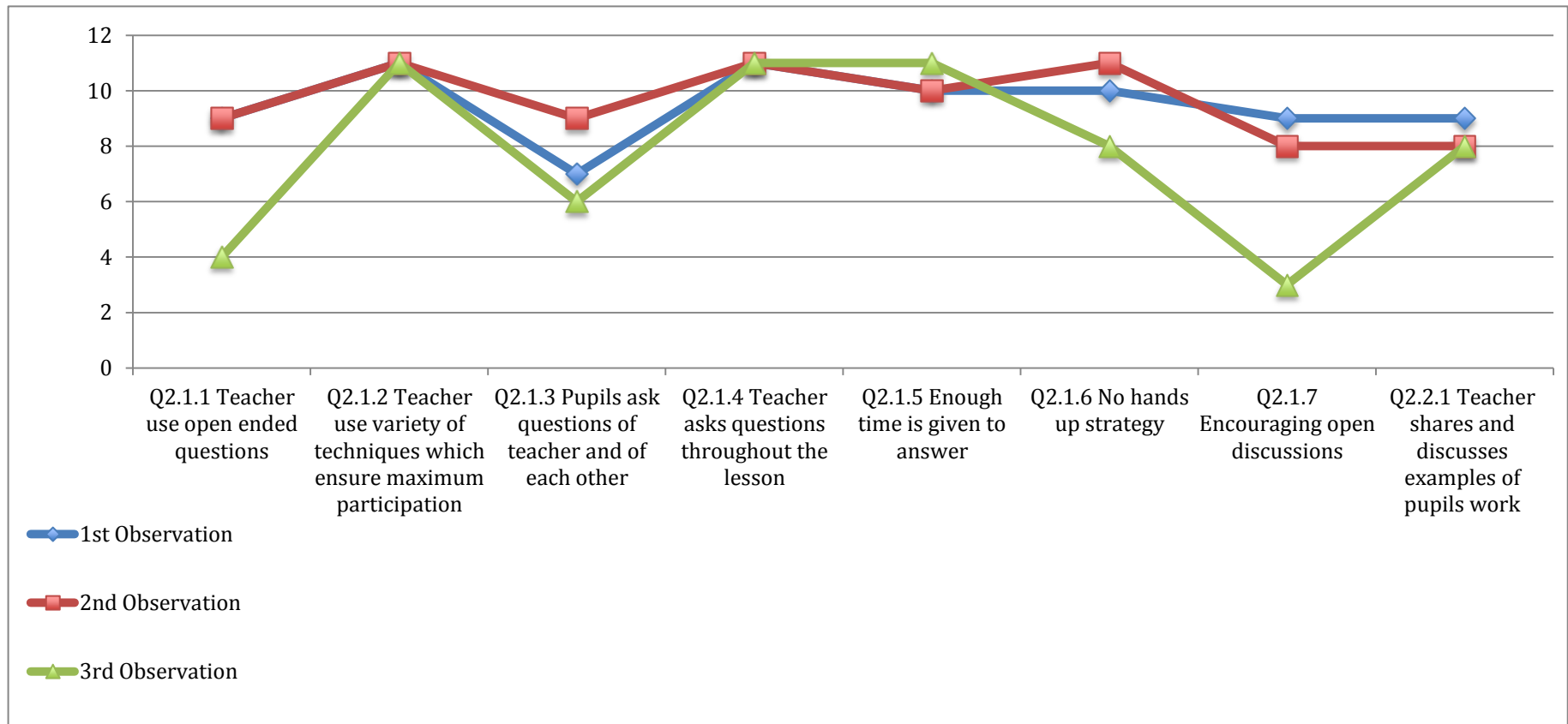
These results are not surprising because success criteria might be a difficult strategy, even for experienced teachers, to design and apply.

Figure 7- 12: The use of learning outcomes' items in each observation



In regards to questioning, the figure below shows that “Teacher use of open-ended questions” and “Encouraging open discussions” declined. Two other evidence items also decreased, but only moderately. These were: “Pupils ask questions of teacher and of each other” and “‘No hands up’ strategy”. The evidence items which drastically declined here were responsible for the notable decrease in the usage of questioning.

Figure 7- 13: The use of questionings' items in each observation



7.3 What are the challenges that the student teachers faced when applying formative assessment?

7.3.1 Issues observed by the researcher

The researcher observed seventeen issues, which took place when the student teachers were applying FA. The two main issues were: the limited use of evidence items in the classroom, and the lack of clarifying things to the pupils. This was expected because the student teachers lacked experience in classroom teaching. The researcher also observed that lack of time in the classroom contributed to these issues.

Table 7- 7: Issues when applying formative assessment

	Issues	Number of times occurring
1	Teachers' limited use of strategies in classroom	26
2	Teachers' lack of clarity	17
3	Teachers' limited use because of lack of time	8
4	Teacher used problematic technique	6
5	Teachers' lack of specification	5
6	Pupils left behind	4
7	Strategies partially used by teacher	4
8	Teacher misapplication of technique	3
9	Pupils' misuse of technique	2
10	Strategies partially used by pupils	2
11	Difficulties faced by pupils	1
12	Difficulties faced by teachers	1
13	Teachers' dominance	1
14	Classroom management problems	1
15	Pupils' negative reaction	1
16	Teacher stopped using strategy because it was time consuming	1
17	Strategy partially used by teacher because of lack of time	1
	Total	82

The total number of issues as listed above (82) is more than the number of evidence items, which were done with issues. This is because when analysing the data, it was useful to further divide some practices, which were done with issues into two categories, as some of these practices point to two different general issues. For example, "Peer-assessment: Pupils discuss success criteria and their work with peers" was both partially used by pupils and an example of the teacher's limited use of a strategy in the

classroom (see **Appendix 8**, evidence item number 18). Hence, there was a greater number of total issues than the number of evidence items, which were done with issues.

7.4 Conclusion of the observation results

The results showed a decline in the usage of FA over the course of the observations. The researcher's observation data showed that the student teachers avoided problematic strategies and focused on strategies which seemed to be working for them. There was an exception to this, as the data showed: although certain practices of self-assessment seemed problematic, the student teachers continued to apply and work through this aspect of FA. Looking at the usage of each evidence item showed that questioning was the most applied element of FA. A few strategies of feedback and sharing the learning outcomes were also among the preferred FA strategies. Success criteria, when broken down according to evidence items, was the least used FA strategy.

Overall, the results suggest that the student teachers seemed to gravitate toward FA practices with more teacher control. The findings further suggest that the main issue that the student teachers faced when implementing FA was the limited application of each strategy. Perhaps when the student teachers found themselves unable to apply certain strategies they chose to avoid them. However, observation data analysis did not reveal any concrete reasons behind their limitations or avoidance of certain FA strategies.

Chapter Eight

Tutors' interview analysis

8.1 Introduction

The tutors' interviews were one-to-one interviews, which were conducted after the student teachers' school placements. TA, TB, TC, TD, TE and TF represent the six tutors who were interviewed. These six tutors supervised seven of the eleven student teacher participants in the study. Each tutor supervised one student teacher in the sample, except one tutor, TA, who supervised two student teachers. The purpose of these interviews was to gain a thorough understanding of what the student teachers were doing during their school placements. The tutors' perceptions played also an important part in obtaining a triangulation of data, which could be compared with the student teachers' perceptions and the researcher's observations.

The tutors' interviews were especially useful in partially answering the third and fifth research questions:

- iii) What do the student teachers do during their teacher-training programme in connection with formative assessment?
- v) What are the challenges that the student teachers faced when applying formative assessment?

The results are discussed in relation to these two driving research questions. In addition, the tutors' perceptions about how to minimise these challenges are discussed.

8.2 Tutors' perceptions about what the student teachers did during their teacher-training programme in connection with formative assessment

As a starting point in the interview, the tutors were asked whether or not they thought that the student teachers understood what FA is, why it is used, and how it promotes learning. All of the tutors, except one, stated that the student teachers were able to

understand FA and its strategies. They explained that this was because the student teachers were young, fresh and open to new ideas.

According to the tutors' perceptions, however, the main obstacle that the student teachers faced when implementing FA was their lack of teaching experience. That is, the student teachers had to deal with everything in the classroom for the first time, such as classroom management, preparing the lesson, making suitable worksheets and time management. Despite these challenges, all of the tutors, except one, thought that the student teachers' implementation of FA improved over time. In fact, one of them perceived that FA helped her student teacher to be more organised in her teaching, which in turn made her more confident when compared to the rest of the student teachers who did not apply it.

The tutors were then given the list of nine strategies relating to FA (see the student teacher questionnaire) and asked whether they thought the student teachers understood how to implement each of these strategies. The tutors' responses were analysed according to each of these strategies.

1. All of them thought that the student teachers understood ***“assessing students many times in the class”***. Two tutors, however, said that the student teachers only understood this strategy to a certain extent.
2. All of the tutors thought that the student teachers understood ***“no hands up strategy, except for asking questions”***. One tutor, however, said that it was only understood to a certain extent.
3. Only three tutors fully agreed that their student teachers understood ***“using more open-ended questions that provoke thinking and help pupils to be active learners. More pupil discussions and less teacher dominance”***. The fourth tutor said that one of their student teachers applied this, but the other one did not. Finally, the fifth tutor agreed with this, but said that it was only used to a certain extent.
4. Half of the tutors agreed that their student teachers understood ***“declaring the learning objectives in a clear way to pupils”***. The other half thought that it was not applied properly because it did not seem that the pupils clearly understood the learning objectives. As these tutors explained, their student teachers simply wrote the learning objectives on the board, without taking the necessary time to make sure that the pupils understood them.
5. Only two tutors fully agreed that the student teachers understood ***“using success criteria for peer-assessment”***. Three tutors entirely disagreed. One tutor thought

that one student teacher understood it to a very limited extent, while their other student teacher could not grasp it at all.

6. Four of the tutors fully agreed that *“pupil self-assessment during or at the end of the lesson”* was understood. Of the two tutors who disagreed, one thought that it was only done to a certain extent, while the other one did not agree at all.
7. All of the tutors fully agreed that student teachers understood the following strategy: *“Provide effective comments that initiate thinking and help the pupils to overcome the difficulties that they are facing. Comments should not only reflect negative and positive aspects in the pupils’ work but go beyond that to guide the pupils in solving the problems they have in learning”*. Three tutors, however, commented that this was only done orally.
8. All of tutors, except one, fully agreed that the student teachers understood *“no marks are used as feedback. Only comments are used as feedback”*.
9. All of the tutors, except one, disagreed that the student teachers understood *“provide the opportunity for learners to respond to feedback either orally in the classroom or written at a later time”*. The tutors who did not agree explained that this strategy was not applied because of lack of time.

To summarise, the tutors thought that the strategies that were most understood by student teachers, included providing effective comments that initiate thinking, the “no hands up” strategy, and assessing students many times in class. The tutors reported that the least understood strategies included providing learners with the opportunity to respond to feedback, using success criteria for peer-assessment and declaring the learning objectives in a clear way.

The results show that different strategies were perceived as difficult by each of the different tutors. These results are interesting because they show that the majority of tutors actually perceived that almost all the student teachers *were* able to successfully implement most of the FA strategies. The following table displays the tutors’ responses:

Table 8- 1: Tutors' perceptions of formative assessment strategies that could not be implemented

No. of times chosen	Formative assessment strategies	Reasons why this strategy was not able to be implemented
1	“No hands up” strategy, except for asking questions.	The pupils could not stop raising their hands. This strategy needs time to be

		applied, but the <i>school placement period is very short.</i>
2	Using more open-ended questions that provoke thinking (makes students talk more about their ideas and opinions which helps them to participate more in lessons instead of just sitting and listening). Helps pupils to be active learners. More pupil discussion and less teacher dominance.	Because student teachers are new to the field of teaching and they need time to get used to applying this. <i>The school placement period is very short.</i>
1	Declaring the learning objectives in a clear way to pupils.	This is because some student teachers find it difficult to understand the reason behind doing this. They were just applying it to please me and they said this.
2	Using success criteria for peer-assessment	The pupils find it too annoying to do it. They are passive towards this. They don't want to make the effort.
1	No marks are used as feedback. Only comments are used as feedback.	Because marks are the only way to get the pupils to learn and focus on their studies. Actually marks are a good motivation for learning.
1	Provide an opportunity for learners to respond to feedback either orally in the classroom or written at a later time.	No comment.

The results show that two of the tutors thought that their student teachers were unable to implement strategy number 3, (“*using more open-ended questions that provoke thinking*”) and number 5, (“*using success criteria for peer-assessment*”). They explained that their student teachers were unable to implement the former because teaching was a new experience for them, and their school placement time was too short to give them the chance to learn how to do so. They also perceived that the latter was difficult to apply because of the pupils’ passive attitude towards this strategy.

One tutor stated that “*declaring the learning objectives in a clear way*” was applied just to please the supervisor. Moreover, they perceived that there was a lack of understanding regarding this strategy. This finding confirms what was found previously

in chapter six (see **sec. 6.5.1, Table 6-20**) when the student teachers were asked about the reasons behind applying (or not) this strategy. However, despite the shortness of school placement time and the lack of teaching experience, the tutors perceived that the student teachers were able to successfully implement the majority of the FA strategies.

When asked which of the strategies that student teachers were able to implement in the classroom, all of the tutors, except two, thought that the student teachers were able to apply all of the nine strategies of FA. The two tutors, who disagreed, stated that the following strategies could not be implemented by the student teachers they were supervising:

- Using more open-ended questions that provoke thinking
- Using success criteria
- Providing an opportunity for learners to respond to feedback orally or written in the classroom

Of the remaining six FA strategies, however, these two tutors agreed that the student teachers were able to implement them in the classroom.

As a follow-up to the last question, the tutors were then asked to assign a numerical value ('10' indicating highest level of ability and '1' indicating lowest level of ability) to each strategy in terms of the student teacher's ability to properly implement that strategy. The numerical values assigned to each strategy were added and ranked according to their total value. Two of the tutors did not assign a value to some of the strategies. While it is not completely clear why this was the case, it would seem to suggest that they either did not know what value the strategy should have, or they did not perceive that it merited one. Both reasons suggest that they did not have a strong opinion about how these strategies were implemented.

The results showed that *“declaring the learning objectives in a clear way to pupils”* had the highest total number (48.50), and was therefore thought to be the strategy which was implemented the most successfully. The *“no hands up' strategy except for asking questions”* had the second highest total number (44). *“Assessing students many times during the class”* and *“Pupil self-assessment during or at the end of the lesson”* (both with a total number of 42) were among the top strategies, which were perceived as those most highly and properly implemented during school placements.

On the other hand, the tutors thought that the following strategies were the least properly implemented: *“no marks are used as feedback. Only comments are used as*

feedback” (with total of 23), and *“provide the opportunity for learners to respond to feedback orally in the classroom or written”* (with a total number of 28).

Table 8- 2: Based on scale of 1-10, tutors' perceptions about the extent to which strategies could be implemented

Formative assessment strategies	TA	TB	TC	TD	TE	TF	Total	Rank
1) Assessing students many times during the class.	8.50	6	8	10	/	9.50	42	3
2) “No hands up” strategy, except for asking questions.	10	4	10	8	8	4	44	2
3) Using more open-ended questions that provoke thinking (makes students talk more about their ideas and opinions which helps them to participate more in lessons instead of just sitting and listening). Helps pupils to be active learners. More pupil discussion and less teacher dominance.	8	/	10	9	/	4	31	6
4) Declaring the learning objectives in a clear way to pupils.	10	2	9	10	9.50	8	48.50	1
5) Using success criteria for peer-assessment.	7.50	/	10	10	/	5	32.50	5
6) Pupils’ self-assessment during or at the end of the lesson.	10	6	10	10	/	6	42	3
7) Provide effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing. Comments should not only reflect the negative and positive aspects of the pupils’ work, but they should go beyond that to guide the pupils in solving the problems that they face in learning.	6.50	6	9	8	/	7	36	4
8) No marks are used as feedback. Only comments are used as feedback.	5	5	8	0	/	5	23	8
9) Provide an opportunity for learners to respond either orally or to give written feedback.	5	/	9	7	/	7	28	7

It is interesting to compare the results listed here with the results regarding whether tutors perceived that the student teachers understood how to implement each of the FA strategies. The results show that the tutors thought that the *“no hand up strategy’ except for asking questions”* and *“assessing students many times during the class”* were highly understood by the student teachers. Similarly, the results indicate that the tutors perceived that these two strategies were amongst the most highly implemented

(with total numbers of 44 and 42, respectively). However, while the tutors perceived that “*declaring the learning objectives in a clear way to pupils*” was the least understood, when answering this question, they thought that this strategy was the highest and the most properly implemented (with a total number of 48.50). Additionally, the perception was that “*using success criteria*” was implemented to a moderate extent (with a total number of 32.50). However, previously, the tutors thought that this was one of the least understood strategies of FA. Thus, it might be suggested that the perceived high usage of certain strategies, as we see here, does not necessary reflect a high understanding of that strategy.

The tutors were asked to rank the strategies from easiest to the most difficult to implement, (‘1’ signifying the easiest and ‘10’ signifying the most difficult), based on their perceptions of the student teacher’s ability to implement these FA strategies. They were also asked to explain the rationale for their decisions. The results in the table below show that the following strategies were thought to be the easiest strategies to apply:

- “No hands up” strategy, except for asking questions
- Declaring the learning objectives in a clear way to pupils
- Assessing students many times during the class

On the other hand, the following strategies were thought to be the most difficult to apply:

- Provide effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing
- Using more open-ended questions that provoke thinking
- Using success criteria for peer-assessment

Three different reasons were provided by the tutors to explain why they ranked the strategies as they did. All three reasons considered the pupils’ acceptance of the strategy, and the difficulties that pupils faced to be crucial deciding factors when determining which strategies appeared to be the easiest and which seemed to be the most difficult to implement. Thus, it might be suggested that, according to the tutors, pupils were the first to be taken in to consideration when evaluating the success and ease of integrating FA.

Table 8- 3: Formative assessment strategies ranked from the easiest to the most difficult (1 as easiest and 10 as the most difficult)

Formative assessment strategies	TA	TB	TC	TD	TE	TF	Total	Rank
1) Assessing students many times during the class.	7	4	7	3	2	1	24	3
2) “No hands up” strategy, except for asking questions.	1	1	1	2	1	5	11	1
3) Using more open-ended questions that provoke thinking (makes students talk more about their ideas and opinions which helps them to participate more in lessons instead of just sitting and listening). Helps pupils to be active learners. More pupil discussion and less teacher dominance.	7	10	4	4	8	8	41	7
4) Declaring the learning objectives in a clear way to pupils.	1	3	2	1	4	2	13	2
5) Using success criteria for peer-assessment	9	5	6	5	7	5	37	6
6) Pupil self-assessment during or at the end of the lesson.	2	5	5	8	6	4	30	5
7) Provide effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing. Comments should not only reflect negative and positive aspects of the pupils’ work, but they should go beyond this to guide the pupils in solving the problems that they face in their learning.	8	9	10	7	9	3	46	8
8) No marks are used as feedback. Only comments are used as feedback.	7	8	3	9	3	7	37	6
9) Provide an opportunity for learners to respond to feedback orally in the classroom or written.	8.5	2	1	6	5	6	28.5	4

Reasons behind ranking	
TA TB TF	Ranking was based on the student teachers' abilities to apply them and the pupils' abilities and acceptance as well.
TC TE	Ranking was based on what demands there were when applying. Here those demands were more thinking from the pupils and more time from the student teachers
TD	Ranking was dependent on how easy it was to apply in Saudi classrooms based on our pupils' response and acceptance to it.

8.3 Tutors' perceptions about the challenges that the student teachers faced when applying formative assessment

While the responses to the interview questions above partially addressed the third research question regarding what student teachers do during their teacher-training program in relation to formative assessment, the next part of the discussion turns to exploring the challenges they faced when applying FA.

8.3.1 Tutors' perceptions about the challenges that the student teachers faced or might face when implementing formative assessment

Most of the tutors thought that lesson time was not sufficient enough to cover all of the material. This factor made it very difficult to implement FA because of lack of time. They also thought that the short period of practical training (i.e. the school placement) had definitely hindered the implementation of FA because FA carries with it many new strategies that need time to be implemented and mastered by both the student teachers and the pupils.

When asked to state all the reasons that they thought have or would have hindered the student teachers' development in relation to FA in Saudi classes, all of the tutors thought that the following was a major challenge that the student teachers faced when implementing FA: *"The absence of a 'performance level' concept. Pupils from different levels of performance are in the same class, introduced to the same fixed curriculum and take the same tests all the year. Pupils are not classified into levels according to their performance. This might hinder promoting learning because of the huge differences between the level of each pupil"*. The tutors' perception might be due to the large number of pupils in Saudi classrooms and the large gaps of ability, especially in EFL lessons. All of the tutors, except one, thought that the following were also major challenges that the student teachers faced or might face when implementing FA: *"Class time is very limited (40 minutes)"* and *"Formative assessment's classroom implementation is not required by the university programme"*.

Table 8- 4: Tutors' perceptions of the reasons that hindered or might hinder student teachers' development in relation to formative assessment in Saudi classes

Reasons that hinder student teachers' development in relation to formative assessment in Saudi classes	No. of tutors choosing the reason
a) Student teachers' experiences as learners over the years have almost entirely focused on various forms of summative assessment.	4
b) Implementing formative assessment is not required by the university programme.	5
c) The absence of a 'performance level' concept. Pupils from different levels of performance are in the same class, introduced to the same fixed curriculum and take the same tests all the year. Pupils are not classified into levels according to their performance. This might hinder promoting learning because of the huge differences between the levels of each pupil.	ALL=6
d) Cultural nature: most of the time, the Saudi system awards students who do well academically. These awards are based on the high proficiency that students are able to attain in summative examinations. The system praises students who attain a "product" or "level", but they give scant recognition to the processes involved in getting there, such as "perseverance", "critical thinking", "problem-based learning", and "self-learning". It is these latter qualities which are so important in formative assessment activities.	4
e) A similar claim can also be made about the curriculum planning documents used by teachers, namely syllabuses, frameworks and teachers' source books. Although some emphasis is given in these documents to the processes of learning, the predominant focus is upon knowledge, concepts and skills, as measured by summative examinations.	4
f) Class time is very limited (40 minutes). This might hinder the proper use of formative assessment.	5
* Are there any other reasons that you would like to share?	None

8.3.2 Tutors' perceptions about how to minimise the challenges that student teachers face or might face when implementing formative assessment

When asked what should be done in order to minimise the challenges that the student teachers faced or might face when implementing FA in Saudi schools, most tutors thought that the MOE needs to *“place pupils according to level of performance”*. One third of them thought that *“more time in lessons”* is needed. Half of them thought that schools could help if they would allow *“student teachers to teach one class only instead of two or more, as this will help them to get to know the pupils more and this will benefit both the teacher and the pupils”*. Finally, all of the tutors, except one, thought that the challenges could be minimised if the university designed *“practical training to be in a separate whole term”*. Also, most of the tutors perceived that in regards to the *“information about formative assessment and other approaches, [student teachers] needed to be provided with an opportunity to practise some of those before school placement takes place”*.

Table 8- 5: Tutors' perceptions of things that should be done to minimise the challenges for student teachers by the Ministry of Education, schools and programmes in the universities

No. of subjects mentioned the reason	Things that should to be done by the <u>Ministry of Education</u> to minimise the challenges faced when implementing formative assessment
1	Research studies conducted on curricula, teaching methods, or teaching and learning, should be made use of.
1	We need good teachers. This could be done only with placement tests before students enrol in college. We need to get the best students to be English teachers.
4	Place pupils in classrooms according to their level of performance.
1	Increase the number of lessons per day. 2 lessons would be fine, which means 80 minutes.
2	More time for lessons.
1	Provide teaching assistants.
1	Training courses for formative assessment, without getting rid of marks.
1	Request less than 24 classes per week.
No. of subjects mentioned the reason	Things that should to be done by the <u>schools</u> to minimise the challenges faced when implementing formative assessment

1	Give teachers more freedom in using the teaching methods they think might work.
3	Support student teachers by helping them to teach in one class only instead of two or more, because this will help them to get to know the pupils more and this will benefit both the teacher and the pupils.
No. of subjects mentioned the reason	Things that should to be done by the <u>university</u> to minimise the challenges faced when implementing formative assessment
1	There should be a relationship between the university and the MOE.
4	Information about FA and other approaches needs to be provided, and there needs to be an opportunity to practise some of these approaches before school placement takes place.
5	Practical training in a separate whole term would definitely be better.
1	More courses about how to use technology, such as projectors and smart boards.

8.4 Conclusion of results from the tutors' interviews

On the whole, most of the tutors thought that the student teachers understood the concept of FA and its elements to a reasonable extent because they were young, open and enthusiastic about the idea. Most of tutors perceived an improvement in the student teachers' FA usage over the period of their school placements.

Regarding the tutors' perceptions about what the student teachers actually did during their school placements, most of the tutors perceived that "*declaring the learning outcomes*", the "*no hands up strategy*" and "*assessing students many times*" were the most frequently and properly used strategies, as well as the easiest to implement. It is interesting to note that "*declaring the learning outcomes*" was thought to be one of the least understood strategies, while the latter two strategies were perceived to be highly understood. The tutors thought that "*using success criteria*" and "*using open-ended questions that provoke thinking*" were the most difficult to implement and, perhaps as a result, the ones least implemented. On the other hand, "*providing effective comments that initiate thinking*" was thought to be highly understood but difficult to apply. Thus, it might be suggested that the high usage of certain strategies did not necessarily reflect a high understanding of that strategy and vice versa.

The tutors perceived that the challenges that hindered the implementation of FA were the limitation of class time, especially in comparison to the amount of curriculum to be covered, and the wide range of abilities in classrooms. Additional challenges which were perceived to hinder the use of FA were: limitation of school placement time and the university programme not requiring FA. In order to minimise these challenges, the tutors thought that the MOE needed to organise pupils according to their performance and ability. They also thought that schools could help by making student teachers responsible for only one class during their school placement time. According to the tutors, the university should consider setting practical training in a whole separate term. Moreover, the tutors recommended that universities offer information about FA and other teaching approaches with the opportunity to practise them before school placements begin.

Chapter Nine

Discussion

9.1 Introduction

The overarching argument of this chapter is that the Saudi student teachers in this sample were positive about formative assessment and able to understand and develop their practice of FA. As the findings will demonstrate, the student teachers were able to learn about FA. This is, of course, despite the fact that all of the student teachers came from a context where their own experience was based solely on summative assessment, a context in which learning is equated with grades. In their implementation of FA, however, they all tended to focus on certain aspects of FA after a period of time because of the challenges that they faced when using certain FA strategies. These findings may be significant as they suggest that even in circumstances that may not be deemed conducive to the development of positive responses to FA, the researcher's sample of student teachers have demonstrated a positive commitment to this new initiative.

In this chapter, the discussion will be based around the six research questions:

- i) What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?
- ii) Do the student teachers think that formative assessment can help school students to make progress?
- iii) What do the student teachers do during their teacher-training programme in connection with formative assessment?
- iv) Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?
- v) What are the challenges that the student teachers faced when applying formative assessment?

vi) Do the student teachers think that formative assessment should be implemented and why?

Two broad themes emerged from the researcher's analysis of the data:

- Perceptions of student teachers about assessment and formative assessment

This encompasses several aspects, including the student teachers' views about assessment's and FA's purposes, nature, possible development and other matters (outlined in more detail below). This theme is informed by their ideas and experiences both before and after their school-based experience of practising formative assessment, but it is general in its orientation.

- Perceptions of student teachers about their individual classroom-based experience of formative assessment

This focuses on what the student teachers actually did in their classrooms and what they thought about their individual experiences.

The first broad theme emerged from all of the research questions, except the third and the fifth, while the second broad theme emerged from the third and fifth research questions.

9.2 Perceptions of student teachers about assessment and formative assessment

The information about assessment that was provided by the university-based training programme privileged summative assessment: as the student teachers explained, the material that they received on assessment was mainly about designing questions for tests and exams (see **sec. 6.4.1**). Despite this, the student teachers were enthusiastic about applying FA both before and after practising it. The theory and practice training approach that the student teachers experienced with the researcher seems to have impacted their perceptions about assessment and FA, as their knowledge and perceptions about assessment and FA changed and developed.

The perceptions of the student teachers about assessment and FA is a broad theme, which merges from four of the research questions. The first research question — “What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?” — will be answered in three parts, which will be discussed in the sections below: i) student teachers' perceptions regarding assessment and its purposes, ii) student teachers' perceptions regarding FA and its elements, and iii) student teachers' perceptions of the advantages and disadvantages of FA, as informed

by their implementation of FA. In these three sections, the Saudi student teachers' perceptions regarding FA — both before and after their school placements — will be discussed; their development of perceptions concerning assessment and FA will be explored. Changes in the student teachers' perceptions towards the advantages and disadvantages of FA will also be analysed.

The second research question — “Do the student teachers think that formative assessment can help school students to make progress? — is explored in the fourth section: the development of student teachers' perceptions about whether FA could help pupils to make progress. The sixth research question — “Do the student teachers think that formative assessment should be implemented and why?”— is answered in the fifth section: the student teachers' perceptions about whether formative assessment should be implemented in Saudi schools. In sections four and five, the student teachers' perceptions before and after their school placements will also be discussed; the development of perceptions about whether FA can help pupils to make progress and whether FA should be implemented in Saudi schools will also be analysed.

Finally, the fourth research question — “Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?”— will be discussed in sections six and seven below: first, student teachers' perceptions of their university-based training programme, which is, of course, distinct from their work in schools and their perceptions of what they have experienced with the researcher. Second, the student teachers' perceptions of what they have experienced with the researcher. The student teachers perceived that the university-based training programme's sections on assessment were useful and helpful, but they also felt that they were not sufficient in terms of assessment knowledge, as these only included information about devising different types of questions for tests, rather than exploring FA and other assessment methods. It seems that the approach used by the researcher helped the student teachers to develop their understanding about assessment and FA.

9.2.1 Student teachers' perceptions regarding assessment and its purposes

Before their placements, the student teachers felt that they did not understand assessment, and that they had little knowledge of the purposes of assessment in relation to selection and certification, learning and quality assurance (see **sec. 4.7.1**). This finding supports Popham's (2009) argument, which suggested that initial teacher-training programmes do not provide suitable preparation for student teachers in relation

to assessment, and specifically FA. Hence, Schneider and Randel (2010: 251) have argued that separate assessment programmes in initial teacher training education are necessary. Furthermore, Andrade (2010a: 348) has argued that providing knowledge about the purposes of the different types of assessment is crucial because it gives student teachers the opportunity to choose the appropriate type of assessment when needed.

Before school placement, this sample of Saudi student teachers had little knowledge about assessment, and because they had grown up in a Saudi system, which emphasises summative assessment, as discussed in the context chapter, their focus was on summative assessment rather than other types of assessment. Before their placements, the Saudi student teachers thought that learning was connected to summative assessment rather than FA. This was shown in many of their comments, in which they attributed learning to “grading” and “marks” (see **sec. 5.2.1, sec. 5.2.3 & Appendix 7**). These types of perceptions were not surprising, because despite efforts to move teaching away from the traditional methods of memorisation and rote learning towards analysis and problem solving in Saudi Arabia (Tatweer, 2011), summative assessment still remains dominant in the Saudi educational system (Darandari & Murphy, 2013: 61), and especially in intermediate and secondary schools (Faraj, 2009: 184). As Sikes (1992: 49) has demonstrated, teachers explain education in a way that makes sense to them. Additionally, Lambert and Lines (2000: 2) have pointed out that assessment is separate from teaching and learning and more related to individual’s experiences.

However, after FA was introduced and discussed with the student teachers through numerous sessions with the researcher — and this was followed by practising FA during school placements — two major developments took place. First, the student teachers’ acknowledgement of the purposes of assessment were highly raised in relation to selection and certification, learning and quality assurance (see **sec. 5.2.1 & 5.2.2**). Second, the findings reflect more awareness regarding the uses of formative and summative assessment (see **sec. 6.2, Table 6-1**), as well as the differences between them. Many explained that formative and summative assessment could be applied in a formal or informal way. All of them stated that it depended on whether feedback or marks were used (see **sec. 6.2.2, Table 6-3**). Almost half of them thought that formative and summative assessment are different in relation to timing: they explained that FA is continuous while summative assessment is done by the end of a course (see **sec. 6.2.2, Table 6-3**). This distinction in timing was stated to be one of the major differences

between FA and summative assessment by Torrance and Pryor (1998: 8). Moreover, Brooks (2012: 119) has argued that assessing pupils all the way through a lesson is one of the characteristics of FA. Furthermore, although the student teachers heavily related FA to four of its five aspects —feedback, peer-assessment, self-assessment and questioning — as well as relating FA to following the progress of the pupils, there were some suggestions that summative assessment could be applied using these same aspects of FA, except for feedback (see **sec. 6.2, Table 6-1 & sec. 6.2.2, Table 6-3**).

These findings support Andrade's (2010a: 349) point, which showed that understanding FA helps teachers to distinguish the differences between FA and summative assessment. Moreover, Dewhurst and McMurtry (2006: 196) suggested that school placements help student teachers to develop in their learning. In many teacher-training programmes around the world, school placements provide the opportunity for student teachers to practise concepts and theories (König, 2013: 1021). This assumption was also confirmed by the previous findings of two studies conducted by König and König and Seifert (as cited in König, 2013: 1023). Therefore, it might be suggested that the student teachers' knowledge and experience of practising FA during school placements has positively helped to develop their perceptions and understanding of assessment as a whole and to know the differences between summative and formative assessment.

9.2.2 Student teachers' perceptions of FA and its elements

The findings which emerged surrounding the student teachers' perceptions about FA and its elements reflect the numerous changes in their perceptions before and after their school placements. These findings were mainly discovered by answering the first research question, which addressed what the student teachers' perceptions were about both assessment as a whole and FA in particular. Researchers' understandings of the nature of FA, as well as the elements of FA, have all been previously discussed in the literature review.

Before the student teachers' school placements, the findings from the first interviews showed that many of the student teachers had relatively limited knowledge about FA and its strategies. This lack of understanding can be illustrated by reference to three specific areas: self-assessment, feedback and sharing outcomes. Firstly, in relation to self-assessment, prior to their school placements, half of the participants thought that this only involved the pupils' general thoughts about their performance after an exam (see **Appendix 7**). According to this viewpoint, self-assessment simply means a quick

judgment from the pupil about whether they did “good” or “poorly”. Secondly, regarding sharing outcomes, only a few of the participants thought that outcomes ought to be shared with pupils at the beginning of a lesson in order to help them to focus on the main parts of the lesson (see **Appendix 7**). Moreover, when sharing outcomes was discussed with those in favour of its practice, many of them were not sure how it could be applied to self-assessment and peer-assessment. Thirdly, at the beginning of their school placements, almost half of the student teachers related feedback to marks, while a few of the student teachers described feedback as comments provided by students to teachers, at the end of a lesson. For the majority of subjects, however, feedback was always related to grading. For example, four interviewees stated that feedback needed to be given to pupils in order to help them to improve before teachers calculate their final mark (see **Appendix 7**). Two other student teachers understood feedback as a form of evaluation. When they were asked to think about feedback, they described it as the means by which pupils can tell their teachers what they thought about the lesson (see **Appendix 7**). According to this perspective, feedback is pupils’ evaluations provided either after a lesson or at the end of a module. For these student teachers, feedback is only provided by pupils for teachers. This sort of feedback is discussed in detail by authors such as Brinko (1993), Kember, Leung and Kwan (2002), and Moore and Kuol (2005). These perceptions — both the student teachers who related feedback to grades and those who connected it with student feedback — do not reflect the meaning of feedback as an FA strategy. Feedback in FA is described as information provided for pupils that guides them and helps them to make progress (Black & Wiliam, 1998a: 9; Marsh, 2007: 26). Hence, feedback in FA is descriptive (Heritage, 2010: 13; Stiggins, 2007: 73) and it relies on comments (Irons, 2008: 7), rather than being about grades (Heritage, 2010: 13; Marsh, 2007: 26) or a comparison of pupils (Black & Wiliam, 1998a: 9).

After their school placements, the findings from the second interview showed that most of the participants were more aware about the concept of FA and its five elements: sharing the learning outcomes, feedback, questioning, peer-assessment and self-assessment. This suggests that student teachers can learn about FA. Whereas before their placements the student teachers in this sample were unable to talk about FA, following their placements their perceptions about FA had clearly developed.

What did FA mean to the student teachers after their placements? After their school placements, most of the participants saw FA as ongoing assessment, which is similar to the perceptions of many authors, such as Black et al. (2003), Clarke (2001: 4),

and Torrance and Pryor (1998: 8). The student teachers related FA to feedback and to finding the strengths and weaknesses to overcome difficulties (see **sec. 6.2, Figure 6-1**). This is similar to what Taber et al. (2011: 178-179) found when interviewing trainee teachers on an Initial Teacher Education (ITE) course about their understandings of assessment. A number of student teachers in Taber's study explained that FA provides feedback that guides pupils towards improvement; it is a continuous process in everyday practices. The Saudi student teachers in this sample related FA to another aspect, which is raising the pupils' motivation. This perception is similar to the perceptions of many authors, such as Cauley and McMillan (2010: 1) and Clarke (2001: 4) who demonstrated that FA does help to raise pupils' motivation. Another feature that the student teachers related to FA was achieving the learning outcomes and success criteria.

Thus, it might be suggested that after their school placements, most of the student teachers were more aware about the concept of FA, and they were able to relate it to some of its main elements. In their two-year research study on the ability of teachers to absorb teaching skills and strategies, Joyce and Showers (1980: 379) argued that teachers are excellent learners, and that almost all teachers are able to develop new skills and strategies, even though the ideas and practices are wholly new to them. Moreover, Little (1992: 186) has suggested that a teacher's development might be linked to their increase of knowledge and skills. These arguments support the findings that student teachers can learn about FA.

After their school placements, the student teachers had more knowledge about the five elements of FA: sharing the learning outcomes, questioning, feedback, peer-assessment and self-assessment. Moreover, they were able to clearly explain the purposes behind the five aspects of FA. Contrary to before their placements, as discussed above, now all the participants saw "declaring the learning outcomes" as necessary to help pupils to know what they were going to have in the lesson and also to help pupils to assess themselves in relation to the learning outcomes (see **sec. 6.2.1, Table 6-3**). This conception of learning outcomes is also reflected in Clarke's (2001: 20) description.

Half of the participants thought that "questioning" was used to check the pupils' understanding (see **sec. 6.2.1**). Black et al. (2003: 35) and Clarke (2001: 87) pointed out that checking pupils' understanding is an essential part of questioning as an FA practice. Spendlove (2009: 32) suggested that useful questioning in FA needs to be about obtaining information regarding what pupils know and understand. After their school

placements, the student teachers' ideas about questioning developed, and their focus shifted to see questioning as a practice which checks understanding.

Similar to what authors, such as Bangert-Drowns, Kulik, Kulik and Morgan (1991: 232-234), Brinko (1993), and Hattie and Timperley (2007: 84) have all suggested, most of the student teachers thought that "feedback" helped improve the pupils' performances (see **sec. 6.2.1**). This reflects the Saudi student teachers' awareness regarding the importance of applying feedback post-placement.

After their placements, the student teachers thought that "peer-assessment" was applied because pupils learn from each other more than from their teacher (see **sec. 6.2.1**). This concept of peer-assessment was described by Topping (2010: 62), who suggested that when feedback is provided by teachers, it is considered as an authoritative source, whereas when it is provided by peers, it is a richer learning resource, which is open to negotiation. The student teachers' perceptions about peer-assessment also confirmed what Hamdan Alghamdi (2013: 81) found when she asked student teachers in her sample about their perceptions regarding group work. In Hamdan Alghamdi's (2013) study, she found that student teachers preferred to work in groups because it helped them to involve, discuss and learn from their colleagues. Wiliam, Lee, Harrison and Black (2004: 55) have highlighted that numerous teachers have pointed out that peer work is essential in supporting pupils.

Whereas before their placements many of the student teachers thought that "self-assessment" was a pupil's general thoughts about their particular performance on an exam or test, the majority now had a more nuanced understanding of self-assessment. They now related self-assessment to learning outcomes and described it as a practice which helps pupils to know what they have achieved, whilst also helping the teachers to know where their students are in their learning (see **sec. 6.2.1**). These latter two points are very similar to Andrade's suggestions in relation to self-assessment (2010b: 91). Most of the participants explained that the "no hands up" strategy made learners alert and attentive (see **sec. 6.2.1**). The student teachers' responses here support Leahy, Lyon, Thompson and Wiliam's (2005: 21) argument about the use of the "no hands up" strategy, which indicated that it helps learners to listen carefully, as they are expected to answer a prompt at anytime during the lesson. The findings in this study illustrate that the student teachers' perceptions and understanding about the purposes behind applying FA and its elements have developed. These findings also support the idea of Black et al. (2003: 2), which demonstrated that the idea of FA could be understood and adopted successfully in schools.

9.2.3 The student teachers' perceptions of the advantages and the disadvantages of formative assessment, as informed by their implementation of FA

While the above section discussed changes before and after school placement in the Saudi student teachers' perceptions regarding the general ideas about FA and its elements, the current section will now focus more finely on what the student teachers perceived as the advantages and disadvantages of FA. Shulman (2000) suggested that 'practitioners in teaching know a great deal more about teaching than our theories can yet account for' (p. 134). He suggested that we encourage subjects to examine the theories: this is called 'wisdom of practice' (p. 134). Asking the student teachers to reflect on the advantages and disadvantages of FA gave them the opportunity to do precisely this: their perceptions can help us, in turn, to better understand FA in the Saudi context and not as an abstract idea.

To be able to better understand FA in the Saudi context, it is necessary that we consider the student teachers' perceptions of the advantages and disadvantages of FA after their placements. Before school placement, the student teachers expected FA's advantages to exceed its disadvantages to a high extent (see **sec. 5.2.4.1, Figure 5-3**). However, after their school placements, these perceptions about FA's substantial advantages significantly changed (see **sec. 5.2.4.2, Table 5-6**). These changes were informed by their experience of actually implementing FA in the Saudi context. This result was not surprising, as evidence has suggested that although teachers believe in the benefits of FA, they complain that putting the idea into practice has many barriers (OECD, 2005a: 69). These difficulties might help to explain the changes of the Saudi student teachers' perceptions of FA, which shifted from high expectations to more moderate expectations.

In this section, we are interested in the student teachers' specific perceptions regarding the advantages and disadvantages of FA. A number of the student teachers' perceptions regarding FA remained the same after their school placements (see **sec. 5.2.4.3, Figure 5-4**). While there might have been a slight decrease or increase in these perceptions, the change was negligible. It is important, however, to consider these perceptions that have remained the same, as they tell us which conceptions have been confirmed through experience. The perceptions regarding the advantages of FA for pupils that remained the same were: that FA helps to raise achievement, especially for lower achievers, amongst students, that FA helps pupils to overcome difficulties, and that FA helps students to know what the target is so that they can achieve the lesson's objective. The student teachers' perceptions here are supported by the findings from

numerous studies, which also list these as benefits of FA, such as Black et al. (2003) and Clarke (2001). The student teachers' perception that FA helps to raise achievement amongst students is also argued in Black and Wiliam (2001: 13, 2006: 9), James (2013: 85), and Sliwka et al. (2005: 114).

These perceptions which remained almost the same contrast with the perceptions which changed from almost total agreement to a notable decline: these were that FA helps pupils to become individuals learners and that FA helps pupils to know how to improve themselves rather than competing with others. Other perceptions which also decreased, albeit not as drastically, were that FA helps raise self-confidence and that FA helps to create better communication and a better atmosphere in the classroom. Some of the aspects which did not convince the student teachers, for example that FA raises self-confidence and creates a better environment, are perhaps somewhat imprecise and immeasurable categories. This might explain why there was a decrease in their perceptions. Moreover, if we apply Shulman's (2000) argument and allow practice to inform and perfect our theories, we need to question whether such aspects like self-confidence can be replaced with other categories, which would be easier to substantiate through evidence.

The perceptions of the student teachers after their placements also indicated a doubtfulness that pupils can learn by themselves. For example, most of the student teachers did not think that FA helped pupils to become individual learners. This contradicts with many research studies, which have argued that FA helps pupils to become individual learners, such as Black et al. (2003: 49). However, James (2013), as discussed in the literature review, argued that most approaches to FA can be divided into two theoretical perspectives: 'behaviourist' and 'constructivist' (p. 84). Although these approaches 'involve superficially similar practices and procedures' (p. 84), the behaviourist tradition 'emphasises the clear specification of performance criteria and the kind of evidence needed to demonstrate performance' (p. 84), while the constructivist theoretical method emphasises the idea of helping pupils to become individual learners. While the former is focused on learning skills and the teacher pointing out what still needs to be learned for the next time, the latter seeks to make sure that learning is 'actively understood and internalised by the learner' (p. 85). Thus, it might be suggested that in this study, the Saudi student teachers' approach to FA tended to be more behaviourist rather than constructivist. That is, their approach to FA was teacher-centred rather than empowering the pupils. For example, although the vast majority maintained their perception that FA helps pupils to overcome their difficulties through feedback,

the majority of the student teachers now disagreed with the idea that FA helps pupils to improve themselves rather than competing with others. While these two aspects are very similar, the important difference is that the former is dependent upon the teacher. That is, improvement directly stems from teacher's feedback; the teacher must be involved. For the latter there is no mention of a teacher, and it is, like the concept of an individual learner, more focused on the pupil. These perceptions suggest a wariness that pupils can learn through assessment without a teacher's involvement.

The student teachers' perceptions of the advantages of FA for the teacher almost all remained the same, except for the perception that FA helps teachers to evaluate their teaching methods. From a total agreement before their placements, this perception had a notable decline after their placements. This shift might be explained by the fact that their teaching placements were only fifteen days, which would not give the student teachers much of an opportunity to evaluate their teaching methods. The majority's perception that FA helps teachers to know where pupils are in their learning and what difficulties pupils face, remained almost the same. These findings confirm the arguments made by many authors, such as Black et al. (2003). Although the student teachers were positive about peer-assessment, as discussed in the section above, both before and after their placements very few of the student teachers felt that FA helped to save time when using peer-assessment. Whereas the student teachers thought that pupils can learn through peer-assessment, almost all the student teachers did not necessarily agree that this saves time when conducting assessment.

It is very interesting to note that the student teachers' perceptions about the negative aspects of FA regarding the student remained almost the same after their placements. Post-placement, most of the student teachers still felt that pupils might want to receive a mark instead of a comment. This viewpoint is reflective of the strong summative culture in Saudi Arabia where marks mean a lot to many students. This finding supports Smith and Gorard's research study (2005), which showed that pupils wanted to receive a mark rather than merely a comment. This also suggests that the student teachers subconsciously perceived a tension between formative and summative assessment. While some educators have suggested that assessment has to be either formative or summative, researchers such as Biggs (1998: 106), Hargreaves (2005: 223), Spendlove (2009: 4) and Wiliam (2000: 13) have all pointed out that using FA does not necessarily contradict with summative assessment and the two can co-exist. Research literature on the tensions between FA and summative assessment have been explored in the literature review.

On the other hand, the perceptions regarding the negative aspects of FA for the teacher all radically changed after the student teachers' experience of implementing FA. These changes might be explained by the fact that these perceptions are about the student teacher and can be more easily reflected upon, compared and tested, whereas the perceptions about the pupils, which are always from the perspective of the teacher, can never be more than an observation. Whereas the majority initially thought that FA does not add more work for the teacher, post-placement, the majority's perceptions changed regarding this issue: after their school placements, they found that FA added more work for the teacher. Although the student teachers were enthusiastic about FA in general, as common sense shows, any type of assessment — formative or summative — creates more work for the teacher, as it involves the completion of another task.

The school placements also seem to have given the student teachers more confidence in their ability to implement FA. This is reflected in their change of perception regarding their ability to write useful feedback: before their placements, many of the student teachers did not feel that they were able to perform this task, whereas after their placements, this perception declined to almost zero. Although these student teachers had personally experienced summative assessment in their own education and training, this change in their perceptions shows that they can learn about FA through their teaching practices, as discussed in the previous section.

Before school placement, many of the student teachers thought that time would affect their ability to practise FA, and after their placements, all of the student teachers had this perception. Their perception that they were not able to practise FA effectively due to time constraints contradicts with OECD (2005a: 69) results, which were discussed in the literature review, and which suggested that teachers thought that FA helped them to save time. However, this perception is supported by many other studies, such as Hunt and Pellegrino (2002: 75) and Taber et al. (2011: 180).

Almost all the student teachers initially thought that the number of pupils in the classroom was a negative aspect, which will affect the practice of FA. Interestingly, this perception declined to half of the group after their placements. Although half of the student teachers disagreed on this point, many studies have argued that FA is negatively effected by the number of students in the classroom, as discussed in the literature review (OECD, 2005a: 69; Taber et al., 2011: 180). The findings of this study showed, however, that the number of pupils in the classroom is not one of the major factors perceived by many of the student teachers as negatively affecting the implementation FA.

There was, however, one aspect which remained the same, and this was that teachers are not able to practise FA due to lack of training. As many of the student teachers explained, the Saudi system offers almost no training in relation to FA; it is predominately a learning environment which favours and promotes summative assessment.

9.2.4 Student teachers' perceptions about whether formative assessment could help pupils to make progress

This section will discuss the development of the student teachers' perceptions about whether FA helps pupils to make progress. This theme merges from the second research question:

Do the student teachers think that formative assessment can help school students to make progress?

The findings from the questionnaire revealed that all student teachers agreed that FA helps classroom students to make progress. In fact, seven of them strongly agreed with this statement; four of them only agreed, and none of them disagreed at all. Other findings from the first interview, which was conducted before their school placements, and the questionnaire, which was conducted after school placements, all reflected similar results. Most student teachers, both before and after school placements, thought that one of the positive aspects of FA in relation to students was that it helps pupils to make progress. This confirms what Black et al. (2003: 2) suggested about FA.

Further data obtained from the second interviews, which were conducted after school placement, showed that the student teachers thought that FA could help school students to make progress for two main reasons: first, it helps the pupils to know what their weaknesses and strengths are, which in turn will aid them in their development. Second, it encourages communication in the classroom, and it helps the teacher to easily follow the progress of the pupil (see **sec. 6.3, Figure 6-2**). Even though many of the participants thought that it was difficult to know whether FA had helped their pupils to make progress, due to the short period of their school placements, the data from the second interviews showed that most participants thought that FA helped most of the pupils in their classes to make progress.

In their famous study, Black et al. (2003: 81) found that even when teachers used one or two FA strategies, this had a positive effect on pupils' performance. As the findings of the current research study show, oral feedback and "no hands up" strategy

were the two main things reported which were perceived to help pupils to make progress (see **sec. 6.3, Figure 6-3**). Regarding the pupils' progress which had been made through the use of FA, raising confidence and academic accuracy were the most reported responses that the student teachers noted (see **sec. 6.3, Figure 6-4**).

While all of the student teachers reported that FA helped pupils to make progress, the findings indicated that the student teachers perceived that average pupils were the ones who made the most progress. One student teacher commented: "I found that high achievers get easily bored. The low achievers need more help and support" (see **sec. 6.3, Table 6-6**). This student teacher's perception is not surprising as this might happen in groups where the students have different abilities. Saudi classes, as discussed in the context chapter, are usually mixed abilities classes. Moreover, this response supports Wiliam's (2006: 6, 2009: 6) suggestion, which argued that when pupils are high achievers and the stated goals are low, they will easily become bored; likewise, when pupils are low achievers and the stated goals are high, pupils tend to feel isolated from the group. With mixed abilities classes, it might be difficult for teachers, especially student teachers or early career teachers, to provide the right range of attention and tasks for all the different pupils, whilst only using one curriculum. Hence, it was not surprising that average pupils were perceived to make the most progress because the curriculum was suited more to them than to other ability levels in the classroom.

9.2.5 Student teachers' perceptions about whether formative assessment should be implemented in Saudi school

In this section, we will discuss the student teachers' perceptions about whether FA should be implemented in Saudi schools. This theme arises from the sixth research question:

Do the student teachers think that formative assessment should be implemented and why?

This research question was answered by data obtained from the first interviews, the questionnaires and the second interviews. Although all of the student teachers in this study came from a background which privileges summative assessment, all of them felt — both before and after their placements — that FA should be implemented in Saudi

schools. This positive response regarding the implementation of FA was also recorded in Cowan (2009: 81) and Taber et al. (2011: 180).

In order to discuss the student teachers' perceptions about whether FA should be implemented in Saudi schools, it is important to first establish that this sample of student teachers were highly influenced by a tradition of summative assessment, as mentioned above, which they experienced throughout their time in school and university. Therefore, it seemed likely that they would be less enthusiastic about the idea of implementing FA. However, the findings show that they were willing to implement FA to such a degree that they could not wait to experiment with it during their school placements. This contradicts Calderhead and Robson's (1991: 1) argument, which held that student teachers' experiences as pupils effect their ideas of classroom practice. Like Cowan's (2009: 81) findings, this study here found precisely the opposite of what Calderhead and Robson (1991) argued. Moreover, after their school placements, the student teachers' enthusiasm to implement FA was still high.

Post-placement, the student teachers were able to articulate the reasons why they perceived that FA should be implemented in the Saudi system. The findings indicate that the student teachers still believed that FA can help pupils in Saudi schools to overcome their fear of making errors and increase self-confidence and motivation when learning. Ten reasons were provided in the questionnaires, which they completed after their placements. These reasons were stated in the results chapter (see **sec. 5.2.4.5, Figure 5-6**). Five additional reasons were provided in the second interview, which was also conducted after their school placements. All fifteen reasons were stated in the results chapter (see **sec. 6.7, Figure 6-14**). The most common reason provided by the student teachers as to why FA should be implemented in Saudi schools was that FA can help to enhance learning and raise achievement. This point has been argued by many authors (see Black et al., 2003: 2; Broadfoot & Black, 2004: 16; Hunt and Pellegrino, 2002: 75). The findings from the questionnaires and the second interviews showed that "raising students' performance" was the most reported response. The second reported reason was that "pupils enjoyed it", which supports the findings of Black et al. (2003: 3).

The reason provided by the student teachers that FA "will help to change the pupils' attitudes towards learning" was interesting. For this group of student teachers, FA was a new idea, which was far from the accepted ideology of the Saudi educational system that they had previously experienced. As this reason for implementing FA shows, however, the student teachers were not only happy about this new type of

assessment because they perceived it as instrumental in raising achievement, but they also went beyond this as they saw FA as a useful means to change a pupil's way of thinking about learning and education. This was one of the reasons that they wanted to implement FA, as they perceived that it helped shift the focus from marks and grades to personal improvement and progress. As this suggests, these student teachers are adopting a new and radical way of thinking, which is reflective of wider cultural changes in the Middle East.

While all of the student teachers were greatly in favour of implementing FA, they expressed an awareness of some of the challenges of practising FA, which is a Western concept, in the Saudi context. An environment can either facilitate or hinder a practice. Nias (1989: 114) demonstrated that teachers consider working conditions to be one of the main factors, which affects their ability to implement a theory in the classroom. The data from the second interviews supports this idea that one's working environment affects the extent to which a teacher is able to apply a theory: all participants thought that some changes in the educational system needed to be accomplished in order to minimise the challenges of implementing FA (see **sec. 6.6, Figure 6-11**). They all agreed that class time needed to be increased, as they all agreed that forty minutes was not enough time to effectively apply FA. This supports Gadsby's (2012: 14) argument regarding the challenges of an effective implementation of FA. Gadsby (2012: 14) argued that in order to apply assessment for learning effectively, teachers need time, which is almost impossible due to many priority and pressure issues in schools. Moreover, all of the participants thought that pupils needed to be placed in separate classrooms based on their abilities before FA could be implemented in the Saudi educational system. This final point was possibly raised because these student teachers were teaching English as a foreign language (EFL); as discussed in the context chapter, it might be more difficult for language teachers to have one class of forty pupils with different levels of ability than it would be for other subjects.

Nevertheless, despite the influence of summative assessment in the Saudi context, all of the subjects thought that FA needed to be implemented in Saudi schools. This perception did not change after practising FA. Despite what the student teachers perceived as obstacles which they faced when implementing FA, all of the student teachers maintained a notable enthusiasm for FA and its need in Saudi educational culture.

9.2.6 Student teachers' perceptions of their university-based training programme, which is distinct from their work in schools and work undertaken with the researcher

This section addresses the student teachers' perceptions of their university-based training programme. This theme derives from the fourth research question:

Do the student teachers think that their training programme is coherent and useful in helping them to develop their professional practice of formative assessment?

This question was answered by the data collected after school placements. The results from the questionnaires revealed that most participants agreed that the university programme was useful and coherent in developing their understanding about the nature of assessment. Only a few participants disagreed with this statement. However, most responses provided in the interviews explained that information about assessment was mainly about designing questions rather than about the types of assessment and its purposes (see **sec. 6.4.1, Figure 6-7**). These findings were expected: as Alkatabi et al. (2005: 21) stated, one of the main objectives of Saudi teachers' educational training is to provide student teachers with the tools to practise summative assessment. Examinations are an important part of the educational system in Saudi Arabia. In fact, Al-Sadan (2000) has argued that exams are the only tools of assessment in the Saudi educational system. This is not just the case in Saudi Arabia. As Hargreaves (2001: 259) showed, this ideology can be seen in Egypt as well. Qatari teachers have also complained about their insufficient awareness of assessment methods (Qassim, 2008: 289). This dominance of the examination system in Saudi schools and the wider Arabian region might help to explain the focus on designing questions for exams rather than assessment knowledge.

Moreover, the second interviews revealed that although most of the student teachers thought that the university training programme was useful in relation to assessment, a few added that the information was brief. The emphasis of the teacher-training programme was more focused on the development of skills, for example writing tests, rather than the acquisition of knowledge about different types of assessment and theories behind assessment. This is similar to what Shulman (1986: 4, 1987: 20) discussed in his idea of a 'knowledge base' when he argued that knowledge was given less attention than skills in teacher education.

Educators are often affected by their culture, whether they notice this or not, and this is reflected in the teacher-training programmes that they design (Blömeke & Paine, 2008: 2027). Similarly, teacher learning is related to cultural factors (Correa, Perry, Sims, Miller & Fang, 2008: 140). Hence, the fact that most of the student teachers in the current study thought that the university training programme was useful and coherent in relation to assessment, might be a perception which is reflective of their wider cultural factors.

9.2.7 Student teachers' perceptions of what they have experienced with the researcher

As discussed in the previous section, the Saudi teacher-training programme focused on summative assessment, with little emphasis on other types of assessment. The Saudi student teachers' lack of knowledge regarding FA prompted the researcher to introduce FA to the subjects for the sake of this study. Joyce and Showers (1980: 382) suggested that it is difficult to expect one to implement a practice without first having the knowledge surrounding that practice. This section will address how the researcher introduced FA and what the student teachers experienced with the researcher.

The questionnaires showed that all of the participants, except one, agreed that the researcher programme was useful and coherent in developing their understanding of FA. Before implementing FA, the student teachers needed to first understand the idea of FA. As Shulman's (1987) discussion about the process of 'pedagogical reasoning and action' suggested, 'comprehension' (p. 14) is the first step. In their study, Joyce and Showers (1980) concluded that five major aspects are essential for skill development and their transfer into normal practice: 'theory, demonstrations, practice, feedback, and coaching' (p. 379). The researcher tried to apply these components to help the participants implement FA.

Responses provided in the second interviews showed that the sessions provided by the researcher were perceived to be useful. The student teachers also thought that the discussions in these sessions were helpful. The handouts, which were given during the sessions, were also described as very useful and full of valuable information (see **sec. 6.4.3, Table 6-13**). When asked about their school placements, all of the participants thought that the brief discussions and feedback, which were offered by the researcher after the lessons, were helpful. All of them, except one, thought that the phone call discussions before the lessons were useful as well (see **sec. 6.4.3**).

In addition, when the student teachers were asked about other things that helped them to understand FA, all of them said that videos and websites about FA, as well as the process of coming up with techniques for applying FA, were helpful (see **sec. 6.4.3**). Moreover, when they were asked about the reasons behind why they found the researcher's programme coherent in regards to the development of their understanding of FA, they responded that the group discussion about the experiences of the first three student teachers to implement FA was very helpful (see **sec. 6.4.3**). Darling-Hammond (2008: 93) argued that teachers learn by exploring, applying and reflecting; by cooperation with others in the field; and by sharing their experiences. She added that this type of learning is unlikely to happen through either university knowledge or through school practice alone, as it has to combine both. Darling-Hammond (2008: 93) explained that teachers learn best through a combination of university education and school placement, as this offers the chance to examine, explore and evaluate teaching and learning. She (2008) called this the “rub between theory and practice” (p. 93).

Research on teacher preparation programmes, as discussed in the literature review, has indicated that connecting theory with practice does help student teachers to learn (Zeichner & Tabachnick 1981: 9). LaBoskey and Richert (2002: 26-29) emphasised the necessity of relating theory to practice by providing the chance for student teachers to explore certain principles with the help and support of their supervisors. Reflection, which has also been previously discussed in the literature review, is a vital means through which theory can be integrated into practice. That is, asking student teachers both to reflect upon their perceptions of assessment and past experiences, and also asking student teachers to constantly reflect on their practice in order to determine how to better implement FA and how FA might be best implemented to suit their particular needs. In this research study, each research instrument helped to facilitate and prompt this reflection, as explained in the methodology chapter.

9.3 Perceptions and observations of student teachers about their individual classroom-based experience of formative assessment

The above sections have focused on the first broad theme of this chapter, which explores the perceptions of the student teachers regarding FA as a general concept. The discussion will now move to examine the second broad theme, which focuses more finely on the student teachers' individual-based experiences of implementing FA. This second theme merges from the third research question:

What do Saudi student teachers do during their teacher-training programme in connection with formative assessment?

In this part, the discussion will first include the researcher's observations of the student teachers' experiences. These observations will then be juxtaposed with the student teachers' perceptions and the tutors' perceptions of the participants' individual-based experiences of implementing FA. This triangulation is partially done to find out the similarities and differences between researcher's observations and the student teachers' perceptions of those experiences. The discussion will also include an examination of what was happening in the classrooms over the period of school placement and why it might have been happening. The data here comes from four sources: the researcher's observations, the second interviews, the questionnaires and the tutors' interviews. The findings from these four instruments will be discussed in relation to the most and least used strategies. Then, the reasons for focusing on particular strategies will be explored. The argument is that over a period of time, the student teachers were focusing on certain strategies because of the challenges that they faced when implementing FA.

9.3.1 Focusing on particular strategies over period of time, data analysed from the researcher's observations only

The findings from the researcher's observations show that there was no remarkable difference in the quantitative use of FA in the first two observations. However, a large decrease in number was found in the last observation. This seemed to have occurred because most of the FA strategies that were seen as problematic by either the researcher or the student teacher were largely avoided in the last observation. This suggests that this sample of Saudi student teachers were trying to get rid of problematic items by avoiding them; they would continue applying what they were able to do. Sikes (1992) suggested that teachers are like everybody; they act and choose certain strategies 'to serve their purpose' (p. 39). Moreover, Joyce and Showers (1980) argued that 'application and problem solving' (p. 380) is the final level of impact of the teachers' development. Shulman (1987: 19) calls this 'reflection', which he described as a set of processes that help teachers to learn from their experiences. The student teachers' reflection and avoidance of some strategies might have occurred as the result of the researcher's feedback and short conversations after each observation. As Shulman (2004) argued, reflection occurs and develops through 'having a partner to reflect with' (p. 93).

The findings show the decrease of FA strategies in two different areas: learning outcomes and questioning. Under “learning outcomes”, the decrease was apparent in all the categories related to success criteria. In relation to “questioning”, the main decrease was in using open-ended questions and encouraging open discussions. It might be suggested that this avoidance of more open-ended questioning and discussion was because it leads to more pupil control and less teacher control. This claim is also backed up by another finding in the observation data: in all the five elements of FA (sharing learning outcomes, questioning, feedback, peer-assessment, self-assessment), the results indicated that the most commonly used evidence items were the ones which were mostly controlled by the teacher, whereas the least used ones were those in which there was little teacher control (see **sec. 7.2.6, Table 7-4 & Table 7-5**). It ought to be noted here that Torrance and Pryor (1998: 8) have suggested that the use of FA could still be teacher controlled, and the student teachers in the current study, to some extent, demonstrated this.

Shulman (2000: 133) has argued that when discussions take place in classrooms, teachers start to lose control of the conversation. The fear of losing control of the class while implementing FA is also found in a study conducted by Lee and Wiliam (2005), which showed that teachers were very concerned about losing control of their class when they were trying to apply FA strategies, which gave their pupils space and time to think. This issue made them take different approaches. Moreover, the findings of Winterbottom et al. (2008: 208) further demonstrated that student teachers’ primary concerns were about themselves as a tutor, and their ability to meet their mentors’ expectations. As these studies suggest, the student teachers in this research study might not be an exception. However, there is no solid evidence to show whether they were consciously focusing on certain FA strategies rather than others.

The results from all thirty-three observations conducted with the eleven participants showed that the practices that were mainly used and maintained were related to “questioning”. Whereas certain “questioning” practices declined, as discussed above, other practices from this element were consistently and highly used. The most used evidence items were practices which can be found under “questioning”. These evidence items were:

- The teacher asking questions throughout the lesson.
- The teacher using a variety of techniques to ensure maximum participation.
- The teacher allowing enough time for pupils to think before answering.
- The teacher utilising the “no hands up” strategy.
- The teacher explaining what good work should look like by sharing and discussing examples of good work.

While the majority of FA practices used related to “questioning”, there was also a high use of practices from the “feedback” element of FA. These included:

- The teacher providing oral feedback to close the gap, by focusing on success criteria.
- The teacher or peers providing oral or written feedback to help learners to overcome their difficulties.
- Peer discussions or teacher-pupil discussions being used to provide feedback to make pupils aware of achievements made regarding the learning outcomes or success criteria.

In addition to all of these FA practices from “questioning” and “feedback”, “sharing learning outcomes” was also highly used. Taking these results into consideration, it might be suggested that besides “sharing learning outcomes”, the student teachers in this study were utilising FA in a way which modelled the Socratic teaching method. That is, the classrooms became spaces for dialogue where learning and assessment was done through questioning and answering.

Whereas there were certain practices which, as discussed above in this section, the Saudi student teachers tended to avoid as they seemed to be problematic, this was not the case in every area of FA. The results showed that the Saudi student teachers continued to work through self-assessment strategies, despite it being problematic. In particular, the student teachers continued to practise “self-assessment written strategies, such as a small survey”, which was the only evidence item done under the self-assessment area. This attempt to work things through, despite difficulties, was not found in any of the other areas. The reasons behind this were not clear. Nevertheless, based on the findings (see **sec. 5.3.4**), time limitation was considered to be one of the challenges faced when implementing FA by all the participants. Because of this, it might be possible that this strategy was used because it was not very time consuming. Another possibility could be because, as a few student teachers explained, they were asked to apply this strategy (see **sec. 6.5.1, Table 6-21**).

9.3.2 Focusing on particular strategies over period of time: data analysis from the researcher's observations, the student teachers' perceptions and tutors' perceptions

The discussion in this section is about what elements of FA the student teachers were applying during their school placements and reasons behind this. The following will be about what FA practices were used the most by the student teachers, and what FA practices were used the least, and the reasons behind these choices. However, in order to explore what these practices were and why they were utilised or not utilised, data triangulation will be used. In order to obtain this triangulation, as discussed above, the findings from the researcher's observations, the student teachers' perceptions and the tutors' perceptions will be compared with each other. The student teachers' perceptions as to the reasons and explanations for applying FA strategies were obtained from the researcher's observations, the student teachers' second interviews and the tutors' interviews. These different perspectives helped to explore the reasons behind the application of certain strategies.

9.3.2.1 Most-used strategies

According to the researcher's observations, the student teachers' questionnaires and the tutors' interviews, the FA strategies which were used the most were:

- Declaring the learning objectives in a clear way to pupils
- "No hands up" strategy
- Assessing students many times during the class

These were the most implemented strategies during the student teachers' school placements. This finding partially confirmed what Cowan (2009: 79) found in her study, when she observed that most of the student teachers implementing FA were sharing the learning outcomes with the pupils.

However, the results from the researcher's observations showed that "feedback", in addition to the three strategies above, were used the most. This contrasts with the student teachers and tutors, who both perceived that "pupils' self-assessment during or at the end of the lesson" was the most applied, in addition to the three practices above. One explanation for this might be related to the misunderstanding that appeared amongst the student teachers about the purposes of assessment and amongst the tutors about the differences between self-assessment and feedback. As mentioned previously

in the results chapter, the student teachers' second interviews (see **sec. 6.2**) and the tutors' interviews (see **sec. 8.2**) showed that there was confusion between feedback and self-assessment. During an interview with one student teacher, the interviewee explained that self-assessment was part of feedback, because pupils do it to let the teacher know where they (the pupil) are in their learning. According to this student teacher, self-assessment is part of the feedback provided by the pupils for the teacher. This means that feedback covers self-assessment as well. Because of this, if this student teacher mentions feedback, according to her perception, there is no need to mention self-assessment as well. Similar problems appeared during the tutors' interviews. One tutor was not able to differentiate between self-assessment and feedback. The researcher had to explain this to her. This confusion might be the reason behind why this aspect of self-assessment was perceived to be applied more frequently than it was actually done. Therefore, "pupils' self-assessment during or at the end of the lesson" will not be considered as highly used in this study.

The reasons behind the high implementation of "declaring the learning objectives in a clear way", "assessing students many times in the class" and "'no hands up' strategy" were obtained from data analysis from the student teachers' second interviews and the tutors' interviews. The majority of the student teachers thought that they were highly using "declaring the learning objectives in a clear way" because it was helpful to the pupils. However, this was not the case with everyone: a few of them reported using it because they were asked to apply it. It might be suggested that the lack of recognition of the difficulties associated with this aspect might explain why it was highly applied. This claim was backed up by results from the tutors' interviews. According to the tutors, although "declaring the learning objectives in a clear way to pupils" was highly implemented and technically easy to apply, it was the least understood by the student teachers. The tutors thought that the student teachers shared the learning objectives, without checking whether the pupils understood these objectives. Making sure that pupils have understood the learning outcomes is not an easy task, especially for beginners; this complexity was recognised by only one student teacher. Other difficulties have been discussed by Dwyer (1998: 134), who argued that most trainee teachers usually face complications in relating assessment activities to the learning outcomes. Thus, it might be suggested that the high usage of a certain strategy did not necessarily reflect a high understanding of how and why it was applied.

The student teachers explained that they used "assessing students many times in the class" the most because they perceived this as the core of FA. They also explained

that they used it because it helped in checking the pupils' understanding. It might be argued that assessing students many times during a lesson has always been part of the teaching process: it is done by every teacher, even if only to a limited extent. Shulman (1987: 13) emphasised that teachers need to make use of their knowledge base when choosing which strategies to apply. Hence, this group of student teachers may have used this practice because it was not new to them. In addition to this, this practice had been reinforced and lifted to a new prominent level of importance through their interactions with the researcher. According to the student teachers' interviews, this aspect of teaching is part of their job, and it serves to check the pupils' understanding (see **sec. 6.5.1, Table 6-22**). This can be supported by the tutors' comments on this strategy. Most tutors thought that this practice was easy to use and highly understood by the student teachers (see **sec. 8.2, Table 8-3**).

Finally, according to the student teachers, the “no hands up” strategy was used the most because it was helpful for making pupils pay more attention to the teacher. This is a strategy in which pupils expect the teacher to call their names to answer a question at any time during the lesson. This is an essential strategy in learning because, as Shulman (2005) argued, keeping learners ‘visible and on their toes’ (p. 10) helps to raise their attention and concentration. However, one student teacher did not like this strategy as she thought that it was a kind of dictatorship; she admitted, however, that she used it when the whole class was passive and did not want to participate. Thus, it might be suggested that the “no hands up” strategy was used highly because it helped the teaching process to go smoothly, as more pupils were paying attention. Also, it might be suggested that it helped pupils, even the quieter ones, to engage and participate. Moreover, this analysis was supported by the tutors' perceptions: they thought that the student teachers had highly understood how and why to apply this strategy, and they thought that it was easy to implement.

9.3.2.2 Least-used strategies

The results from the student teachers' questionnaires, the researcher's observations and the tutors' interviews showed that “provide the opportunity for learners to respond to feedback orally in the classroom or written” was the least-used strategy. In addition to this, data analysis from two instruments — observations and questionnaires — showed that “using success criteria for peer-assessment” was considered to be used the least as well. These two strategies were used the least for numerous reasons, which will be discussed in the following paragraphs.

According to the student teachers, the practice of “providing the opportunity for learners to respond to feedback orally in the classroom or written” was used the least for two main reasons: lack of time and the pupils’ lack of ability or willingness to do it. It was also found that lack of time was reported as a reason by the tutors as well. The tutors also thought that this strategy was difficult to implement. Although lack of time has been reported as a major reason behind the lack of usage in relation to FA (see Cowan, 2009: 80; Taber et al., 2011: 180), Sikes (1992: 42) argued that the issue of time is often a quick excuse that teachers tend to provide when a new innovation is imposed upon them. Thus, it might be argued that lack of time has different interpretations, and, according to this situation, it might be suggested that other priorities superseded applying this aspect of FA. The Saudi student teachers’ main priority was finishing the lesson on time, and this practice of FA might have hindered them from reaching this aim. Hence, they may have decided to reduce its use as it clashed with other priorities. As Gadsby (2012: 101) argued, extra schoolwork or other priorities play an essential role in hindering the implementation of FA.

Half of the student teachers reported “using success criteria for peer-assessment” the least, and three reasons were provided. The main reason was, again, lack of time. This supports Hunt and Pellegrino (2002: 75) who described lack of time as one of the major challenges that teachers face when implementing FA. The second reason concerned the pupils’ attitudes: some student teachers found that the pupils did not take the exercise seriously, and that they did not appear to like it (see **sec. 6.5.1, Table 6-17**). Finally, this strategy was reported to be difficult, by almost half of the participants, for four reasons: losing control of the class, time limitation, the pupils struggling to use the success criteria, and the student teachers’ fear of using the practice in the first place. In addition to this, it was found that “using success criteria for peer-assessment” was thought to be difficult by the tutors as well. In fact, it was reported to be one of the most difficult strategies to apply. Therefore, it might be suggested that applying success criteria was not an easy task to do according to the perceptions of the student teachers and the tutors. Although the student teachers reported lack of time as one of the reasons why they did not implement this aspect of FA, it can be argued that the lack of time that they perceived was actually a result of losing control of the class or spending more time on the strategy, because the pupils were struggling to use it, or perhaps not even taking the task seriously. All of these difficulties hindered the student teachers from finishing the lesson on time, which was their main priority, as mentioned above.

An interesting question might be raised from all of these findings: did these student teachers know why they were choosing certain strategies? Unfortunately, there was not a definite answer to this question, but it seems that the student teachers knew that they were using “declaring the learning outcomes”, “assessing students many times” and “‘no hands up’ strategy” more frequently than the other items, and that they were using “providing the opportunity to the learners to respond to feedback orally in the classroom or written” and “using success criteria for peer-assessment” the least. However, they did not recognise that they were avoiding the items where they had less control and using the items where they had more control.

To summarise the answer to the fourth research question, (What do the student teachers do during their teacher-training programme in connection with formative assessment?) it can be said that the Saudi student teachers were implementing FA to a reasonable degree in the first two observations; however, a major decrease took place in the last observation. The reason behind this major decrease was avoiding open-ended questions and discussions regarding success criteria. It seemed that the student teachers avoided the use of practices that were less teacher controlled, whilst they tended to focus on practices that had a higher degree of teacher control. Moreover, the triangulation of the researcher’s observations, the tutors’ interviews and student teachers’ questionnaires indicated that “declaring the learning outcomes”, “assessing students many times” and the “‘no hands up’ strategy” were the most implemented strategies by the student teachers during their school placements. However, the researcher’s observation analysis also revealed that there were some “feedback” practices that were highly implemented as well. This meant that the classroom became a place of conversation between teachers and students. The least-used items were “provide the opportunity to the learners to respond to feedback orally in the classroom or written” and “using success criteria for peer-assessment”. Both were reported to be used the least due to lack of time and student acceptance. However, other competing priorities might provide a more suitable interpretation for these perceptions.

9.3.3 Reasons behind focusing on particular strategies

This section will focus on the student teachers’ and the tutors’ perceptions of why the student teachers focused on particular strategies. This discussion merges from the fifth research question:

What are the challenges that the Saudi student teachers faced when applying formative assessment?

The data analysis of the student teachers' and the tutors' perceptions about what things facilitated or hindered their implementation of FA showed that most of the student teachers found that pupils' acceptance and teaching aids, such as pictures, flash cards and charts, were the things that helped them to implement FA (see **sec. 6.5.1, Table 6-24**). Some of the participants thought that using the source room helped because they were able to go around the class and observe pupils better. Shulman and Shulman (2004: 267) argued that tools, suitable resources, PCs and reasonable spaces for gathering in groups are what accomplished learning and teaching relies upon. Half of the student teachers stated that the number of pupils helped them because there were not too many pupils in their classrooms.

On the other hand, all of the participants thought that short lesson time (40-45 minutes only) and the mixed ability of pupils in one classroom were the main obstacles that they perceived when implementing FA (see **sec. 6.5.1, Table 6-24**). The tutors also confirmed this result (see **sec. 8.3.1**). Other reasons that were mentioned by the student teachers, which they perceived as hindering their implementation of FA, were the pupils' acceptance and the large number of pupils in the class.

However, in relation to mixed abilities, two main issues were discussed by the student teachers. First, most participants explained that high achievers were bored, while low achievers were kept active. Another issue was that the curriculum was not suitable for pupils from different levels (see **sec. 6.5.1**). It might be suggested that classes of mixed abilities hindered this group of Saudi student teachers because they were teaching EFL, which could be considered as a linear subject, similar to maths and science subjects. This means that if pupils are going to understand B, they need to master A first. Moreover, because there were about 30 to 40 pupils in each class, the issue of mixed abilities made it more difficult to implement FA because of the huge number of pupils and gaps between abilities. In one class, for example, there were low achievers, who did not know how to write their names in English, and high achievers, who were able to speak, read and write fluently. Others were somewhere in the middle. All of these pupils were introduced to the same material and were expected to achieve the same learning outcomes whether they were at the top of the class or struggling with the basics. In addition to all of this, there were no teaching assistants. The student teachers' perceptions here support the findings of the researchers, such as Kyriacou (1997: 60) and Zohairy (2014: 59) who emphasised that mixed abilities classroom might not be suitable for language classes. As discussed in the context chapter, mixed abilities classrooms have not been recognised by the Saudi educational system as

problematic. The researcher's sample, however, shows that such classrooms are an issue which needs to be considered, particularly if FA is going to be successfully integrated into classroom practices.

"Lack of time in lessons" has been repeatedly cited throughout this study as a challenge faced when implementing FA. Lack of time has also been reported as a major issue faced when implementing FA in many studies (see Cowan, 2009: 80; Hunt & Pellegrino, 2002: 75; Taber et al., 2011: 180). However, it might be argued that lack of time is a perception, which actually reveals more about one's main priorities. The tutors also complained that the lesson time was short compared to the large amount of curriculum that needed to be introduced, and this negatively affected the implementation of FA.

Thus, it might be suggested that the Saudi student teachers perceived that pupils do play an important role in implementing FA: they can be obstacles and they can be facilitators. Teaching aids, such as pictures, flash cards and charts, were thought to be helpful. However, the main obstacles that were perceived when implementing FA in Saudi classrooms were short lesson time and mixed abilities classrooms.

9.3.4 Further reasons behind focusing on certain strategies over period of time

Further reasons behind the student teachers' focus on certain strategies over a period of time were explored in two ways: first, by discussing the challenges that the student teachers faced when applying FA; second, by examining their perceptions regarding the role that the MOE, schools and universities might play in minimising these challenges. The findings were obtained from the student teachers' responses in the questionnaires and second interviews, the researcher's observations and the tutors' interviews. These three different perspectives were used to obtain a more accurate picture. The findings showed that all of the student teachers and most of the tutors considered classroom time limitation to be the main challenge when practising FA in Saudi schools (see **sec. 6.5.1, Table 6-24 & sec. 8.3.1**). Class time in Saudi Arabia is, as mentioned above, around forty minutes. Limitation of classroom time in Saudi Arabia was perceived as the biggest challenge, as it did not allow the student teachers to implement FA effectively. This issue was clearly stated many times by the student teachers (see **sec. 5.3.4 & sec. 6.5.1, Table 6-24**). Moreover, another main challenge that was pointed out by the student teachers and the tutors was the issue of getting pupils accustomed to FA strategies in a very limited time, that is during their school placement time (see **sec. 5.3.4 & sec. 8.3.1**). Fullan and Hargreaves (1992: 1) have suggested that a desirable

implementation of a new innovation requires learning how to apply the new things. According to the student teachers and tutors, two weeks was not enough time for the student teachers to learn how to apply FA strategies whilst also helping pupils to become accustomed to these FA practices. They perceived that the pupils needed more time to get used to such strategies like “no hands up”, and more time to use self-assessment, peer-assessment and feedback. Most of the student teachers also perceived that pupils not taking feedback seriously and classroom management were challenges to them as well (see **sec. 5.3.4**). It can be suggested that FA is a time consuming assessment. Teachers need time in order to implement it effectively and pupils need time in order to adapt themselves to its elements.

On the other hand, the researcher found that two main issues appeared when the student teachers were implementing FA: the limited use of evidence items and the student teachers’ inability to clarify certain practices to the pupils (see **sec. 7.3**). This was expected because of the participants’ lack of experience in teaching. According to Hunt and Pellegrino (2002: 75), lack of teaching experience and lack of familiarity with the curriculum are major obstacles that one faces when implementing FA. In addition, it was found that the need to finish the lesson on time contributed to the rise of more issues.

Moreover, when the student teachers and tutors were asked about their perceptions regarding the role that the MOE, schools and universities should play in minimising these challenges for student teachers, the results from both parties were very similar. The results showed that most of the student teachers and tutors thought that if the MOE increased the time of lessons and arranged pupils according to different levels of performance, this would greatly reduce the challenges associated with implementing FA in Saudi schools (see **sec. 6.6** & **sec. 8.3.2**). It might be useful to point out that these results have been repeated numerous times in this research study. Repetition of these two issues might be an indication that this group of Saudi student teachers and tutors really believed that lesson time and mixed abilities were the main causes behind hindering the implementation of FA in the Saudi context.

On the other hand, in relation to the role of schools, the student teachers expressed that more cooperation from the school management was needed. Tutors thought that schools could support student teachers by providing them with the opportunity to teach and focus on one class only, instead of two or more. This might help the student teachers to better know their pupils and to be able to recognise their weaknesses and strengths, which would, in turn, help the pupils to overcome their

difficulties. According to Hayes (2012: 216), one of the major aims for new teachers should be to know their pupils' abilities, in order to help the low achievers to overcome their difficulties and the high achievers to be even better. Student teachers in this study seemed to recognise that this might not happen if they were asked to teach different classes in a very short period of time.

Finally, both the tutors and the student teachers thought that universities needed to consider changing school placement so that it occurs in a separate term. This would provide student teachers with more time to practise FA and build relationships with pupils. The student teachers added that they would like to observe at least ten lessons before beginning to teach. This call for observation should be put in consideration because, according to Brandom et al. (2005: 212), student teachers can benefit from observing and evaluating the practices of each other. In Brandom et al.'s (2005) research study, this helped student teachers to connect their beliefs and practices to the basic theories of FA.

The tutors thought that more information about FA and other approaches needed to be provided by the universities, together with the opportunity for student teachers to practise FA before their school placements takes place. According to Jones and Moreland (2005: 205), promoting teachers' knowledge in pedagogy can help teachers to develop their implementation of FA.

Thus, the findings here supported what Taber et al. (2011: 182) concluded, which is that FA is a challenging area for many student teachers. In this study, the tutors and the student teachers thought that the limitation of school placement time and lesson time were among the main challenges that the student teachers faced when implementing FA. Similar ideas were provided regarding the role that the MOE, schools and universities should play in reducing the challenges that teachers might face when implementing FA in Saudi schools. To conclude, the main aspects required by this sample of Saudi student teachers and tutors to overcome the perceived challenges that they faced when implementing FA were: more time during school placement and more time during lessons, with classes designed according to different levels of performance; more information about FA and other approaches in their training programmes; and more cooperation from schools.

9.4 Conclusion

This chapter has discussed, as the two broad themes both suggest, the perceptions of the Saudi student teachers. As Sach (2012) crucially argued, 'teachers' perceptions are

important to the understanding and implementation of formative assessment' (p. 274). The student teachers in this study were highly influenced by their summative culture: this was reflected in both their views of assessment and the information that they reported was provided by their university-based training programme. Despite this summative influence, when the researcher introduced FA to them, the student teachers were enthusiastic about the idea. This enthusiasm continued throughout their school placements, even though they faced many challenges, which significantly effected their perceptions regarding the advantages and disadvantages of FA. According to the student teachers' perceptions, their implementation of FA was challenged by time limitations, lesson time and school placement time, and the mixed abilities of pupils in EFL classrooms.

The findings from the researcher's observations showed that despite the student teachers' limited belief in the ability of pupils to learn by themselves, the usage of FA contributed to the transformation of classrooms into spaces of dialogue, as the student teachers made more use of questioning and feedback. The student teachers also perceived that their pupils progressed through the use of these FA strategies. The researcher's approach of connecting theory to practice through reflection — that is, by relating the concepts of FA to the student teachers' practice through discussions before and after lessons — seemed to contribute to the students teachers' development of knowledge regarding FA. Therefore, we can conclude that student teachers are able to learn about FA, which supports Black et al.'s (2003) argument that teachers can learn about FA.

The student teachers focused on certain FA strategies over a period of time. As the findings showed, the student teachers avoided problematic practices, while they continued applying strategies that were perceived as less problematic. While Black and Wiliam (Black & Wiliam, 1998a; Black et al., 2003) have recommended applying the five elements of FA suggested in many of their works, the Saudi student teachers in this study seemed to develop their own approach to FA, which was reflected in teacher controlled classes, with classroom practices mainly based on questioning, including the "no hands up" strategy, and feedback. This confirms Torrance and Pryor's (2001: 629) argument, which explained that when teachers examine and reflect on their classroom practices, especially their use of questioning and feedback, they are more likely to foster new approaches to FA. Therefore, it might be suggested that the application of the five elements of FA that Black and Wiliam (1998a) have encouraged might not all necessarily be needed for FA to yield positive results.

Chapter Ten

Conclusion

10.1 Introduction

This thesis explored a sample of Saudi student teachers' perceptions in relation to formative assessment. This study was conducted by collecting data in a variety of ways: interviews, questionnaires and observations. The researcher established the student teachers' perceptions regarding FA and its five elements (sharing learning outcomes, questioning, feedback, peer-assessment and self-assessment). The study included what the student teachers knew about FA before it was introduced and practised and how their perceptions and knowledge of FA developed during and after their school placements. It also included the researcher's observations about what practices of FA took place during the student teachers' school placements and their perceptions about these practices.

The following chapter will discuss the central focuses of this thesis. This chapter will then move on to a discussion of the methodological uses and limitations of this study. Finally, recommendations will be offered, and potential areas for future research will be indicated.

10.2 Conclusions about substantive areas

The findings of this study, which will be discussed below, include:

- The Saudi student teachers, within this study, initially had a lack of knowledge regarding FA.
- The student teachers in this sample were enthusiastic about implementing FA, both before and after their school placements.

- The theory and practice approach, which was utilised in this study — that is, connecting theories about FA with individual practices through discussions and feedback — seemed to help the student teachers to develop their understanding about FA.
- The student teachers were able to learn about FA, and their perceptions about FA and assessment as a whole seemed to be effected after practising FA.
- The student teachers tended to focus on certain strategies of FA over a period of time.

10.2.1 Student teachers' initial lack of knowledge about formative assessment

The findings showed that this group of Saudi student teachers had a lack of knowledge regarding assessment as a whole and FA more specifically. Their university-based programme provided them with information mainly related to summative assessment rather than other types of assessment (see **sec. 9.2.6**). This emphasis on summative assessment seemed to lead the student teachers to equate learning, as they did, solely with “grading” and “marks” (see **sec. 5.2.1, sec. 5.2.3 & Appendix 7**). Given that they correlate learning with marks, this may have connections with teaching and learning elsewhere in the classroom. In her suggestions on forming teacher preparation programmes, Darling-Hammond (2006: 303) has argued that student teachers need to understand assessment because this knowledge helps them to develop their teaching skills. Additionally, Andrade (2010a: 349-350) emphasised the importance of introducing FA in teacher preparation programmes, suggesting that it will not only help our future teachers to distinguish between FA and summative assessment, but that it will help them to know what classroom practices are effective for improving pupils' learning.

As useful as it is to pay attention to assessment and FA in teacher preparation programmes, it might be helpful to go beyond this and build active researchers who are able to search, reflect and choose. Darling-Hammond (2006: 305) explained that student teachers need to be trained to act as researchers who will then go and search for more pedagogical knowledge, which can be tailored to suit particular needs and circumstances. While the student teachers in this study appeared to have little knowledge of FA, only a small amount of attention was paid to their development as active researchers. Alnassar and Dow (2013) have recently pointed to the lack of

emphasis on critical thinking and research skills in Saudi higher education; they warned:

If teaching staff do not adopt modern teaching techniques which provide students with hands-on experience, events and activities that help them to acquire and analyse knowledge, then the students will fail to develop self-learning skills and deeper professional and cultural activities. (p. 57-58)

Interestingly, the student teachers, along with their university and school tutors, expressed the need for more attention to this type of learning within teacher preparation programmes in Saudi Arabia (see **sec. 9.3.4**). They perceived FA to be a practice which encourages pupils to ‘acquire and analyse knowledge’ (Alnassar and Dow, 2013, p. 58) whilst building self-confidence, motivation and achievement (see **sec. 9.2.4**).

10.2.2 Enthusiasm about applying FA

Although this group of student teachers may have been influenced by a context which, as discussed in the context chapter, emphasises summative assessment, these views were not deeply entrenched within them, because when given the opportunity to learn about and apply a different type of assessment, the student teachers were enthusiastic. It is important to note that this enthusiasm may have been slightly influenced by the research programme’s close alliance to the university course, which the student teachers were likely eager to excel on.

Before and after their implementation of FA, the student teachers, like most teachers, acknowledged that learning is the most important purpose of assessment, more so than quality assurance or selection and certification (see **sec. 5.2.1**). Their interest in FA may be explained by the fact that FA is an assessment method, which allows one to explore how far something has been learned. It is interesting to note too that while all teachers are interested in learning to some degree, the student teachers seemed to be more interested in learning after employing a teaching method, which utilised FA (see **sec. 5.2.2**). Perhaps these Saudi student teachers had always been concerned with FA, and this study gave them the opportunity to think more explicitly about it. This might explain their enthusiasm to implement FA even before they began their school

placements. After school placements, this enthusiasm remained high because they perceived that their implementation of FA had helped their pupils to achieve the learning goals (see **sec. 5.2.4.5** & **sec. 6.7**). Sikes (1992: 40-41) suggested that adopting changes in classroom practices depends on how practitioners perceive the positive or negative effect of practising those changes. From the perspective of the Saudi student teachers, FA provided a solution to some of the issues that they observed in the Saudi schooling system, such as helping pupils to overcome the fear of making mistakes and raising pupils' self-confidence and motivation (see **sec. 5.2.4.5** & **sec. 6.7**). Their sense lies close to what Miller and Lavin (2007: 3) found in their study: FA helps raise self-confidence amongst children who had negative views about their ability. Hence, not only were the student teachers pleased about their experiences with FA, but they thought that FA was important and needed to be implemented across Saudi schools. However, they also suggested that before implementing FA in Saudi schools, certain changes needed to be made to the educational system in order to obtain the desired effect (see **sec. 9.2.5**). This shows that some of the student teachers were carefully thinking and reflecting about how to implement FA — a Western concept — in the Saudi school system.

10.2.3 Linking theory and practice to help develop the student teachers' understanding of FA

As discussed in the literature review, reflection is an important means of linking theory to practice. One of the ways in which the researcher kept the theory of FA and its actual practice in a continual dialogue was through conversations: first, through the one-to-one discussions immediately following each classroom observation, in which the researcher encouraged the student teacher to reflect upon their FA practices, and second, through the group discussion in which three student teachers talked about their experiences after first applying FA strategies. These conversations were a vital means of facilitating the integration of the theory of FA with its practice. It was also a means through which the participants could reflect on their practice. Korthagen (2001: 15) has called this 'realistic teacher education' (p. 15), that is, a training which reinforces theory by encouraging the students to reflect on practical situations. Korthagen (2001) argued that support should be 'adjusted to the specific problems the student teachers are having' (p. 15). This method is similar to that used in medical and dental training in which students are not left alone to think about how to solve problems, but they are aided through discussion, consultation and practice. All of the student teachers, except one, agreed that

the researcher's programme was useful in developing their understanding of FA. This approach seemed to have played an important role in developing the student teachers' understanding of FA and its strategies (see **sec. 9.2.7**).

10.2.4 The student teachers can learn about FA

This study found that the student teachers can learn about FA, and their knowledge of FA seemed to help them to develop their knowledge about assessment as a whole (see **sec. 9.2.2**). At the beginning of this project, the student teachers had a limited understanding of FA and its five elements. After FA was introduced by the researcher and practised during their school placements, the student teachers' knowledge regarding FA increased and developed. This supports the suggestion of Black et al. (2003: 2) that FA can be learned. Not only did the student teachers have more understanding about the five elements of FA, but they were able to recognise the differences and similarities between formative and summative assessment (see **sec. 9.2.1**).

10.2.5 The student teachers' focus on certain strategies of FA

At the beginning of their school placements, the student teachers applied many FA strategies. Over time, however, the student teachers tended to focus on certain FA strategies and avoid other strategies, which had been perceived as challenging. This study was only the starting point for these student teachers in their relationship with FA; they may develop further in their FA practices.

The student teachers' most preferred strategies were assessing students many times during a lesson, "no hands up" strategy and oral feedback; these elements helped to create an open atmosphere of dialogue (see **sec. 9.3.1**). However, the student teachers also demonstrated a strong preference for strategies which emphasised teacher control (see **sec. 9.3.1**). This might be symptomatic of their wider culture, which privileges summative assessment and teacher authority. It might also be a result of their fear of losing control of the class, or perhaps it might be related to their concerns about meeting their mentors' expectations.

The student teachers' most perceived challenges of implementing FA included short lesson time and school placement time, and classes with a wide range of abilities (see **sec. 9.3.3** & **sec. 9.3.4**).

10.3 Conclusions about methodological matters

The methodological practices used in this study were carefully considered and rooted in literature. As discussed in the methodology chapter, first interview and observation instruments were piloted. All instruments were related to each other and helped to answer the six research questions. A method of triangulation was used for validity purposes, as discussed in both the findings and the methodology chapters. Translations were added to ensure that the participants were discussing ideas in a language which was most comfortable to them. Finally, a statistician at the University of York checked and verified the methods used to calculate the data. Some of the approaches used to conduct this research might be useful for those who are interested in conducting similar studies: in particular, working with student teachers and using of a variety of instruments to collect data over a period of time. There were, however, some limitations to the methodological approaches, and these will be discussed below.

10.3.1 Working with student teachers as participants in this study

The researcher chose to work with a group of student teachers who were in the top percentile of their programme. This information was requested by the researcher and made available by the university. Student teachers were selected for the purpose of this study because they are often young, open, enthusiastic and more likely to adapt to changes in classroom practices (Sikes, 1992: 47). As Wiliam (2007: 196) has suggested, getting experienced teachers to amend their teaching habits is not an easy task. Therefore, due to the time limitation of this study, and the fact that FA is a relatively new approach in the Saudi educational system, working with student teachers seemed to be the most suitable choice for the current research project. Working with this purposive sample of student teachers, on the whole, was successful, and it would be recommended for similar studies. The student teachers were eager to know more about FA, and they seemed to look forward to implementing it during their school placements.

There were, however, limitations that came with choosing student teachers. Student teachers have limited teaching experience. Although the student teachers in this sample coped quite well with the challenges that they faced, some of them struggled with classroom management and organising a lesson. This may have affected their implementation of FA.

10.3.2 The issue of intervention, and the relationship between the researcher and the participants

Robson (2011: 188) has distinguished between traditional research and action research: action research is more than simply describing and understanding; it is related to change and concerned with '*improvement and involvement*' (p. 188). According to Cohen et al. (2011: 344), action research can be used in numerous research areas, such as replacing a traditional teaching method with a new one, or the professional development of teachers, especially when new approaches to learning are being implemented.

Regarding the relationship between the researcher and the participants, Robson (2011) described this aspect of action research:

Collaboration between researchers and those who are the focus of the research, and their participation in the process, are typically seen as central to action research. (p. 188)

In this study, not only was the concept and practice of FA introduced by the researcher, but there were many discussions between the researcher and the participants throughout the study. Weiskopf and Laske (1996: 111-113) suggested that in action research, the researcher is the director, developer, helper and reviewer of knowledge. This is not to suggest that the researcher was directing the participants toward specific things, but rather that there was a more collaborative method, in which the participants were given the opportunity to reflect on their practices.

Kemmis and Wilkinson (1998) viewed action research as a 'cyclical process' (p. 21). For Robson (2011) this includes introducing a change 'and then observing what happens following the change, reflecting on these processes and consequences and then planning further action' (p. 190). In this study, FA was the 'change' that was introduced before the student teachers began their school placements. The researcher then carefully observed the student teachers throughout their school placements. Every student teacher was observed three times. Brief one-to-one discussions took place before and after each observation. Discussions were useful for the researcher to better understand how the participants perceived FA. As Ferrance (2000) explained, action research is a 'reflective process' (p. i) in which discussion is an important research tool. In this study, there was a brief telephone conversation with each participant before their first observation, in

which the lesson that was going to be introduced was discussed. The researcher made it clear that she was available throughout the study for feedback and advice. Again, this was not done to direct the student teachers, but rather it gave the student teachers opportunities, which the researcher could then reflect upon.

This study drew on traditions of action research. The method employed here, like all research methods, has its limitations. The risk of the researcher influencing the participants' views was a main concern. The researcher was aware of this limitation and took care to affect the minimum influence on the student teachers' perceptions. Many steps were taken by the researcher to avoid influencing the student teachers with her perceptions. One way the researcher did this was by using video links and a variety of other sources, made by other educators, to explain what FA and its five elements are. The researcher clearly explained at the beginning of the study, and throughout the project, that her role was as a researcher rather than a supervisor. The researcher also took care to speak in a calm and uniform tone of voice to try to avoid appearing judgmental or biased. The researcher too kept reminding the student teachers that there were no right or wrong answers or perceptions; the researcher kept repeating throughout the study that she accepted all views and perceptions regarding FA or any other matter related to the project. The researcher also took care to avoid discussing the student teachers' work with their university tutors and other teachers.

Although the student teachers were asked to implement FA by the researcher, and they were expected to do so by their supervisors because they were part of this research study, they all had the option to quit the project at any point during the study. One of the student teachers did, in fact, withdraw because she thought that FA added more work to her classroom practices. Through the discussions that took place during school placements, it seemed that the student teachers who remained part of the study were excited about what they were doing. Moreover, as suggested above, the study seemed to have developed the student teachers' ideas about learning.

Despite this, however, the student teachers seemed to equate the researcher with authority within their university. Future studies might want to consider having two separate parties: one who introduces and explains the concept of FA, and another who observes and discusses. One limitation of the method that was used in this study was that the researcher had to ask the student teachers to evaluate and comment on the researcher's programme. This could be problematic because the student teachers may

have been wary about expressing their genuine thoughts to the researcher. While the researcher insisted that the student teachers were not criticising her and that positive comments which were not true were not helpful, future studies might want to consider the limitations that come with having one researcher who must introduce the concepts.

10.3.3 Ethical issues

The guidelines for ethical responsibility surrounding voluntary participation, confidentiality and anonymity towards participants were derived from the University of York, Department of Education ethical guidelines. Ethical approval was granted by the Ethics Committee at the University of York.

In order to ensure that all the participants understood what was required of them, the research study was clearly explained to the student teachers at the beginning of the project. The student teachers were provided with consent forms, which explained that they would be interviewed, observed and audio-taped. It also stipulated that they could withdraw at any stage of the study. They were informed that what they said would remain confidential. Questions and concerns were discussed before they signed the consent forms. All participants, including the tutors, were referred to anonymously as A, B and C, etc. (see, for example, **Table 6-16**). Data was kept in a safe place.

It might seem unethical that only student teachers in the top percentiles were given the chance to participate in this study. One of the participants later contacted the researcher to relay the usefulness of the programme for their current teaching. This further complicates the issue of how the researcher's study may have had longstanding influences on parties who were involved or not involved in the study. Although it was beyond the scope of this study to include every student teacher, the researcher was able to explain the nature of FA to other student teachers who were not part of the study, but who seemed interested in FA. These other student teachers were offered the chance to observe their classmates implementing FA during their lessons. They were also provided with the opportunity to discuss and share their experiences with their colleagues. Information about FA was not denied to any student teacher who wanted to know more about the topic.

10.3.4 Using different types of research instruments

Using different types of research instruments, such as interviews, observations and questionnaires over a period of time, helped the researcher to gain a better understanding of the student teachers' perceptions regarding FA.

The first interviews helped the researcher to know the student teachers' initial perceptions regarding both assessment as a whole and FA in particular. Conducting a preliminary interview before the student teachers' school placements was especially useful for this study, as it provided the researcher with evidence of the student teachers' starting impressions before they commenced practising FA. A direct comparison between these initial perceptions and the responses to the questionnaire after the student teachers' school placements further enabled the researcher to trace the participants' changing perceptions. Significant changes in their perceptions seemed to suggest that the student teachers' encounter with FA altered their perceptions. While the researcher's presence — particularly in the interviews when the researcher was present to answer any questions about FA and assessment — may have slightly affected the student teachers' perceptions, the shift in their perceptions again seems to signal that there is something more going on. One of the limitations of these first interviews that future studies should allow for was the participants' limited understanding and knowledge of assessment and FA. This might possibly be due to the fact that the participants in this particular study were student teachers. Other studies might find, however, that the same is true for experienced teachers. The risk here is that the researcher needs to interrupt the interview to explain concepts and, by doing so, he or she introduces the possibility that they are affecting how their participants are then thinking about those ideas.

The questionnaire and the second interview, which were conducted after practising FA, further helped the researcher to obtain a deeper understanding of the student teachers' views regarding FA and how it was implemented. Thirty-three observations, which were conducted over a period of seven weeks, and the employment of a method of triangulation — that is, juxtaposing the perceptions of the researcher with those of the tutors and the student teachers — allowed the researcher to better explore what was going on inside the classrooms and how FA was implemented by the student teachers over a period of time. While it would have been useful for the researcher to observe every single lesson, this was impossible because of time constraints and the fact that the student teachers were teaching at multiple schools across the city. Each observation, too, was followed by a discussion. Future studies

might want to consider the possibility of videotaping all of the lessons even if the researcher is not present. They also should take into account the difficulties of arranging meeting times and places. Arranging interviews during a pre-sessional week worked particular well, as the student teachers were not yet weighed down by demanding timetables.

10.3.5 General limitations

It is essential to restate that this was a small study, which was conducted with a small group of student teachers in one university. Moreover, FA was only applied in the limited time of school placement. Therefore, this work cannot be generalised. Nevertheless, it does provide an indication of how FA might be perceived and applied in Saudi schools. This study is one of very few research studies conducted in the Arabian region about FA, and it is the first study in the region to obtain the perceptions of student teachers in relation to FA. Although a few studies have been conducted on FA, their focus has been on students in higher education. This research study hopes to be a starting point for more research on FA in schools in the Arabian region. The research here aims to inspire educators and researchers in the field to conduct further studies similar to the famous King's Medway Oxford Formative Assessment Project (KMOFAP) applied by Black et al. (2003), where six participating schools were offered an extensive amount of support, attention and training by researchers.

10.4 Recommendations

This thesis is a small-scale research study with some interesting implications to be considered by variety of people, perhaps especially by those in settings where traditional summative assessment currently dominates. The findings of this study could be useful for educational-policymakers as a guide for action when they are reflecting on the design of teacher-training programmes. They may wish to consider issues arising from this work in relation to their policy development and their thinking about the characteristics of assessment. The finding might also be useful as a means of reflection for teacher trainers who might be considering introducing FA to teachers.

As many research studies have argued, improving pupils' learning helps to raise achievement (see, for example, Sahlberg, 2007). Hence, the major recommendation for policymakers in Saudi Arabia is that assessment needs to focus on improving pupils' learning, rather than measuring it. Studies conducted in Saudi Arabia (Aldawood, 2007:

156) have related some students' low achievement to the adoption of the traditional assessment approach, where pupils are asked to memorise information to pass examinations. Elwood and Klenowski (2002) suggested that in order to improve teaching and learning, classroom assessment needs to be formative and student-centred. Thus, in order to maximise learning, raise achievement and change the pupils' and teachers' attitudes towards teaching and learning in Saudi schools, policymakers need to pay more attention to classroom assessment. They might want to consider the idea of integrating FA, which has been proven to help create independent learners, as well as enable teachers to follow their pupils' progress throughout the year, so that they can plan ahead to make sure that learning exists in their classrooms. While summative assessment is essential for accountability, research suggests (see, for example, Black & Wiliam, 1998a) that FA can help classroom students to make progress and develop their performance. Wiliam (2009: 7) argued that emphasising the use of FA in classrooms could be equal to adding eight extra months of learning to each pupil per year. For these reasons, a learning approach which utilises FA has been adopted in numerous European countries, Canada (see OECD, 2005a: 31-41) and some Asian countries, such as Hong Kong (see Carless, 2005).

As discussed in this study, FA was perceived by the student teachers as having a positive impact on pupils' learning and their attitudes towards learning. Student teachers explained that it helped their pupils academically and emotionally by raising their self-esteem and self-confidence. Moreover, the student teachers in this study thought that FA was very important in helping pupils to appreciate learning for the sake of learning rather than for the sake of marks. The MOE has recently emphasised the need for a constructivist approach in Saudi schools. That is, an approach which is not focused on behaviour, but cognition; a student-centred approach that encourages problem solving and discussion. FA could play an important part in this new emphasis. Torrance and Pryor (1998: 15) and James (2013: 85-87) have all suggested that the constructivist perspective best lends itself to, and is reinforced by, the practice of FA.

Therefore, more training opportunities might be needed to help teachers to understand the nature of FA and how to apply it. Policymakers, however, need to take great care in considering the current working conditions of teachers before integrating FA. Current teachers have enormous workloads and considerable burdens, and this needs to be taken into account when designing methods and programmes for existing teachers. All of the student teachers and tutors in this study suggested that lesson time

and mixed abilities in classrooms were the main obstacles that they faced when implementing FA. Their practice was perhaps further hindered by the total absence of teaching assistants in many Saudi schools.

Another aspect that policymakers might want to consider would be making FA an active part of the pupils' lives from their earliest days at school. Suddenly implementing FA in higher education and even secondary education might be problematic, for both teachers and students, and could lead to frustration. An earlier introduction to FA might help both teachers and pupils to get used to FA's strategies, such as discussion, problem solving and being able to assess oneself and their peers based on certain criteria. These strategies need time to be mastered by teachers as well as pupils. Such provisions need to be considered and teachers' worries and suggestions need to be addressed before FA is integrated into Saudi schools.

Furthermore, when integrating FA into the Saudi educational system, it might be helpful if it is directed not just at current teachers, as is Wiliam's (2007: 184) focus, but also at future teachers. At the moment, 52% of the Saudi population is under the age of 25 (Central Department of Statistics & Information, 2004: 47). As this suggests, teacher-training programmes are very important for the successful integration of FA. This is another reason, too, why this study focused on student teachers.

Because FA is almost a new approach in Saudi Arabia, it might be even more important to follow these student teachers during their school placements and help them reflect on their FA practices than it is in other contexts where FA is an accepted approach. It is important, too, to create student teachers who are able to research, reflect and discuss issues with colleagues and supervisors rather than being passive and waiting for information to be introduced and explained to them. This type of approach could help student teachers to link theory to practice and to adapt FA to their specific context and needs. However, it is also essential to pay attention to the suggestions and challenges that student teachers perceive as affecting their implementation of FA. In this study, the student teachers, as well as their tutors, suggested that longer school placements are required because this is an important way through which student teachers come to know their pupils and measure their progress. Most of the student teachers added that they wanted to observe some lessons where FA was being used and integrated before practising FA during their school placements. All of these issues need

to be taken into consideration when designing programmes, which will integrate FA into teacher training.

10.5 Suggestions for further research

This study has focused on Saudi student teachers' perceptions regarding their implementation of FA. Because there has been a very limited amount of research done on FA in the Arabian region, there are still many aspects of FA and its place within the Arabian context, which need further research. Future research could address existing teachers' perceptions of FA and how they might go about implementing it in Saudi schools. Further research could also focus on the pupils' perceptions of FA. Of interest, too, might be research that explores how specific FA strategies are implemented in Saudi schools. Feedback, in particular, would be another useful area to investigate in the Saudi context: how would it be implemented by teachers and received by pupils, and to what extent does it help students to make progress. If FA were to be introduced in Saudi schools, future research studies, which examine the challenges of implementing FA in relation to pupils and teachers, would also be of value. It might also be beneficial to focus future areas of research on how FA is being used in different subject areas, for example math, science and language, and which FA strategies work best in each particular area.

Appendices:

Appendix 1: First interview questions, which were conducted with the Saudi student teachers before school placements.

1) From the options below, choose the statements that describe the purpose of assessment.

I) The first part is concerned more with *learning*.

L1	To motivate students.
L2	To diagnose strengths and weakness.
L3	To provide feedback.
L4	To consolidate work done to date.
L5	To help students to develop their capacity for self-assessment.
L6	To establish the level of achievement at the end of a unit of a study.

II) The second part is concerned more with *selection* and *certification*

C1	To establish the level of achievement at the end of a programme of study.
C2	To pass or fail a student.
C3	To grade or rank a student (with reference to norm and/or criteria)
C4	To underwrite a 'licence to practice'.
C5	To demonstrate conformity with external regulations, such as those of a professional or statutory body.
C6	To select for employment, further education activity, etc.
C7	To predict future performance.

III) The third part is concerned more with *quality assurance*

Q1	To assess the extent to which the programme's aims have been achieved.
Q2	To judge the effectiveness of the learning environment.
Q3	To provide feedback to teachers regarding their personal effectiveness.
Q4	To monitor levels of achievement over time.

Q5	To assure interested parties that the programme or unit of study is of an appropriate standard.
Q6	To protect the relevant profession.
Q7	To protect the public.

2) Now please do the following.

A) Why did you choose certain statements in particular?

B) Could the statements be ranked according to importance? If yes, please rank them starting from the most important to the least important.

C) Choose the reason or reasons behind ranking them in this way:

- 1- Because this is what education should be about.
- 2- The selection was based on how often this purpose is used in classrooms by teachers.
- 3- The selection was based on sequence (i.e. a certain purpose depends on another purpose and the second purpose cannot be done unless the first one is done, and so on).
- 4- The selection was based on what I think is the best for pupils' learning.

D) If there are other reasons not mentioned above, please explain them.

3) From the following list, which is about the elements of assessment, please do the following:

a) Specify which of these elements are related to assessment.

b) Justify the process for applying each assessment element (i.e. explain the intended or perceived purpose for using each one).

- 1- Assessment is done as an oral formal exam.
- 2- Assessment is done as a written formal exam.
- 3- Assessment is done informally in a written way.
- 4- Assessment is done orally in an informal way. For example, when a teacher listens to the student's answer in class and then gives feedback, that is called assessment.
- 5- Teachers teach and they then assess later on.
- 6- Assessment is part of teaching. It is integrated into teaching and lesson planning. It is part of lessons, and can be done many times during a lesson.
- 7- Assessment is done to provide pupils with marks.

8- Assessment is done by the pupils themselves (individually). Students are asked to say what objectives they have achieved and what they have not.

9- Pupils can assess each other, that is, read each others' work and give feedback.

10- Assessment is done to provide students with feedback that reflects their weaknesses and strengths, while also showing them how to overcome their difficulties.

11- Assessment involves sharing objectives with pupils and helping them to recognise the standards that they are aiming for.

12- Assessment involves open-ended questioning, which provokes thinking, rather than closed questions.

13- We use assessment in order to know the extent to which students have achieved the outcomes (criteria assessment).

14- Learning outcomes are not important in assessment. We should use assessment that compares students to each other. We assess students according to their performance in a group (norm referencing).

15- Assessment is neither based on achieving the learning outcomes nor comparing a student to the group. It is based on noticing the performance of a student over the whole year. If a student's performance becomes better, the results would be better, and so on (ipsative assessment).

16- Assessment is continuous, such as the one practised in Saudi primary schools.

17- Assessment is done in different ways, which depends on the purposes of assessment.

*Would you like to add anything about how assessment is done?

(Because the student teachers did not know what formative assessment was, at this point in the interview, the researcher had to explain formative assessment. The researcher then asked the following questions):

4) According to your expectations, answer the following. Tell me which of the following advantages and disadvantages of practising formative assessment in classrooms you consider to be likely to happen to Saudi teachers and students.

First part

<i>TN</i>	<i><u>Teachers (-)</u></i>
TN1	Adds more work to the teacher.

TN2	Teachers not being able to write useful feedback.
TN3	Teachers not being able to practise formative assessment effectively due to time limitations (in classes and out of classes).
TN4	Teachers not being able to practise formative assessment effectively due to the lack of training.
TN5	Number of students in classroom.

Second part

TP	<u>Teachers (+)</u>
TP1	Saves time, especially when using peer-assessment.
TP2	Helps teachers to know what difficulties students face.
TP3	Helps teachers to evaluate their teaching methods.
TP4	Helps teachers to know where the students are in their learning.

Third part

SN	<u>Students (-)</u>
SN1	Pupils fail to interpret the feedback correctly.
SN2	Pupils fail to give useful feedback to their friends.
SN3	Pupils might want to receive a mark instead of a comment.

Fourth part

SP	<u>Students (+)</u>
SP1	Pupils know what the target is (they can see the objectives).
SP2	Pupils know how to overcome their difficulties through feedback.
SP3	Helps pupils to focus on how to improve themselves, rather than competing with others.
SP4	Helps pupils to become individual learners.
SP5	Helps in raising achievement among students, especially low achievers.

SP6	Helps to create better communication and better atmospheres in classrooms.
SP7	Helps to raise self-confidence.

*Are there any other advantages or disadvantages that you would like to add?

5) According to your expectations, which of the following do you think would be a challenge when introducing formative assessment into the Saudi system?

- a- Teachers' reactions.
- b- Useful courses.
- c- Curriculums and methods of teachings, which depend on memorising rather than thinking.
- d- The huge amount of material which teachers need to introduce to students.
- e- The fixed curriculums that need to be given.
- f- Teacher-training quality.
- g- Teachers are not encouraged and trained to choose what to give and when to give it.
- h- Class time (40-45 min.) might not allow enough time to practise formative assessment frequently.
- i- Teachers' ability to change their methods of teaching.
- j- Pressure of work on teachers.
- k- Pupils with different levels of performance share the same curriculum and the same class.
- l- Number of pupils in classrooms.
- m- Summative assessment loads and requirements.

*Are there other challenges that you would like to add?

6) I will try to help you to understand formative assessment through this programme and I will give you the opportunity to work on it in the classroom. Could you please tell me:

a) How do you feel about that?

b) Are you looking forward to it?

c) Are there particular things that you need me to do to support you?

d) Do you think that you will be able to understand the key ideas?

7) Would you like to make any other comments about formative assessment?

Appendix 2: Arabic translation of the first interview, which was conducted with the student teachers

(1) اختاري كل الجمل التي تمثل بالنسبة لك أهداف التقييم من الخيارات التالية.
(1) الجزء الأول: في تطوير عملية التعلم:

- 1) تعزيز الدافع لدى الطلاب.
- 2) تشخيص نقاط القوة والضعف لدى الطلبة.
- 3) تزويد الطالب بالتغذية الراجعة.
- 4) التقييم من أجل أن تجمع ما تم تحصيله من عمل حتى هذه اللحظة بطريقة مترابطة و مكثفة.
- 5) مساعدة الطلاب على تطوير مهاراتهم في التقييم الذاتي.
- 6) معرفة مستوى النجاح والتقدم في نهاية كل وحدة مدرسية.

(2) الجزء الثاني: في الانتقاء (الاختيار) والشهادات:

- 1) معرفة مستوى النجاح في نهاية أي برنامج (دورة- دبلوم) مدرسي.
- 2) تتجيب الطلاب أو ترسيبهم.
- 3) وضع الطلاب في مستويات مختلفة (كما في التقييم المعياري المرجع (النموذجي المرجعي) والتقييم محكي المرجع).
- 4) التقييم من أجل الحصول على رخصة لممارسة عمل ما أو تنفيذه.
- 5) التقييم من أجل أن يظهر لنا مدى مطابقة وموافقة شيء ما للشروط الموضوعية و مستواه.
- 6) التقييم من أجل الاختيار في التوظيف, والاختيار من أجل أداء أي نشاط علمي إضافي وغير ذلك .
- 7) توقع مستوى الأداء في المستقبل.

(3) الجزء الثالث: يختص بضبط الجودة

- 1) التقييم من أجل معرفة مدى تحقيق أهداف برنامج معين.
- 2) الحكم على مدى فعالية البيئة التعليمية.
- 3) توفير التغذية الراجعة للمعلمين فيما يختص بمدى فعاليتهم الشخصية.
- 4) مراقبة مستويات التقدم خلال فترة زمنية.
- 5) إبلاغ الجهات المعنية وطمأنتها بأن برنامج معين أو وحدة مدرسية معينة ذو مستوى مناسب.
- 6) حماية المهن المهمة.
- 7) حماية حقوق الأفراد.

(2) الآن قومي بما يلي:

(أ) اشرحي سبب اختيارك لما سبق في السؤال الأول.

(ب) هل تعتقدين أن أهداف التقييم يمكن أن ترتب حسب الأهمية أم أنها جميعا في نفس الأهمية؟

إذا كنت تعتقد بأن بعضها أهم من الآخر رتبها حسب الأهمية مبتدأه بالأهم فالأقل أهمية.

ج) اختاري من القائمة الأسباب التي بناءا عليها قمت بترتيب الأهداف حسب الأهمية:

1) لأن هذا ما يجب أن تقوم عليه المدارس.

2) كان الترتيب بناءا على ما يحصل عادة في الفصول.

3) كان الترتيب بناءا على أن ما وضع في أول القائمة يعتمد عليه ما وضع في الفقرة التي تليه. فالأول يعتمد على الثاني وحتى نقوم بالتالي علينا عمل الثاني وهكذا.

4) كان الترتيب بناءا على ما تعتقد أنه أفضل من ناحية دفع الطالب إلى أن يكون أكثر اعتمادا على نفسه في تعلم ما يحتاج إلى تعلمه (السعي إلى أن يكون الطالب أقل اعتمادا على المعلم في العملية التعليمية وأكثر اعتمادا على نفسه).

د) إذا كان هناك أسباب أخرى غير المذكورة أعلاه تم الاعتماد عليها في ترتيب الأهداف حسب الأهمية أرجو شرحها.

3) من القائمة التالية لعناصر التقييم.

أ) حددي أي منها له علاقة بالتقييم.

ب) ثم حددي الهدف من وراء عمل هذا النوع من التقييم.

1) التقييم يكون على شكل اختبار رسمي تحريري.

2) التقييم يكون على شكل اختبار رسمي شفهي.

3) التقييم يكون عبارة عن اختبار تحريري غير رسمي.

4) التقييم يكون عبارة عن اختبار شفهي غير رسمي. مثال: حين يستمع المعلم لإجابة الطالب في الفصل ويعلق عليها (يكون هناك تغذية راجعة) يعتبر هذا تقييما.

5) المعلمون يدرسون أولا ثم يقيمون لاحقا.

6) التقييم هو جزء من التدريس والتحضير. هو جزء من الحصة ويمكن أن يحدث مرات عديدة خلال الدرس.

7) التقييم يكون من أجل تزويد الطلبة بالدرجات.

8) التقييم يمكن أن يقوم به الطلبة أنفسهم (كل على حده). فهم يسألون ما هي الأهداف التي قاموا بتحقيقها و الأهداف التي لم يحققوها بعد.

9) الطلاب يستطيعون أن يقيموا بعضهم البعض. فهم يقرؤون ما يكتبه زملاؤهم ثم يزودونهم بالتغذية الراجعة.

10) التقييم يكون بهدف تزويد الطلبة بالتغذية الراجعة التي تحتوي على تحليل لنقاط القوة و الضعف لدى الطلاب ثم تحديد الإجراءات اللازمة لتعزيز نقاط القوة والتغلب على نقاط الضعف عند مقارنة وضع الطالب الحالي بالأهداف المرجوة.

11) وهو يتضمن أن يشارك الطلبة في معرفة أهداف الدرس ومساعدتهم على معرفة المعايير التي يجب أن يسعوا لتحقيقها.

12) وهو يتضمن الأسئلة ذات الإجابات المفتوحة والتي تشد التفكير بدلا من الأسئلة التي تكون إجابتها إما بنعم أو لا.

13) نحن نستعمل التقييم لمعرفة مدى ما حققه الطلاب من الأهداف المرجوة مثل التقييم

محكي المرجع.

14) نستعمل التقييم حتى نقارن بين الطلبة في المجموعة الواحدة. فنحن نقيم الطلبة بناء على أدائهم بالنسبة لباقي المجموعة كما في التقييم المعياري المرجع.

15) التقييم يعتمد على مراقبة مدى تحسن الطالب خلال سنة مدرسية كاملة. فلو تحسن أداء الطالب خلال السنة فإن النتيجة النهائية ستكون أفضل بكثير كما في التقييم بالمقياس الذاتي.

16) التقييم يكون مستمرا كما هو مطبق في المدارس الابتدائية السعودية.

17) التقييم يطبق بطرق مختلفة وهذا يعتمد على الهدف منه.

****هل تودين إضافة شيء عن كيفية عمل التقييم؟****

4) بناء على توقعاتك أي من الايجابيات والسلبيات يمكن حدوثها في المدارس السعودية عند تطبيق التقييم البنائي (في حال قامت وزارة التربية بتهنية الجو لنظام جديد يتواءم مع التقييم البنائي).

المعلمون (-)

- أعباء إضافية على المعلم.

- عدم قدرة المعلمين على كتابة تغذية راجعة مفيدة للطلبة.

- عدم قدرة المعلمين على تطبيق التقييم البنائي بشكل فعال بسبب ضيق الوقت.

- عدم قدرة المعلمين على تطبيق التقييم البنائي بشكل فعال بسبب قلة التدريب.

- أعداد الطلبة في الفصل.

المعلمون (+)

- يختصر الوقت على المعلم خاصة حين يستخدم المعلم تقييم الأقران لبعضهم البعض.

- يساعد المعلم على معرفة ما يواجهه الطلبة من صعوبات.

- يساعد المعلمين على تقييم طرق التدريس التي يستخدمونها ومدى فعاليتها.

- يساعد المعلمين على معرفة أين وصل الطلبة في تعلمهم.

الطلبة (-)

- فشل الطلبة في الفهم الصحيح لما زودهم المعلم به من تغذية راجعة.

- فشل الطلبة في تزويد زملائهم بتغذية راجعة ذات فائدة.

- قد يرغب الطلبة بان يحصلوا على العلامة بدلا من مجرد تعليق على إجاباتهم.

الطلبة (+)

- معرفتهم بأهداف الدرس تساعدهم.

- بالتغذية الراجعة يستطيع الطلاب معرفة كيفية تخطي الصعاب.

- يساعد الطلبة على التركيز على كيفية تحسين أدائهم بدلا من الانشغال بمقارنة أنفسهم بأقرانهم.

- يساعد الطلبة على أن يعتمدوا على أنفسهم أثناء تعلمهم.

-يساعد على تحسين أداء الطلبة بالذات الضعفاء منهم.

-يساعد على خلق بيئة حوارية وجو أفضل بشكل عام في الفصل.

-يساعد على زيادة الثقة بالنفس.

**** هل تودين إضافة سلبيات أو ايجابيات أخرى؟****

(5) بناء على توقعاتك أي من الأمور التالية سيكون تحدياً في حين تم إدخال التقييم البنائي في النظام السعودي (في حال استخدم التقييم البنائي في المدارس السعودية كما هي دون أي تغيير في النظام)؟

(1) ردة فعل المعلمين.

(2) توفير دورات ذات فائدة.

(3) المناهج وطرق التدريس الحالية التي تعتمد على الحفظ بدل من شحذ التفكير.

(4) حجم المناهج .

(5) المناهج غير القابلة للتعديل والتي يكون المعلم ملزماً بإعطائها كما هي .

(6) الجودة في تدريب المعلمات.

(7) كون المعلمات غير مدربات على الاختيار من المنهج ماذا يجب أن تقدم للطالبة ومتى تقدمه.

(8) الوقت المتاح في الحصة (40-45) دقيقة قد لا يكون كافياً لتطبيق التقييم البنائي في الحصة بشكل متكرر.

(9) الصعوبة التي قد تواجهها المعلمات في تغيير طرق التدريس التي اتبعوها.

(10) ضغوط العمل التي تواجهها المعلمات.

(11) جميع الطلاب رغم اختلاف مستويات أدائهم يدرسون نفس المنهج ويحضرون نفس الصفوف.

(12) أعداد الطلاب في الصف الواحد.

(13) متطلبات التقييم التجميعي وكثافة تطبيقه.

***** هل هناك تحديات أخرى تودين إضافتها؟*****

(6) أساساً يمكن على فهم التقييم البنائي خلال هذا البرنامج كما أنني سأدريكن عليه في الفصل. فهلاً أخبرتنني:

أ) ما شعورك حول ذلك؟

ب) هل أنت متحمسة لذلك؟

ج) هل هناك أمور معينة تودين أن افعلها من أجلك حتى أساعدك؟

د) هل تعتقدين أنك قادرة على فهم الأمور الرئيسية؟

(7) هل تودين إضافة أي تعليق يختص بالتقييم البنائي؟

Appendix 3: Questionnaire which was conducted with the student teachers after school placements

Participant' name: _____

This questionnaire is divided into 5 parts. I would like you to complete each part in light of your experience. The first part is about what you think is generally meant by assessment as a whole and formative assessment in particular. The second part is about whether or not you think that formative assessment can help school students to make progress.

The third part is about what you did during your initial teacher-training programme in connection to formative assessment and what you think about how that programme helped you to understand and practise formative assessment. The third part is divided into sections A, B and C. Section A is about what the university programme provided in relation to formative assessment, and how coherent and useful that programme was to you. Section B is about what the researcher provided in relation to formative assessment and how coherent and useful the researcher's programme was to you. Section C is about what you did during school placement.

The fourth part is about the challenges that you faced when applying formative assessment. Finally, the fifth part will ask you about what you think about implementing formative assessment.

Part 1

1) From the options below, do the following:

A) Choose the statements that best describe the purposes of assessment.

I) The first part is concerned more with *learning*

- 1) To motivate students.
- 2) To diagnose strengths and weakness.
- 3) To provide feedback.
- 4) To consolidate the work done to date.
- 5) To help students to develop their capacity for self-assessment.

6) To establish the level of achievement at the end of a unit of study.

II) The second part is concerned more with selection and certification

7) To establish the level of achievement at the end of a programme of study.

8) To pass or fail a student.

9) To grade or rank a student (with reference to norm and/or criteria).

10) To underwrite a 'licence to practice'.

11) To demonstrate conformity with external regulations, such as those of a professional or statutory body.

12) To select for employment, further education activity, etc.

13) To predict future performance.

III) The third part is concerned more with quality assurance

14) To assess the extent to which the programme's aims have been achieved.

15) To judge the effectiveness of the learning environment.

16) To provide feedback to teachers regarding their personal effectiveness.

17) To monitor levels of achievement over time.

18) To assure interested parties that the programme or unit of study is of an appropriate standard.

19) To protect the relevant profession.

20) To protect the public.

B) Could the purposes of assessment listed above be ranked according to importance? If yes, please rank them starting from the most important to the least important. If no, please move to question number 2.

1 (Most important)	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20 (Least important)	

C) Choose the reason or reasons behind ranking them in this way:

- 1- Because this is what education should be about.
- 2- The selection was based on how often this purpose is used in classrooms by teachers.
- 3- The selection was based on sequence (i.e. certain purposes depend on other purposes, and the second purpose cannot be done unless the first purpose is done, and so on).
- 4- The selection was based on what I think is the best for pupils' learning.

D) If there are other reasons not mentioned above, please explain them.

2) From the following list, which is about elements of assessment, please do the following:

a) Specify which of these elements are related to assessment.

- 1- Assessment is done as an oral formal exam.
- 2- Assessment is done as a written formal exam.
- 3- Assessment is done informally in a written way.
- 4- Assessment is done orally in an informal way. For example, when a teacher listens to a student's answer in class and then gives feedback, that is called assessment.
- 5- Teachers teach and they then assess later on.
- 6- Assessment is part of teaching. It is integrated into teaching and lesson planning. It is part of lessons and can be done many times during a lesson.
- 7- Assessment is done to provide pupils with marks.
- 8- Assessment is done by the pupils themselves (individually). Students are asked to say what objectives they have achieved and what they have not.
- 9- Pupils can assess each other, that is, read each others' work and give feedback.
- 10- Assessment is done to provide students with feedback that reflects their weaknesses and strengths, while showing them how to overcome the difficulties that they have.
- 11- Assessment involves sharing objectives with pupils and helping them to recognise the standards that they are aiming for.

- 12- Assessment involves open-ended questioning, which provokes thinking, rather than closed questions.
- 13- We use assessment in order to know the extent to which students have achieved the outcomes (criteria assessment).
- 14- Learning outcomes are not important in assessment. We should use assessment that compares students to each other. We assess students according to their performance in a group (norm referencing).
- 15- Assessment is neither based on achieving the learning outcomes nor comparing a student to the group. It is based on noticing the performance of a student over the whole year. If a student's performance becomes better, the results will be better, and so on (ipsative assessment).
- 16- Assessment is continuous, such as the one practised in Saudi primary schools.
- 17- Assessment is done in different ways, which depend on the purposes of assessment.

3) From your experience of practising formative assessment in Saudi classes, please put a tick beside the following advantages and disadvantages that you consider more likely to happen to Saudi teachers and students.

i) Teachers (-)

- Adds more work to the teacher.
- Teachers not being able to write useful feedback.
- Teachers not being able to practise formative assessment effectively due to time limitations (in classes and out of classes).
- Teachers not being able to practise formative assessment effectively due to the lack of training.
- Number of students in classrooms.

ii) Teachers (+)

- Saves time, especially when using peer-assessment.
- Helps teachers to know what difficulties students face.
- Helps teachers to evaluate their teaching methods.
- Helps teachers to know where the students are in their learning.

iii) Students (-)

- Pupils fail to interpret the feedback correctly.
- Pupils fail to give useful feedback to their peers.
- Pupils might want to receive a mark instead of a comment.

iv) Students (+)

- Pupils know what the target is (they can see the objectives).
- Pupils know how to overcome their difficulties through feedback.
- Helps pupils to focus on how to improve themselves rather than competing with others.
- Helps pupils to become individual learners.
- Helps to raise achievement amongst students, especially low achievers.
- Helps to create better communication and a better atmosphere in classrooms.
- Helps to raise self-confidence.

*Are there any other advantages or disadvantages that you would like to add?

4) From your experience of practising formative assessment in Saudi classes, please put a tick beside the statements that you think might be a challenge when introducing formative assessment into the Saudi system.

- a- Teachers' reactions.
- b- Providing useful courses to schoolteachers in order to help them understand and practise formative assessment in Saudi schools.
- c- Curriculums and methods of teachings, which depend on memorising rather than thinking.
- d- The huge amount of material which teachers need to introduce to students.
- e- The fixed curriculums that need to be given .
- f- Teacher-training quality.
- g- Teachers are not encouraged and trained to choose what to give and when to give it.
- h- Class time (40-45 min) might not allow enough time for practising formative assessment frequently.
- i- Teachers' ability to change their methods of teaching.
- j- Pressure of work on teachers.
- k- Pupils with different levels of performance share the same curriculum and the same class.
- l- Number of pupils in classrooms.
- m- Summative assessment loads and requirements.

*Are there other challenges that you would like to add?

Part 2

For each of the following statements, indicate whether you Strongly Agree (SA), Agree (A), Neither agree nor disagree (N), Disagree (D), or Strongly Disagree (SD), by circling the appropriate choice below the statement.

1) Formative assessment can help school students to make progress.

- 1) SA
- 2) A
- 3) N
- 4) D
- 5) SD

Part 3

Part 3 is about what you did during your initial teacher-training programme and how coherent and useful it was in connection with formative assessment. This part is divided into three sections: section A, B and C. **Section A** is about what *the university programme* has done to help you to develop your understanding and practice of formative assessment, and how useful and coherent this programme was. **Section B** is about what *the researcher* has done to help you to develop your understanding and practice of formative assessment, and how useful and coherent the researcher's programme was. **Section C** will ask you about what you did **during school placement**.

1) For each of the following statements, indicate whether you Strongly Agree (SA), Agree (A), Neither agree nor disagree (N), Disagree (D), or Strongly Disagree (SD) by circling the appropriate choice below each statement.

Section A

The university programme in relation to formative assessment

I. Things that are done at the university, such as sessions, books, handouts, assignments, etc.

About assessment in general

- | | | | | | | |
|----|--|----|---|---|---|----|
| 1. | At the university, the university programme was <u>useful</u> in developing my <u>understanding</u> of the nature of <u>assessment</u> . | SA | A | N | D | SD |
| 2. | At the university, the university programme was <u>coherent</u> in developing my <u>understanding</u> of the nature of <u>assessment</u> . | SA | A | N | D | SD |

About formative assessment in particular

- | | | | | | | |
|----|---|----|---|---|---|----|
| 3. | At the university, the university programme was <u>useful</u> in developing my <u>understanding</u> of <u>formative assessment</u> in particular. | SA | A | N | D | SD |
| 4. | At the university, the university programme was <u>coherent</u> in developing my <u>understanding</u> of <u>formative assessment</u> in particular. | SA | A | N | D | SD |

II. Things that were done during school placement.

- | | | | | | | |
|----|---|----|---|---|---|----|
| 5. | <u>Sufficient</u> feedback was provided by the university supervisor or school supervisor in relation to my practice of formative assessment <u>during school placement</u> . | SA | A | N | D | SD |
| 6. | <u>Useful</u> feedback was provided by the university supervisor or school supervisor in relation to my practice of formative assessment <u>during school placement</u> . | SA | A | N | D | SD |
| 7. | Adequate support for helping me to develop <u>good practice</u> in my teaching, in relation to formative assessment, was provided by supervisors <u>during school placement</u> . | SA | A | N | D | SD |

- | | | | | | | |
|----|--|----|---|---|---|----|
| 8. | As a whole (at the university and during school placement), the university programme was <u>coherent</u> in helping to develop <u>good practice</u> of formative assessment. | SA | A | N | D | SD |
| 9. | As a whole (at the university and during school placement), the university programme was <u>useful</u> in helping to develop <u>good practice</u> of formative assessment. | SA | A | N | D | SD |

Section B

The researcher's programme in relation to formative assessment

I. Things that were done at the university, such as sessions, books, hand-outs, etc.

About formative assessment in particular

- | | | | | | | |
|-----|---|----|---|---|---|----|
| 10. | At the university, the researcher's programme was <u>useful</u> in developing my <u>understanding</u> of <u>formative assessment</u> in particular. | SA | A | N | D | SD |
| 11. | At the university, the researcher's programme was <u>coherent</u> in developing my <u>understanding</u> of <u>formative assessment</u> . | SA | A | N | D | SD |

II. Things that were done during school placement

- | | | | | | | |
|-----|--|----|---|---|---|----|
| 12. | <u>Sufficient</u> feedback was provided by the researcher in relation to my practice of formative assessment <u>during school placement</u> . | SA | A | N | D | SD |
| 13. | <u>Useful</u> feedback was provided by the researcher in relation to my practice of formative assessment <u>during school placement</u> . | SA | A | N | D | SD |
| 14. | Adequate support for helping me to develop <u>good practice</u> in my teaching, in relation to formative assessment, was provided by the researcher <u>during school placement</u> . | SA | A | N | D | SD |

Judging the researcher's programme as a whole

- | | | | | | | |
|-----|---|----|---|---|---|----|
| 15. | As a whole (at the university and during school placement), the researcher's programme was <u>coherent</u> in helping me to develop a <u>good</u> | SA | A | N | D | SD |
|-----|---|----|---|---|---|----|

practice of formative assessment.

16. As a whole (at the university and during school placement), the researcher's programme was *useful* in helping to develop *good practice* of formative assessment. **SA A N D SD**

Section C

About what you did during school placement in relation to formative assessment

2) From the beginning of your school placement until the end of it, how frequently did you use the following strategies in your lessons?

For each of the following statements indicate whether you do it Always (A), Frequently (F), Sometimes (S), Occasionally (O), or Never (N), by circling the appropriate choice beside each statement.

1.	Assessing students many times in the class.	A	F	S	O	N
2.	"No hands up" strategy, except for asking questions.	A	F	S	O	N
3.	Using more open-ended questions that provoke thinking.	A	F	S	O	N
4.	Helping students to be active learners (more student discussions and less teacher dominance).	A	F	S	O	N
5.	Declaring the learning objectives in a clear way.	A	F	S	O	N
6.	Using success criteria for peer-assessment.	A	F	S	O	N
7.	Pupils' self-assessment during or at the end of a lesson.	A	F	S	O	N
8.	Providing effective comments that initiate thinking and help pupils to overcome the difficulties that they are facing.	A	F	S	O	N
9.	No marks are used as feedback, only	A	F	S	O	N

	comments are used as feedback.					
10.	Provide the opportunity for learners to respond to feedback orally in the classroom or written.	A	F	S	O	N

Part 4

1) As a student teacher who has a limited experience of teaching, which of these do you consider a challenge when practising formative assessment:

- 1- Class management.
- 2- Time limitations.
- 3- Coming up with suitable techniques.
- 4- Using suitable success criteria for peer-assessment.
- 5- Getting pupils used to formative assessment strategies in a very limited time (school placement time).
- 6-Pupils not taking feedback seriously.
- 7-Integrating formative assessment in a lesson plan.

Part 5

1) Do you think that formative assessment should be implemented in Saudi schools?

- 1) Yes
- 2) No

2) Please give reasons for your answer.

Appendix 4: Second interview, which was conducted with the student teachers after school placements

Some of the questions in this interview are related to the interviewees' answers in the questionnaire.

Part 1

Research Question	Interview Question
<p>i) What do the student teachers think is meant by assessment as a whole and by formative assessment more specifically?</p>	<p>Q1) According to your answer in question 1 part A, please explain why you have chosen certain statements in particular.</p> <p>Q2 A) Does this list in question 2 show items that could not be used as formative assessment?</p> <p><i>(The researcher was aware that this is more complex question, as all assessment can be both formative and summative depending upon its intention.)</i></p> <p>Q2 B) According to your answer in question 2, justify the process for applying each assessment element (i.e. explain the intended or perceived reason for using each one. Why is this type of assessment done and how can it be done in relation to formative, summative or any other type of assessment?).</p> <p>Q3) Would you like to add anything about how assessment is done?</p> <p>Q4) What is assessment about in general?</p> <p>Q5) Tell me about formative assessment.</p> <p>Q6) Tell me about the strategies (elements) that are related to formative assessment and why we use them.</p> <p>Q7) How different do you think summative and formative assessment are: very different, not very different, not different? Explain why.</p>

Part 2

<u>Research question</u>	<u>Interview questions</u>
<p>ii) Do the student teachers think that formative assessment can help school students to make progress?</p>	<p>Q1) According to the answer you have chosen in part 2 question 1, please explain why.</p> <p>Q2) Has formative assessment helped the pupils in your class to make progress?</p> <p>a) If yes, can you explain what are the things that you have done that helped your pupils to make progress? Is it feedback, declaring objectives, assessing students many times, etc.? Can you give me examples?</p> <p>b) If no, why?</p> <p>Q3) How did these practices help them to make progress (e.g., accuracy, critical thinking, etc.)?</p> <p>Q4) Based on the things that you have done, did formative assessment help most of the pupils in your class to make progress? Why?</p> <p>Q5) Who did formative assessment help in particular (low achievers, high achievers, average students)? Explain with examples.</p> <p>Q6) Besides helping students to make progress, do you think that formative assessment is useful or useless and why?</p>

Part 3

<u>Research questions</u>	<u>Interview questions</u>
<p>iii) What do the student teachers do during their initial teacher-training programme in connection with formative assessment?</p>	<p>Questions related to section A in the questionnaire: the university programme.</p>
<p>iv) Do the student teachers think that their training programme is</p>	<p>Q1) According to what you have chosen in part 3 section A statement 1 in the questionnaire, do the following:</p> <p>First, explain what have you learned about the nature of assessment and its types.</p> <p>Second, what were the things that the university</p>

coherent and useful in helping them to develop their professional practice of formative assessment?

v) What are the challenges that the student teachers faced when applying formative assessment?

programme provided that helped you to understand assessment. Explain in relation to the following things and how useful they were:

- a) Number of sessions.**
- b) Discussions in those sessions.**
- c) Books or hand-outs provided to you.**
- d) Assignments about assessment.**
- e) Tests.**

Third, did *you* or the *university* do other things that helped you to understand assessment?

Q2) According to what you have chosen in part 3 section A statement 2 in the questionnaire, please explain why do you think the university programme was coherent?

Q3) According to what you have chosen in part 3 section A statement 3 in the questionnaire, do the following:

First, explain what you have learned about formative assessment and its elements.

Second, what are the things that you have done in the university that helped you to understand formative assessment. Explain in relation to the following things and how useful they are:

- a) Number of sessions.**
- b) Discussions in those sessions.**
- c) Books or hand-outs provided to you.**
- d) Assignments about formative assessment.**
- e) Tests.**

Third, did *you* or the *university* do other things that helped you to understand formative assessment?

Q4) According to what you have chosen in part 3 section A statement 4 in the questionnaire, please explain why do you think the university programme was coherent?

	Q5) Turning to the school part, what did the university do there that helped you?
	Q6) According to statement 8 and 9 in the questionnaire, how? In what ways?
	Q7) Do you think that the university programme has prepared you to carry out formative assessment when you become a teacher? Why?
	Questions related to section B in the questionnaire: the researcher programme.
	<p>Q8) According to what you have chosen in part 3 section B statement 10 in the questionnaire, do the following:</p> <p>First, explain what have you learned about formative assessment and its elements.</p> <p>Second, what are the things that the researcher has done to help you to understand formative assessment. Explain in relation to the following things and how useful they are:</p> <p>a) Number of sessions.</p> <p>b) Discussions in those sessions.</p> <p>c) Books or hand-outs provided to you.</p> <p>Third, did you or the researcher do other things that helped you to understand formative assessment?</p>
	Q9) According to what you have chosen in part 3 section B statement 11 in the questionnaire, please explain why do you think the researcher's programme was coherent?
	Q10) Turning to the school part, what did the researcher do there that has helped you?
	Q11) According to statement 15 and 16 in the questionnaire, how? In what ways?
	Q12) Do you think that the researcher's programme has prepared you to carry out formative assessment when you become a teacher? Why?
	Questions related to section C in the questionnaire:

	<p>during school placement.</p>
	<p>Q13) During school placement, there are some strategies that you have used the most. Tell me, why did you use these the most?</p> <p>Q14a) There are some strategies that you have used the least. Tell me why did you use these least by choosing from the following statements:</p> <ul style="list-style-type: none"> a) Because the pupils didn't like it. b) Because I tried it and found that it was useless. c) Didn't try it because I didn't believe it was useful. d) I liked it, but because of lack of time, I didn't use it. e) I knew how to do it, but it was difficult to use. f) My supervisor didn't encourage me to use it. g) Because I was not sure how to do it. h) Other reasons. Please mention them. <p>Q14b) From the 10 strategies in the list, are there any strategies that you have found difficult to use? In what ways have you found them difficult to use (this includes strategies that you have used and strategies that you haven't used).</p> <p>Q15) What things facilitated your implementation of formative assessment in your class? (e.g., students' acceptance, class size, using the source room, using charts, etc.)</p> <p>Q16) What are the things that obstructed the initiation and implementation of formative assessment in your class? (e.g., students' different levels of performance, class size, students' refusal to accept things, short lesson time, etc.)</p> <p>Q17) What things would you like to be provided to you as a student teacher in order to help you to develop your understanding of formative assessment?</p> <p>Q18) What things would you like to be provided to you as a student teacher to help you to develop your</p>

	practice of formative assessment?

Part 4

<u>Research question</u>	<u>Interview questions</u>
v) What are the challenges that the student teachers faced when applying formative assessment?	Q1) What do you think should be done to minimise these challenges by the Ministry of Education, schools and programmes in the university?

Part 5

<u>Research question</u>	<u>Interview questions</u>
vi) Do the student teachers think that formative assessment should be implemented and why?	<p>Q1) Why do you think that formative assessment should be or should not be implemented in Saudi schools (discuss with the student teachers the reasons that they have given in the questionnaire in Q2).</p> <p>Q2) Discuss the comments that the student teachers have added about my research questions.</p>

Appendix 5: Observation schedule

Observation Schedule

Participant: _____

Date: _____

Class period: _____

Start time: _____

End time: _____

Observation number: _____

Number of pupils: _____

School: _____

Unit: _____ Lesson: _____

Other observers: _____

Elements of formative assessment	Key features of formative assessment	Evidence	Perceptions of the use of evidence	When evidence is used	No. of times evidence used	Perceptions of adequacy for no. of times evidence is used	Technique	Comments
<i><u>1 Learning Outcomes (L.O.s)</u></i>	1.1 Are the L.O.s shared with the pupils in a way they can understand?	1.1.1 Pupils can rephrase and explain.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
	1.2 Are the success criteria that lie beneath the L.O.s shared or developed with the pupils?	1.2.1 Pupils' discussions about success criteria with peers and teacher.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		1.2.2 Success criteria are written up somewhere accessible to pupils.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		1.2.3 Concrete example is used when needed to make success criteria clearer to pupils.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		

Elements of formative assessment	Key features of formative assessment	Evidence	Perceptions of the use of evidence	When evidence is used	No. of times evidence used	Perceptions of adequacy for no. of times evidence is used	Technique	Comments
<u>2</u> <u>Questioning and dialogue in class</u>	2.1 Does the teacher use questioning effectively (i.e. to promote thinking and check understanding)?	2.1.1 Teacher uses <u>open-ended questions</u> .	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		2.1.2 Teacher uses a variety of techniques which ensure maximum participation (e.g. group work or peer work with the teacher acting as facilitator).	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		2.1.3 Pupils ask questions of the teacher and of each other.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		2.1.4 Teacher asks questions throughout the lesson.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		

		2.1.5 Enough time is given to pupils to think before answering.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		2.1.6 “No hands up” strategy used.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		2.1.7 Encouraging open discussions (e.g. what can we add to Jim’s answer?)	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
	2.2 Does the teacher explain what good work will be like (i.e. are teachers clear about the expected standards)?	2.2.1 Teacher shares and discusses examples of pupils’ work.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		

Elements of formative assessment	Key features of formative assessment	Evidence	Perceptions of the use of evidence	When evidence is used	No. of times evidence used	Perceptions of adequacy for no. of times evidence is used	Technique	Comments
<i>3Feedback</i>	3.1 Does the feedback (both oral and written from teacher and peers) focus on the L.O.s or success criteria?	3.1 Effective comments that initiate thinking (i.e. asking the pupils questions about their work, such as asking them to write examples to make their ideas clearer).	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
	3.2 Does the feedback provided ‘close the gap’?	3.2.1 The teacher and peers provide oral or written feedback that helps the learner to overcome their difficulties.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
	3.3 Does feedback make pupils aware of achievements they have made in relation to L.O.s and success criteria?	3.3.1 This is reflected through peer discussions, group discussions or teacher-pupil discussions.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		

	<p>3.4 Are pupils given time to respond to feedback?</p>	<p>3.4.1 Providing the <u>opportunity in lesson time</u> for learners to read comments on their work and to discuss with their teacher or with peers the necessary improvements.</p>	<p>(SA) (A) (N) (D) (SD)</p>		<p>Once 2 – 4 5 – 7 8-10+</p>	<p>Yes No</p>		
		<p>3.4.2 Using a <u>sheet of paper</u> to record comments. This is slipped between the pages of the pupils’ book and can initiate a written dialogue between the teacher and the learner.</p>	<p>(SA) (A) (N) (D) (SD)</p>		<p>Once 2 – 4 5 – 7 8-10+</p>	<p>Yes No</p>		

Elements of formative assessment	Key features of formative assessment	Evidence	Perceptions of the use of evidence	When evidence is used	No. of times evidence used	Perceptions of adequacy for no. of times evidence is used	Technique	Comments
4 Peer-Assessment	4.1 Are the pupils involved in peer-assessment?	4.1.1 Pupils are discussing success criteria and their work with peers.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		4.1.2 Pupils are using success criteria to judge each other's work.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		4.1.3 Pupils are giving comments on successful features and advice for further development.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		4.1.4 Pupils are observed discussing success criteria and their work with peers.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		

Elements of formative assessment	Key features of formative assessment	Evidence	Perceptions of the use of evidence	When evidence is used	No. of times evidence used	Perceptions of adequacy for no. of times evidence is used	Technique	Comments
<u>5 Self-Assessment</u>	5.1 Do teachers and pupils reflect on the extent to which the L.O have been achieved?	5.1.1 Strategies that are used orally, such as the use of traffic icons.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		5.1.2 Written strategies, such as a small survey.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		
		5.1.3 Something else.	(SA) (A) (N) (D) (SD)		Once 2 – 4 5 – 7 8-10+	Yes No		

Appendix 6: Semi-structured interview, which was conducted with university tutors and schoolteachers

First of all, I will discuss what is meant by formative assessment with the tutors and schoolteachers. Then, I will provide them with a piece of paper (see below). I will explain to them that the interview questions will be based on the elements that are listed on this piece of paper.

Paper provided

Formative assessment strategies:

- Assessing students many times during the class.
- “No hand up” strategy, except for asking questions.
- Using more open-ended questions that provoke thinking (i.e. make students analyse and talk more about their ideas and opinions, which helps them to participate more in lessons instead of just sitting and listening). This might help pupils to be active learners and lead to more pupil discussions and less teacher dominance.
- Declaring the learning objectives to pupils in a clear way.
- Using the success criteria for peer-assessment.
- Pupils’ self-assessment during or at the end of the lesson.

Feedback:

- Provide effective comments that initiate thinking and help the pupils to overcome the difficulties that they are facing. Comments should not only address the negative and positive aspects in the pupils’ work, but they should go beyond that to guide the pupils in future learning.
- No marks are used as feedback, only comments are used as feedback.
- Provide the opportunity for learners to respond to feedback orally in the classroom or written.

Interview schedule of university tutors and schoolteachers who supervised the student teachers

Would you please answer the following questions about student teachers' development in relation to formative assessment:

Research questions	Interview questions
<p><u>Research question</u> iii) What do the student teachers do during their initial teacher-training programme in connection with formative assessment?</p> <p><u>Sub-question</u> -Do supervisors think that the student teachers can understand and implement formative assessment?</p>	<p>Q1) Do you think that the student teachers have understood the whole concept behind the use of formative assessment (why it is used, the significance of using it and how it promotes learning)? Why?</p> <p>Q2) Do you think that the student teachers have understood how to implement each of the formative assessment strategies? Answer this question according to each strategy on the list.</p> <p>Q3) Which of the following strategies were the student teachers not able to implement in classrooms? Why? Illustrate your answer with examples if you have any.</p> <p>Q4) Which of the following strategies were the student teachers able to implement in classrooms? Why? Illustrate your answer with examples if you have any.</p>

	<p>Q5) Based on the strategies that the student teachers were able to implement, to what extent do you think that they were able to implement them properly (10 reflecting the highest ability to implement a strategy and one as the least).</p>
<p>Question number six could help me to partially answer both research questions:</p> <p>iii) What do the student teachers do during their initial teacher-training programme in connection with formative assessment?</p> <p>v) What are the challenges that the student teachers faced when applying formative assessment?</p>	<p>Q6) Based on the student teachers' ability to implement formative assessment strategies, rank the strategies from the easiest to the most difficult to implement (1 is the easiest and 10 is the most difficult). Explain why you think they should be ranked this way.</p>

Research question

v) What are the challenges that the student teachers faced when applying formative assessment?

Sub-question

- What are the tutors' perceptions about what things hindered the student teachers from implementing formative assessment?

Q7) What were the major challenges that have or would have hindered the student teachers from implementing formative assessment in Saudi classrooms?

Q8) Choose all the reasons that you think have or would have hindered the student teachers' development in relation to FA in Saudi classes:

a) Student teachers' experiences as learners over the years have almost entirely focused on various forms of summative assessment.

b) Formative assessment's classroom implementation is not required by the university programme.

c) The absence of a 'performance level' concept. Pupils from different levels of performance are in the same class, introduced to the same fixed curriculum and take the same tests all the year. Pupils are not classified into levels according to their performance. This might hinder promoting learning because of the huge differences between the level of each pupil.

d) Cultural nature: most of the time, the Saudi system awards students who do well academically. These awards are based on the high proficiency that students are able to attain in

summative examinations. The system praises students who attain a “product” or “level”, but they give scant recognition to the processes involved in getting there, such as “perseverance”, “critical thinking”, “problem-based learning”, and “self-learning”. It is these latter qualities which are so important in formative assessment activities.

e) A similar claim can also be made about the curriculum planning documents used by teachers, namely syllabuses, frameworks and teachers’ source books. Although some emphasis is given in these documents to the processes of learning, the predominant focus is upon knowledge, concepts and skills, as measured by summative examinations.

f) Class time is very limited (40 minutes). This might hinder the proper use of formative assessment.

* Are there any other reasons that you would like to share?

Q9) What should be done to minimise these challenges for student teachers by the Ministry of Education, schools and programmes in the universities?

Appendix 7: Student teachers' justifications of the process for applying certain assessment elements

No. of subjects who chose the element	The elements of assessment	Justification of the process for applying each element	No. of subjects who provided the same justification
9	1- Assessment is done as an oral formal exam.	To measure the pupils' level of performance through grading.	9
10	2- Assessment is done as a written formal exam.	To measure the pupils' level of performance through grading.	10
6	3- Assessment is done informally in a written way.	To measure the pupils' level of performance through grading.	3
		To measure pupils' daily development of knowledge.	1
		To revise previous lessons.	1
		To check pupils' understanding and keep them alert in order that they can be assessed (tested) at any time.	1
10	4- Assessment is done orally in an informal way. For example, when a teacher listens to the student's answer in the class and gives feedback, then that is called assessment.	To measure level of performance (grading) with less stress on pupils.	4
		Pupils can speak freely without the fear of marks.	1
		Encourage discussion in order that pupils are more likely to receive the correct answers for the test.	1
		To measure pupils' daily development of knowledge.	1
		To revise previous lessons.	1
		Justification not provided.	1
		To check pupils' understanding and keep them alert. The feedback will help them to avoid the same mistakes.	1

5	5- Teachers teach, and they then assess later on.	This is how things are.	3
		It is traditional, but this is how things are in Saudi schools.	1
		Teachers can use this method if they do not have time to assess.	1
10	6- Assessment is part of teaching. It is integrated in teaching and lesson planning. It is part of lessons and can be done many times during a lesson.	Helps teachers to recognise the level of the pupils and then decide what to teach and how to teach it.	1
		Teachers look at previous assessments and decide how and what to assess (test) in the next lesson.	1
		Helps teachers to grade pupils more accurately.	2
		Assess pupils at the beginning of a lesson to see what they know about a certain topic.	2
		To check the pupils' understanding before moving to the next step.	2
		Helps pupils to pay more attention to the teacher and helps them to remember the information that was introduced.	1
		This method is not traditional and it only suits some of the pupils. It is not necessary to do.	1
8	7- Assessment is done to provide pupils with marks.	This is what assessment is about.	1
		Helps teachers to know what the pupils understand.	1
		To pass or fail pupils.	2
		To grade pupils and give them feedback about what they need to improve in.	1
		To grade pupils.	3

6	8- Assessment is done by the pupils themselves (individually). Students are asked to say what objectives they have achieved and what they have not.	Self-assessment is only the general thoughts of the learner about how she/ he performed on a test (whether they did “good” or “poorly”).	6
6	9- Pupils could assess each other, read each other’s work and give feedback.	Read their peers’ work and predict the mark their peers might have before submitting their work.	1
		Pupils assess each other’s work using marks.	1
		To discuss their work with their peers.	2
		Pupils accept criticism from their peers more than from their teachers.	1
		Pupils learn from their peers’ mistakes, especially when they correct them by themselves.	1
7	10- Assessment is done to provide students with feedback that reflects their weaknesses, strengths and how to overcome the difficulties that they have.	To raise the pupils’ achievement. Gives pupils another chance before they receive the final mark.	4
		Comments written by students to the teacher at the end of a lesson so that the teacher can adjust their teaching.	2
7	11- It involves sharing objectives with pupils and helping them to recognise the standards that they are aiming for.	Shared at the beginning of a lesson to help the pupils focus on the main and most important parts of the lesson.	3
		Helps pupils to recognise the standards that they are aiming for (<i>the participant seemed to repeat what is in the statement here</i>).	1
		Solely for the pupils’ self-assessment.	1
		Helps pupils to pay more attention to the teacher.	1

10	12- It involves open-ended questioning, which provokes thinking, rather than closed questions.	To recognise pupils' level of knowledge.	3
		Gives pupils the chance to express themselves.	1
		To check if the pupils have achieved the learning outcomes.	1
		To check the pupils' understanding.	2
		Helps teachers to assess pupils' understanding.	3
9	13- We use assessment in order to know the extent to which students have achieved the outcomes (criteria assessment).	Helps the pupils to know what outcomes they have achieved.	2
		Helps the teachers to know what outcomes have been achieved.	3
		Helps teachers to decide whether the provided material was useful to the pupils or not.	1
		To grade pupils.	2
		Check what the pupils have achieved and then diagnose the problem.	1
6	14- Learning outcomes are not important in assessment. We should use assessment that compares students. We assess students according to their performance in a group (norm referencing).	Divide pupils into levels according to their performance.	3
		To grade pupils.	3
10	15 Assessment is neither based on achieving the learning outcomes nor comparing a student to the group. It is based on noticing the performance of a student in the whole year. If a student's performance improves, the results will be better, and so on (ipsative assessment).	Helps teachers and pupils to focus on pupils' development and this helps in raising pupils' motivation.	5
		Helps teachers and pupils to focus on pupils' development.	2
		Helps in raising pupils' motivation.	2
		Helps teachers to be more accurate about pupils' development.	1
7	16- Assessment is continuous, such as the one practised in Saudi primary schools.	To check the pupils' understanding.	1
		To assess pupils' development.	2
		To urge pupils to study and always be	2

		ready for assessment.	
		To test the pupils' short memory.	1
		To help the pupils to remember and focus on the information that was introduced.	1
11	17- Assessment is done in different ways, which depend on the purposes of assessment.	To assess different things.	7
		To help pupils to develop their skills over time.	1
		It depends on the pupils' level, school subject and even the lesson itself.	1
		Different methods need to be used to assess different pupils.	1
2	*Would you like to add anything about how assessment is done?	Assessment needs to raise pupils' motivation, otherwise they will not care about studying and improving.	1
		Assessment could be about dividing pupils into levels, but it must not be about failing or passing.	1

Appendix 8: Issues when evidence items were used

Abbreviations used in this table: L.O. = learning outcomes/ S.C. = success criteria

Issues which occurred over the 33 observations (each listed issue occurred once, unless otherwise noted)

Issues which occurred in the first observation are written in red

Issues which occurred in the second observation are written in blue

Issues which occurred in the third observation are written in green

	Evidence of applying the 5 elements of formative assessment	Issue 1	Issue 2	Issue 3	Issue 4	Issue 5	Issue 6	Issue 7	Issue 8	
1	Learning Outcomes 1.1.1 Are the learning outcomes shared with the pupils in a way which they can understand?	It was introduced quickly in English. Not explained to them or related to the lesson.	Introduced in English, explained by teacher in English. Difficult grammatical words were not explained.	Introduced in English only. Difficult words were not explained.	Introduced orally and quickly at the end of the lesson.	Explained in English only. Difficult words that needed to be explained in their mother tongue were not.	They were written in English on the board. Difficult words were not explained.			
	General name of the issue	Teacher's lack of clarity when explaining what is expected of the pupils.								
2	Learning Outcomes 1.2.1 Pupils' discussions are about S.C. with peers and teachers.	Discussions were between students only. From their answers, it was shown that they were not sure								

		about how to use the S.C. and why.							
	General name of the issue	Pupils faced difficulties in use.							
3	Learning Outcomes 1.2.2 S.C. written somewhere accessible to pupils.	Success criteria not clearly written.							
	General name of the issue	Teacher's lack of clarity when explaining what is expected of the pupils.							
4	Learning Outcomes 1.2.3 Concrete example is used when needed to make S.C. clearer to the pupils.	She started explaining the lesson without relating the examples that she had discussed to the S.C..							
	General name of the issue	Teacher's lack of clarity when explaining what is expected of the pupils.							
5	Questioning 2.1.1 Teacher uses open-ended questions.	Limited use in classroom.	The questions were asked and answered by the teacher.	Questions were not framed properly. Pupils were confused. The teacher had to rephrase them many times.					
	General name of the issue	Teacher's limited use in classroom.	Teacher's dominance.	Teacher's difficulty in use.					
6	Questioning 2.1.2 Teacher uses variety of techniques to ensure maximum participation.	Lack of variety.	Only a few pupils were involved in the group work, while the teacher ignored the rest. The pupils were asked to write on	Some techniques were used, but the purpose of using them did not seem clear to the teacher. For example, when	Very limited use in classroom. Almost no variety of techniques: mostly	Lack of variety.	The techniques used were: -Flash cards. -Small boards. However, the students misused the		

			the board, they were asked to read, and they were asked to make thumbs up and thumbs down and yet more than half of the class did not participate. The teacher ignored this.	the students were asked to judge their friends' work using thumbs up and thumbs down, the teacher did not ask the students the reason behind their decisions. It was more like a fun game without a purpose.	questioning and answering, but there was good participation.		small boards because the teacher did not collect them immediately.		
	General name of the issue	Teacher's limited use in classroom.	Pupils left behind.	Teacher's misapplication of technique.	Teacher's limited use in classroom.	Teacher's limited use in classroom.	Pupils' misuse of technique.		
7	Questioning 2.1.3 Pupils ask questions of teacher and of each other.	Two teachers only provided a few questions.	Led to class-management problem. When students asked the teacher a question, the latter was too busy answering the question and lack of control of the class took place.	Students were shy.					
	General name of the issue	2xTeacher's limited use in classroom.	Class-management problems.	Pupils' negative reaction.					
8	Questioning 2.1.4 Teacher asks questions throughout the lesson.	None							
9	Questioning 2.1.5 Enough time is given to pupils to think before answering.	Enough time was given to answer, but this	Time was given, but the technique was not helpful.	With easy questions, enough time was given,	Limitation of use because of lack of time.				

		was not the case when the students were assessing each other and giving feedback.	The teacher picked a pupil and then asked a question, but the pupil seemed to be put on the spot and not able to think.	but with complicated ones, not enough time was given.					
	General name of the issue	Teacher's limited use in classroom.	Teacher used a problematic technique.	Teacher's limited use in classroom because of lack of time.	Teacher's limited use in classroom because of lack of time.				
10	Questioning 2.1.6 "No hands up" strategy	This was used with issues. Most pupils who were chosen randomly to answer could not answer. The teacher lost time as she then switched to choose pupils who could answer.	Pupils were picked randomly, but misbehaviour took place because the teacher did not know her students' names and she had not written their names on pieces of paper. As a result, the students did not take her seriously.	It was used only in the second half of the lesson.	Pupils were picked randomly without choosing from pieces of paper. The pupils who were in the teacher's sight were chosen much more often than others.	Pupils were picked randomly, but misbehaviour took place because the teacher did not know her students' names and she had not written their names on pieces of paper. As a result, the students did not take her seriously.	Girls were picked randomly, but misbehaviour took place because the teacher did not know her students' names and she had not written their names on pieces of paper. As a result, the students did not take her seriously.	The teacher picked names <u>from the list</u> , not from lollipops or random pieces of papers. Therefore, some names were called more than other names.	It was used only in the second half of the lesson.
	General name of the issue	Teacher stopped using it because it was time consuming.	Teacher used a problematic technique.	Teacher's limited use in classroom.	Teacher used a problematic technique.	Teacher used a problematic technique.	Teacher used a problematic technique.	Teacher used a problematic technique.	Teacher's limited use in classroom.
11	Questioning 2.1.7 Encouraging open discussions.	Three teachers used this evidence item	Just used when warming up. This was not, however,	Lack of encouragement of open discussions.					

		very rarely.	used during the lesson.						
	General name of the issue	3xTeacher's limited use in classroom.	Teacher's limited use in classroom.	Teacher's limited use in classroom.					
12	Questioning 2.2Does teacher explain what good work looks like (i.e. is the teacher clear about expected standards?). 2.2.1 Teacher shares and discusses examples of pupils' work.	Two teachers did not clarify how students should assess each other's work or what standards they should look for. Students were confused.	Two teachers displayed a limited use of this evidence item.						
	General name of the issue	2xTeacher's lack of clarity.	2xTeacher's limited use in classroom.						
13	Feedback 3.1Does feedback (both oral and written from peers and teacher) focus on L.O. or S.C.?	Lack of feedback from pupils to their peers, and more feedback from the teacher.	The students assessed each other relying on the S.C. which were provided by the teacher. However, the S.C. that were provided by the teacher did not really help in assessing the answers. Teacher did not reflect on how to assess the answers, but they	There was teacher-student oral feedback and student-student written feedback, but because of lack of time, students did not read their feedback to their peers.	Lack of feedback. Only done once.				

			focused on whether the students read the answers loudly or whether they were confident, which had no relation to the essence of the activity.						
	General name of the issue	Teacher's limited use in classroom.	Teacher's misapplication of technique.	Teacher's limited use in classroom because of lack of time.	Teacher's limited use in classroom.				
14	Feedback 3.2 Does feedback provided close the gap? 3.2.1 Teacher and peers provide oral or written feedback that helps the learner to overcome their difficulties.	Limitation of use. Feedback was provided orally after reading the conversation, but this was only done with two pupils.	There was teacher-student oral feedback and student-student written feedback, but because of lack of time, the students did not read their feedback to their colleagues.	Lack of explanation and clarity.	There was a general explanation at the end of the lesson after getting the answers from the pupils, but no specific feedback was provided, especially, when wrong answers were given.				
	General name of the issue	Teacher's limited use in classroom.	Teacher's limited use in classroom because of lack of time	Teacher's lack of clarity.	Teacher's lack of specification.				

15	Feedback 3.3 Does feedback make pupils aware of achievements made regarding L.O. or S.C. 3.3.1 This is reflected through peer discussions or teacher-pupil discussions	Lack of clarification and not done frequently enough.	There was teacher-student oral feedback and student-student written feedback, but because of lack of time, the students did not read their feedback to their colleagues.	The teacher did not notice pupils' lack of achievement, and feedback was not given in relation to the L.O. as a result.	Limited use in classroom.	There was a general explanation at the end after getting the answers from the pupils, but no specific feedback was provided, especially, when wrong answers were given.			
	General name of the issue	Teacher's limited use in classroom +lack of clarity.	Partially used by teacher because of lack of time.	Partially used by teacher.	Teacher's limited use in classroom.	Teacher's lack of specification.			
16	Feedback 3.4 Pupils given time to respond to feedback? 3.4.1 Learners read the comments on their work and discuss necessary improvements with teacher or peers.	Used in a simple way: the teacher gave feedback to the students and asked them to correct their mistakes in the class. This is a small way of responding to feedback.							
	General name of the issue	Partially used by teacher.							
17	Feedback 3.4 Pupils given time to respond to feedback? 3.4.2 Using a sheet of paper to record comments, which are	None							

	slipped between the book pages in order to initiate a dialogue between teacher and pupil.								
18	Peer-assessment 4.1.1 Pupils discuss S.C. and their work with their peers.	Because of lack of time, the teacher did not do it more than once.	It was not used often enough, probably twice. Used thumbs up and thumbs down to assess each other, but pupils didn't use S.C. because they were not clear.						
	General name of the issue	Teacher's limited use in classroom because of lack of time.	Partially used by pupils + limited use in classroom.						
19	Peer-assessment 4.1.2 Pupils are using S.C. to judge each other's work.	Because of lack of time, the teacher did not do more than once.	The teacher asked the pupils to judge each other's work, but she didn't explain the S.C..	Done amongst peers without a clear focus on S.C.	Limited usage and S.C., which were not used effectively.	S.C. were not clear to the students. As a result, students failed to do this.			
	General name of the issue	Teacher's limited use in classroom because of lack of time.	Teacher's lack of clarity.	Partially used by teacher.	Partially used by teacher + limited use in classroom.	Teacher's lack of clarity.			
20	Peer-assessment 4.1.3 Pupils giving comments on successful features as well as advice for further development	Done through group work, but it was not enough. It needs to be more than	It is difficult to say because the S.C. were not even related to the activity. They both	Because of lack of time, the teacher did not do more than once.	Very brief, not clear feedback and limited use in classroom.				

		this.	did this and did not do this.						
	General name of the issue	Teacher's limited use in classroom.	Teacher's misapplication.	Teacher's limited use in classroom because of lack of time.	Partially applied by pupils +limited use in classroom.				
21	Peer-assessment 4.1.4 Pupils are observed discussing S.C. and their work with peers.	Very limited use in classroom. Only once.	Because of lack of time, the teacher did not do more than once.	Only a few were observed, while the rest were not observed.	Some were observed, others were not (especially the ones in the corners although they were the ones that seemed to need the most help).				
	General name of the issue	Teacher's limited use in classroom.	Teacher's limited use in classroom because of lack of time.	Pupils left behind.	Pupils left behind.				
22	Self-assessment 5.1.1Self-assessment strategies are used orally, such as the use of traffic icons.	It was done orally in a quick way and with the class as a whole. No chance was given to hear the pupils who were struggling.							
	General name of the issue	Pupils left behind.							

23	Self-assessment 5.1.2 Self-assessment written strategies, such as a small survey.	For two teachers there was not any reflection on L.O.. As a result, it was not very specific. This strategy was limited to just asking about understanding the lesson in general. It seemed that many said yes without specifying their needs and difficulties.	Lack of clarity.	Self-assessment was neither clear nor specific. The L.O. were missing. It was limited to, did you understand or not?	No honest answers were given. The researcher observed that the pupils were advising each other to just tick whatever to complete the survey.				
	General name of the issue	2xTeacher's lack of specification.	Teacher's lack of clarity.	Teacher's lack of clarity and specification.	Pupils' misuse of technique.				

Appendix 9: Sample of raw data from observation schedules / Name of Participant: (I)

Abbreviations used in this table: L.O.=learning outcomes/ Obs.= observation/ E. Eva.= evidence evaluation/ Time use= number of times evidence used/ Adcq.= adequacy of use/ Sts.= students/ T.= teacher/ Obj= objectives/S.C.= success criteria/ SA= strongly agree/ A= agree/ Q= questions/ b.c.= because.

<u><i>I. Learning outcomes</i></u>	Evidence	1 st Obs.			2 nd Obs.			3 rd Obs.			No. of times evidence used properly in all observations	Analysing the use of each feature and evidence or other evidences	Analysing the use of the element in general
		E.Eva.	Time use	Adcq.	E.Eva.	Time use	Adcq.	E.Eva.	Time use	Adcq.			
1.1. L.O. shared	1.1.1 Pupils can rephrase and explain. (This evidence was not used by T.s. Because of this, the No. of times evidence used column in 1.1. row will reflect No. of times L.O. were shared, instead Sts. rephrasing L.O.).	A	1	yes	SA	2-4	yes	SA	2-4	yes	This box will reflect No. of times L.O. shared, but the Sts. don't rephrase. This is exceptional.		
		I agree that L.O. were shared and explained clearly. However, I am not sure if Sts. were able to rephrase them or not. Only one pupil was asked to explain one objective and she provided the explanation in Arabic. The teacher explained the rest of the objectives. She started the lesson late because she was introducing some instructions and formative assessment strategies to the Sts. in her class. She also had to give the pupils some pieces of paper about formative assessment strategies: why, when and how to apply in class. The teacher started with a game, which was not related to the lesson; it seemed to be just for fun (i.e. every pupil had to draw themselves for 5 minutes). All of this took around 15 minutes, which affected her lesson and that is why Sts. were not given enough time to answer Q.s. and many other steps were not applied.			Sts. rephrased and explained the objectives.			The L.O. were written on a chart in English. There was no rephrasing or explaining by the pupils. However, there was explaining by the teacher: that is, during the lesson every time the T. finished explaining part of the lesson, she returned back to the board to relate it back to the L.O. before moving on. This showed that she was aware of what she was doing and why she was sharing the L.O. with the Sts. in the first place. The Sts. seemed relaxed and happy to know where they were going, as was demonstrated by their reactions, such as nodding and smiling.					

1.2.S.C. Shared	1.2.1 Pupils' discussions about success criteria with peers and teacher.	SA	1	yes	SA	2-4	yes						
								Did not take place.					
	1.2.2 Success criteria are written up somewhere accessible to pupils.	SA	1	yes	SA	1	yes	SA	1	yes			
	This was written on the board.	S.C. were in front of the Sts. throughout the lesson as they were hung on a board in the front.			S.C. were in front of the Sts. throughout the lesson as they were hung on a board in the front.								
1.2.3 Concrete example is used when needed to make success criteria clearer to pupils.					SA	1	yes						
	Example not needed, as S.C. were clear enough and this was shown by the pupils' responses when assessing each other.	The concrete examples were there and written in front of the Sts. all the time.			Not done.								
<u>2. Questioning</u>	Evidence	1 st Obs.			2 nd Obs.			3 rd Obs.			No. of times evidence used properly in all observations	Analysing the use of each feature and evidence or other evidences	Analysing the use of the element in general
		E. Eva.	Time use	Adcq.	E.Eva.	Time use	Adcq.	E.Eva.	Time use	Adcq.			

2.1. Teacher uses questions to promote thinking	2.1.1. Use open-ended questions.	A	11+	yes	SA	2-4	yes	A	5-7	yes			
	Teacher uses open-ended questions, such as, "What can you buy from bookstore?", and similar questions to this.				Example: T: What do you like to eat? T: Why did you use "are" with tomatoes? T: Why did you use "is" with water?				What is the weather like in Autumn? What is the weather like in Summer? What is the weather like in Winter? What is the weather like in Spring?				
2.1.2. Different techniques used to enhance participation	2.1.2. Different techniques used to enhance participation	SA	11+	yes	SA	5-7	yes	A	2-4	yes			
	The techniques used were small boards and group recitation. Sts. used the small boards to practise spelling and then the whole class would show the boards to the T. They would then practise peer-assessment and self-assessment when correcting any errors.				Peer work, group work, flash cards, small boards, real objects, throwing the ball (to ask a question individually) and taking a role and holding baskets: Three pupils were asked to come to the front of the class and carry three baskets. The 1 st basket was named "BUTCHER", the 2 nd was "BAKER" and the 3 rd was "GROCER". Then the teacher asked the Sts. what type of food each girl was selling. This was very interesting for the pupils, as was obvious from their reaction: attention, enthusiasm and willingness to participate.				Pictures, games and guess games.				

2.1.3. Students ask questions of the teacher and their peers.				SA	8-10	yes						
	Not done.			This was mainly done during group work and when using small boards. When doing group work, Sts. asked the teacher questions in order to understand and to get help.			Not done.					
2.1.4 Teacher asks questions throughout the lesson.	SA	11	Yes	SA	11+	yes	SA	11+	yes			
	Used pictures, real objects and flash cards. This T. showed the Sts. pictures and real objects then asked them some Q. about them.			This was done all the time during the lesson, but mainly when the T. was throwing the ball to the Sts. and asking them what food they liked to eat. Also the T. asked three pupils to come to the front of the class to carry three baskets. The 1 st basket was named "BUTCHER", the 2 nd was "BAKER" and the 3 rd was "GROCER". Then she asked the Sts. what type of food each girl was selling.			Techniques used here: pictures, games, guess games and group work					
2.1.5 Enough time give to students before answering.	A	5-7	No	SA	11+	yes	A	2-4	yes			
	Time was not enough for Sts. to answer. The technique of asking the Q. was not really helpful. The T. randomly picked the name, then after the pupil stood up, the T. asked the Q. This did not seem to be helpful because the pupil seemed to feel that everybody was staring at them. The Sts. answering seemed to become confused and were not able to answer. The researcher noted that when the Q was asked when the Sts. were sitting down and time was then given for thinking, before a particular student was called, most Sts.			The researcher observed that there was enough time for the Sts. to answer, but the problem was that the T. called the name then she asked the Q. This seemed to make the Sts. nervous, and therefore they could not answer. However, when the question was asked and the student was called after thinking time, more pupils were able to answer.			It is 2-4 because the lesson ended 15 minutes early because of a serious storm warning.					

		were able to answer.										
	2.1.6 “No hands up” strategy	SA	11+	yes	SA	11+	yes	SA	11+	yes		
		This was done throughout the lesson through the use of lollipops.			This was done by using names written on lollipops. This was used perfectly.							
	2.1.7 Encouraging open discussions	SA	2-4	no	SA	2-4	yes					
		The teacher asked open-ended questions such as, “What can we buy from the supermarket?” However, the rest of the lesson was centred on the T. teaching and Sts. listening.			The T. asked Q., which encouraged to Sts. to openly discuss their thought processes. For example, when one pupil looked at the picture and answered: “There are some tomatoes”, the T. asked “Why did you use are with tomatoes?”			Not done.				
2.2 Does the teacher explain what good work looks like (i.e. are teachers clear about the expected standards?).	2.2.1 Teacher shares and discusses examples of pupils’ work.				SA	2-4	yes	SA	1	yes		
		Not needed.			The T. used examples of good work as a model for the whole class. This sentence, for example, was given by one of the Sts.: “There are some eggs”. The teacher asked the other pupils to make similar sentences, after looking at the picture in their books, using “is, are, some, any and there”.			The teacher explained what good work looks like. She was clear about the expected standards and this was done by using the S.C..				

<u>3. Feedback</u>	Evidence	1 st Obs.			2 nd Obs.			3 rd Obs.			No. of times evidence used properly in all observations	Analysing the use of each feature and evidence or other evidences	Analysing the use of the element in general
		E.Eva.	Time use	Adcq.	E.Eva.	Time use	Adcq.	E.Eva.	Time use	Adcq.			
3.1 Does feedback (both oral and written from T. & peers) focus on L.O. or S.C.?	3.1.1 Use comments that initiate thinking (e.g. ask Sts. questions about their work, such as “How about writing an example to make your ideas clear?”	SA	8-10	yes	SA	8-10	yes	SA	1	yes			
		Pupils provided oral feedback to each other (peer-assessment). Also, when the Sts. used the small boards to write the spelling of the words, the teacher gave them feedback by explaining how to write it through an example on the board.			The T. asked the Sts, to give examples of countable and uncountable words as part of their feedback. Then, the T. asked them to put their answers into sentences.			Feedback was written by peers and it focused on the S.C. This was only done 5 minutes before the class was abruptly ended due to weather conditions, and so there was not enough time to give more feedback and discuss it because the school day ended very early.					
3.2 Does feedback provided ‘close the gap’?	3.2.1 T. & peers give oral and written feedback to overcome the difficulties.	A	8-10	yes	SA	11+	yes	A	1	yes			
		The technique helped to close the gap because the T. explained how to read words. She explained how certain words are read, e.g. the word “furniture”.			When a pupil came up with this sentence: “there is oranges”, the T. said when we have plural “oranges” we use “are”. This was explained in Arabic in a clear way, b.c the word “plural’ is not known to them in English.			Feedback provided ‘closed the gap’. However, because of the weather circumstances, the Sts. were able to provide the feedback for one pupil only.					

3.3 Does feedback make pupils aware of achievements made in relation to L.O. and S.C.?	3.3.1 This is reflected through peer-discussions, group-discussions or teacher-pupil discussions.	A	8-10	yes	SA	1	yes	A	1	yes			
		T. discussed with the Sts. what they can buy from a certain shop, such as a pharmacy or a grocery store. Sts.' answers were discussed and feedback was given.			The T. provided indirect feedback through questioning. When a pupil made up a sentence from the picture in the book: "There are some apples", the T. asked: "why did you choose "are" in this sentence?" The pupil responded: "because the word apples is plural".			Feedback made pupils aware of achievements made in relation to S.C.. This was reflected through written feedback provided on pieces of paper after some group discussions. Then this feedback was read orally in front of the class.					
3.4 Are pupils given time to respond to feedback?	3.4.1 Gives pupils the chance in a lesson to read comments and discuss with teacher and peers necessary improvements.												
		Not done.			Not done.			Not done.					
	3.4.2 Using a sheet of paper slipped in a pupil's book to initiate dialogue between T. and student.												
		Not done.			Not done.			Not done.					

<u>4. Peer-assessment</u>	Evidence	1 st Obs.			2 nd Obs.			3 rd Obs.			No. of times evidence used properly in all observations	Analysing the use of each feature and evidence or other evidences	Analysing the use of the element in general
		E.Eva.	Time use	Adcq.	E.Eva.	Time use	Adcq.	E.Eva.	Time use	Adcq.			
4.1 Are pupils involved in peer-assessment?	4.1.1 Pupils are discussing S.C. and their work with their peers.				SA	1 at the end of the lesson	yes						
		Not done.			An exercise in the book was done using peer work and which relied upon S.C.. When the T. asked for the answers, most of the Sts. answered correctly. The researcher observed that the Sts. were confident in themselves and their answers. It seemed that they enjoyed this method too b.c it clearly relied on the S.C..			Not done.					

	4.1.2 Pupils are using success criteria to judge each other's work.						SA	1	yes				
		Not done.			This did not happen due to lack of time, but it was not really needed. It was clear that the Sts. could judge themselves relying on the S.C..			This was used by the Sts. to judge their peers as they were reading a passage. However, judging each other's work was only done once because of the bad weather circumstances and early closure.					
	4.1.3 Pupils giving comments on successful features as well as advice for further development.							SA	1				yes
		Not done.			From Sts.' answers and responses it can be said that this was not really needed.			This was done through written feedback on pieces of paper after group discussions. This was then read orally in front of the class.					
	4.1.4 Pupils are observed discussing S.C. and their work with peers.				SA	2-4	yes	A	1				yes
		Not done.			Done while they were doing peer work.			Because this lesson was in the source room, the layout of groups at circular tables allowed the T. to observe the Sts. while they were discussing the S.C..					

<u>5. Self-assessment</u>	Evidence	1 st Obs.			2 nd Obs.			3 rd Obs.			No. of times evidence used properly in all observations	Analysing the use of each feature and evidence or other evidences	Analysing the use of the element in general
		E. Eva.	Time use	Adcq.	E. Eva.	Time use	Adcq.	E. Eva.	Time use	Adcq.			
5.1 Do teachers and pupils reflect on the extent to which the L.O have been achieved?	5.1.1 Strategies that are used orally, such as the use of traffic icons.												
		Not done.			Not done.			Not done.					
	5.1.2 Written strategies, such as small survey.	N	1	no									
		This was done, but there was not any reflection on the L.O.. The use of the strategy was not very clear or specific. The T. asked about understanding the lesson in general. It seemed that many said yes without specifying their needs or difficulties.			It was in the lesson plan, but the T. could not do it b.c. of lack of time.			It was in the lesson plan, but the T. could not do it b.c. of lack of time, due to the weather circumstances.					
5.1.3 Something else.													
	Not done.			Not done.			Not done.						
	Notes	The T. wasted a lot of time with the Sts. and there was not much discussion as a result. She did not involve them in discussions using peer-assessment or group assessment. Hence, most of the lesson was more like the T. teaching and the Sts. listening.			The use of formative assessment was obvious. The T. did not progress to the next step until she was sure that the class understood the first step. This was done through Q. like: “Why did you use this?” or “Why did			The use of formative assessment was there. The T. did not progress to the next step until she was sure that the Sts. had grasped the idea. However, the T. was not able to complete many steps and tasks because of the weather circumstances and the early school closure.					

you use that?"

This was a surprise to the Sts. at the beginning, as could be seen through their facial expressions!

The Sts. were wondering why the T. kept on asking them why they answered in a certain way if it was correct. This was not usual for them, and it seemed that they were not used to discussing their answers with the T..However, after a while, they seemed to enjoy this. At the end of the lesson, it seemed that the Sts. were more able to discuss and speak openly. They seemed less afraid and more confident.

Appendix 10: Sandwell Metropolitan Borough Council document

Observation Schedule for Assessment for Learning

<p style="text-align: center;">Key Features of effective assessment for learning</p>	<p style="text-align: center;">Comments/Evidence</p> <p style="text-align: center;">How does this manifest itself in the classroom? What are the indicators?</p>
<ul style="list-style-type: none"> • Is the teacher clear about the learning objectives/learning outcomes? 	<ul style="list-style-type: none"> • <i>Clearly written on plans.</i> • <i>Clearly accessible to pupils.</i> • <i>Activities match objective and allow it to be met.</i> • <i>Pupils understand what they are learning.</i>
<ul style="list-style-type: none"> • Are the learning objectives shared with the pupils in a way they can understand? • Are the success criteria that lie beneath the learning objectives shared or developed with the pupils? 	<ul style="list-style-type: none"> • <i>Pupils can rephrase and explain.</i> • <i>Language of 'success criteria' is familiar to pupils.</i> • <i>Success criteria are regularly used by pupils.</i> • <i>Success criteria are written up on the board, sheets or somewhere accessible to pupils.</i> • <i>Pupils' discussions are about success criteria with peers and teacher.</i>
<ul style="list-style-type: none"> • Does the teacher show/explain what 'good' work will be like, i.e. – are pupils clear about the expected standards? 	<ul style="list-style-type: none"> • <i>Teacher regularly models expectations.</i> • <i>Teacher regularly shares and discusses examples of other pupils' work.</i> • <i>Pupils articulate what they need to do to improve more specifically.</i> • <i>Success criteria/levels are available and used, e.g. displayed in classroom.</i> • <i>Pupils' work is used to exemplify different standards.</i>
<ul style="list-style-type: none"> • Does the teacher use questioning effectively, i.e. to find out what pupils know and understand; to promote further learning; to prompt thinking and reflection? 	<ul style="list-style-type: none"> • <i>Teacher asks questioning from knowledge → evaluation.</i> • <i>Teacher uses variety of techniques which ensure maximum participation.</i> • <i>Pupils ask questions frequently of teacher and of each other.</i> • <i>Teacher asks differentiated questions to specific pupils.</i> • <i>Teacher asks questions throughout lesson.</i>

<p style="text-align: center;">Key Features of effective assessment for learning</p>	<p style="text-align: center;">Comments/Evidence How does this manifest itself in the classroom? What are the indicators?</p>
<ul style="list-style-type: none"> • Does the feedback (both oral and written from appropriate adults and peers) to the pupils, focus on the learning objective? • Does feedback make pupils aware of the achievements they have made in relation to the learning objective? • Does feedback provide an improvement prompt or ‘closing the gap’ prompt? • Do the pupils understand/use the feedback to improve their work? • Are pupils given time to respond to feedback? • Is there evidence that pupils act upon the feedback to improve their work? 	<ul style="list-style-type: none"> • <i>Written and oral feedback is understood by pupils and can be explained orally by them.</i> • <i>Pupils’ rates of progress and improvement through their verbal responses and written work are clear.</i> • <i>Learning objectives in subsequent lessons highlight that learning is moving on.</i> • <i>Pupils are motivated, on task and clear about their learning.</i> • <i>Pupils are able to ‘help themselves’ and are independent learners.</i>
<ul style="list-style-type: none"> • Are pupils involved in other ways in the assessment process, e.g. peer-/self-assessment; negotiating, recording, monitoring their own progress through personal targets? 	<ul style="list-style-type: none"> • <i>Pupils are given opportunities to discuss their work.</i> • <i>Pupils are regularly observed discussing success criteria and their work with peers.</i> • <i>Pupils are able to support each other and identify next steps.</i> • <i>Pupils actively and regularly engage in personal target setting process and understand why they do it.</i>
<ul style="list-style-type: none"> • Do teachers and pupils reflect on the extent to which the learning objective has been achieved, e.g. in the plenary, self-/peer-assessment? 	<ul style="list-style-type: none"> • <i>Self-assessment is a regular, frequent and familiar strategy used in the classroom.</i> • <i>Language of the learning objective is revisited frequently in lesson.</i> • <i>Plenary probes learning through quality questioning and pupil responses - it does not just repeat and explain activity.</i> • <i>Next learning steps are discussed and/or recorded.</i>
<ul style="list-style-type: none"> • Do teachers use what they find out from assessment to inform their interventions in the midst of pupils’ learning and adjust their planning? 	<ul style="list-style-type: none"> • <i>Teachers intervene at timely intervals throughout lessons to ensure pupils remain focused.</i> • <i>Teachers’ planning shows clear differentiation and alterations.</i> • <i>Teachers’ teaching shows clear change of direction when and where necessary.</i> • <i>Pupils are always clearly challenged by what they are learning.</i> • <i>Pupils are engaged motivated and interested.</i>

Appendix 11: Results of Q2 A in the second interview

❖ *PART1 Q2 A) Does this list in question 2 show items that could not be used as formative assessment?*

The list in question 2 contained 17 items (**Appendix 3**):

1- Assessment is done as an oral formal exam.

2- Assessment is done as a written formal exam.

3- Assessment is done informally in a written way.

4- Assessment is done orally in an informal way. For example, when a teacher listens to the student's answer in the class and then gives feedback, that is called assessment.

5- Teachers teach, and they then assess later on.

6- Assessment is part of teaching. It is integrated into teaching and lesson planning. It is part of lessons and can be done many times during a lesson.

7- Assessment is done to provide pupils with marks.

8- Assessment is done by the pupils themselves (individually). Students are asked to say what objectives they have achieved and what they have not.

9- Pupils can assess each other, read each other's work and give feedback.

10- Assessment is done to provide students with feedback that reflects their weaknesses, strengths and how to overcome the difficulties that they have.

11- It involves sharing objectives with pupils and helping them to recognise the standards that they are aiming for.

12- It involves open-ended questioning, which provokes thinking, rather than closed questions.

13- We use assessment in order to know the extent to which students have achieved the outcomes (criteria assessment).

14- Learning outcomes are not important in assessment. We should use assessment that compares students to each other. We assess students according to their performance in a group (norm referencing).

-15- Assessment is neither based on achieving the learning outcomes nor comparing a student to the group. It is based on noticing the performance of a student in the whole

year. If a student's performance becomes better, the results would be better, and so on (ipsative assessment).

16- Assessment is continuous, such as the one practised in Saudi primary schools.

17- Assessment is done in different ways, which depend on the purposes of assessment.

Two participants only thought that formative assessment is part of assessment as a whole. They thought that it is part of every element in the list above. However, the rest of the participants had different perceptions. As shown in the table below, most participants thought that formative assessment is never done with marks.

Participants' choices of assessment elements that could NOT be used as formative assessment

Assessment elements that could not be used as formative assessment	Reasons	No. of subjects offered the reason
7- Assessment is done to provide pupils with marks.	Formative assessment is never done with marks.	9
2- Assessment is done as a written formal exam.	Because formal exams are about marks and formative assessment is not.	3
5- Teachers teach, and they then assess later on.	This is not continuous and formative assessment has to be continuous.	3
1- Assessment is done as an oral formal exam.	Because formative assessment is not formal.	2
14- Learning outcomes are not important in assessment. We should use assessment that compares students to each other. We assess students according to their performance in a group (norm referencing).	NA (the participants did not mention any reason).	2
3- Assessment is done informally in a written way.	NA (the participant did not mention any reason).	1

8- Assessment is done by the pupils themselves (individually). Students are asked to say what objectives they achieved and what they did not.	Teachers need to participate as well.	1
15- Assessment is neither based on achieving the learning outcomes nor comparing a student to the group. It is based on noticing the performance of a student in the whole year. If a student's performance becomes better, the results would be better, and so on (ipsative assessment).	No reasons mentioned.	1
16- Assessment is continuous, such as the one practised in Saudi primary schools.	Formative assessment is continuous, but it is not like the one applied in Saudi schools.	1

Appendix 12: Table, derived from second interview data, which shows the student teachers' perceptions about what they learned from the researcher regarding the elements and strategies of FA

❖ *Part 3 Q8) According to what you have chosen in part 3 section B statement 10 in the questionnaire, do the following:
First, explain to me what have you learned about formative assessment and its elements.*

The following table reflects two types of data. The first and second columns show the number of participants who had mentioned each element and strategy of formative assessment without further explanations. The third and the fourth columns show the number of participants who mentioned the element or the strategy with further explanations. The fifth column shows the number of participants as a whole who mentioned the element or the strategy.

Subjects' perceptions about what they learnt about formative assessment from the researcher (2)

Elements and strategies of formative assessment mentioned by the participants without explanations added	No. of subjects	Elements and strategies of formative assessment mentioned by the participants with explanations	No. of subjects	Total No. of subjects mentioning the element of formative assessment
First element / Sharing the learning outcomes	5	<u>Sharing the learning outcomes:</u> Students can judge themselves in relation to the learning outcomes.	1	8
		<u>Sharing the learning outcomes:</u> Students can focus on what they are going to have for today's lesson.	1	
		<u>Sharing the learning outcomes:</u> Helps students know what they are going to have in today's lesson.	1	
Second element/ questioning	7	None provided	0	7

Third element/ feedback	5	<u>Feedback:</u> This contains both positive and negative comments. 2 stars and a wish strategy.	1	6
Fourth element/ Peer-assessment	5	<u>Peer-assessment:</u> Pupils assess each other and benefit from this.	4	10
		<u>Peer-assessment:</u> Pupils assess each other relying on success criteria.	1	
Fifth element/ self-assessment	5	<u>Self-assessment:</u> Helps the learner to be independent and assess themselves.	2	9
		<u>Self-assessment:</u> Helps the teacher to know what the pupils are struggling with and then re-explain.	2	
“No hands up” strategy	5	<u>“No hands up” strategy:</u> Helps the pupils to be more involved and pay attention.	1	6
Sharing success criteria	1	None provided.	0	1
More time should be given to the pupils before answering	1	None provided.	0	1
Small boards	1	None provided.	0	1
Thumbs up and thumbs down	1	None provided.	0	1

Appendix 13: The mean and the standard deviation for data obtained from the first interviews

Tables of the first interviews that contain data of the mean and the standard deviation regarding the purposes of assessment (Learning, Selection and Certification, and Quality Assurance), and the advantages and the disadvantages of formative assessment before school placement are displayed here. This data is presented in figures in chapter five.

Table 1: The mean and the standard deviation of the three purposes of assessment, before school placement

Assessment related to	Mean	Std. Deviation	Rank
Learning	0.70	0.27	1
Selection and Certification	0.53	0.26	3
Quality Assurance	0.64	0.27	2

Table 2: The mean and the standard deviation for each assessment item related to learning, before school placement

Learning	Mean	Std. Deviation	Rank
L1	0.72	0.46	3
L2	0.81	0.40	2
L3	0.45	0.52	5
L4	0.54	0.52	4
L5	0.90	0.30	1
L6	0.72	0.46	3
Overall	0.70	0.27	

Table 3: The mean and the standard deviation for each assessment item related to selection and certification, before school placement

Selection and Certification	Mean	Std. Deviation	Rank
C1	0.63	0.50	2
C2	0.27	0.46	6
C3	0.72	0.46	1

C4	0.36	0.50	5
C5	0.72	0.46	1
C6	0.54	0.52	3
C7	0.45	0.52	4
Overall	0.53	0.26	

Table 4: The mean and the standard deviation for each assessment item related to selection and certification

Quality Assurance	Mean	Std. Deviation	Rank
Q1	0.81	0.40	1
Q2	0.81	0.40	1
Q3	0.36	0.50	5
Q4	0.72	0.46	2
Q5	0.54	0.52	4
Q6	0.63	0.50	3
Q7	0.54	0.52	4
Overall	0.64	0.27	

Table 5: The mean and standard deviation of the student teachers' expectations of the advantages and disadvantages of practising formative assessment, which they perceive are likely to happen to Saudi teachers and students

Advantages and disadvantages likely to happen to teachers & students	Mean	Std. Deviation	Rank
Teacher Negative Mean (TN)	0.60	0.25	3
Teacher Positive Mean (TP)	0.95	0.10	1
Student Negative Mean (SN)	0.61	0.25	2
Student Positive Mean (SP)	0.95	0.10	1

TN (Teacher-), TP (Teacher +), SN (Student-), SP (Student +)

Table 6: The mean and standard deviation of the student teachers' expectations of the disadvantages of practising formative assessment, which they perceive are likely to happen to Saudi teachers

Disadvantages likely to happen to teachers	Mean	Std. Deviation	Rank
TN1	0.18	0.40	5

TN2	0.45	0.52	4
TN3	0.63	0.50	3
TN4	0.81	0.40	2
TN5	0.90	0.30	1
Overall	0.60	0.25	

Table 7: The mean and standard deviation of the student teachers' expectations of the advantages of practising formative assessment, which they perceive are likely to happen to Saudi teachers

Advantages likely to happen to teachers	Mean	Std. Deviation	Rank
TP1	0.81	0.40	2
TP2	1.00	0.00	1
TP3	1.00	0.00	1
TP4	1.00	0.00	1
Overall	0.95	0.10	

Table 8: The mean and standard deviation of the student teachers' expectations of the disadvantages of practising formative assessment, which they perceive are likely to happen to Saudi students

Disadvantages likely to happen to students	Mean	Std. Deviation	Rank
SN1	0.45	0.52	3
SN2	0.54	0.52	2
SN3	0.81	0.40	1
Overall	0.61	0.25	

Table 9: The mean and standard deviation of the student teachers' expectations of the advantages of practising formative assessment, which they perceive are likely to happen to Saudi students

Advantages likely to happen to students	Mean	Std. Deviation	Rank
SP1	0.81	0.40	3
SP2	1.00	0.00	1
SP3	0.90	0.30	2
SP4	1.00	0.00	1
SP5	1.00	0.00	1
SP6	1.00	0.00	1
SP7	1.00	0.00	1
Overall	0.95	0.10	

Appendix 14: The mean and the standard deviation for data obtained from the questionnaires

Tables of the questionnaires that contain data of the mean and the standard deviation regarding the purposes of assessment (Learning, Selection and Certification, and Quality Assurance), and the perceived advantages and disadvantages of formative assessment after school placement are displayed here. This data is presented in figures in chapter five.

Table1: The mean and the standard deviation for all of the three types of assessment, after school placement

Assessment related to	Mean	Std. Deviation	Rank
Learning	0.97	0.10	1
Selection and Certification	0.79	0.26	3
Quality Assurance	0.88	0.22	2

Table 2: The mean and the standard deviation for each assessment item related to learning after school placement

Learning	Mean	Std. Deviation
L1	1.00	0.00
L2	1.00	0.00
L3	0.91	0.30
L4	1.00	0.00
L5	0.91	0.30
L6	1.00	0.00
Overall	0.97	0.10

Table 3: The mean and the standard deviation for each assessment item related to selection and certification after school placement

Selection and Certification	Mean	Std. Deviation
C1	1.00	0.00
C2	0.45	0.52

C3	0.82	0.40
C4	0.91	0.30
C5	0.91	0.30
C6	0.64	0.50
C7	0.82	0.40
Overall	0.79	0.26

Table 4: The mean and the standard deviation for each assessment item related to selection and certification after school placement

Quality Assurance	Mean	Std. Deviation
Q1	0.91	0.30
Q2	0.91	0.30
Q3	1.00	0.00
Q4	1.00	0.00
Q5	0.82	0.40
Q6	0.73	0.47
Q7	0.82	0.40
Overall	0.88	0.22

Table 5: The mean and standard deviation of the student teachers' choices of the advantages and disadvantages of practising formative assessment, which they perceive are likely to happen to Saudi teachers and students, after school placement

Advantages and disadvantages likely to happen to teachers and students	Mean	Std. Deviation	Rank
Teacher Negative Mean (TN)	0.64	0.22	2
Teacher Positive Mean (TP)	0.61	0.17	3
Student Negative Mean (SN)	0.64	0.28	2
Student Positive Mean (SP)	0.69	0.19	1

Table 6: The mean and standard deviation of the student teachers' choices of the disadvantages of practising formative assessment, which they perceive are likely to happen to Saudi teachers, after school placement

Disadvantages likely to happen to teachers	Mean	Std. Deviation	Rank
TN1	0.73	0.47	3
TN2	0.09	0.30	5
TN3	1.00	0.00	1
TN4	0.82	0.40	2
TN5	0.55	0.52	4
Overall	0.64	0.22	

Table 7: The mean and standard deviation of the student teachers' choices of the advantages of practising formative assessment, which they perceive are likely to happen to Saudi teachers, after school placement

Advantages likely to happen to teachers	Mean	Std. Deviation	Rank
TP1	0.09	0.30	4
TP2	0.91	0.30	2
TP3	0.45	0.52	3
TP4	1.00	0.00	1
Overall	0.61	0.17	

Table 8: The mean and standard deviation of the student teachers' choices of the disadvantages of practising formative assessment, which are likely to happen to Saudi students, after school placement

Disadvantages likely to happen to students	Mean	Std. Deviation	Rank
SN1	0.64	0.50	2
SN2	0.55	0.52	3

SN3	0.73	0.47	1
Overall	0.64	0.28	

Table 9: The mean and standard deviation of the student teachers' choices of the advantages of practising formative assessment, which they perceive are likely to happen to Saudi students, after school placement

Advantages likely to happen to students	Mean	Std. Deviation	Rank
SP1	0.91	0.30	1
SP2	0.82	0.40	2
SP3	0.36	0.50	4
SP4	0.36	0.50	4
SP5	0.91	0.30	1
SP6	0.73	0.47	3
SP7	0.73	0.47	3
Overall	0.69	0.19	

Appendix 15: Results of the student teachers’ perceptions of the elements of FA, after their school placements

Participants’ responses of part 1 Q6):

❖ **PART1 Q6) Tell me about the strategies (elements) that are related to formative assessment and why we use them.**

The list in question 2 contained 17 items (**Appendix 3**):

Will be shown in the following tables:

Table 15- 1: Reasons mentioned for applying “Declaring the learning outcomes”

Reasons mentioned for applying “Declaring the learning outcomes”	No. of subjects mentioning the reason	No. of subjects reporting “Learning outcomes” as an element
These two reasons were mentioned together: 1) Helps pupils to know what they are going to have today. 2) Helps pupils to assess themselves in relation to the learning outcomes.	11	11

Table 15- 2: Reasons mentioned for applying “Questioning”

Reasons mentioned for applying “Questioning”	No. of subjects mentioning this reason	No. of subjects reporting “Questioning” as an element
Checks understanding.	5	7
Gets students involved.	2	

Table 15- 3: Reasons mentioned for applying “Feedback”

Reasons mentioned for applying “Feedback”	No. of subjects mentioning this reason	No. of subjects reporting “Feedback” as an element
Improves the pupils’ performance.	7	11
Done to make pupils listen carefully.	1	
It helps pupils to be enthusiastic.	1	
Improves learning.	2	
Done between the pupils and the teacher.	1	
Done amongst pupils only.	2	
It is done by the students for the teacher to let the teacher know what the pupils thought about the lesson.	1	

Table 15-4: Reasons mentioned for applying “Peer-assessment”

Reasons mentioned for applying “Peer-assessment”	Number of participants mentioning the reason	Number of participants reporting “Peer-assessment” as an element
Pupils learn from each other more than their teacher.	7	11
Helps the pupils to be involved in discussions	2	
Helps the pupils to be active in the learning process and more confident.	2	

Table 15- 5: Reasons mentioned for applying “Self-assessment”

Reasons mentioned for applying “Self-assessment”	No. of subjects mentioning this reason	No. of subjects reporting “Self-assessment” as an element
Helps the pupils to know what they have achieved.	4	8
Helps teachers to know where students are in their learning.	4	
Self-assessment is related to the learning outcomes.	3	
Did not apply it because she was not convinced.	1	

Table 15- 6: Reasons mentioned for applying “No hands up strategy”

Reasons mentioned for applying “No hands up strategy”	No. of subjects mentioning this reason	No. of subjects reporting “No hands up strategy” as an element
Makes the students alert and attentive.	7	7
Helps pupils to listen to the teacher.	2	
Helps pupils to participate.	2	
Helps in classroom management.	1	

Table 15- 7: Reasons mentioned for applying “Success criteria”

Reasons mentioned for applying “Success criteria”	No. of subjects stating the reason
The teacher assesses the pupils’ work based on success criteria.	3

Appendix 16: Comparing the student teachers' perceptions of assessment and formative assessment before and after school placement by using paired-samples t-test

Table 16- 1: The mean and standard deviation of all the three types of assessment before and after school placement

Assessment related to		Mean	Std. Deviation	Rank
Pair 1	Learning- PreSP	0.70	0.27	1
	Learning- ASP	0.97	0.10	1
Pair 2	Selection & Certification- PreSP	0.53	0.26	3
	Selection & Certification- ASP	0.79	0.26	3
Pair 3	Quality Assurance- PreSP	0.64	0.27	2
	Quality Assurance- ASP	0.88	0.22	2

PreSP (Pre-School Placement), ASP (After-School placement)

The analysis of paired-samples t-test revealed that there was a statistically significant development in the subjects' understanding of the nature of assessment. The results showed a significant development of understanding regarding assessment related to learning (sig=0.06, $p < 0.01$), followed by selection and certification (sig= 0.036, $p < 0.05$), and quality assurance (sig=0.036, $p < 0.05$) with the same significance level (see **Table 16-2**).

Table 16- 2: The variation in perceptions of the purposes of assessment, before and after school placement

Paired-samples t-test

Assessment related to	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Dev	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Learning- PreSP Pair1 Learning- ASP	-0.27	0.26	0.08	-0.45	-0.097	-3.464	10	.006**
Select&CertificationPreSPSelect&Certification - Pair2 ASP	-0.26	0.35	0.11	-0.50	-0.021	-2.429	10	.036*
QualityAssurance-PreSP Pair3 QualityAssurance-ASP	-0.25	0.34	0.10	-0.47	-0.019	-2.417	10	.036*

PreSP (Pre-School Placement), ASP (After-School Placement),

*Significant at an alpha level of 0.05

** Significant at an alpha level of 0.01

When conducting the analysis of the paired-samples t-test, it was found that the Saudi student teachers' perceptions regarding the advantages of FA in relation to students and teachers significantly changed. This suggests that their experiences of practising FA had a significant influence on their perceptions regarding the advantages of FA (see **Table 16-3** & **Table 16-4**): there was significant variation of the advantages of FA in relation to teachers (sig= 0.000, P< 0.01), and significant variation of the advantages of FA in relation to students (sig= 0.002, P<0.01).

Table 16- 3: Comparing the student teachers’ perceptions, before and after their school placements, regarding the advantages and disadvantages of FA in relation to students and teachers

Paired-samples t-test statistics

Advantages and disadvantages likely to happen to teachers and students		Mean	N	Std. Deviation	Std. Error Mean
Pair1	Teacher Negative (TN) PreSP	0.60	11	0.25	0.07628
	Teacher Negative (TN) ASP	0.64	11	0.22	0.06505
Pair2	Teacher Positive (TP) PreSP	0.95	11	0.10	0.03049
	Teacher Positive (TP) ASP	0.61	11	0.17	0.05183
Pair3	Student Negative (SN) PreSP	0.61	11	0.25	0.07545
	Student Negative (SN) ASP	0.64	11	0.28	0.08354
Pair4	Student Positive (SP) PreSP	0.96	11	0.09	0.02785
	Student Positive (SP) AS	0.69	11	0.19	0.05720

PreSP (Pre-School Placement), ASP (After-School Placement), TN (Teacher Negative = Disadvantages of FA likely to happen to teachers), TP (Teacher Positive = Advantages of FA likely to happen to teachers), SN (Student Negative = Disadvantages of FA likely to happen to students), SP (Student Positive = Advantages of FA likely to happen to students)

Table 16- 4: The variation in the student teachers' perceptions of the advantages and disadvantages of FA before and after their school placements

Paired-samples t-test

Advantages and disadvantages likely to happen to teachers and students		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair1	Teacher Negative (TN) PreSP Teacher Negative (TN) ASP	-0.04	0.34	.10381	-.26767	.19494	-0.350	10	.733
Pair2	Teacher Positive (TP) PreSP Teacher Positive (TP) ASP	0.34	0.20	.06098	.20503	.47679	5.590	10	.000**
Pair3	Student Negative (SN) PreSP Student Negative (SN) ASP	-0.03	0.31	.09486	-.24167	.18107	-0.319	10	.756
Pair4	Student Positive (SP) PreSP Student Positive (SP) ASP	0.27	0.22	.06519	.12747	.41799	4.183	10	.002**

PreSP (Pre-School Placement), ASP (After-School Placement),
 TN (Teacher Negative= Disadvantages of FA likely to happen to teachers)
 TP (Teacher Positive= Advantages of FA likely to happen to teachers)
 SN (Student Negative= Disadvantages of FA likely to happen to students)
 SP (Student Positive= Advantages of FA likely to happen to students)
 **P<0.0

List of Abbreviations

Abbreviation	Explanation
FA	FORMATIVE ASSESSMENT
ARG	ASSESSMENT REFORM GROUP
AFL/AfL	ASSESSMENT FOR LEARNING
OECD	ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT
EFL	ENGLISH AS A FOREIGN LANGUAGE
QCA	QUALIFICATIONS AND CURRICULUM AGENCY
ITT	INITIAL TEACHER TRAINING
NCTQ	NATIONAL COUNCIL ON TEACHER QUALITY

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