Assessment for Learning (AfL)

in one Maltese State College

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Abstract

Assessment is a complex landscape. Debates about whether summative or formative assessment, or a combination of both, offers the best approach to assess students' learning have been dominating international and local literature for years. This study seeks to further enrich these discussions by looking into the relationship between the beliefs and practices about Assessment for Learning (AfL) of Maltese state primary school teachers in one college. A college is a cluster of primary, middle and secondary schools within a particular geographical region. Furthermore, this study takes a step forward in investigating the influence of a collaborative action research approach on the teachers' beliefs and practices about AfL. Throughout the study, positivism is resisted and the guiding theoretical framework is social constructionism based on an interpretive paradigm.

This investigation was carried out in two phases over the span of one year, the first phase in May-June 2014 and the second phase from September 2014 to June 2015. The first phase consists of collecting data from two open-ended questionnaires with eighty-five teachers and eight Heads of Schools. The second part of the study consists of a nine-month long study with three teachers who were new to AfL. These participants took on the role of action researchers to improve their class situations by embedding a set of AfL strategies in their lessons. Multiple data sources including group discussions, individual feedback sessions, record-keeping booklets, semi-structured interviews with the teachers and their students and teachers' self-written stories were utilised. Both research phases generated rich qualitative data which were analysed from a qualitative content analysis lens. Data coding and analysis were assisted by NVIVO.

Findings of the first phase indicate that the overarching situation consists in a positive level of thought, which is accompanied by a limited understanding and a higher degree of mechanical AfL practice. Thus, the relationship is a divergent to a convergent one, therefore a complex one. This link transcends into degrees of semi-complex (Early Years) to a complex (Junior Years) relationship at the particular year group levels.

Findings from the collaborative action research part show that this mode of teachers' professional learning had an overall positive influence on the beliefs-to-practice relationship, albeit to different degrees of improvement. Nonetheless, the participants still ended with a wobbly belief about AfL having the same effect on all the students.

This thesis argues that the belief about the pedagogy is also underpinned by the teachers' perceptions of the students' attitudes and motivation towards learning. Thus, the teachers' perceptions of the students are affecting their expectations and perspectives of the success, or otherwise, of AfL. Hence, the belief to practice relationship is a matter of degree.

Keywords: Assessment for Learning (AfL), Formative assessment, beliefs, pedagogy and action research, collaborative action research.

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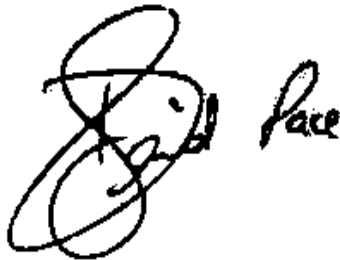
Lastly, my thanks go to my mum and in-laws for their words of encouragement and moral support.

Declaration of Authenticity

I hereby declare that this thesis is my own work. No part of it has been previously submitted, published or presented elsewhere in any format.

Due acknowledgement has been given to other's people work throughout this thesis.

This thesis is my intellectual property and use of any of this material must be adequately acknowledged.

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Doreen Said Pace

Dedication

To my family

Geoffrey, Karl and Kurt

and

My late father

Carmelo

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List of Abbreviations Used

Assessment for Learning – AfL

Assessment as Learning – AasL

Collaborative Action Research - CAR

European Union – EU

Trends in International Mathematics and Science Study – TIMSS

Progress in International Literacy Study – PIRLS

National Minimum Curriculum - NMC

A National Minimum Curriculum Framework For ALL – NCF

Learning Outcomes Framework – LOF

Head of Department – HOD

Institute for Education – IfE

Malta Union of Teachers – MUT

Programme for International Student Assessment – PISA

Organisation for Economic Cooperation and Development – OECD

Assessment Reform Group – ARG

Teaching and Learning International Survey – TALIS

Ministry for Education and Employment – MEDE

Directorate for Quality and Standards in Education - DQSE

*Beliefs are never a finished process
because humans are continually in the process of
changing and becoming.*

(Fives and Buehl, 2012, p. 490)

Chapter 1 : Introduction

1.1 Overview

This thesis investigates the influence of primary school teachers' beliefs and practices about Assessment for Learning (AfL) in one Maltese state college over the span of one scholastic year. A college consists of a cluster of primary, middle and secondary schools within a particular geographical region. The number of schools varies across colleges. Nonetheless, an equitable student population is ensured in that each college has about the same student population. The one participating in this study is constituted of eight primary schools (Kinder to Year Six), one middle school (Year Seven and Year Eight) and one secondary school (Year Nine to Year Eleven). There are eleven colleges on the Maltese Islands, one in Gozo and ten in Malta.

The study takes a two-phase approach. First, it sets out to obtain the broader view of the teachers' position about AfL within the eight aforementioned primary schools. Then it narrows down to a collaborative action research approach with three teachers who, prior to this study, had never been supported in the implementation of AfL. During this research study the participant teachers were fully-supported in the application of specific AfL strategies that could help them improve their respective class situations.

The discussion of this chapter starts with an overview of the study, which details the research rationale, aim, purpose and questions of this study. This is then followed by a detailed explanation of the epistemology, theoretical perspective, methodology and methods used in this study. After that, the international situation with regards to AfL is discussed, which challenges place the need for this study in a wider dimension, other than Malta. Lastly, this chapter will discuss the recent era of changes in the Maltese

educational reforms, an era spanning more than two decades. In this last section, the educational challenges and priorities will be highlighted so as to show the significance and timeliness of this study.

The organisation of this thesis consists of seven chapters, whose details and signposting will be embedded in the discussion.

1.2 Visual Representation of the Study

Figure 1.1 presents an overview of what the study entails, while the subsequent section expounds on each area.

> **Research Issue:** A group of Maltese state primary school teachers within one college were not valuing, appreciating and believing in the philosophy of AfL.

> **Research Aim:** This study set out to investigate the connections between the teachers' beliefs and practices regarding AfL in a group of state primary schools within one college. Additionally, this study has examined the influence of collaborative action research on the relationship between these beliefs and practices with regard to AfL held by a small group of teachers who were new to AfL.

> **Research Purpose - This study intends to:**
>
> - create new knowledge about the emerging AfL situation at a particular point in Malta with particular participants and within a particular context;
> - enrich both the local and international literature;
> - inform local policy and practice about professional learner-centred ways of learning to tackle innovations;
> - provide local experiences of a small group of teachers, which non-participant teachers can associate and possibly trial.

> **Research Questions**
>
> - What are the connections between the beliefs and practices of teachers who are novice AfL practitioners in a Maltese state primary school?
>
> - How could a collaborative action research study influence the connections between the teacher's AfL beliefs and practices, and therefore of prospective AfL practitioners?
>
> **Methodology: Qualitative** **Analysis: Qualitative Content Analysis**

Figure 1.1: A Visual Representation of the Study

1.3 Research Issue, Aim and Purpose

Assessment occupies a central role in educational programmes of instruction because through assessment the impact of the programme on the students' learning can be measured. Despite its prominence, the purpose, function, and the timing of assessment affects whether the teacher is still, or not, in time to take a follow-up action to remedy the learning situation. Using assessment as part of the ongoing teaching and learning process rather than at the end of the learning has been greatly emphasised by Black and Wiliam (1998a, 1998b, 1999) in their seminal work. Such position of assessment is still supported in contemporary debates (Hay, Tinning and Engstrom, 2015; Laveault and Allal, 2016).

The Maltese policymakers concur with this modern view of assessment to improve learning, that is, Assessment for Learning (AfL), to the extent that this philosophy has been recommended in the current National Curriculum Framework For All (NCF) (Ministry of Education and Employment, 2012). This is because the rationale of AfL would fulfil the three overarching aims of the NCF: inclusivity, lifelong learning, active citizenship and employability. More than that, AfL fitted well with the aims and purposes of recent reforms, carried out between 1995 and 2017 (Grima, Grech, Mallia, Mizzi, Ventura and Vassallo, 2008; Ministry for Education and Employment, 2015; Ministry of Education, 1999; Wain, Attard, Bezzina, Camilleri, Darmanin, Farrugia, Psaila, Sammut, Sultana and Zammit, 1995; Wain, Macelli, Bencini, Borg, Borg, Debono, DeBrincat, Gatt, Mizzi, Sultana and Vella, 2001), which will be discussed in detail in section 1.7. The recommendations put forth by these policy documents have been endorsed by the very recent sectoral agreement between the Government

and the Malta Union of Teachers (MUT), which supports the former's vision of assessment as part of the learning process.

The last two decades spearheaded by Wain et al.'s (1995) report introduced the notion of student-centred learning, among other ideas, which has influenced and shaped the subsequent changes of the Maltese educational system. This shows that the call for student-centred learning has been voiced for quite a long time. Student-centred learning is an approach to teaching and learning whereby the student is an activator (Hattie, 1999, 2003) and co-constructor of knowledge (Vygotsky, 1978) in partnership with the teacher rather than a passive receiver. Despite this emphasis, the introduction of AfL pedagogy is a recent policy recommendation (Ministry of Education and Employment, 2012).

Notwithstanding the effectiveness of AfL as evidenced by research (Birenbaum, 2016; Birenbaum, DeLuca, Earl, Heritage, Klenowski, Looney, Smith, Timperley, Volante and Wyatt-Smith, 2015; Birenbaum, Kimron, Shilton and Shahaf-Barzilay, 2009; Black and Wiliam, 1998a, 1998b, 2009; Chappuis and Stiggins, 2002; Hattie, 1999, 2002, 2003; Laveault and Allal, 2016; Stiggins, 1999, 2002, 2009; Stiggins, Arter, Chappuis and Chappuis, 2004), an effective tool in the hands of unskilled craftsmen loses much of its effectiveness. Hence, for a pedagogical tool like AfL to leave its mark, it must be used with great craftsmanship. More than that, since the implementation of AfL was on a voluntary basis in a number of state primary schools in Malta, its practice was being taken up lightly. For instance, the college in this study had seven primary schools which were being supported in the implementation of AfL and one which was not. The respective schools had not asked for support and started benefiting from such service at the same time.

The AfL support service was provided by the Education Officer of that time, together with five Heads of Department within the AfL unit in the Directorate for Quality and Standards in Education (DQSE). This unit was set up in the last quarter of 2011. The Heads of Department were recruited through an open call for applications. Among others, their eligibility criteria required ten years' teaching experience. The five that were chosen came from different backgrounds, having performed duties as a class-based primary school teacher, a teacher with inclusion coordinator duties, a teacher within the Malta Writing Programme (MWP), a teacher within the Literacy Support Agency and a teacher within the e-Learning Department.

Notwithstanding their voluntary calls for support, different attitudes towards the implementation of AfL from both Heads of Schools and class teachers were experienced. The educators' dispositions towards AfL was observed from either the small-group discussions during the allotted year-group curriculum development time or during whole-school staff professional development sessions. The structure of these professional sessions was an adaptation of Wiliam's (2004) programme, Keeping Learning on Track (KLT), whereas their content was inspired by the works of Black and Wiliam (1998b), Black, Harrison, Lee, Marshall, and Wiliam (2004a) and Clarke (2005), among others, on the AfL strategies and the way they contribute to increase student achievement.

In providing support to teachers within my role as Head of Department (Assessment) for three years, it was noted that the issues raised could be grouped into two main categories, stemming either from scepticism about AfL or from the belief that AfL was already part of the teachers' practices. Both stances indicating an initial resistance to further one's (the teachers') knowledge about AfL. Faced with such opposing views

and attitudes, the assumption was that there might either be patchy episodes of practice, in that teachers were not practising AfL in a consistent way, or that they were not doing it in an intentional way, as explained by Black and Wiliam (1998a, 1998b), or that they were not practising it at all. Thus, absence of practice or unsustainable practice might be the impinging factor for the teachers' spectrum of beliefs about AfL. Notwithstanding this initial assumption, this study does not set out to test this statement but will be open to what the investigation data will reveal. Moreover, this study will not claim that the findings represent the teachers' beliefs and practices in primary schools across the Maltese Islands, but reflect solely the situation within one college.

Stating my assumption is simply a matter of being honest about my preconceived ideas and position on this real-life issue (Crotty, 1998; Sikes, 2004; Sikes and Potts, 2008). Moreover, as Walsham (2006) pointed out there is never a "neutral observer" (p. 321) who approaches research with a "blank mind" (Ormston, Liz, Matt and Dawn, 2013, p. 6).

Black, Harrison, Lee, Marshall, and Wiliam's (2003) findings about the type of teachers' practices in the use of formative assessment resonate with the assumption being made at the start of this study. Black et al. (2003) found four categories of teachers' practices: "experts, moving pioneers, static pioneers and trailers" (p. 28). Expert teachers fully embedded and integrated the formative assessment with practice. The moving pioneers were teachers who had success with one or two strategies and were seeking alternative ways of moving forward. Similarly, static pioneers were also successful with one or two strategies but decided to stick only to these strategies. Lastly, trailers were those teachers who attempted the strategies but did not embed

them in their practice. Another study by Webb and Jones (2009) about teachers' AfL classroom practices who were participating in a professional development programme for the implementation of AfL found three groups of teachers' practices: "trialling, integrating and embedding" (p. 170). The trialling group were those teachers who were at the experimentation stage. The integrating group consisted of teachers who adopted the integration of some AfL strategies but not in an intentional way. Lastly, the teachers forming part of the embedding category used AfL within its spirit, (Marshall and Drummond, 2006), meaning that each strategy was used purposefully.

The findings of these three studies not only resonated with my assumption but also stimulated a self-reflective process of thought provoking questions intended to discover the teachers' thoughts, levels of understanding, beliefs, concerns and practices with regard to AfL. Of particular interest was whether there is a relationship between the teachers' AfL beliefs as well as AfL practices. More than that, the influence of how collaborative action research (CAR), as a mode of professional learning, shapes the teachers' beliefs and practices will be examined. Thus, an insight into how the medium and mode of learning about AfL influences the teachers' beliefs and practices about the new pedagogy would be gained. The ways in which teachers experience AfL and the effect of their AfL beliefs on AfL practices will be delved deeper in Chapter Two, where a critical review of the literature will be presented.

1.4 Structure of this Study

This study was carried out in two phases, with each phase guided by a research question and a set of subsidiary questions. The two main research questions were formulated to answer the research aims and thereby address the research purpose (as outlined in Figure 1.1).

The justifications for having chosen these questions and the research design, methodology and methods most suited to answer them will be explained in Chapter Three. Subsequently, Chapter Four presents the findings generated from the two open-ended questionnaires in the first phase of the study and provides a critical analysis of the results. Following right after, Chapter Five presents the findings generated from the multiple data collection sources (see Figure 1.2) used in the collaborative action research process. Chapter Six provides a critical analysis of each story through a set of themes. Finally, Chapter Seven draws the conclusion of this study by revisiting the research questions in the light of the findings while setting forth the implications and makes recommendations for future research.

1.5 Philosophical Underpinnings

Having disclosed, in section 1.3, my professional involvement with the participants prior and at the beginning of the research, which Sikes and Potts (2008, p. 3) define as "insider research", makes it more important to state my positionality. Figure 1.2 sets out the epistemology, theoretical perspective, methodology and methods that have shaped the design of this study.

Figure 1.2: Adaptation of Crotty's (1998) scheme for this study.

1.5.1 My Epistemological stance

Epistemology, Cohen, Manion, and Morrison (2011) explain, refers to the nature of knowledge which in Lincoln, Lynham, and Guba's (2011, p. 91) words forces the researcher to ask "How do I know the world?" and "What is the relationship between the inquirer and the known?" Answering these questions establishes the epistemological assumptions of "what it means to know" (Scotland, 2012, p. 9) or, as Crotty (1998, p. 8) put it, "how we know what we know." Both Crotty (1998) and Gray (2013) recognise the existence of three epistemological stances: objectivism, subjectivism and constructionism. This study embraces the constructionist stance, which sustains that knowledge is constructed through the interaction of the subject with the environment. As Crotty (1998) explains, there is no meaning without the intervention of the human mind, and since different people have different experiences influencing how the mind interprets objects, two people are likely to interpret the same thing differently. Consequently, each subject and object are considered as partners in the generation of knowledge (Crotty, 1998). Therefore, in constructionism, new knowledge is subjective and highly related to the researcher's position and perspective. Nonetheless, Gray (2013) maintains that these "different constructions of the same phenomena are equally valid" (p. 20), as long as they are justified. Hence, in constructionism, there is not one absolute truth or meaning.

Objectivism differs from constructionism as it holds that there is a world awaiting to be discovered and its meaning does not depend on whether the human being is conscious of the world's existence (Crotty, 1998). Subjectivism, according to Crotty (1998), Scotland (2012) and Gray (2013), occurs when meaning is imposed on the object, thus maintaining and asserting control by the researcher over what constitutes

valid knowledge (Guba and Lincoln, 2005). In this study, careful attention was given to avoid imposition so that the teachers' responses would reflect what they actually understand and think rather what might be better to tell (Greener, 2011).

1.5.2 My Ontological stance

Ontology focuses on the "nature of reality" (Lincoln et al., 2011, p. 91). In terms of education, Jackson (2013, p. 52) translates it into "the philosophical study of the nature of educational reality and how there may be different perceptions of what is known." This implies that perceptions of teaching and learning realities are formed and shaped by the meaning that beings give to them (Crotty, 1998). Hence, different realities lead to different interpretations which, in turn, re-shape the contextual reality. In line with the epistemological stance explained above, reality is shaped by the human beings' actions. However, in the context of education, there is the reality envisaged by the policies which teachers are expected to meet through their change of practices. If teachers consider the reality portrayed in the policies as distant and utopic, independent of what they do, it will be difficult to bring about change through their actions (Fullan, 1993). Therefore, in education, there might be two opposite perspectives, the policy envisaging a constructionist operating framework and the current culture based on a subjectivist operationalisation. This paradigmatic controversy, as Guba and Lincoln (2005) highlight must find a way how to "interbreed" (p. 192) as otherwise it will be impossible to bring out the change in practice envisaged by the educational policies. Therefore, there must be a crossing of paths between subjectivism and constructionism.

Crotty (1998) provides an excellent example about this crossing of perspectives, where he argues that in subjectivism meaning is imported from somewhere else, like dreams

or beliefs, while in constructionism the human being creates the meaning. Therefore, in subjectivism humans make meanings too. Through this example, he illustrates that "epistemological stances are not watertight compartments" (p. 9) and since epistemological and ontological stances go hand in hand, then there should not be the argument, Dewey (1930) suggests, of an either-or reality but how the new reality can emerge from the teacher's new craft knowledge (Russell, 2015). A similar argument to Crotty's (1998) advocacy for the possibility of inter-crossing between epistemology, ontology and theoretical perspectives is also expounded by Guba and Lincoln (2005), who argued that it is no longer useful to contend about the "irreconcilable conflicts but on how one perspective might inform the other" (p. 192). Hence, using a constructionist approach with teachers who, currently, adopt a subjectivist operationalisation to knowledge would, hopefully, provide a model which they can emulate in their teaching and learning.

Notwithstanding the multiplicity of realities which can give rise, according to Birenbaum et al. (2015), to teachers' professional dilemmas, the ontological position that I subscribe to is an interpretivist one where reality is affected by the doing and experiences of humans within a context. Thus, the action transforms the living reality of the humans within that context giving a new meaning to the living reality (Blaikie, 2000; Schwandt, 2000). Therefore, the new meaning transcends from the doer's action and it is this meaning that affects the operational context of the doer. Hence, an understanding of how researchers attribute meaning necessitates an understanding of their position within the context being studied and an understanding of the context itself.

Schwandt (2000) recognises three ways in which intepretivism can occur: empathy, phenomenology and language frames. The whole argument put forward by Schwandt (2000) is that the interpreter has to get inside the world of the actors (empathy) to understand their daily lives (phenomenology) and to make an 'objective' analysis, as an outsider of the language used to describe their living practices and culture. In a similar vein, Clough and Nutbrown (2012) maintain that an interpretive approach necessitates the researcher to get "on the inside" (p. 64) of the research field, thus becoming inseparable from the subject. Crotty (1998), also, states that an interpretivist approach is a theoretical perspective in the guise of hermeneutics, phenomenology and symbolic interactionism.

Hermeneutics, (Gray, 2013) explains, is the social construction of the social reality. Therefore, hermeneutics shares the same ontological position of interpretivism. According to Schwandt (2000) different people construct diverse meanings of reality which through interpretivism can be interpreted in an objective way which is a fork of hermeneutics – objective hermeneutics. To do so, Crotty (1998) argues, the already interpreted world must be put in abeyance to be re-interpreted by the researcher, who embeds himself in the daily lives and context of those researched. This abeyance allows the researcher to try to look at the daily lives in their pristine form to make a new meaning. Such process is what phenomenology does. Distinctive from hermeneutics and phenomenology, symbolic interactionism relies on the symbolic features that constitute communication and interaction, such as discourse, text and symbols in the daily lives (Crotty, 1998; Gray, 2013).

This study translates these facets of interpretivism through a collaborative action research approach which allows the participants to share their constructions and

interpretations of their living realities to be re-interpreted by the researcher, who takes account of their cultural demands by being in their culture. Therefore, collaborative action research is a particular methodology which, in its process for change, can use various elements from sub-sets of interpretivism. In the current study, familiarisation with the fieldwork culture was possible due to the long term presence, spread throughout one whole scholastic year, amounting to approximately forty-seven hours of direct contact with the participants. Moreover, the participants involved themselves in the verification of the transcribed and translated data and had the opportunity to read my interpretation of the findings and to give their views about it. Since the three teachers' in-class learning environment differed from an exam-driven syllabus to a non-exam one, this variation enriched the study as the influence of testing on the teachers' practices and beliefs could be debated and analysed.

The entire research adopted a social constructionist approach to learning because I share Lamb and Simpson's (2003) belief that teachers as learners should go through the same experiences they are expected to offer to their students. On the other hand, I, as the guiding 'teacher', have to be able to step back, to listen and to scaffold on the teacher's professional talk about AfL, thus adopting the AfL approach with the teachers I worked with. In this respect, this research has changed my positionality to respect more the teachers' craft knowledge and to use their knowledge of practice to bring about change. This has not only changed me professionally but also personally, as a mother of two school-age boys, during parents' days' exchanges with my sons' teachers. Lastly, this research has made me more sensitive towards the concept of action research as I believe that, at times, the term is becoming a cliché where everyone is doing action research. McMahon (1999) argues that the everyday thinking without

a strategic action follow-up is not action research as it just stops at the thought level. Awareness of what a sound action research investigation entails has therefore led me to read new works or discuss with the protagonists to find out more about the methodology used.

1.6 A Social Constructionist Perspective

The epistemology of constructionism states that the making of meaning is a construction of the human being's interactions with the world (Crotty, 1998; Windschitl, 2002). On the other hand, the constructionist's view of reality, their ontological position, is that reality is not independent of the human mind because, as Crotty (1998) argues, the meaning of reality without the interpretation of the mind is meaningless.

Two types of constructionism exist the individual (constructi**v**ism) and the group constructs (social constructio**n**ism). Constructivism is construed by the making of meaning of the individual mind (Crotty, 1998, p. 58). Distinctive from constructivism, social construction emphasises the making of meaning within and out of group interactions. Since human beings have different positionalities in the world, their different interpretations of the same phenomena allow space for a critical discussion (Crotty, 1998).

In teaching and learning, Prawat (2009) and Stiggins (2009) argue that teachers can hold a naïve conception of constructivism when they perceive the students' involvement in learning as a sufficient condition for constructivism. Instead, it is the focused interaction and, Windschitl (2002) adds, the follow-up activities that extend the cognitive implications of that activity which qualify the students' knowledge as

constructionists of learning. In this respect, Windschitl (2002, p. 145) sustains that "what distinguishes a teacher employing constructivist teaching is not the 'giving of hints' but the elaborate set of strategies to support the understandings and autonomy of students." The scaffolding provided by the teacher during lessons, according to Vygotsky (1978), assists students to reach their zone of proximal development (ZPD). It is in this view of social interaction between the teacher and the student during the learning process which led Vygotsky (1978) to emphasise that learning is a social activity embedded in dialogic talk amidst other ways of communication and learning (Vygotsky, 1986). Therefore, Vygotsky's (1978) understanding of teaching and learning is that of a dynamic process and interaction with the learning environment. The role of the social environment is what distinguishes Vygotsky's from Piaget's (1971) works: the emphasis of Piaget is on the readiness for learning of the individual, thus constructivism, as per his theory of the stages of development. Windschitl (2002, p. 140) refers to Piaget's view of learning as cognitive constructivism.

This study shares Vygotsky's (1978) conceptualisation of constructionism, implying that students are regarded as partners with their teachers in their learning process. The dilemmas that this view raises, as Windschitl (2002) explains, are conceptual, pedagogical, cultural and political: conceptual because it challenges the epistemological and ontological views of the teacher practitioner if a subjectivist form of knowledge is currently being adopted; pedagogical because the design to lesson planning must be different, student-centred. Mc Tighe and Thomas (2003) and Wiggins and Mc Tighe (2005) emphasise that a student-centred approach to lesson planning should reflect a backward design to planning, whereby teachers do not start planning from the activities but from the lesson's learning goal and the diverse

learning attainment targets that will, ultimately, lead towards that goal. Once that is established, teachers will match the tasks and the most appropriate mode of assessment to measure the learning achievement. Such a shift in lesson planning must be complemented by a re-orchestration of the teacher's and the student's roles, thus bringing about a cultural dilemma. Furthermore, Windschitl (2002, p. 150) argues that "for teachers, creating patterns of beliefs and practices consonant with a constructivist philosophy is especially difficult when one considers the entrenched school culture that it must usurp." Providing a meaningful teacher-to-student in-class interaction is not an easy task for teachers, and despite the teachers' willingness, they need help in this endeavour (Harrison, Constantinou, Correia, Grangeat, Hähkiöniemi, Livitzis, Nieminen, Papadouris, Rached and Serret, 2018).

All these changes, unless they are well explained to the various stakeholders such as parents and the business community, will be resisted giving rise to the political dilemmas. Therefore, both constructivism and constructionism have their limits as well as their benefits (Crotty, 1998; Windschitl, 2002).

In AfL, the teacher's role must be a social constructionist one as the teacher has to find out through dialogue whether the students' constructions of learning represent what the teacher intended and, in case not, the teacher has to assist the students to rectify their constructions. This continuous search for the right constructions is similar to Marzano's (1998) emphasis on the intended and actual learning. It follows that the creation of an effective social constructionist learning environment necessitates a culture of dialogue where the teacher's and students' voices are valued and can be critically discussed. Culture is in fact seen by Geertz (1973 as cited in Crotty (1998)) as the source, rather than the result, of human action, meaning that any changes in the

surrounding reality have to come from the re-culturing of the learning organisation (Fullan, 1993; 2011). However, this culture to action link issue is complex as while culture influences the teachers' actions, it is the action of teachers which reshapes the surrounding culture of learning. Applying this culture-to-action link to the focal area of this study, assessment, implies that assessment shapes what goes on in class (Earl, 2007; Dsythe 2008). This means that if the teacher's action is assessment based, that action will contribute towards the building of an assessment culture supported by the teacher's beliefs and practices about the assessment in use. Such an assessment culture is perhaps what is currently needed in the Maltese context, as the present system is mostly based on a culture of testing (Gipps, 1994). Malta is not an exception in the difficulties faced by its teachers in the implementation of AfL, since other countries have faced, or are still facing, similar issues. This will be discussed in the following section, which will first look at the international scenario and then will narrow down the focus to the Maltese educational context.

1.7 Assessment Issues in the International Fora

Every country has its own system of transmitting the set (explicit) curriculum, and adopts methods by which students' progress on that curriculum is assessed. Thus, teaching, learning and assessment are three topics of global interest because they are, or should be, an integral part of one's educational system. However, their interrelatedness or otherwise differs across countries as cultural pressures influence, and in some cases determine, the approach to teaching and learning and the type of assessment used on the basis of what is valued (Black, 2015). For instance, Darling-Hammond and McCloskey (2008) pointed out that in the USA the culture of testing is privileged over a culture of formative assessment processes. Thus, if a change in the

way of assessing students is proposed, American practitioners would definitely need abundant support to enact it. Similarly, in Canada, DeLuca and Klinger (2010) examined the confidence levels in assessment of prospective teachers and found that they were more confident in the use of summative, rather than the formative, assessment. In another study, Klinger, Volante and Deluca (2012) concluded that the participant teachers' assessment literacy levels needed to improve. Hence, the Canadian teachers participating in these studies needed support in the development of their levels of understanding about assessment and to raise their confidence levels in the implementation of AfL. On the other side of the globe, in Australia, Cumming and Maxwell (2004) argued that assessment practices varied among teachers and there was not a common front between them, implying that these teachers lacked a uniformly accepted way of assessing students. These difficulties were attributed to a lack of common understanding about assessment because such understanding was still in its developing stages. Thirteen years later, Masters (2017), in an online article[1] was still debating about the distorting messages conveyed by a grade or mark in that these outcomes of assessment do not inform the students about their on-going progress. In his article, he strongly advocates for more use of formative assessment, implying that the challenges faced in the previous decade, mentioned by Cumming and Maxwell (2004), are still pertinent.

In Hong Kong, a country whose Confucian-Heritage culture is dominated by high-stake tests, Carless (2010) draws attention to the gap between policy and practice in the use of formative assessment. According to Carless (2010), increasing the

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[1] theconversation.com

educators' knowledge of assessment through collaborative research is a possible resolution to this challenge.

On a Northern European front, Jonsson, Lundahl and Holmgren (2015) show that in Sweden AfL practices are mostly teacher-centred, a practice which is the antithesis of the philosophy of AfL. It can also be interpreted that the participating teachers tried to import old-established roles and practices into the new pedagogical practice. Since the old and new pedagogy operate from different theoretical frameworks, trying to fit a practice from one into the other will surely be a recipe for failure.

In Scandinavia, the Norwegians too felt the need to change their teaching, learning and assessment practices to an outcomes-based practice guided by a formative assessment philosophy, especially after the disappointing PISA results (Tveit, 2014). Two years later, Leirhaug and Annerstedt (2016) confirmed the recent change to, and use of, AfL and, therefore, the practitioners' little experience with this practice. Furthermore, they emphasised that the breakthrough should occur by working more alongside the students and their teachers.

From a Western European front, the OECD review of the educational systems in Northern Ireland and the UK by Shewbridge, Hulshof, Nusche and Stenius Staehr (2013) recommended further collaborative work and capacity building in the implementation of an evaluation and assessment framework. According to these authors, the proposed measures would further enhance the current positive practices. In response, a Commission Report by McIntosh (2015) supports the OECD's recommendation by strongly emphasising the move to in-depth teaching through the removal of levels that, according to him, are currently clashing with the purpose of formative assessment. Furthermore, he admits that the mode of assessment training is

not effective, and thus there is the imminent need for quality staff training in assessment.

In Scotland, the recent Organisation for Economic Co-operation and Development (2015) review commissioned by the Scottish Government to evaluate its Basic General Education (BGE) since the implementation of the Curriculum for Excellence (CfE), praised the latter's great promises, efforts and type of practice. Nonetheless, the Organisation for Economic Co-operation and Development (2015) drew a caveat that "too many teachers are unclear of what should be assessed in relation to experiences and outcomes" (p. 11). In view of this, two of the few recommendations put forth were purposely about assessment. These included the integration of assessment and evaluation, and the alignment between the purpose of the assessment and the resulting evidence from that assessment task.

This brief overview of studies looking into assessment policies and practices across continents is not an exhaustive investigation, yet it not only highlights the challenges across the globe, consisting of the need to be:

- More knowledgeable about formative assessment;
- Aware of the thoughts that shape the teacher's attitude towards assessment and its incorporation in the daily lessons;
- Conscious of the cultural context in which the assessment is situated and how the learning environment influences the effectiveness, or otherwise, of formative assessment;

but also confirms the timeliness and pertinence that research about assessment still enjoys. These challenges can be of consolation, but not an excuse, to the Maltese

policymakers and practitioners in that they can recognise that Malta is not an exception to the challenges put forth by formative assessment. The Maltese challenges, stemming mainly from a deep-rooted culture of testing, will be discussed next. Meanwhile, the recognition that formative assessment is not a straightforward matter even on an international level makes this study more relevant, as its findings could be of interest on a wider scale beyond the local dimension.

1.8 The Maltese Educational Context

The Maltese educational structure is composed of three sectors: the state, the church and the private-independent. The state sector accounts for almost 58% of the total student population, the church around 30% and the private independent around 12% (National Statistics Office, 2012). While the state schools are totally funded by the government, the church sector is in its majority funded by the state but depends also on the yearly donations of parents whereas the private-independent is totally funded by the parents.

Malta is a small state nation with a strategic geographical position in the middle of the Mediterranean. It is a British post-colonial country and has been independent since 1964. Since the country's main asset revolves around its human capital, ensuring basic competency, knowledge and skills amongst citizens is a government priority. In view of this, the Hon. Minister Edward Scicluna (2014) stated that "education is the best tool for social mobility, for fighting poverty and for our children to have better opportunities" (p. 57). Hence, the government is officially recognising that education is the key to prosperity. Such significance is reflected in the mission of the Maltese Ministry for Education and Employment as per statement below:

> The objective of the Ministry for Education and Employment is to provide present and future generations with the necessary skills and talents for citizenship and employability in the 21st century and beyond. Our children need to develop their potential and acquire the appropriate knowledge, key skills, competences and attitudes through a value-oriented formation including equity, social justice, diversity and inclusivity. (Ministry for Education and Employment, 2014b)

The mission that the Ministry set for itself is rather ambitious but necessary especially in the light of the poor performance of the Maltese students, reported by the Ministry for Education and Employment (2013b; 2013), in the TIMSS and PIRLS international assessments. In particular, the Maltese student cohort under-performed in texts that required reference and higher order skills of interpretation. This indicates that these students lack the skills for higher order thinking (Bloom, 1969). Moreover, the figure for 2013 of 20.9% early school leavers as per the National Statistics Office (2014) confirmed the figures by the Europea Commissione – European Commission (2013) that Malta had the second highest level above EU average of early school leavers. This alert showed not only that the two decades of educational reforms have not yet reached their intent but also the mission guiding the educators' work was falling short. Consequently, immediate attention and a new course of action by the Ministry's policymakers, aimed at dropping the rate of the Maltese Early School Leavers to 10% to reach the EU 2020 target, ensued. The emphasis of the new strategy called on educators to provide meaningful in-class or out-of-class learning experiences. Hence, this new way forward is similar to Black and Wiliam's (1998a, 1998b); Wiliam's (2010) emphasis for the creation and capitalisation of effective class and school learning environments. However, such environments can be brought about if the educators, school leaders and teachers are well-versed in how to create and sustain this environment. In view of this, in order to reach the targets set in the Ministry's mission,

the educators in a school organisation would need a sound professional development and learning programme about what makes most impact on students' learning. Wiliam (2011a) asserts that lifelong learning skills can be instilled through daily formative assessment practices, or what in Black and Wiliam (1998b) are termed as AfL. Therefore, any educational organisation which is serious about student achievement should invest in teacher training about formative assessment practices.

The Maltese Government's initial step of assistance to reach the MEDE's mission was a financial injection in the yearly budget allotted to education. This financial impetus provided the means for the construction of several new state of the art primary, middle and secondary schools as well as the setting up of different learning programmes in both the primary, middle and secondary sectors. Although these have ameliorated the situation, as the rate of early school leavers has decreased, (Ministry for Education Youth and Employment, 2014), Wiliam (2011a, 2016) stresses that what matters most is not the programme or the money invested for it but the quality of instruction underpinning that learning programme. Therefore, the way forward to improve the outcomes of learning organisations is to be watchful about the quality of teaching and learning.

The current National Curriculum Framework For All (NCF), (Ministry of Education and Employment, 2012), stipulates that the AfL pedagogy that can assist educators in the betterment of the current quality of teaching and learning. Thus, making it in line with the Ministry's mission. It was in response to the NCF's call that AfL was introduced in the state primary schools on a voluntary basis. The interest, or lack thereof, in the use and sustainability of AfL has led to the need of this study.

1.9 Summary of Chapter

This chapter has set out the research issue, aim and purpose of this study. The need for this exploratory investigation into the connections between the beliefs and practices about AfL of Maltese state primary school teachers in one college has stemmed not only from a local need but also from the international challenges regarding AfL identified in section 1.7. Thus, the outcomes of this study are of relevance to both the local and international context. It is hoped that the findings resulting from this investigation will eventually not only enrich the corpus of literature on AfL through the creation of new knowledge about the field from another context, particularly through three authentic local stories with which other teachers sharing similar contexts might identify, but also provide a contemporary example of professional learning that can tackle teaching and learning innovations, among other things, thus informing policies and school leaders who have the responsibility to offer such support to their teachers. What is of interest in this research is that the study moved beyond an exploratory level of investigation, as it also examined the effect of the CAR process on the teachers' beliefs and practices for the implementation of a new pedagogy.

Apart from providing the contextual background for this study, this chapter has stated the research questions, the methodology and the methods and mode of analysis, all of which align to the parameters of qualitative research. Also, the need for this study has been identified and justified, while the philosophical underpinnings and positionality have been expounded. It has been stated that a social constructionist stance to epistemology and ontology is endorsed throughout the study

As explained in the outline of the structure of this study, the next chapter is a critical review of the literature which explores how teachers experience AfL, looking into their professional dilemmas at both the theoretical and pragmatic level.

Chapter 2 : Review of Literature –How teachers experience AfL

2.1 Overview

This chapter offers a critical discussion of the literature concerning the philosophy of Assessment for Learning (AfL), the debate about whether AfL contributes towards enhancing student academic achievement and learning experiences, the relationship between the teachers' beliefs and practices in adopting a new pedagogical approach, the challenges of its implementation and the role of professional learning communities in teacher learning.

In order to carry out a due investigation into the current issues in AfL, this critical review is divided into five major areas. The first one revolves around a discussion of the fundamental role that assessment plays within an educational system. For this reason, definitions of AfL are proposed, while also noting the general lack of consensus about a standard universal definition of AfL and the dearth of student and teacher-friendly definitions of AfL. Given that student and teacher-friendly definitions are lacking, an attempt to offer two such definitions will also be made. Secondly, the research evidence-based outcomes about the significant impact of AfL on student achievement will be discussed. Issues of the quality of teaching and learning and the role of the surrounding culture in the teacher's and students' interaction during the learning episodes will be delved into. In acknowledging that the school culture might be in contrast with a growth mind-set culture, which needs to underpin the AfL implementation, the professional dilemmas that teachers are caught up in will be expounded on. According to Dweck (1986), a growth mind-set is a mind frame whereby success in learning is attributed to effort and practice, thus to controllable

factors rather than to something fixed which the learner cannot control. Since these dilemmas have a direct effect on the teachers' positionality about AfL and, consequently, what they put in practice, the third focus will be on the relationship between the teachers' beliefs and practices. If the underlying premise is that teachers practice what they believe that will work, or have witnessed to work, then professional learning activities can facilitate the teachers' learning and what they come to believe. Hence, the fourth issue will deal with an analysis of the vital role that professional learning communities (PLC) play in teachers' learning. In an attempt to extrapolate the connecting links between professional learning communities and teacher learning, the current context of the Maltese teachers' professional learning will be investigated. This will shed light on the present limitations of the current structure of teachers' professional learning and the effect that this might have on the successful implementation of AfL.

Following the international debates about AfL, the fifth issue centres on the role of policies. In this respect, a review of the local policy documents related to teaching, learning and the school environment is carried out. Such a review is highly relevant to this study as the policies provide the framework for the schools' and the teachers' work. More specifically, the explicit inclusion and emphasis of AfL as one of the pedagogical approaches available to teachers in meeting a student-centred approach in the current National Curriculum Framework For All (NCF), which, in turn, has affected the subsequent policies, justifies the need to investigate and include the local scenario in this review.

2.2 The Role of Assessment in Education

2.2.1 Formative versus Summative Assessment (FA vs SA)

Assessment is one of the most widely discussed topics in education as it is through assessment that students' achievements of the learning outcomes are evaluated, measured and reported. Therefore, assessment acts as a tool that provides information to students, teachers, school leaders, parents and policymakers concerning the status of an individual's learning (Taras, 2005). Consequently, assessment results attract the interest of various stakeholders because these results do not only reveal the level of learning of a country's student population but also reflect the effectiveness of the current teaching and learning. This implies that, through assessment results, society in general is informed about the quality of teaching and learning, and therefore about the quality of its teachers. Hence, assessment is the means which reveals whether effective teaching is leading to effective learning. In fact, Wiliam (2011a) affirms that teaching starts when learning starts. This has a direct implication on the purpose, function and timing of assessment. If this stance is accepted and the assessment takes place only at the end of the learning, then the evidence collected could be too late to remedy the situation. Therefore, if the performance results attained after the 'learning' has taken place reveal a low attainment, it could mean then that no effective teaching has taken place. This is what happens with summative assessment (SA), where stock of the learning is taken at the end of the learning process (Stiggins, 2002) and when the assessment act is separated from teaching and learning instances (Fautley and Savage, 2008). According to Gipps (1994) and Fautley and Savage (2008), an educational scenario which keeps teaching, learning and assessment as three distinct things reflects a culture of testing, whereby the SA takes priority over formative assessment (FA). In this respect, Baird, Andrich, Hopfenbeck and Stobart (2017) maintain that assessment

and learning have been kept apart because their respective theories have not developed in parallel: theories of the former did not take account of theories of the latter, which is why a connection between the two has been difficult to establish. To this effect, Wiliam (2017a) explains that this lacuna arises from the purpose and function of the respective theories in that the purpose of AfL has stemmed from a "…principle and [an] observation about learning" (p. 400) rather than from a problem with learning. Whereas theories of the latter deal with "what happens during the learning, theories of assessment deal with the evidence of learning" (p. 400) because "assessment is a procedure for making inferences about learning" (Wiliam, 2017a, p. 397). Hence, in using the evidence of learning as the basis and the purpose of assessment during the learning, the link between assessment, learning and, consequently, teaching is better established. In ascertaining assessment as an integral part of the teaching and learning (Shepard, 2000b), whereby the former acts as a "bridge" (Wiliam, 2016) linking teaching to learning, both teachers and students have a tool at their disposal to check that what was taught was transferred to meaningful learning. As Marzano (1998) put it, assessment serves as the checkpoint between the intended and actual learning, and it is only when these two levels of learning match that effective teaching takes place. In the eventuality of a gap between the two levels, then the whole cycle of teaching would have not been completed.

Conceptualising teaching as a cycle, journey or work in progress from the learning intention to the learning outcome would be fairer to the teacher rather than to say that no teaching has taken place. Actually, the teaching act would have taken place but what would not have taken place is effective teaching for long-term learning. In this regard, it is important that assessment takes place on a daily basis because day-to-day

assessment makes assessment more authentic, relevant and responsive to the immediate needs of the students (Nutbrown, 1999). Therefore, the embedding of assessment within teaching and learning implies that both teachers and students have to be active users of assessment during teaching and learning. This does not imply that there is no room for SA in the process of learning, as this type of assessment can also be used formatively, thus contributing evidence of development in learning. The frequency and type of assessment depend on the intent of the assessment, that is, on what does the teacher wants to make inference about, and on how that evidence will be used.

2.2.2 Summative Assessment (SA)

Summative assessment is frequently associated with a grade or a mark, two constituting factors that do not necessarily attest to the student's progress or aid the learner in improving. Moreover, the function of summative assessment is for certification purposes, accountability or selection criteria (Fautley and Savage, 2008). However, summative assessment can take a formative nature if the evidence of learning gained from it is taken a step further. This happens when the information gained is used by teachers to refine their teaching, and to inform and guide the students in making the necessary corrections. The intent of formative assessment, according to Black and Wiliam (1998a, 1998b, 1999, 2004, 2009), Chappuis and Stiggins (2002) and Black, Harrison, Lee, Marshall and William (2003) is to improve the students' learning experience while they are in the process of learning. Specific AfL strategies imbued in a work in progress form of learning aim at assisting students experience higher achievement goals in daily learning through the right scaffolding advice provided by the teachers or peers. Therefore, it follows that the distinguishing factors

between formative and summative assessment are the timing and purpose of the assessment. In summative assessment, for example, the function that is pursued is a rear view stock-taking analysis of the learning status while the function of formative assessment is forward looking.

During lessons teachers are continuously evaluating students' work, thus making a series of implicit judgements at particular points in the learning process, which can be considered as a sequence of 'mini' summative exercises if the assessment stops at teacher evaluation (Taras, 2005). Such assessment is mistaken for formative assessment as it does not include marks or grades, when in fact it is another form of summative assessment, thus highlighting further the restricted understanding of the multiple ways in which summative assessment can be manifested. For the latter to qualify as formative, it needs to include Scriven's (1967) complexive evaluation which subsequently Bloom (1969), Hattie (2014) and Wiliam (2014) categorised as feedback that aids the learner in reaching his true potential. Feedback is crucial in so far as it contributes to an evident change in the student's progress. It is only when this happens that formative assessment takes place (Clarke, 2005; Sadler, 1989). While Scriven (1967) and Taras (2005) place summative and formative assessment on the same continuum, thereby not establishing a clear distinction between the two, Sadler (1989) opts for a clearer distinction. This implies that the use of summative assessment as a mere tool for measuring performance rather than academic growth is being contested. By taking into account this broader view, the process of assessment would encompass a tool based exclusively on the expected outcomes of the evaluation of the material being assessed, the judgement on the type of feedback that needs to be given and the subsequent action undertaken by the student on the feedback given. This process is

repeated *ad infinitum.* Therefore, both evaluation and judgement would form part of the assessment process and should not be separated. In fact, according to Scriven (1967) evaluation is "a methodological activity" (p. 40) while Nitko (1995) defines it as "the process of judging the quality of a student's performance" (p. 324), a stance that supports further the validity of a continuum of assessment. Nonetheless, in their critique of the research on formative assessment, Dunn and Mulvenon (2009) argue that evaluation is an apparatus that produces assessment data while assessments are data collection instruments. This distinction between the function of evaluation and assessment led these critics to separate formative evaluation from assessment. The subsequent separation of the latter prevents Dunn and Mulvenon (2009) from evaluating the connecting link between formative assessment and student achievement. Rightly so, Dunn and Mulvenon (2009) claim that further empirical evidence on the affiliation between formative assessment and academic achievement still exists. The separation of evaluation from assessment equates the process of separating methodology and method in research design, a disassociation which is arduous since the methodology informs the choice of methods (Cohen, Manion and Morrison, 2007; Cohen et al., 2011).

2.2.3 Summative Assessment as a sub-branch of Formative Assessment

The conceptualisation of summative assessment as a sub-branch of formative assessment is very relevant to twenty-first century education systems as this stance would encourage teachers to start perceiving assessment as a singular rather than a pluralistic activity (Sadler, 1989; Scriven, 1967; Wiliam and Leahy, 2015). Furthermore, if summative and formative assessment are no longer seen as distinct and incompatible, the existent tension between formative and summative assessment

might be diluted (Taras, 2005). The use of one assessment with multiple functions is recommended by Harlen (2005), who points out that the same evidence of learning can be used for both the narrowed criteria at each episode of learning and the broad criteria at the end of a learning programme. Moreover, Taras (2005) adds that using one assessment for a variety of purposes will eradicate the excessive burden teachers are faced with when using assessment. She suggests that the time gained by using such a method will help educators focus on their teaching and come up with adequate strategies that promote the involvement of students in the use of feedback. It is only then that student autonomy is increased. The latter is an aspect that Willis (2007) perceives as being elusive and that requires immediate attention on behalf of the research community.

The students' involvement in their learning process widens the social dimension of learning. Such view of learning is highly emphasised in the Assessment Reform Group (2002) definition of AfL, which describes it 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).

However, this social learning aspect required by AfL does not only demand a change in the students' role during learning but also necessitates that teachers and school leaders share a social learning theory conviction both in their espoused and in-use theories (Argyris and Schon, 1974).

2.2.4 The Social Learning Theory of AfL

The social learning theory on which formative assessment and AfL are founded is social constructionism (Vygotsky, 1978). Social constructionism holds that students are active collaborative constructors of meaning with their teachers. The implications

that this learning theory has for assessment is that learning and assessment occurs in groups (Fautley and Savage, 2008). However, in AfL, one of the strategies employed is self-assessment, a term that denotes and implies 'the self', and therefore the individual. However, there is peer assessment too, which is about giving or receiving feedback, thus the social group aspect. Therefore, the strategies of AfL include elements of social constructivism and constructionism. These different ways in which people learn need to be shared in an empirical way with the students so they can develop the necessary skills and competences to handle AfL in a formative way. AfL cannot be as effective as Black et al.(2003) have shown if teachers adopt Freire's (1970, 2000) banking model of education, whereby the teachers are the sole transmitters of information while students are passive spectators on the receiving end. A banking model of education relies heavily on the behaviourism learning theory, in which the role of the learning environment the students are exposed to and that which the students come to know from their interaction with the environment is ignored (Vinod, 2011). If this approach in education is still taking place and the teachers claim that their teaching and learning is based on social constructionism, then what they say is not what they practice. Hence, the clash between beliefs and practices will obstruct the effectiveness of the AfL pedagogy.

The engagement of both educators and learners in this process transforms assessment into a social activity which complements Vygotsky's (1978) stance on learning as an interpersonal activity. If teaching, learning and assessment constitute a series of social activities interrelated with the students' educational experiences, (Dewey, 1938), such a stance towards education should offer diverse opportunities for broadening the students' intellectual and academic experience.

The sociocultural perspective of AfL has recently been further reinforced in a collection of papers which discussed the challenges of AfL and how these can be possibly met (Laveault and Allal, 2016). However, in a review of this collection, Wiliam (2017b), while welcoming the importance of the insights put forth by the respective authors, criticises their stance of AfL in being only from a social-cultural perspective, because AfL has also roots in other traditions, based on "data-driven decision making and strategy-based…" (Shepard, Penuel and Davidson, 2017, p. 49). Therefore, AfL is a pedagogy which is influenced by a combination of theories based on specific models of learning and others not based on theories of learning such as the the two just mentioned above. Although both traditions can lead to effective use of assessment, if used well, that is, with the appropriate knowledge, competence and skill, AfL is mostly effective when there is coherence and equity between the student, the curriculum, the pedagogy and the assessment used. Consequently, assessment has to be adapted in the same way that curriculum and pedagogy are, if it is to reach all the students. According to Wiliam (2017b), part of the problem lies in the inconsistent practices of teachers about AfL, despite the "weight of the evidence on the effect of assessment on student achievement" (p. 1). Thus, if the debate about sporadic AfL practice is still relevant, then educational systems are still far from reaching the pinnacle of assessment, that is, Assessment as Learning (AasL).

2.2.5 Assessment as Learning (AasL)

An extension of AfL is Assessment as Learning (AasL), the epitome of formative assessment in which the students take full control of their learning by engaging in a metacognitive process to help them understand where they are, where they should be and how to decide on closing the gap (Earl, 2003, 2007). This form of assessment is a

clear example of what constitutes independent and lifelong learning skills. Therefore, assessment, when used well, can positively influence learner autonomy (Lamb, 2010; Lamb and Simpson, 2003; Lamb and Little, 2016) due to the convergent link between classroom assessment and self-regulated learning (SRL) (Andrade and Brookhart, 2016). For students to be high in self-regulated learning, their role and their teacher's role must change. As a result, classroom assessment also carries a political effect (Broadfoot and Black, 2004). Recent work by Panadero, Jonsson and Strijbos (2016) points out that feedback is a "central feature of AfL or [classroom formative assessment]" (p. 322); therefore, there is also a relationship between feedback and SRL. Furthermore, since self-and-peer assessment stem from feedback, then there is also a relationship between these two strategies and SRL, but Panadero et al. (2016) acknowledge that there is the need for more research on peer assessment and SRL.

In conclusion of the discussion about the types of assessment, an educational programme without any form of assessment is an inconclusive programme as there is no evidence showing that the learning has taken place. In turn, without evidence, the decision-making that should stem from it would be based on superfluous data rather than sound data. As a result, the next steps to be taken might not be fit for the circumstances or purpose of the situation (Cohen et al., 2007, 2011). It follows that a deep understanding of the role of assessment and its effect on student achievement is undeniably important. However, such a competence, both in the theory and the empirical part of assessment, requires further training of all stakeholders constituting the internal and external communities.

Assessment is indeed a complex matter as it deals with the concept of progression in learning, the awareness of different approaches to learning, autonomy, collaboration

and cooperation in learning and motivation, among others. Therefore, AfL is not just a matter of a set of techniques but plays a crucial role in aligning and bringing coherence between the curriculum, the pedagogy used and the learning outcomes (Spencer and Hayward, 2016). It is within this broad intent of assessment that strong concern arises when one form of assessment such as the summative is preferred over the formative. Whichever type of assessment is used depends on the purpose and function for which it is being used, and it should not be an either-or battle. As the ensuing discussion will show, there is nothing wrong in using both types of assessment concurrently. On the contrary, it is a good balance, because it emphasises that the learning process should not be assessed in a monopolistic way. However, one of the main challenges for the implementation of AfL is convincing teachers of this dual need and use of assessment. Perhaps, if the role of assessment was presented as a cyclic process whereby both types of assessment are part of the same loop, teachers might be more receptive and could gain more from the benefits of AfL.

2.3 Definitions of Assessment for Learning (AfL)

The seminal and influential work of Black and Wiliam (1998b) about the impact of formative assessment on student achievement has generated much interest and triggered a vast amount of research on the subject. Notwithstanding the voluminous literature, up to this day no single universal definition of what constitutes AfL has been outlined. According to Nitko (1995), Taras (2005), Dunn and Mulvenon (2009), Boyle and Charles (2010), Bennett (2011) and Gordon et al. (2014), the different yet similar definitions of AfL might risk confusing teachers, who might be led astray as to what constitutes the best definition and framework of AfL. If different teachers follow different definitions and subsequently uphold different understandings of AfL,

it is likely that their practices, in mirroring their diverse understandings, might differ too. Laveault and Allal (2016) note that this is one of the many challenges that teachers face in the implementation of AfL. If placed in this perspective, then Jonsson, Lundahl, and Holmgren's (2015) argument about a consensual dearth of what makes effective and less effective AfL practices is still valid and relevant. In fact, Wiliam (2017b), in his book review of Laveault and Allal (2016), attributes this gap to the lack of "systematic use of assessment to improve learning" (p. 1). Perhaps, a definition from an empirical perspective could assist both teachers and students to engage in a methodical use of formative assessment. An empirical basis is required because the definition has to clearly illustrate the roles of the teachers, the students and the process in ways that they both can understand. Definitions do not only provide a working framework but also provide the parameters for reflection on the subject explained by that same definition. Postholm (2012) points out that in reflecting, in this case about the definition, the reflective practitioner must not only understand the words and thoughts of the author of the definition but also the author's motivation. It is only when the rationale is deeply understood and embraced that the users (in this case teachers and students) of the definition can really make meaning out of it and be motivated by its parameters to guide their work.

Despite the many different views about AfL, the two most cited and leading definitions of AfL are provided by Black and Wiliam (1998a, 1998b, 2009) and the Assessment Reform Group (2002). Both critical stances, together with other definitions by Hattie (2002), Stiggins, Arter, Chappuis and Chappuis (2004), OECD (2008) and Klenowski (2009), will be discussed in an attempt to formulate a teacher-friendly and a student-

friendly definition of AfL, which are supported by a framework for AfL. The latter will build on the one provided by Black and Wiliam (2009).

Black and Wiliam (1998b) define assessment as

> All those activities undertaken by teachers and by their students in assessing themselves that provide information to be used as feedback to modify teaching and learning activities. Such assessment becomes formative assessment when the evidence is actually used to adapt the teaching to meet student needs.

Subsequently, Black and Wiliam (1999) support this definition further by advocating that the spirit of AfL rests on the:

- provision of effective feedback;

- active involvement of pupils in their learning;

- adjustment of teaching to take account of the results of the assessment;

- recognition of the profound influence assessment has on the motivation and self-esteem of pupils, both of which are crucial influences on learning;

- need for students to be able to assess themselves and understand how to improve.

Therefore, AfL is based on the meaningful interaction taking place between the teacher and the student. However, for the latter to take place, the stakeholders, in particular the students, must not only know what AfL is about but must be equally certain of what role they should adopt in this form of assessment. Unless students are aware, as much as their teachers are, of the expected foreseen outcomes that AfL places on their role in learning and be willing to change their current role in learning (Dixon, Hawe and Parr, 2011), a healthy AfL interaction is loosened and its effectiveness becomes greatly questioned. A recent study by Leirhaug and Annerstedt (2016) has reaffirmed

the call for more student-involvement in assessment and that assessment must be something "done with the students rather than to the students" (p. 628).

Learning about new expectations brought forth by innovative pedagogical strategies implies that teachers and students need to broaden the scope and the extent to which the content of their interpersonal interactions will seek questioning 'how to learn' rather than just 'what to learn' (Wiliam, 2007b). On one hand, Willis (2011), Gordon et al. (2014) and Hopfenbeck, Flórez Petour and Tolo (2015) emphasise the importance of creating a sense of affiliation and identity through dialogue within the class community. On the other hand, Lamb and Little (2016) argue that a meaningful dialogue on and about learning between teachers, students and peers promotes student autonomy while also implying that AfL is considered as a stepping stone leading to autonomous learning. If the process of AfL is vital for the students' learning and achievement, a student-friendly definition of AfL is needed in order to guide the learners. At present, the language used in the definitions of AfL targets teachers rather than students. Since research outcomes are more accessible to teachers rather than students, the responsibility of sharing and understanding AfL strategies is falling entirely on the teachers. This might explain the lack of involvement on behalf of students where AfL practices are concerned. It also suggests, as Jonsson et al. (2015) point out, that AfL practices are more teacher-centred, while their implementation signals a collaborative effort between teacher and student, thus a paradox between recent evidence-based AfL practice and the way it should be. This incongruence further calls for the need to have an AfL definition from a students' perspective. This would enlighten educators in that having a teacher and a student-friendly definition at their disposal would help them to reflect upon the spirit of AfL from the sender's (the

teacher) and the receiver's (student's) view. Such an insight would facilitate the process entailed in planning for a lesson with AfL which should reflect a constructive alignment between the learning outcomes, the assessment and the tasks (Biggs, 1996, 2003a, 2003b). Lack of coherence between these facets of the teaching and learning process would only show the inefficacy of the assessment users in handling assessment to provide "an added-value to the learning experience" (Hay et al., 2015, p. 33). Contrastingly, an assessment efficacy would focus on the students' behaviour as a result of assessment. This, as Laveault (2016) remarks, is yet another challenge of AfL.

Referring to the Assessment Reform Group (2002) definition mentioned in section 2.2.3, three main parts: the process of seeking and interpreting evidence, the use of evidence produced by teachers and students, and the three phases (the present, the future and in-between) of the quest for evidence, constitute this definition. In seeking and interpreting evidence, both the teachers and the students have to know what kind of evidence justifies and ensures that deep learning has taken place. Therefore, if teachers and students have, as Black (2007) states, a shallow understanding of what counts as evidence of learning, then there might be the danger that the evidence used to rely results on is not a true representation of what has been learnt. An example of a false evidence of learning is when teachers judge mastery of learning by the number of correct or incorrect responses in school or homework rather than by the rationale used to work out the responses. Such rationale can be accessed either through dialogue and meaningful talk, as stated by Vygotsky (1987), Lamb (2008, 2010) and Lamb and Little (2016), or in the use of hinge point questions (Wiliam and Leahy, 2015). This type of questioning takes place at a particular moment in the lesson when the teacher

needs to collect evidence of whether the students are understanding or misunderstanding the whole concept. Moreover, Wiliam and Leahy (2015) argue that a well-crafted hinge point question does not allocate space for the collection of false evidence. Additionally, they admit that hinge-point questions are not frequently used because a well-crafted question requires time and practice to formulate. However, teachers are encouraged to start practising them if they really want to tap on the students' actual learning. This is one of the ways teachers collect valuable information on what has been learnt, thus a means of seeking and interpreting evidence on which to decide the next steps.

The ARG, in their definition, stress on the dual responsibility of both the teacher and the students to identify where they are in their learning and to decide on the way forward. Notwithstanding this definition, the already mentioned study by Jonsson et al. (2015) found that this partnership practice between teachers and students is still lacking. Possibly, teachers are still shouldering the responsibility for the implementation of AfL because they are not relating to the definitions presented and, more importantly, translating them into effective practices. When teachers take on themselves the sole responsibility of AfL implementation, the teachers would be adding on unnecessary work, leading them to believe that AfL is another burden on their workload. Moreover, this teacher-centred approach to AfL reinforces further the students' belief that they do not need to involve themselves in learning (Black, Swann and Wiliam, 2006). However, Black and Wiliam (2009) were very clear about the students' responsibilities in the learning process, with the latter reiterating that the learning has to be done by the students and not by the teachers (Wiliam, 2011a). Furthermore, Wiliam and other scholars (Black, Harrison, Lee, Marshall and William,

2003; Wiliam, 2007b; Wiliam and Leahy, (2015) have identified five main activities which both teachers and students have to participate in for the effective use of AfL. Table 2.1 outlines each of these five main activities while explaining what each activity demands from the teacher and the student respectively.

Key activity	Teacher's Role It is the responsibility of the teacher to:	Student's Role It is the responsibility of the student to:
Success Criteria (SC)	Share clear SC of what constitutes 'good' work in a language that is understood by the student.	Make use of the SC to know what is expected of them to reach the lesson's learning goal.
Questioning or effective opportunities to think	Put forth a balanced set of questions that would challenge and cater for the different abilities in class.	Take the necessary time to think about an appropriate answer and share it with the class.
Comment-only marking	Focus the comments on the areas of improvement and, more importantly, on how this improvement can be registered.	Take time to read the teacher's comments and to act on them to show that the gap has been closed or, at least, narrowed down.
Peer and self-assessment	Model the use of SC for peer and self-assessment on a given task.	Make use of the SC to give constructive feedback to peers and to self about their/one's performance on a given task.
Formative (FA) use of summative assessment (SA)	Bridge the gap between FA and SA by turning the latter into a formative learning experience.	Look at summative assessment from the point of view of what can be done about the mistakes made.

Table 2.1: Teachers' and students' roles in relation to the five main key activities of AfL.

The combination of the above five activities, also referred to as strategies, the underlying principles of AfL stated above and the three key processes identified in the ARG definition of AfL led Black and Wiliam (2009) to slightly redefine their original definition presented in Black and Wiliam (1998b) to represent more accurately the rationale of AfL. Their redefined definition states that:

> Practice in a classroom is formative to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited.

In this definition, Black and Wiliam (2009) are consistent with their early work on formative assessment that teacher's feedback is central to student's learning, but the new emphasis is on the "moments of contingency" (p. 10) that differentiate between a theory of teaching and learning and a theory of formative assessment. Even though such a well-articulated definition of AfL provides a clear theoretical basis for the teacher, it might not be so clear as to what it entails from a pragmatic perspective, neither for the teacher nor, if not more, for the student. Even though Black and Wiliam (2009), Wiliam (2011a, 2011b) and Wiliam and Leahy (2015) have provided a framework for AfL, reproduced in Figure 2.1 below, that unifies teachers' and learners' practices, it might still be a complicated matter to put it into practice.

	Where the learner is going	Where the learner is now	How to get there
Teacher	Clarifying, sharing, and understanding learning intentions and success criteria	Engineering effective discussions, tasks, and activities that elicit evidence of learning	Providing feedback that moves learning forward
Peer		Activating students as learning resources for one another	
Learner		Activating students as owners of their own learning	

Figure 2.2: An AfL framework for a more unified AfL practice

Source: From "Embedding formative assessment: Practical techniques for k-12 classrooms" (p. 11) by (Wiliam and Leahy, 2015). United States.

In the absence of a more simplified day-to-day language and the implicit account of other influence factors - classroom management, instruction and learning, subject

matter knowledge, curriculum, programmes of studies and assessment (Laveault, 2016), a framework explaining the fine details of its embedding in the lessons might be of help and what teachers might need. Ideally, the empirical methodology of how to go about this would be best if it had to be suggested by the practitioners themselves. In order to achieve this, the research community needs to provide different examples from diverse contexts, as AfL practices cannot be imported from one context to the other. Thus, in drawing on the needs of the Maltese context, a student-friendly AfL framework that might help students is being proposed in Figure 2.3 below.

Students' remits during learning.			
I as a…..	I will learn to talk about/explain what…..	I will be able to….	I need to….
Student	• I will be learning; • Makes an excellent product; • The process of learning is.	• Find out and talk about where I am in relation to the product (end task) or process of learning line.	• Know the next steps from the product or process of learning; • Ask the teacher or a peer about the next steps in case of difficulty; • Work on the teacher's comments to move to the next step.
Peer	• We will be learning and, • Would make an excellent product or process of learning.	• Assist my friends in learning to find out where they are in the product or process of learning line.	• Suggest the next step from the product or process of learning.
The teacher will guide me through the process to check that what I am doing and what I am suggesting to my friends in learning is on the right track.			

Figure 2.3: A simplified student-friendly AfL framework

From a teacher's perspective, AfL entails that the educator finds out the current knowledge held by the students, elicits from them or tells them the learning goal, co-construct the success criteria, provide feedback on how to improve, creates effective opportunities to think and for self and peer assessment. In this respect, the social aspect of AfL necessitates a collaborative relationship to co-construct knowledge and to

develop the right skills, attitudes and competences for independent learning. Such a learning scenario does not emphasise the hierarchy of the expertise, although it is assumed that the teacher has the expertise to guide the students forward in their learning. Instead, the weight is more on the quality of interaction between teachers and students through the continuous verbal exchanges of feedback, which, according to Hattie (2002) and Stiggins et al. (2004), among others, is a central component of AfL. Given that such working-relationship is not the norm, both the students and the teachers have to work to develop this habit, which is why a student-and-teacher-friendly framework would be needed and would help. In fact, Jonsson et al. (2015) point out that, on one hand, students might be uncomfortable with the new learning demands, while teachers would benefit if they experienced this kind of collaborative learning before they offered it to students (Andrade and Brookhart, 2016). Furthermore, the latter stress that situated professional development can be a great contributor to tackle these issues. More about teacher's professional learning will be discussed in section 2.7 below.

On the European front, the Organisation for Economic Co-operation and Development and Centre for Education Research and Innovation (OECD) (2008) defines the central role of formative assessment as an agent that acts upon the goals of lifelong learning to improve the learning-to-learn skills needed for independent learning. The prominence on learning autonomy is neither an explicit feature of the previously discussed definitions, even though it is the ultimate aim, nor of the following definitions that will be discussed. In relating assessment to lifelong learning, the OECD's (2008) explanation aims at bringing more social justice in the learning environment. Therefore, the learning skills and attitudes acquired through the

appropriate use of AfL are relevant for life, and not just momentarily for compulsory schooling.

Klenowski (2009) defines AfL as "the process of identifying aspects of learning as it is developing, using whatever informal and formal processes best help that identification, primarily so that the learning is enhanced" (p. 1). In this definition, the phrase "as it is developing" stresses the idea that AfL occurs while learning is underway. However, what is still unclear is the overriding reference to "informal and formal processes" that aims at identifying and deciphering the evidence of learning. Teachers as users of assessment would want and need to know and be exposed to examples that qualify for such processes as otherwise they might risk being affected by what Klenowski (2009) herself defines as a "misunderstanding of principles and distortion of practices" (p. 1). Minimising these distortions is possible with the provision of a simple and clear definition that does not leave space for ambiguity and variances in the practitioners' understandings of AfL. In a similar vein, Bennett (2011) and Laveault and Allal (2016) have argued that the different definitions of AfL create a challenge and in themselves limit the possibility of an unequivocal understanding of AfL. To mitigate such broadness of AfL interpretation, an attempt is being made, on the basis of the research evidence about AfL discussed in this section, to offer a simple definition which explains what the teacher has to do to successfully implement AfL. Due to the nature of this step-by-step explanation, this definition is regarded as more teacher-friendly.

> In AfL, I (the teacher) must take note of what the student knows, so as to build on that the learning goal of the lesson. The learning goal can either be told or co-constructed with the students. After establishing what the students will learn, I (the teacher) must tell them or co-construct with them the procedure of how I will know and how they will know that they have learnt. Then I will use these steps for learning (what students need to do to be successful in their learning) as the foundation for the feedback comments that I (the teacher) will provide to help the students' progress in their learning in such a way that they can become independent learners. Also, the students will make use of the same steps to make a self-assessment of their work and that of others.

This definition differs from the ones discussed above in so far as it provides a more practical approach on how to go about the implementation of AfL. It explains clearly what the teacher has to do to clarify the learning goal and how it can be reached, while it also relates these two strategies with the central strategy of AfL, feedback (Hattie, 2014; Wiliam, 2014). Furthermore, a key characteristic of this definition is the explicit link that exists between the use of constructive feedback, the success criteria, independent learning and the manner in which all parts subsisting in each other will ultimately direct students towards Vygotsky's (1978) zone of proximal development (ZPD). Specifically, in using the SC, students would be in a position to self-assess their work, thus being able to self-regulate their learning trajectory (Panadero et al., 2016). However, to do so, in addition to the framework outlined in Figure 2.3, students would also benefit from a simple definition explaining what they need to do to fully participate in the AfL process. Thus, to complement the teacher-friendly definition, another definition for the students is being offered below. The latter is written in a student-friendly way and from the stance of how they should look at an assessment based learning process.

> AfL informs me about what *I will learn* and what I need to *do to learn* while assisting me in *checking* continuously what I have learnt. In AfL, I work *with* the teacher to *create* the steps for learning that will help me *identify* what I need to do to maximise my learning. This will also assist me in *checking* my *own work* and that *of my friends* in the process of learning. Finally, the steps for learning will be the *basis* on which the teacher and my peers will *comment* on my own work for further improvement.

This definition is consistent with the strategies, principles and definitions of AfL stated above but is predominantly student-centred. In constructing this definition, careful attention has been given to synchronise the teachers' and the students' definitions since both teachers and students are working on the same process and for the same purpose, the betterment of the student's achievement. This is the reason why a very similar wording structure is used, the difference being only in the perspective of the intended user. For example, the teacher's definition starts with '……I tell or construct…..what they will learn', whereas in the students' definition, the teacher's process is reflected in the words 'what I will learn and what I need to do….'.

In conclusion to this debate about the diversity of the definitions about AfL, this section has further reinforced the urgent need to have a more pragmatic definition with which teachers can relate and translate into practice while also pointing out the lack of a student-friendly definition. It was argued that if students are to partake in the AfL process, they must know and understand what it entails. For this reason, the framework for AfL by Black and Wiliam (2009) has been used and adapted in such a way that renders it more student-friendly while also presenting it from a student perspective. Additionally, this framework is being supported by student and teacher-friendly definitions of AfL. Student achievement can be reached after it is clear to the main

stakeholders of AfL what they should do to achieve further. This is precisely the focus of the next section.

2.4 AfL and Student Achievement

Raising student achievement is one of the goals of a high-quality education. It is worth pointing out that 'achievement' is perceived as progress that is relative to one's potential. Hence, achievement in learning is not about sameness, that is, acquiring the same skills, competences and knowledge to get to the same destination. Instead, achievement in terms of learning progress should be measured by how much the learners have moved forward in relation to their starting position prior to learning.

In essence, raising learners' achievement is so important because of the powerful contribution that an outstanding educational system can fuel into the economy, thus sustaining the social growth of the country (European Commission, 2017; Wiliam, 2010, 2011a, 2016; Wiliam and Leahy, 2015). A strong economy should not be simply judged by its financial strength but also by how skilled its citizens are to lead an independent life as much as possible. Put simply, if low-functioning students possess the basic skills to do the shopping on their own or to catch a bus, they are also contributing to the economy because the government would be saving on their carer's salaries. Therefore, achieving high standards for each student, regardless of each one's ability, through effective quality education is a multi-faceted interest. A country's labour-market needs high-skilled people with the right attitude and disposition to learn if the economy is to remain competitive, stable and prosperous (Camilleri, Debono, Galea and Gravina, 2007; Ministry of Education, 1999; Ministry of Education and Employment, 2012; National Commission For Further and Higher Education-(NCFHE) and Ministry for Education and Employment, 2015). In turn, a strong

economy is a sign of good governance, thus the political effect. Lastly, for policymakers, the more competent the students are the higher the professional recognition of its educators, thus the professional effect. Therefore, using assessment effectively to give a more positive learning experience to students is not just of interest to the internal educational community but also of interest to the wider and external community too.

Wiliam (2010, 2011a) suggests that if policymakers are serious about raising student achievement, they should invest in formative assessment. However, investing in formative assessment with a shallow understanding of what student achievement is might not lead to the significant evidence-based gains reported by Black and Wiliam (1998b).

2.4.1 Attainment versus Achievement

Student achievement, Guskey (2013) argues, is a multifaceted and complex construct which is further compounded by the "lack of a shared understanding of what it means" (p. 3). In view of this intricacy, Guskey (2013) defines achievement as "the accomplishment of something" (p. 3), a statement in which the term "something" refers to the lesson's learning goals. Thus, achievement is the mastery of the learning goals by the students. Hence, achievement is not something which can be solely shown by performance grades or marks (Guskey, 2013). Instead, it can be even witnessed during a lesson or at the end of it because it is viewed as a continuum of short episodes of attainment (Guskey, 2013). Precisely, Guskey describes attainment as "the level of achievement at a particular point in time" (2013, p. 4). In relating this argument to AfL and its strategies, it follows that the accomplishment of the scaffolded success criteria in the form of more manageable attainment targets aids in the process of straying away

from a concept of achievement that caters solely for performance grades. Furthermore, it also shows that student achievement is a matter of degree of the number of attainments gained in relation to the student's starting place. This highlights that AfL cannot be seen as a tool promoting and encouraging sameness in learning whereby everyone ends up reaching the same learning goal at the same time, but aims at providing equity among students in the process of learning. Consequently, AfL becomes a worthy pedagogical tool to invest in not because of the scale of its impact, but more so for its quest in moving students forward in their learning trajectory. This is an important implication for teachers. If they expect AfL to be the unlocking key to the mastery of the learning goal, in its totality, by all students, then they will be greatly disappointed. Instead, teachers should view the application of success criteria, an AfL strategy, as the means which makes visible the small learning attainments which, in its absence, might have remained invisible. In a recent study by Leirhaug (2015), no significant improvement in grades in the Physical Education Program that implemented AfL were found, which contrasts highly with the key promise of AfL. Interestingly, Leirhaug (2015) noted that the lack of improvement in the performance grades masked the small improvements in the learning outcomes for the subject. This indicates that using learning attainment descriptions to measure the student's achievement provides a more just and fair means to gauge the student's progress. This calls for a shift in the way student achievement is understood by those for whom such achievement is a matter of scores.

In looking at student achievement through the lens of formative assessment, rather than in terms of the scores of the student's performance obtained in the summative assessment performance, the focus of achievement is diverted onto the

accomplishment of the task rather than the ego of the student (Cauley and McMillan, 2010; Dweck, 2000). Focusing on the work rather than the person would not attribute success or failure to a characteristic within the person. Performance goals can be misleading as a rise in scores is not necessarily a reflection of student achievement but may be an indication of the right coaching and training that the student has been given (Harlen, 2005). For instance, high achieving students are likely to obtain high grades or marks but that mark might not be a reflection of any valid learning improvement but simply a reinforcement of the status quo of the student. One contention is how much further an A grade student can improve. If exam performance measures mostly knowledge, the grade or mark might not improve. However, high achieving students might need to improve their thinking and analytical skills, aspects that might not be necessarily or appropriately determined by an exam in certain subjects.

In their seminal work, Black and Wiliam (1998b) reiterate that student achievement can only be attained through well-intentioned formative assessment practices, thereby implying that teachers have to be acutely aware of what they are doing and why. Freire (1970) referred to this mindfulness as a 'conscientisation' process which consists in the conscious effort that leads to effective action during the learning process (Wood, 2000). Teachers who are aware of what they have to do and why are also mindful of the fact that different contextual circumstances and needs require different actions. From this perspective, Black, Harrison, Lee and Wiliam (2004b) attest that it is a common misconception to think of AfL as the silver magic bullet that enables all students to reach the national learning outcomes associated with their year group syllabi. This highlights the fact that AfL is not a one-size-fits-all pedagogy but a flexible pedagogy in that the strategies and techniques used need to be adapted to the

exigencies of the audience. For instance, they assert that "AfL can reach everyone if teachers determine how students learn and are knowledgeable about the learning progression" (p. 57). The latter is the key to effective AfL implementation (Cumming and Van der Kleij, 2016). Furthermore, they stress that while the AfL principles hold for every student, what should be different is the way students are assessed through AfL, as assessment has to be fair and just in that it responds to the students' way of learning. If teachers look at the AfL strategies as something standardised to be applied with everyone in the same way and expected to have the same effect, they run the risk of not having their expectations met and concluding, wrongly, that AfL does not merit the claims propounded by the research evidence.

The flexibility and the diverse use of AfL is evident in the field of special education. Although research about the impact of AfL on students with a statement of needs is limited, Ravet (2013) points out that collecting evidence from a student on the autism spectrum disorder and also providing feedback is and should be different from the way a teacher collects evidence and informs back a student without a statement of need. If teachers are not aware of this, and do not use this flexibility, they might argue that AfL works for some but not for everyone. Since everyone is different, the problem does not lie in the tool but in the way it is used. If sameness is what is sought, the purpose of AfL is defeated. Hence, the lack of an adequate framework for the implementation of AfL indicates that such existent variety in the understandings of AfL and the way it relates to achievement might impinge on the way AfL is implemented.

In the absence of a common ground regarding understanding of what AfL means, what it entails and how it contributes towards achievement, there might be the tendency to adopt a simulation approach from another context to its implementation. This stance

would be erroneous because, as Hargreaves and Shirley (2012) emphasise, the importation of evidence-proven practices does not guarantee the same success and lifelong benefits obtained in the original setting of those practices. In this respect, there is the danger pointed out by Black and Wiliam (1998b) that "teachers will not take up attractive sounding ideas, albeit based on extensive research, …" (p. 15), the main reason being that it all depends on the consonant synchronisation of the AfL strategies in the new system and the prevailing culture. In fact, Black and Wiliam (1998a, 1998b) had already pointed out that new assessment practices can bring about the reported research evidence gains if these assessment practices are embedded in the right nurturing learning set-up. This is why they stress that "what [teachers] need is a variety of examples of implementation, by teachers with whom they can identify and from whom they can both derive conviction and confidence that they can do better, and see concrete examples of what doing better means in practice…" (p. 16). This would allow teachers to be more creative and flexible in the AfL techniques they employ to promote student achievement, because they build on fellow colleagues' exemplars from a similar context. Thompson and Wiliam (2007a, 2007b) offered the "tight but loose" theoretical framework approach to guide teachers in their implementation of AfL for students' success in learning. On the one hand, the "tight" part of the framework reflects the strong adherence to the five main activities shown in Figure 2.1 above (see pg. 44) that makeup a lesson with AfL. On the other hand, the "loose" part of the framework refers to the different techniques that teachers employ when implementing a particular strategy.

The most important arguments brought forward in defence of the fact that AfL is a tool striving for success stems from the underlying principle that it will contribute to

student achievement if the process is student-centred and embedded within an academic atmosphere in which student success is not a privilege enjoyed by the few. Instead, the surrounding learning ethos should promote the idea that success in learning is what students should expect by right, and that it is within the duty of every teacher to assist the students in attaining this right. Failure to do so would be a disservice to the educational system and the students. This idea has been contended by Hattie (2003) and Wiliam (2007a, 2007b) who both concur that efforts should be directed towards the investment of adequate training for teachers. It is only then that quality in teaching and learning can be achieved. Recently, Wiliam (2017c) reiterated that a substantial part of the investment in teacher training should be allocated to exploring how student involvement can be increased, an area which is still under researched.

2.4.2 AfL, Student Achievement and the Learning Culture

Fullan (2011) describes culture as the umbrella of norms, values, skills, practices and relationships. Therefore, an assessment culture driven by the purpose of student achievement consists of a set of relationships between the norms, values, skills and practices of formative assessment that lead to and celebrate achievement, even the most minimal one. Hence, the surrounding culture in an AfL environment, as Skott (2009) points out, shapes, and is shaped by, the understanding that the stakeholders hold about AfL. This means that a culture of AfL for student achievement requires an ethos that is conducive to the spirit of assessment rather than the spirit of testing (Gipps, 1994). The spirit of assessment is not about grades and marks but about the improvement in learning. When the spirit of assessment is missing, the new assessment practices, in this case AfL, would require a re-thinking of the way

assessment should be practised (Black and Wiliam, 1998a, 1998b). This re-thinking, Birenbaum (2016) maintains, involves an examination of the surrounding culture. Marshall and Drummond (2006) explain that the spirit of AfL is based on a "high organisation of ideas" (p. 147) that promotes learner autonomy. This explanation resonates well with Biggs's (1996, 2003a, 2003b) constructive alignment which emphasises a triadic relationship between the aims, activities and assessment in a lesson for more focused learning. This synchronisation, Black, Harrison, Lee, and Wiliam (2004b) affirm, involves a re-orchestration of the learning process whereby, according to Hargreaves (2004), teachers would be required to work smarter rather than harder, in order to attain higher quality learning outcomes. This involves, as Black and Wiliam (2009) advocate, teachers to be the engineers of effective learning environments. With respect to the teacher's role in a culture of assessment, Hattie (2002) refers to teachers as activators of knowledge. I am inclined to agree more with Black and Wiliam's (2009) description as it gives a broader dimension to learning than just knowledge. This wider perspective is in line with how the European Council (2006) and the European Commission (2016) define learning, in the twenty-first century, as a set of knowledge, skills and competencies. However, for students to acquire the skills and become competent learners, they must learn in an environment underpinned by the belief that every learner can learn, fail and rise again for further achievement (Dweck, 1986).

A learning atmosphere which embraces failure is based on growth and not on a mere fixed mindset that qualifies ability and intelligence as something unmalleable (Dweck, 1986, 2010). A growth mindset is a frame of mind whereby intelligence is not perceived as a fixed, innate ability. Instead, the view of intelligence envisioned by a

growth perspective sees the intellect trait as developmental. Using a growth mindset implies that student achievement is not only related to formative assessment practices but also to the effort and time spent on deliberate practice, thus putting students in control of their achievement. Studies by Ericsson, Krampe and Tesch-Römer (1993), and Blackwell, Trzesniewski and Sorich (2007) have shown that students who approached tasks with a growth mind-frame had outperformed students with a fixed mindset approach. Consequently, if student achievement depends on the degree of effort and control put forth by the student, then every student can achieve through the consistent use of formative practices, only if these practices are well understood by the student too. This is suggestive of the debate about the effect of nature or nurture on achievement. A recent international study by the Organisation for Economic Cooperation and Development – OECD (2016) about the students' performances in PISA 2015, reported that student achievement was highly correlated with the students' socio-economic background. While this finding reinforces further the argument that student achievement does not depend solely on ability, it should be interpreted with caution as teachers might use it to excuse, and consequently perpetuate albeit unintentionally, lack of achievement among groups of disadvantaged students.

In their early works about the role of assessment in students' learning, Natriello (1987) and Crooks (1988) assert that good assessment practices work with students both with and without a statement of needs. Therefore, the success of AfL does not depend solely on cognitive ability but on the effort and positive feelings instilled in students about their efficacy in attaining a particular learning target. Students' successful experiences in learning are likely to enthuse them to pursue their learning further. Therefore, these successes in learning would be a source of motivation for the students' next steps in learning, which is why Wiliam (2017c) has concluded that in the right learning

environment motivation is obtained from learning rather than being a pre-requisite for learning. Hence, the motivation attained from past learning experiences becomes a source of motivation for the next learning episode. In the same way that student achievement resulting from effective AfL practices does not depend on ability, motivation is also not related to a student's cognitive ability. However, the expectancy-value theory of motivation states that ability and expectations are highly related to academic success (Wigfield and Eccles, 2000). Thus, if motivation does not depend on ability, the enthusiasm for learning can be influenced by the teacher's expectations of success for that student and the way the teacher relates with that student. It therefore follows that teachers' preconceptions of the students' ability to succeed can highly influence the students' disposition for learning, their engagement in learning and their behaviour resulting from the learning. In turn, this behaviour may reinforce the teachers' set expectations and influence their readiness to accept or refute a new pedagogy. In relation to this, Cauley and McMillan (2010) maintain that "teachers can unknowingly reduce student motivation by communicating a lack of belief in their abilities" (p. 4). It is in this respect that awareness of one's beliefs and philosophical stance about teaching and learning is crucial.

Student achievement is a complex matter as too many factors can affect it. In the case of AfL, despite the strong correlation with achievement reported in several studies, with the most influential being the seminal work of Black and Wiliam (1998b), there is criticism by Dunn and Mulvenon (2009) that the current scientific evidence connecting the two factors is not enough. Their contention is based on the scale of the studies brought forward by AfL in that they are mostly small-scale studies and the

contexts are quite diverse. In view of this, they conclude that more research about AfL and student achievement is needed.

Since different programmes of instruction, such as the Let Me Learn (LML) approach by Johnston (1998), are supported by convincing evidence of affecting student achievement, then it can be argued that AfL is not the sole contributor to student achievement. Although Black and Wiliam (2009) acknowledged such existence, they affirm that these programmes of instruction are underpinned by formative assessment practices implying that ultimately, the link between formative assessment practices and student achievement is further strengthened. Also, this reinforces the concept that what matters most is the philosophy underpinning the approach adopted in teaching and learning, which is what will be discussed next.

2.4.3 The Philosophical Perspective of AfL

AfL is a social teaching and learning pedagogy based on Vygotsky's (1978) understanding of social constructionism. This view of constructionism emphasises the active roles of the students and does not ignore what the students know from their interactions with the environment (Vinod, 2011). If teachers ignored this fact, they would be engaging in Skinner's (1985) behaviourist approach to teaching and learning, an approach which is incompatible with the AfL philosophy. This implies that teachers who are currently employing a behaviourist approach to teaching and learning need to re-address their habits of practice and be ready to change them. A teacher-centred AfL practice goes against the theoretical framework of AfL. However, this kind of practice can be changed by an understanding of teachers' beliefs (Borg and Al-Busaidi, 2011), which should be at the core of every teaching and learning initiative since they influence teachers' approaches in practice (Pajares, 1992). As it

is possible for teachers' beliefs about assessment to be mistaken (Stiggins, 2004), their practice may be influenced negatively. This can happen when the teachers' held beliefs are incongruent with the philosophy of AfL. Stiggins (2004) shares some examples of such incongruence, which include: exams are a good motivator for learning: as a result, teaching and learning decisions are taken by teachers for students, the most fundamental decisions on learning are those made at the end of the year, and that students should not be given the opportunity to take on the role of assessors. If teachers' practice is to reflect the AfL philosophy, then such an anti-AfL outlook would need to be changed. Stiggins (2004) suggests how this change can be made through a rethinking of the currently held beliefs. This reconsideration requires teachers to:

- come to hold high expectations for each student;

- help students to believe in their potential for achievement;

- believe in the students' ability to be assessors of their work and of their peers';

- acknowledge that ongoing teaching and learning decisions are more fruitful than when taken at the end of the year.

Educators upholding this philosophy of teaching and learning do not focus on superficial curriculum coverage but on the quality of the students' involvement in the group during a task, as it is this latter interaction which teachers need in order to understand the sense that the student makes of the activity. In the eventuality that teachers who subscribe to the above reconsideration of beliefs fail to give the quality of the student's involvement its due importance and instead prioritise content and coverage, their beliefs and practices are not being congruent (Lopes and Santos, 2013;

Marshall and Drummond, 2006; Torrance and Pryor, 2001). When this happens, social constructionist teaching and learning is under threat (Prawat, 1992). Indeed, both change of practice and change of beliefs are a challenging feat and a cause of great tension for teachers who have long-established practices in a behaviourist conceptual framework.

2.5 The Challenges and Tensions of AfL for Teachers.

AfL is not a simple matter because it needs to attend to various factors for its successful implementation (Laveault, 2016), which include having highly literate assessment users, a fertile and supportive learning background, the need for practical exemplars to highlight the process of interaction between the users of AfL and the way to go about lesson planning, and a policy framework which supports such practice. Therefore, the major challenge for AfL remains the alignment between research, policy and practice (Spencer and Hayward, 2016). It is through research and then through experimentation with the research evidence that teachers become knowledgeable about AfL. The more assessment-literate the users of assessment are, the better-off they are situated to face and combat the professional dilemmas presented by the incongruences between the contextual policies and the current cultural assessment practices.

2.5.1 The challenges presented by research, practice and policy.

As discussed in section 2.3 above, research about AfL provides numerous definitions with which teachers can subscribe and follow, a factor which Bennett (2011) criticises as a major limitation of AfL and indeed a cause of tension which challenges the teachers' AfL practices. Even a standardised definition is likely to be interpreted differently by the wide cohort of assessment users, let alone different, yet similar,

standpoints about the same topic. The diverse interpretations can translate themselves into different practices which might yield different outcomes, leading teachers to form and hold different knowledge and understanding about AfL. The misconceptions that this diversity can lead to are of concern since, in turn, they affect the quality of the practice and the take-up of the pedagogy. For instance, Shepard (2000a), Marshall and Drummond (2006), Klenowski (2009) and Boyle and Charles (2010) maintain that conceptualising and using AfL as a checklist tool is an oversimplification of the rationale of AfL. According to Klenowski (2009), such use does not only violate and devalue the spirit of AfL but also underscores the teachers' lack of understanding of AfL. In turn, this inadequacy in the use of AfL supports further the call made by Volante and Fazio (2007) that more research on the knowledge of AfL is needed. Two years later, Skott (2009) echoed this appeal but specified that such investigation into the teachers' understandings, thoughts and values regarding AfL needs to shed light on whether the level of understanding contributes to inappropriate AfL practices. It could be that the unfit practices do not stem from a lack of understanding but from the convenience they provide to teachers to maintain the status quo and from a lack of knowledge of how to plan a lesson embedded in formative assessment, that is, from the point of view of the student (Andrade and Brookhart, 2016). The mechanical use of AfL does not threaten the teachers' and the students' established roles as it does not require of them to share the power of expertise. Consequently, it becomes more comfortable for teachers and students to keep their current roles rather than to be more active, especially for the latter (Jonsson et al., 2015). This is another challenge for both the teachers and the students to accept, as the varying degree of control from both sides creates fear and anxiety (Helsing, 2007).

Another challenge, which is particular to this study, is the context in which the evidence claimed is based. Within the body of international literature, there is a dearth of Maltese research about AfL, especially with regard to primary education. Thus, Maltese teachers are in dire need of local exemplars with which they can relate. Although there have been some studies in the secondary sector, only one case study by Satariano (2015) has been carried out since the inception of AfL in Maltese primary schools in 2011. Therefore, in the Maltese context, the "lack of knowledge about what good *AfL* looks like" (p. 420) as pointed out by DeLuca and Klinger (2010) is very relevant and perhaps more acute than in other contexts. In a more recent study, Klinger et al. (2012) found that teachers looked at "assessment as necessary and important, but it is difficult to manage and master" (p. 452). Hence, "increasing awareness and understanding of AfL…" (p. 455) is a recurrent challenge which needs to be addressed from a contextual factor through situated learning (Darling-Hammond, 2017). Randel, Apthorp, Beesley, Clark and Wang (2016) argue that the challenge of growing one's AfL knowledge creates another challenge, that of finding exemplars of the meaningful impact of AfL, especially with regard to its management by the class teacher. Rogers and Murcott (1995) and Rogers (2010) maintained that when the innovation is perceived as unreachable, unmanageable and, consequently, unachievable it creates mixed feelings in the user that can compromise its development and sustainability. Convincing teachers that an innovation, in this case AfL, is indeed manageable necessitates the reassurance that the innovation works in their context (Haggarty and Postlethwaite, 2003). Empirical evidence is important as the success of AfL does not depend only on the knowledge of AfL but on how the user adapts and manages the learning environment in terms of class management and organisation. These might seem to be peripheral issues but are an important piece of the AfL package, as ignoring

them would make AfL more complex (Laveault, 2016). The problem is that empirical prototypes are scarce, and even rarer when either the educational policies or the surrounding learning environment do not support these types of practices.

Educational policies provide a framework that, when translated into practice, shapes the way in which the education's vision and mission are achieved. Thus policies inspire the cultural, economic and political context of a country (Poskitt, 2016). When a coherent alignment between the policy, the learning culture and the practice is not maintained, this creates a living paradox for teachers. A case in point would be when the teaching and learning environment is operated by a policy which envisages student-learning approaches and yet the decisive assessment is a summative one, which leaves teachers with no other option but to constantly race to cover the syllabus (Webb and Jones, 2009), creating a professional dilemma between what is right to do and what they are expected to do (Birenbaum et al., 2015). This clash of demands also manifests itself in choosing between culturally-rooted accepted practices and new ways of doing assessment. For instance, parents might find it hard to accept the new approach to assessment as they themselves have neither experienced nor benefitted from a formative teaching and learning, thus they might perceive it as an "unsound practice" (Stiggins, 1999, p. 28). The sole experience they have had is the one they value most and, because of these parental misconceptions about AfL, teachers might feel pressured to use only one type of assessment (Hargreaves, 2005). Gardner and Gardner (2012) suggest that one way to reduce this tension and challenge is by turning a misinformed public or external community into an informed one. With regard to teachers, DeLuca, Luu, Sun and Klinger (2012) suggest that misconceptions about AfL theory and practice necessitate an investment in the teachers' capabilities to

integrate the various forms of formative and summative assessment, as they are both valid and have a place in good programmes of instruction.

2.5.2 Meeting the Challenges of AfL

In the light of the above challenges stemming from the incongruence between policy, research and practice, several authors (Allal, 2016; Andrade and Brookhart, 2016; Laveault, 2016; Lopez and Villabona, 2016; Meissel, Parr and Timperley, 2016) argue that overriding these difficulties is possible through an effective professional learning development programme which targets a systemic change (Smith, 2011). Such programmes of instruction have to attend to both the main and ancillary factors related to a lesson with AfL. The key factors would include the rationale of AfL, theories of assessment and learning, while the secondary factors would class organisation and its underlying culture, and reflecting on the learning.

Laveault and Allal (2016) point out that debates about effective professional development are still developing. Therefore, so far, no particular PDL programme has been identified as being the most effective. What has been found to be impactful on teachers is a pragmatic approach to learning whereby the theory is co-constructed by themselves from their practices (Hargreaves, 1984; Kirton, Hallam, Peffers, Robertson and Stobart, 2007), thus bridging the theory-to-practice gap (Parslad, 2016). In so doing, the starting point is not the theory but the practice. If this stance is adopted, then professional support personnel need to work with practitioners (Huang, 2010) by adopting a bottom-up approach rather than impose on them. One way of doing this is through action research because "… [it] is an orientation to knowledge creation arising in a context of practice and requires researchers to work with participants" (Huang, 2010, p. 93). Moreover, she affirms that in action research the "context of practice is

privileged over theory" (p. 93). Hence, by giving priority to practice in such a way that this is used as the means to introduce theory, the researcher shows concern for the participants' challenges (Cohen et al., 2011) and is interested in collaborating with them to improve their situation. It thus follows that action research can assist teachers in tackling the tensions and challenges pertaining to the implementation of AfL to eventually help them become more confident about it. In turn, the more confident the teachers are in the implementation of AfL, the more likely it is for them to feel strongly about it and possibly use it consistently.

2.6 Teachers' Beliefs and Practices about pedagogy.

Pedagogy is a teacher's personal choice stemming from the educator's ongoing examination of what has been the most effective teaching strategy that has helped their learners to achieve. This cross inspection contributes to the formation of the teachers' knowledge about what good teaching entails. The results of such long investigative process are based on the teachers' in-class experiences, thus constituting their peripheral beliefs (Nishino, 2012), both as a student and as a teacher (Black and Wiliam, 2004; Clark and Peterson, 1986; Kagan, 1992). In turn, the outcomes of the diverse class episodes' investigations will eventually shape the teachers' beliefs about good teaching. Consequently, when a reform in instruction is sought, an investigation into the teachers' beliefs is essential because the educators' work is affected by core and peripheral beliefs (Nishino, 2012). This complicates matters because beliefs are a very personal and a private affair, thus making it more difficult to access them (Osterholm, 2010), and eventually, making pedagogical change even more difficult.

Learning about a person's beliefs is not a straightforward matter because "the individual conceptions that are in constant relation to the teachers' context and

experiences" (Fives and Buehl, 2012, p. 476) require an equal familiarity with the context (Nespor, 1987). Such familiarity brings for consideration "the teachers' beliefs about the context, the content knowledge, the specific teaching practices, the teaching approaches and the role of the student in their school environment" (Fives and Buehl, 2012, p. 472), or as Nishino (2012) refers to them as the core beliefs. This multilevel of factors constituting the hidden (implicit/tacit) and explicit nature of beliefs contributes further to their messy construct (Pajares, 1992). Interestingly, Pajares (1992) and De Vries, Jansen and Van de Grift (2013) attribute the complexity and messiness of beliefs to a lack of definition. In contrast, Fives and Buehl (2012) contend that the problem does not lie in the definition per se but in "getting authors to consistently define and use the term across fields" (p. 473). The variances in contexts and experiences together with the person's subjectivity of what constitutes knowledge may offer a challenge to the attainment and assurance of the consistency being advocated. Also, targeting the core and explicit beliefs is not enough as according to Dixon et al. (2011), the tacit beliefs may be equally impinging on the teachers' pedagogical change.

Zakaria, Care, and Griffin (2011) found that not even pre-service training could change the teacher's early formed beliefs. Therefore, teachers need very convincing evidence of which they have to be prime witnesses to re-think or unlearn their strongly held beliefs about a teaching and learning pedagogy (Skott, 2015). Such quality evidence needs the experiences of teacher-practitioners of AfL that would have spent a considerable amount of time reflecting on their AfL practices and their impact. In this respect, Gordon et al. (2014) showed that "few practitioners have significant experience in creating or using high quality embedded formative assessment" (p. 343).

This implies that current teachers have limited positive experiences of AfL, implying that they do not have a strong empirical background upon which strong formation of beliefs could be built. Consequently, Gordon et al. (2014) recommend to policymakers that a long term teacher learning programme is necessary to overcome this difficulty. Similarly, Leirhaug and Annerstedt (2016) strongly suggest for the development of an ongoing professional development which should focus on helping teachers to "unlearn some of the practices and beliefs that have dominated their careers…as well as helping students to take on new roles in their learning" (p. 626). It would be more convincing if the students' voices were to be included as it would start filling the gap noted by Fives and Buehl (2012) that "few studies have used data from both teachers and students about the role of teachers' beliefs on student outcomes" (p. 480). Ultimately, these experiences would not only offer increased awareness about AfL (Klinger et al., 2012) but also provide the opportunity for teachers to learn from fellow teachers and external professionals to build and form their knowledge within the triadic relationship that exists between knowledge and practice: knowledge 'in', 'for' and 'of' practice (Cochran-Smith and Lytle, 1999; Laveault, 2016).

Knowledge in practice is the knowledge formed during the course of action, while knowledge of practice is constructed on the outcomes of practice. Eventually, the new knowledge of practice becomes knowledge for the next episode of practice, and the collection of several episodes of knowledge of practice forms teachers' craft knowledge (Russell, 2015). Craft knowledge, according to Russell (2015), is the accumulated knowledge of practitioners when engaging in reflective process on their practice, an often ignored crucial component of high-quality teacher education and professional development (Postholm, 2012). If craft knowledge is about knowledge of

practice which, aims at the "transformed and expanded view of practice" (Cochran-Smith and Lytle, 1999, p. 276), then craft knowledge should also be the focus of professional learning. In focusing on craft knowledge, the theory about AfL is built from teachers' own valued knowledge and experience (Russell, 2015). Therefore, knowledge of practice as the underpinning framework for professional learning about a pedagogical innovation can be the unlocking key in moulding the beliefs of teachers (Klinger et al., 2012).

2.6.1 Changing beliefs and practices through a Professional Development programme

Fives and Buehl (2012, p. 471) maintain that "teachers' beliefs matter" because they identified that the "purpose or function of beliefs serves three possible functions – filtering, framing and guiding" (p. 478). Furthermore, they stress that filtering is particularly important and relevant in teacher education. This is so because educators transform their beliefs on the basis of their interpretation about the impact of practice by its influence on student learning (Kirton et al., 2007). Depending on the degree of accomplishment of the learning outcomes, teachers filter and ultimately decide on whether the process is worthwhile or not (Mansfield and Volet, 2010), thus establishing their own degree of beliefs. Related to this, Brown, Harris and Harnett (2012) emphasised that teachers need to be persuaded by the educational value of an AfL activity if they are to acknowledge and implement it. The extent of this value is highly dependable on how much it 'solves' the class problem, which would have been framed by the class teacher. However, the outcome of the activity is not only influenced by the complexity of the problem that needs to be solved but also by the teacher's self-confidence and, in this case, the students' role too, in the successful

management of the task activity that would ultimately solve or alleviate the problem, thus the guiding belief.

If the outcomes of practice result in improved student outcomes, practice becomes a catalyst for change in beliefs (Guskey, 2002). This is because the outcome would act as a "motivational belief" (Fives and Buehl, 2012, p. 480) for further and subsequent practice. Guskey (1986; 1988), asserts that a professional development model for teacher change should have practice as the starting point, that is, it should result from action-based research. This is because teacher-learning is multi-dimensional in that it needs to attend to the affective, cognitive and motivational aspect of learning (Korthagen, 2017). Since AfL is about effective practice in a social constructionist environment, learning about it needs to grow out of practice (Smith, 2011) and through a "collaborative effort" (Darling-Hammond, 2017, p. 304) and teacher co-operation (Postholm, 2012). Therefore, professional development educators supporting teachers in AfL need to adopt an authoritative rather than authoritarian approach (Postholm, 2012), which opens up a dialogue on the teachers' needs and wants, thus attending to their motivational dimension of learning in addition to the cognitive and affective needs. In doing so, theoretical knowledge will be co-constructed rather than imposed, so that the change in behaviour results also from their motivation for change and not just from a momentary change of thought. If the teachers' urge for change results in a positive experience, then that is likely to have a more long-term effect on their behaviour and wisdom of practice (Shulman, 1987). The wisdom of practice is pivotal in teachers' change of practice and, ultimately, the change of beliefs, because "teachers embrace more sources of experience, which they can relate to, rather than research findings" (Fives and Buehl, 2012, p. 477).

Contrastingly, Richardson (1996) and Hargraves and Shirley (2012) argue that change in beliefs precedes change in practice because beliefs are the drivers of action. In turn, change of actions must be preceded by the teachers' involvement in the design of their innovations. This argument indicates that teachers change their actions only after they have changed their beliefs. However, teachers' involvement in the design of the innovation does not necessarily mean a change in beliefs but may simply indicate the willingness to participate in a process of change with the intent to make more sense of the process, which augurs well for a successful change (Fullan, 1993; Fullan, 2011). According to Anderson (2004), teachers' voluntary participation is one avenue for teacher change, which, at least, ascertains a preliminary interest in the change especially when taking into account the fact that what needs to be changed must be professionally relevant to the teacher (Altrichter, Posch and Somekh, 1993). On the other hand, lack of preliminary interest is a recipe for failure of the innovation because the novelty will not "survive more than its awareness stage" (Harrison, 2005, p. 255). It follows that there are two phases to the change of practice – the temporary change during the experimental phase and the long-lasting change. In the former type, the beliefs are still being formed on the trialled practice, while in the latter type, these same beliefs would have increased in their strength. This occurs when the teachers' conviction in the worthiness of the trialled practice grows to a level that would ensure the sustainability and further investment in that practice. In relation to this, Kagan (1992) and Calderhead (1996) point out that beliefs' transformation stems from persistent and perseverant engagement.

The position in this report is that during the temporary change, the transformation of practice has to lead for the eventual influence and change of the beliefs. Once the

adjustment of beliefs has been done and established, the permanent phase will reverse the roles where the strength of the beliefs lead the practice. Hence, the beliefs and practices affair is not about which one leads which, but it all depends on the professional learning phase that the educators find themselves in in relation to the change being considered. Knowing the educators' learning phase is important for a professional development facilitator as it influences the design of the professional development and learning programme. To-date, there is not one professional development programme which really stands out in influencing teacher learning about AfL (Smith, 2011), to the extent that Klinger et al. (2012) claim that research evidence about the impact of contemporary PD is still vague. This implies that Klinger et al's. (2012, p. 456) call for "the ongoing necessity for continued research models of PD related to our efforts to develop teachers' classroom assessment capacity" is still valid. Moreover, since teachers' beliefs and practice relationship "…in the research literature remains murky" (Fives and Buehl, 2012, p. 471), further research is needed to clarify, even a little, this obscurity.

The beliefs-to-practice connection is so complex yet important that Marshall and Wiliam (2005) recognise the "little attention teachers' beliefs have received in the rush to implement what Hargreaves (2004) has called a strategy of high leverage, [AfL]" (p. 166). More recently, the need for further research on the influence of beliefs on students' learning outcomes, and on the relation of beliefs and the implementation of new assessment approaches, has been pointed out by Rubie-Davies et al. (2012) and Dixon et al. (2011) respectively.

2.7 Professional Learning Communities and AfL.

Smith (2011) argues that "teachers want to, but they are not confident in how to integrate AfL" (p. 59); therefore, they need "to learn about and try out [the] new practices" (p. 56). Professional Teaching and Learning Communities (PTLCs) can assist in this change of teachers' practices, from the traditional deep-rooted practices to more contemporary ones (Thompson and Wiliam, 2007a), like that of AfL. While such learning activities help in the construction of the content knowledge, their structure also provides a safe and reassuring zone of a constant habit of inquiry of practice in order to improve it (Birenbaum et al., 2009). This is because, according to Wenger (1998a, 1998b), teachers form partnerships for learning within a collaborative culture for instructional and educational improvement (Duke, 1990; Guskey, 1986; Guskey, 1988). Maintaining such a relationship amongst the learning community's participants and with professional support personnel (Burke and Hall, 2003) is important as in itself this rapport mirrors the learning atmosphere that should prevail in classrooms. Therefore, teachers in learning communities are not only supported in the content knowledge but also in first going through the expected learning culture themselves (Lamb and Simpson, 2003).

In schools where professional learning communities do not exist, teachers are missing out on the educational value of working as a group with common aims and purposes that benefit the students' learning. Willis (2011) explains that teachers working in professional communities of practitioners develop a sense of belonging and affiliation which, by time, shapes the group's identity and builds a professional relationship of trust amongst the community of practitioners. Postholm and Skrøvset (2013) sustain that when trust is an underlying characteristic of the learning community of teachers,

it will be easier for teachers to accept the knowledge of practice shared by their colleagues as valid knowledge. This is because the knowledge shared is based on what has worked in the colleagues' class environment, to which they can relate. This reassures them that it might work in other similar environments. Teachers deem such relevant activity as very important because Coleman and Kottkamp (2015, p. viii) found that "change in teaching occurred when teachers go beyond the simple administration of a tool to when they could see classroom application which made sense to them". Therefore, trust is a vital element in a community of practitioners if one is to improve knowledge of assessment and student involvement in the assessment process, which, according to Randel et al. (2016), is easier to achieve than to change the assessment practices.

When teachers discuss and reflect together, the resultant learning of such practices is what causes change in commonly shared and engrained beliefs (Osterman and Kottkamp, 2004). When teachers change their principles with the support of their colleagues, they themselves become mechanisms of change that can overcome the barriers of AfL implementation (DeLuca et al., 2012). The individual and collective capacity building, according to Fullan (2011), are among "the right drivers that can directly work on culture" (p. 4) for social change. In Hargreaves and Fullan (2012), the individual capacity is called the human capital, while the collective capacity is referred to as the social capital. A third capital, Hargreaves and Fullan (2012) explain, is the decision capital by which teachers decide on the best way forward. In tandem, these three capitals form the professional capital of a school, which is what will transform a school. Hargreaves and Fullan (2012) defined professional capital in terms of the "collective assets of teachers and teaching that are developed, invested,

accumulated, and circulated to produce a high yield or return in the quality of teaching and student learning" (p. 49). Therefore, the transformation results from the collective opportunities provided for individuals to share the knowledge, skills, qualifications, capacities and emotional intelligence together with the decisions they make. Hence, for professional capital to leave an impact, it is not enough to have highly skilled individual teachers, as it is the powerful act of coming together and unity in purpose for action that facilitates and strengthens change within an institution.

Professional learning communities are a modern contemporary form of professional development and learning. However, setting them up offers a challenge to both teachers and school leaders especially if the existent culture is not conducive to such communities of learning. As Postholm and Skrøvset (2013) state, the first challenge for a school leader is the competence required to lead and advise teachers about AfL. If school leaders are not one step ahead of their teachers in innovative stances within the educational sector, they cannot create and foster a culture for professional inquiry (Bezzina, 2002). Moreover, Smith (2011) sustains that "leaders are responsible for providing the necessary support system such as resources, time and beyond all, an atmosphere where trust and support allow for trial and sometimes failure" (p. 56). If this is not the case, school leaders cannot be the "skilled change agents" (Fullan, 2011, p. 4) responsible for leading learning communities that focus on students' assessment-based learning as advocated by Sergiovanni (2001).

Creating a culture of assessment-based learning requires that professional learning communities focus also on the student's agency and self-regulation in learning (Andrade and Brookhart, 2016; Birenbaum, 2016). Achieving these foci is challenging due to the current clash between the demands of policy and actual practice. For

example, if the Education Department or Local Education Authority aim for a student-centred learning approach but exams are still conditioning teachers' work, then teachers are caught up between an implicit (student-centred learning) and an explicit (exam driven) structure. It is likely that the teachers' agency is more affected by the explicit rather than the implicit structure, thus, it is not enough to have the right implicit structure to bring about change. This shows that the conditions affecting the teachers' work are not only limited to the social structures they work in as stated by Shilling (1992) in the structuration theory. This point was discussed with Shilling (2014), in a personal communication (see Appendix I), where the counter argument specified that this interpretation would hold if it was justified in terms of the rules and resources drawn by the individuals. This indicates that re-culturing and restructuring must complement each other. But the rules are shaped by the culture teachers and students are situated in. Hence, changing the rules must be preceded by a change in the cultural context. In fact, Fullan and Erskine-Cullen (1995), Fullan (2011) and Birenbaum (2016) strongly suggested that re-culturing must precede restructuring. Re-culturing is crucial, as in this process the learning organisation adjourns its beliefs, understandings and practices in a quest to meet the demands of the twenty-first century educational needs (Fullan and Erskine-Cullen, 1995).

Another challenge in the development of professional learning communities is characterised by the conditions under which the group is formed. A group of teachers can come together in the form of a social covenant or contract group (Sergiovanni, 2000). Covenant groups share the same values, commitment and motivation to reach a common goal for change. Contrastingly, social contract groups make an effort to congregate and are motivated by an extrinsic reward. An example of such a reward

could well be an acknowledgement of participation. Although covenant groups are essential when taking into account the need for change in teaching and learning, Nielsen (2012) suggested that a balanced approach of both types of groups can work out well because it creates a sense of unity. Whichever type of group is adopted, teachers' professional learning communities should be driven by the persuasion that they and the students would ultimately be the beneficiaries of such innovation. Professional learning communities are the key spaces necessary in informing teachers about diversity in learning in order to enhance it (Missett, Brunner, Callahan, Moon and Price Azano, 2014) because, through the learning community opportunity, teachers can value and see how it is managed (Burke and Hall, 2003). Also, professional learning communities contribute to the "…unlearning [of] some of the practices and beliefs that have dominated teachers' careers to date as well as helping students to take on new roles in their learning" (Leirhaug and Annerstedt, 2016, p. 626).

Notwithstanding the numerous benefits of professional learning communities, the absence of the right culture conducive to assessment-based learning poses yet another challenge for its implementation. The task gets further complicated when not only the appropriate culture is not present but also when such type of professional learning is non-existent. This is the case in Malta, where professional development is still very traditional (Attard Tonna and Shanks, 2017) albeit lately, the practice of professional learning communities is evolving slowly with the recent setting up of the Institute for Education (IfE). The intent of the institute is to be an educators' hub for professional learning, for all the educators at all levels within the local educational authority. Ironically, most of the professional development opportunities provided by the

Institute are still taking place out of the school context, which defeats the purpose of professional learning communities. Most recent, the issue of teachers' continuous professional development and learning has gained increased attention and importance by the new sectoral agreement for the state schools only between the Government and the Malta Union of Teachers. Through this agreement, the Ministry for Education and Employment (2018a) is envisaging the take up of both mandatory and self-sought programmes of PD and the time allotted for the compulsory PD has increased from twelve to forty hours per scholastic year. In addition, the agreement incentives teachers in that if they accumulate three-hundred-and-sixty hours of PD over six years, they move up one scale after six rather than eight years. However, this faster progression will work well with novice teachers or those who are still not in the capping scale, but those who reach scale seven might not be interested to further their professional learning unless they are intrinsically motivated to do so. In relation to an educator's interest for further professional learning opportunities, a very recent study by Attard Tonna and Calleja (2018) revealed that the level of participation and the type of professional learning activities in Malta are of concern. The current situation of professional learning in Malta will be discussed next.

2.8 Teachers' Professional Learning in Malta

Maltese teachers attained their professional status with the passing of the Maltese Government Education Act (1988), which paved the way for the introduction of formal in-service training. The structure of the on-the-job training, currently in use, consists of three half-day training sessions. This type of training amounts to twelve hours which are the obligatory hours agreed on by the Malta Union of Teachers (MUT) and the Ministry of Education Youth and Employment (2007). Other training opportunities

are at the discretion and voluntary participation of the teachers. However, each teacher has to attend three sessions of professional development held after school hours against remuneration.

The format of these sessions has mostly been very traditional and training-based (Attard Tonna and Shanks, 2017). According to Bezzina and Camilleri (2001), a training-based professional activity does not respond adequately to the teachers' needs to be more competent in inclusive practices. Moreover, a training-based activity makes teachers passive, which is not what the twenty-first century education is demanding from teachers. This century's demands are for teachers to engage in reflective inquiry (Bezzina, 2002). Such a call is more pertinent than ever in the light of the findings of a very recent Maltese study on *Teachers' Professional Lives and Careers,* which revealed that "…67% of the respondents were not partaking in some form of professional learning" (Attard Tonna and Calleja, 2018, p. 31). Of most concern is the participant teachers' low preference for collaborative practices as a form of professional learning (Attard Tonna and Calleja, 2018). These results establish further the urgent need of contemporary forms of professional learning, such as that undertaken in this study.

With the current professional development set-up, teachers do not have the opportunity to participate in such inquiry, as professional learning communities are not a common practice. The current NCF, with its call for a "pedagogical reform and cultural change imbued in a new value system" (p. 25), acknowledges that its ambitious targets can be reached through a new or a rethought professional learning activity. This rethinking includes:

- an increase in the time spent on continuous professional learning (p. xvi);

- a focus on differentiated teaching and learner-centred learning, which are key priority areas of the MEDE and the DQSE (p. 6);

- the type of ongoing support for teachers to learn and implement practices in key priority areas (p. 41);

- how teachers can become critical and reflective professionals about their situations (p. 44).

Currently, these aims are not being met as the present learning opportunities are not embedded in a professional learning community. Attard Tonna and Shanks (2017) argue that for teachers to be critical learners (p. 100), they need to come together in their teaching and learning environment as, when they do so, their professional learning experience is not de-contextualised, risking its becoming irrelevant to their daily needs and challenges. It also reinforces what Duke (1990) calls the culture of collaboration. In Malta, the time dedicated for primary school teachers to come together as a professional community depends on whether peripatetic teachers (teachers of Music, Art, Physical Education and Drama assigned to the college) are present in school, because they take over the class during their colleagues' professional learning community time.

The drawbacks of this system are that the materialisation of the professional community discussions cannot always be ensured implying that a more sustainable form of professional learning is greatly needed. Moreover, the different support services that the school decides to avail itself of must share the weekly allotted time of ninety minutes for curriculum development. Therefore, if the school engages in

numerous educational services for the sake of just being proactive, the same participation can have a negative counter effect as teachers are being overwhelmed by the various strategies or programmes of instruction suggested by the different support personnel. In fact, primary teachers have raised the concern of too many support staff with their union representatives. In response, the Malta Union of Teachers (2014) wrote to the Directorate for Educational Services (DES) stating that while the MUT had no objection to have guest speakers, it expected these visits to be limited. According to the MUT, the professional learning time, locally referred to as curriculum time, should be used by teachers to carry out coordination and other essential duties. The MUT did not specify what these duties entail. If they include administrative work related to the class, then the MUT is not fully supporting the reflective inquiry that should be a priority in teachers' professional work. Therefore, if in the weekly non-contact time teachers are being directed to focus on other matters rather than teaching and learning, it follows that reflective professional learning communities are almost non-existent. The lesser the number of occasions for teachers to meet, the greater the threat to their own and the school's professional capital (Hargreaves and Fullan, 2012). When implementing a new pedagogy, teachers need to come together under the leadership of the Head of School (Wain et al., 2001) to discuss the practice and challenges brought about by the new pedagogy.

The problem is that though Heads of School are expected to take a leading role in curriculum matters (Ministry of Education, 1999), particularly in "the identification of themes and supervision of action research" (p. 56), a recent study by Debono (2014) has shown that Heads of School are still administering schools with most of their time being taken up by non-curricular issues. The implications of Debono's (2014) findings

support and restate what Hattie (1999) has been saying, that Heads of Schools are not focusing on what really matters, the evidence-based teaching aspects that positively influence student learning.

Gordon et al (2014) and Hopfenbeck et al. (2015) maintain that familiarity of the teachers' working context facilitates the successful implementation of assessment. Consequently, Heads of School, in sharing the same teaching and learning context, are at a more advantageous position than that of external support personnel because they can start from and build on their insider perspective. Involving school leaders is only one of the ways in which assessment reforms can be tackled. If it is not possible for the school leader to take on this duty, another member of the senior management team (SMT) can be delegated. In applying this suggestion to the Maltese context, this SMT member can be either the Assistant (Deputy) Head or a Head of Department (HOD).

Teacher expectations about student ability and the frequency of formative assessment are two other crucial factors which impinge on the successful implementation of assessment reforms (Missett et al., 2014). These two aspects are culturally imbued matters (Birenbaum, 2016) and, therefore, having Heads of School participating in the creation of this culture is a means of introducing and sustaining an internal coherence model (Elmore, Forman, Stosich and Bocala, 2014). An internal coherence model connecting the leadership practice for instructional improvement with the organisational processes for team levels and the teachers' efficacy beliefs is an essential feature of an assessment culture.

This section looked at Maltese teachers' professional learning opportunities in and out of school. It has been discussed that professional learning communities are not yet a common practice of learning in and across schools. This lacuna has been

acknowledged in the current NCF, and the IfE is attempting to fill this gap through alternative modes of assessment. Nonetheless, the early days of the IfE do not, as yet, permit in-depth studies on the effect of its learning programmes on the professional development and learning of teachers. Since the gap in the provision and materialisation of professional learning communities persists, this study aims at using action research as a model of professional learning in the implementation of a new pedagogy.

2.9 The Maltese Policy Documents – a strong emphasis on formative assessment.

Chapter 327 of the Government of Malta (1988) Education Act and its subsequent legal notices stipulate the right and duty of every child to attend school, at least, during its compulsory term (5 – 16 years). Access to schooling is a basic human right. However, access does not automatically guarantee a quality and meaningful schooling experience. The first National Minimum Curriculum (1989) recognised the importance of offering a quality and meaningful learning experience, which led, six years after its implementation, to Wain et al's. (1995) critical report. In this document, the Commission recommended the introduction of school learning communities while also stressing the need to focus on and offer conducive learning environments so as to give students their learning entitlement. The key recommendations to reach these aims consisted of the introduction of mixed ability classes in the last two years of the primary cycle, the removal of the secondary schooling tripartite system, a rethinking of the scope of assessment, an emphasis on higher order skills and an official language policy. Therefore, a more student-centred system was called for. In response to this, several policy documents as shown in Figure 2.4 ensued to remedy the situation.

2014
Framework for the
Education Strategy
(2014-2024)

A National Literacy for
All (2014-2019)

Early School Leavers
Strategy

Lifelong Learning
Strategy.

Respect for All
Framework.

Education for All audit
report

2015
Learning Outcomes
Framework

Institute for Education

2016
Consultation process to
define inclusion.

2012
A National Curriculum
Framework For All (NCF).

Introduction of AfL support
in schools

2006
Amendment of the
Education Act

2005
For All Children to
Succeed

2000
Equal Opportunities Act

1999
National Minimum
Curriculum (NMC)

1995
For Tomorrow's Schools
Report

Figure 2.4: The major Maltese policy reforms of the last two decades.

The most relevant documents for this study are the:

- Ministry for Education (1999) *National Minimum Curriculum – Creating the Future Together,* locally referred to as the NMC;

- Ministry for Education and Employment (2012) National Curriculum Framework for All, known as the NCF, which is the current curriculum;

- Ministry for Education and Employment (2014a) Framework for the Education Strategy;

- European Agency for Special Needs and Inclusive Education (2014) audit report.

The new NMC drew on the recommendations by Wain et al. (1995) and proposed a more formative approach with an educational future based on social justice. This required the removal of streaming together with a new assessment system whose purpose was not selection and streaming of students but one which shifts the focus of assessment from "valuing what is measured to measure what is valued" (Grima et al., 2008). This has been translated by Grima et al. (2008) into a six-year proposal plan to mitigate the excessive focus by teachers and other stakeholders on summative assessment to bring more social justice among the learners.

The Ministry for Education and Employment (2012), in the current NCF's legally binding curriculum, has further strengthened the move towards a more socially just assessment plan by explicitly recommending AfL as one of the pedagogies that could reach this aim. Nonetheless, two years later, an external commissioned audit, the European Agency for Special Needs and Inclusive Education (2014), found that in Maltese classrooms and schools there is still an "overemphasis on high stakes,

summative assessment, … high level of competition" and "very little evidence of AfL across schools and limited possibilities for learners to take control over their learning" (p. 45). Hence, the teachers' practices were not formative, and summative assessment still led the way. This shows that nothing has changed since Grima and Chetcuti's (2003) work, which found that testing dominated the schools' cultures. A similar statement has been made very recently by the Hon. Minister of Education, Evarist Bartolo[2], on the students' performance in the last Ordinary Level exams. He said, "the Maltese educational system in place relies heavily on a one-off exam to assess students' achievements, thus giving little or no attention to achievements throughout the schooling years in most subject areas."

Unless a change in practice towards a consistent formative approach takes place, the NCF's aims of active citizenship and employability, lifelong learning and inclusive education might not be reached within the NCF's (2012-2026) lifespan. Concurrently, the four broad goals constituting the current *Framework Strategy for Malta 2014-2024,* namely:

- narrowing the gender gap in achievement;

- reducing the number of students at risk;

- increasing lifelong and adult learning;

- increasing student participation in vocational and tertiary education to reach the EU2020 targets for Malta,

might be compromised too.

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[2] http://www.timesofmalta.com/articles/view/20160713/local/sec-results-show-failure-concerns.618695

Therefore, responding to the Maltese students' educational needs in the twenty-first century through a formative approach is a national vision which permeates the major policy documents. In practice, this strong call for change is not being reflected with the same vigour. The external audit report by the European Agency for Special Needs and Inclusive Education (2014) points out that the data collected from surveys, questionnaires and observations in the field revealed a "disconnection between teaching and learning" (p. 45). If there is no link between teaching and learning, then there must be an equally minimal connection between teaching, learning and assessment. Consequently, this indicates that the current teaching practice is not using assessment as the bridge between teaching and learning (Wiliam, 2016). Moreover, the separation of teaching from learning indicates that the two practices are being kept apart, implying that minimal interactive regulation is going on during the learning process (Allal, 2016). In this respect, the audit team recommended "[the leverage of] learner engagement and participation; the use of AfL to support the learning of students in self-reviews and in making decisions about their learning" (p. 89), in other words, the use of classroom formative assessment for self-regulation (Andrade and Brookhart, 2016).

Given that the audit team urged the Maltese educators to prioritise and work on the concept of inclusion in its wider sense explains the little or minimal use of AfL. Perhaps, it is, as has been argued in the previous sections, a matter of raising the assessment literacy of the Maltese educators.

Micallef (2014) reports that teachers in Malta are frustrated by the present class structure of mixed-ability classes as they cannot cope with the vast range of abilities they have to cater for. If teachers are desperate about their class situation and their

class life has become a matter of coping strategies, there is the concern that quality teaching and learning might be compromised too. Banding, in fact, was a political measure taken in collaboration with the Department of Curriculum Management, aimed at mitigating the mixed-ability problem faced and claimed by teachers. In the letter circular DCM 75/2014, Fabri (2014) argues that young children aged three to eight years old will be grouped by the month of birth "to restrict the range of intellectual maturity of children […] thus making it less challenging for the teachers to address the needs of every child." Subsequently, when children, aged nine and ten, are in the last two years of the primary cycle, the grouping will be based on their level of achievement in the summative assessment of the previous year. Such a decision denies the opportunity for students to learn with peers who have a developmental headway, which goes against the principles of social justice underpinning the major reforms discussed above. Axiak et al. (2014), a group of University of Malta academics, have pointed out the issue of educational values and social justice while harshly criticising the banding measure as "a policy reversal (p. 1) […] of a barely three-year-young system" (p. 4). In reaction, Calleja (2014) reported and stressed the Hon. Minister of Education's position that banding is not streaming but a balanced way to lighten the difficulties faced by teachers. It would have been absurd if the Minister had equated banding with streaming as he would have gone against all the principles that the last two decades of reforms have tried to bring about. The banding measure can be cushioning teachers to hold on to their established practices even though the Minister has argued that change is not an option but part of the global process (Calleja, 2014). As things stand, the Maltese educational system has an educational crisis (Micallef, 2014) as it calls for a learner-centred approach imbued in a banding system.

If change is essential, the banding measure will be futile without a transformation in the teachers' old habits of practice. Cutajar, Bezzina and James (2013) suggest that new habits can emerge from "[…] a new balanced approach of co-operation and sharing of good practice […]" (p. 23). Therefore, the difficulties faced by teachers to implement the AfL pedagogy within a classroom setting which they are trying to survive in at present, can be alleviated by working with other professionals who have more experience in that pedagogy.

The reasons as to why teachers are struggling in mixed-ability banded classes and why a student-centred pedagogy like AfL is minimally used have not been explored in depth and merit further investigation. On the evidence of the literature discussed in the previous sections, several possible reasons for the scant use of AfL could be connected to:

- a misunderstanding of what AfL really is;

- the relationship between teachers' beliefs and practices about AfL;

- the role of summative and formative assessment in the classroom;

- the roles of the teacher and the students in the new assessment culture;

- a lack of effective professional learning activities about assessment, of which AfL is a subset.

As already reported, Grima and Chetcuti (2003) confirmed that summative assessment was, and to a certain extent still is, the preferred mode of assessment. For assessment practices to change, a transformation of the surrounding culture is necessary. This should stray away, as Gipps (1994) strongly advocates, from a system of testing to one based on assessment. According to Buhagiar (2007), a change in the practices of

assessment must first attract the teachers' attention to AfL, which can be done by involving them in a "participatory agenda for change" (p. 53). In a study with one particular year group in one of the ten colleges in Malta, Satariano (2015) found that the participant teachers had a good understanding of AfL although they rarely implemented some of its fundamental strategies (Thompson and Wiliam, 2007a), an interesting incongruence between the two factors. Furthermore, Satariano (2015) found that the participant teachers "did not pass the responsibility for learning to the students" (p. 271), which confirms a teacher-centred AfL practice amongst his participants. While these findings are in stark contrast with the aims and recommendations of the local policies discussed in this section, they expose the gap between the theory in the policies and the actual in-class assessment practices. Furthermore, the theory-to-practice gap in Satariano's (2015) study is similar to the findings of James and Pedder (2006) who concluded that the participant teachers had conflicting principles and practices of AfL. These findings further reinforce the clash between a person's espoused (what one believes) and in-use (what one practices) theories (Argyris and Schon, 1974).

In the light of his findings, Satariano (2015) has recommended further "local case studies and action research in the field of assessment so that more local practices can be disseminated amongst local teachers" (p. 271). The present study responds to this call because it will examine the relationship between the Maltese primary teachers' beliefs and practices about AfL in one college. It will also investigate the influence of action research on the beliefs and practices regarding AfL of a small group of primary school teachers who are new to AfL practices.

The critical lens undertaken in scrutinizing the major Maltese policy documents shows that the overarching permeating spirit in Malta is based on a student-centred approach to learning. However, local studies and political measures have shown that, in practice, student-centred teaching and learning is impinged by other class factor issues such as class composition, size and teaching methods. Given these problems, the present study will try to shed more light on the relationship that exists between following a pedagogical belief aimed at teaching and learning through formative assessment practices and the challenges arising from implementing that practice.

2.10 Summary of Chapter

This review of literature set out to investigate and analyse how teachers experience AfL. The role of assessment in education, the influence of summative and formative assessment on teaching and learning, particularly how a culture of testing favours and, therefore, privileges summative over formative assessment, were explored first. Despite this privilege in the practice of assessment, the literature reviewed is moving away from this perspective to one where both types of assessment form part of the same continuum. In fact, the argument put forth was that the initial stage of the formative assessment process, when teachers make a judgement on the academic evidence, is a mini summative assessment without a mark or grade if teachers just stop at the judgement level. However, if teachers use that judgement to provide feedback to students to move forward, then the mini summative action moves to a higher level in that it would be informative to students. Should the latter use the teacher's information to take action on their shortcomings, and for each action taken the quality of work is self-checked against the expected outcomes, thus self-regulation would thus be employed and assessment would be taken to another level, that of Assessment as

Learning (AasL). This cycle of feedback, action, reflection, verification and again feedback is what makes the formative nature of assessment so social, an aspect which has been explored in section 2.2.4.

Unless this iterative process is well understood, formative assessment will lose in its effectiveness. Unfortunately, the lack of a standard teacher-friendly and student-friendly definitions about AfL does not facilitate this understanding process, especially when teachers and students are key partners in the AfL process. An attempt to offer such definitions was presented in section 2.1.

The promising key feature of AfL is student achievement. However, in the absence of the right supportive environment, student achievement might not be guaranteed. While various environmental factors have a bearing on student achievement, what makes the difference this end is not the programme of instruction but the type of assessment practices underpinning the programme. It was also argued that since achievement is relative to one's potential, even the assessment practices have to be tailor-made to match the student's level of functioning. Hence, although there is an overall operating framework for assessment, it has to be accepted that there should be adaptations to suit the students' individual needs.

When the environmental structures do not conform to a social constructionist approach, on which AfL is based, further tensions and challenges are created for the teacher. Examples of these tensions include the awareness, acceptance and management of the roles of the teacher and the student, and the shift from a post-mortem judgement of learning to a capitalisation on the moments of contingency.

The learning environment can slowly start changing through small, gradual changes in practice, whose outcomes can affect the beliefs that teachers hold about the success of the innovation. When these changes are going on in a school, teachers need and benefit from the support of their colleagues and other expert personnel with whom class practice problems and successes are shared. Thus, professional learning communities are of utmost importance and crucial in the change process. This is more so in Malta, where a recent study revealed that a high percentage of teachers are currently not engaged in any form of professional development, and that collaborative forms of professional development are the least engaged in (Attard Tonna and Calleja, 2018).

Following the international stance on AfL, the chapter concluded with a closer look at the national position about teaching, learning, assessment and professional development. It is clearly evident that the Maltese educational system is still undergoing a reform process which started over twenty years ago intending to provide a meaningful student-centred learning experience. AfL has been strongly recommended as one of the pedagogies that teachers can adopt to achieve this significant learning experience. The problem is that, in Malta, AfL is a recent innovation imbued in a culture of testing and backed with very few studies about the teachers' experiences of its implementation in the primary school setting. To address this void, the current study is a first in investigating such an issue in the state primary schools within the chosen college and with the participants involved. To do so, the study first examines the understandings, thoughts, practices and concerns about AfL of teachers from the eight primary schools forming part of the chosen college. Then, it explores and investigates the influence of a collaborative action research approach

on the relationship between beliefs and practices regarding AfL of three primary school teachers.

The next chapter explains and justifies the methodological approach adopted in this research study. Meanwhile, the visual representation presented in Chapter One (see section 1.2) has been updated (see section 2.11 overleaf) to include the gap in knowledge identified in this chapter.

2.11 An updated visual representation of the study with the gaps in knowledge

> **Research Issue:** A group of Maltese state primary school teachers within one college were not valuing, appreciating and believing in the philosophy of AfL.

> **Research Statement:** This study set out to investigate the connections between the teachers' beliefs and practices regarding AfL in a group of state primary schools within one college. Additionally, this study has examined the influence of collaborative action research on the relationship between these beliefs and practices held by a small group of teachers who were new to AfL.

> **Research Purpose - This study intends to:**
>
> - create new knowledge about the emerging AfL situation at a particular point in Malta with particular participants and within a particular context;
> - enrich both the local and international literature;
> - inform local policy and practice about learner centred professional learning ways to tackle innovations;
> - provide local experiences of a small group of teachers with which non-participant teachers can associate and possibly trial.

> **Research Questions**
>
> - What are the connections between the beliefs and practices of teachers who are novice AfL practitioners in a Maltese state primary school?
>
> - How could a collaborative action research study influence the connections between the teacher's AfL beliefs and practices, and therefore of prospective AfL practitioners?

> **Gap in Knowledge**
>
> - Lack of shared understanding about what constitutes AfL;
>
> - Limited local exemplars of teachers' experiences regarding AfL;
>
> - No local studies about the effect of collaborative action research on teaching and learning innovations.

Figure 2.5: Updated research diagram cycle

Chapter 3 : Research Design and Methodology

3.1 Overview

In this chapter, explanations and justifications of the research design, methodology, methods of data collection, the data analysis approach used to answer the research questions and the ethical considerations taken, are presented. This study has been driven by two main research questions, outlined in Chapter One. These questions are:

- What are the connections between the beliefs and practices of teachers who are novice AfL practitioners in a Maltese state primary school?

- How could a collaborative action research (CAR) study influence the connections between the teacher's beliefs and practices, and therefore of prospective AfL practitioners?

The subsidiary questions for the first research question are:

- What are the teachers' beliefs about AfL practices in the teaching and learning process?

- What are the teachers' AfL practices?

- What are the school leaders' beliefs about AfL?

The subsidiary questions for the second research question are:

- How have the teachers' beliefs changed as a result of the action research process?

- How have the students benefited from the 'newly' embedded strategies in their learning?

A two-phase approach was used to answer these research questions. Each phase was guided by the respective research question.

The research design of this study was informed by a social constructionism epistemology and a reality that is dependent on the actions of human beings. The rationale of how constructionism and relativism have shaped "the overarching approach to the study", as Thurston, Cove and Meadows (2008, p. 2) defined it, will be discussed first. The research methodology about the adopted CAR process will follow right after. The background, the definitions, the different sub-branches of action research and the five-stage process adopted for the implementation of AfL with the participants will be presented and debated next. Subsequently, the research roles taken in this study will be explained. This is followed by an explanation and justification of the chosen multiple data collection sources, the process of data collection adopted, the approach to analysis, the trustworthiness of this study and the ethical considerations taken at each stage of this study.

3.2 Research Design: Qualitative Approach

Research design, according to De Vaus (2001), is a description of the "logical structure of the inquiry" (p. 16). However, any inquiry is guided by a set of research questions in which the type of research questions show what the researcher wants to find out and sheds light on "what type of evidence is needed to answer the research questions in a convincing way" (De Vaus, 2001, p. 9). Therefore, the research design is also influenced by and has to reflect the type of research questions (De Vaus, 2001). Moreover, the purpose of research design is to shape the study (Clough and Nutbrown, 2012), thus providing a plan of the entire study (Creswell, 2013). This plan, Creswell

(2013) maintains, determines whether a qualitative or quantitative research is undertaken.

In illustrating his point, De Vaus (2001) makes an analogy with a building construction whereby the architect, prior to the design of the building, needs to know the purpose and future utility of the building to draw an appropriate plan. Greener (2011) refers to this interconnection between purpose, design and scope in terms of the "logic of appropriateness" (p. 2), while Cohen and Manion et al. (2007, 2011) call it the fitness for purpose. This coherent chain, Richard and Morse (2012) explain, provides the methodological congruence within a study, which Silverman (2013) translates into the researcher's sound methodological and method choices. This inextricable link has also been explained by Crotty (1998), who emphasised the coherence between the four elements constituting a research design: epistemology (how we come to know), theoretical perspectives (how we look at things), methodology (plan of action) and methods (the techniques used to gather data). In Crotty's (1998) four-element framework, the ontological element is not included. However, he stresses that if it had to be included, it would sit alongside epistemology to inform the theoretical perspectives. In line with this, Carter and Little (2007) and Scotland (2012) support the view that sound methodological and method choices are underpinned by the ontological and epistemological stances underlying the theoretical paradigm of the research.

Since this study seeks to discover, describe and interpret the teachers' beliefs and practices about AfL with the sole aim of providing a better understanding of the rationale behind the current practices, the most logically appropriate and fitting theoretical perspective is the interpretive one (Blaikie, 2000). Given that

understanding of the relationship between teachers' beliefs and practices is much more important than the generalisation of the link between these two phenomena, an interpretative approach to the data is further deemed more appropriate because "it seeks to explore people's experiences and their views or perspectives of these experiences" (Gray, 2013, p. 37). Such an exploration requires an in-depth understanding of the issue under examination. In these cases, Creswell (2013) suggests that a qualitative approach is the fittest for the purpose. For this reason, this study adopts a qualitative research methodology because it aims to explore, examine and interpret a local situation to understand better the participants' perspectives about AfL before, during and after the change in practice.

In this study, the research design started with the identification of the area of interest as a real-life work related issue, rather than approaching it from a perspective based on philosophical underpinnings. Crotty (1998, p. 13) acknowledged that "it is hardly [the case that] researchers embark on a piece of research from their epistemological stances but from a real-life issue that needs to be addressed." After having identified the potential scope of research within area of interest, the formulation of the most appropriate research questions started. Once the focus was established, a parallel exercise revolving around the researcher's philosophical underpinnings was engaged in, so as to determine the most appropriate matching methodology, research methods and approach to data analysis. The research design process adopted is illustrated in Figure 3.1 below.
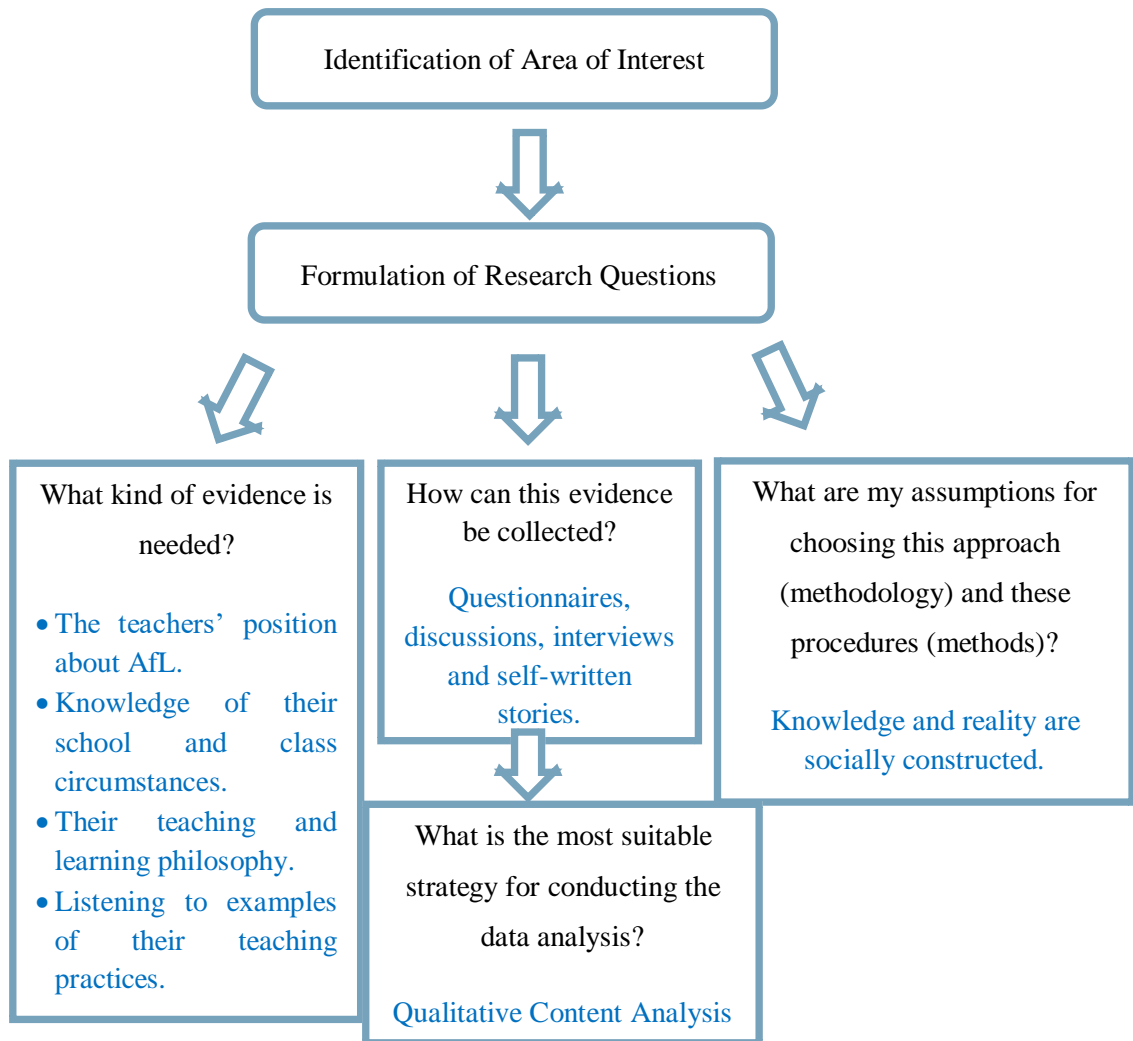
Figure 3.1 : The Research Design used in this study.

A more detailed list of the implementation of this research design is given in Table 3.1 and Table 3.2 below. The first column on the left reiterates the main research questions. Reading from left to right highlights the link and alignment between the research questions, the methodology, the data collection activities, the approach to data analysis, the data generated and the ethical considerations taken at each phase, which Sikes (2004) stresses upon to ensure the credibility of a study. Moreover, it signposts where each section will be expounded.

Phase 1
Research Question 1
What are the connections between the beliefs and practices of teachers who are novice AfL practitioners in a Maltese state primary school?
(see section 3.3 for a detailed discussion)

Data Generated (see section 3.4)	**Data Collection Methods (see section 3.6)**	**Ethical Considerations (see section 3.9)**	**. Data Analysis Approach (see section 3.10)**
Rich qualitative data.	Open ended questionnaire for: • Eighty-five primary school teachers and, • Eight Heads of Primary Schools	• University's permission. • Maltese Educational Directorates' permission. • College Principal's permission. • Information Sheet. • Verbal explanation at a Council of Heads meeting. • Dissemination of questionnaires through the Heads of schools. • Collection of questionnaire from a postal box in each school. • An email of thanks sent to all the school's staff.	• Content Analysis • Manual and Computer Assisted (NVIVO[11]).

Table 3.1: An overview of the methodological congruence in phase one

Phase 2 Research Question 2 How could a collaborative action research study influence the connections between the teacher's beliefs and practices, and therefore of prospective AfL practitioners? (see section 3.3 for a detailed discussion)			
Data Generated (see section 3.4)	**Data Collection Methods (see section 3.6)**	**Data Analysis Approach (see section 3.10)**	**Ethical Considerations (see section 3.9)**
Rich qualitative data about: • the teachers' **proactive** thoughts and practices about lessons embedded with AfL strategies. • the teachers' practices and visible thoughts through their own reflections about their practices and the learners' response while the learning was taking place. • the teachers' retrospective look at their learning experience and how this might shape their 'future' practices. • the students' retrospective look at their learning experiences especially their thoughts about whether these helped them or not.	• 5 Group discussions. • 3 Individual feedback sessions per teacher participant. • Record-keeping booklet. • A semi structured interview with each teacher participant. • Students' group interviews per grade spread over a number of sessions on one particular day for each grade. 16 out of 17 students from the Year 2 class took part in the discussion. 13 out of 15 students participated in the discussion. 5 out of 16 students took part in the discussion. • 3 self-written recounts in the last session. From the Year 3 class	• Transcription • Translation • Reading and re-reading and highlighting. • NVIVO[11] assistance for the data interpretation and analysis. • Themes. • Beginning, middle and final phase learning progress per teacher.	• University's permission. • Maltese Educational Directorates permission. • College Principal permission. • Head of School permission. • Information meeting with all teachers within year group meetings. • An information sheet was given. • One week time frame to decide on the matter. • Informed Consent signed at various intervals throughout the research study. • Logistics set and discussed with and approved by the Head of School. • Prior to each visit, Head of School and teachers were reminded of my visit. • Record-keeping booklet was distributed to the teachers one week before the first meeting. • Audio recording consent. • Meetings schedule was always discussed with the teachers and amended accordingly. • Parental consent for the students' views discussed with the Head of School and the teachers. • Students' involvement explained to parents during parents' day. • Translation of data containing all the data collection activities was sent back to the participants for their feedback on an agreed fortnight timeframe.

Table 3.2: An overview of the methodological congruence in phase two

3.3 Research Questions

In the overview of this chapter (see section 3.1) the research questions and the respective subsidiary questions were stated. The choice of these questions stemmed from the hope that the participants' responses would shed light on the level of understanding they held and whether their AfL practices, if any, mirrored or contrasted with their level of understanding, thoughts and beliefs. Moreover, this study delved into how the participants' concerns about AfL shaped their understanding, thoughts and beliefs. In getting to know these insights, it was hoped that a link between the participant teachers' beliefs and practices could be established.

The school leaders, locally known as Head of School, have been included as according to Fullan (2011), "the central driving force to system-wide success is the combination of the educators and students' energies" (p. 3). Reforms cannot have the desired effect if the main protagonists within a learning organisation do not share the same intrinsic motivation in their teamwork for instructional improvement. Fullan (2011) highlights three factors, "attitude, philosophy and theory of action" (p. 5), as the right drivers for change within the right framework mindset. Fullan defines the right mindset in terms of the educators "attitude, philosophy and theory of action" (p. 5). This definition builds on Dweck's (1986, 2010) right mindset for learning, a growth one.

In the second phase of the study, the implementation of AfL was approached from a practice stance rather than from a transmission of knowledge form of professional development. This required the participants to be active learners during the process of their learning, on two accounts: action and reflection. Action for change is not about more of the same but about new activities that would, hopefully, lead to new knowledge and, consequently, new formation of beliefs. The newly formed beliefs result from, the "…powerful learning experiences…" that

teachers have from their own class practices and from other fellow colleagues (Bleicher, 2014, p. 813). Therefore, changing beliefs necessitates not only action but also reflection on that action. According to Bleicher (2014), these two factors are the main components of a collaborative action research (CAR) framework which, when combined with professional learning activities, "…[they] hold some promise in achieving educational change at the grassroot level" (p. 805). Furthermore, the change resulting from the teachers' actions was the focal point of evaluation because teachers' beliefs are shaped, changed and sustained by their perception of "…the positive gains in student achievement within a reasonably short time after instruction" (Bleicher, 2014, p. 807).

Teachers upskill themselves because they are interested in providing a more meaningful learning experience to their students. Hence, a study about the teacher's beliefs on a new pedagogical way of teaching could not leave out the students' voices who are the ultimate beneficiaries of their teachers' professional learning activities (Easton, 2008). More than that, both voices were important because the effectiveness of AfL results from the meaningful interaction between teachers and students in the process of teaching and learning (Black and Wiliam, 1998b). Therefore, knowing both standpoints enriches the data in that it sheds light on the quality of interaction between the teacher and the student.

3.4 Research Methodology: Collaborative Action Research (CAR)

Bleicher (2014) states that when the components of CAR - motivation, knowledge, action and reflection - are embedded into a set of professional learning activities they

> …should provide learning opportunities that create changes in teachers' disposition about teaching and learning, leading to changes in classroom practice and resulting in improved student achievement. pp. 216-217.

Thus, the safe environment provided by the professional learning activities allows teachers to have first-hand experience to build their own knowledge of practice on the new proposed pedagogy. In turn, the informed knowledge based on the evidence of class practice will assist teachers to uphold or reject the claims about the new pedagogy (Bleicher, 2014). More than that, Easton (2008) and Attard Tonna and Shanks (2017) hold that the most fruitful professional learning activities are contextualised in the educators' working context. When such activities start from the learners' needs, in this case, the teachers', a bottom-up approach is used (Easton, 2008; Said Pace and Seguna, 2018). In turn, this approach to learning mirrors what the teachers are expected to do to offer students a learner-centred approach. Hence, a CAR approach to learning not only offers new theoretical pedagogical knowledge but also attends to the practical knowledge of how to implement the related theory (Lamb and Simpson, 2003).

The CAR methodology has been chosen for the flexibility it offers in the building of knowledge through a process of collaborative action and reflection to ultimately improve the students' achievement.

3.4.1 Background of Action Research

The roots of action research, according to Helskog (2014), are attributed to both Dewey (1930) and Lewin (1946), with Dewey's emphasis on leveraging teachers' knowledge and their practices to become research-data, while Lewin gave prominence to the empowerment of disadvantaged groups, in particular, the unprivileged and the minority groups. Therefore, the roots of action research consist in the people's empowerment through the self-generated knowledge from their situations. These two fronts of action research have also been discussed by Adelman (1993), who concludes that action research provides the means of reflective enquiry by ordinary people. Other scholars, Altrichter et al. (1993) and Avison, Lau, Myers

and Nielsen (1999), reinforce Dewey's view about the contribution of action research to theory and practice.

Although teachers cannot be considered as neither unprivileged nor minority groups, if their experiential knowledge remains untapped, then they can become a powerless group of people whose mission would be to implement what policymakers would have decided for them. In this sense, the combination of Dewey's and Lewin's emphasis about action research can assist teachers to grow in their professional learning and consequently, contribute to the overall profession's growth in education. Hence, the action research process becomes an emancipatory avenue for teachers (Carr, 1994; Kemmis and Wilkinson, 1998).

The notion of teachers as researchers was introduced by Stenhouse (1975) who sustained that teachers can be action researchers within their classes on curriculum matters, especially when the focus is on student learning, because such studies provide a valuable contribution to student learning. Curriculum matters, I argue, consist of the content to be taught, the expected learning outcomes and the pedagogical approach used in reaching the learning outcomes. Hence, curriculum studies become a matter of both the 'what' to learn and the best possible way of 'how' to learn. Therefore, research by teachers on matters of pedagogy, like AfL, would provide a valuable contribution to the teachers undertaking the study and possibly to other teachers too.

Researching one's situation without conferring with colleagues sharing a similar context is a solitary experience, which in turn is not as fruitful as when cooperating and collaborating with colleagues. In education, Corey (1954) introduced a new dimension to action research, which he termed as cooperative action research, whereby teachers have the option to carry out research in cooperation with others within a community of research practitioners, (Wenger,

1998a, 1998b), rather than individually. When liaising and collaborating together, teachers engage in Elliott's (1993, 2009, 2010) concept of multi-order action research which Coghlan and Brannick (2005) classify into first, second and third order research. The first order occurs when teachers are studying and working on their situations. Second order happens when teachers are working with colleagues on mutual concerns and, thus supporting and learning from each other. Third order takes place with dissemination. In this study, these three elements of action research were present because the teacher was working on her own in her class, the teacher was also working with colleagues in the community of practice about the AfL pedagogy and lastly dissemination occurred when they shared their experience with school colleagues. Hence, it can be argued that this research embraced the best practices dealing with cooperation and collaboration.

One of the major benefits of cooperative and collaborative action research is the mitigation of issues of power and control because teachers, according to Wenger (1998a, 1998b), are collaborating together for a common purpose. Matters of power and control arise, Noffke (1997, 2009) argues, in controversial debates about 'who' will be developed, on 'what', by 'whom' and in 'whose' interest. Furthermore, these disputes bring to life matters concerning personal, professional and political dimensions. The personal aspect manifests itself in the personal change that the teacher researcher goes through as a result of the action research process. Subsequently, this personal change translates itself in the in-class professional teacher's actions thereby affecting the class's learning reality of the teacher and the students, thus creating a political effect.

Another benefit of collaborative action research, Raymond and Leinenbach (2000) maintain, is the bridging between the researcher's and the teacher's worlds because as McNiff (2017a)

points out, in action research the researcher is "an insider and not a spectator" (p. 10). In being an insider, the researcher becomes familiar with the issues that are of direct relevance to the participants. Thus, the area of study comes to be significant for the teachers participating in the action research, with the sole intent of emancipating them through democratic and collaborative ways of working (Lomax, 1986), on issues which are of core interest to them. Such working relationship creates an atmosphere where participants do not feel threatened by the research but supported (Cain and Harris, 2013).

Notwithstanding the benefits of action research and collaborative action research, Townsend (2014) explains that problems can arise from the quality of the relationship, the different roles and the diverse interests that each participant has in the research project. The method used in dealing with the issues arising in this study will be explained in section 3.5 below.

3.4.2 Definition of Action Research

Lewin (1946) explains the action research process in terms of an iterative cycle consisting of planning for action, taking action, observation, reflection on action, evaluation and deciding on the next steps to be taken. This process is shown in Figure 3.2.
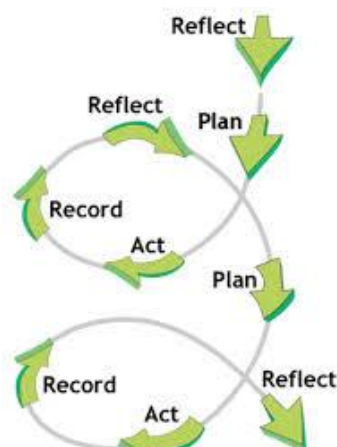
Figure 3.2: Lewin's action research cycle
Source: http://cei.ust.hk/teaching-resources/action-research

Furthermore, Lewin and other researchers, (Elliott, 1991, 1993, 2007, 2009, 2010), (Kemmis and Wilkinson, 1998), and (Noffke and Somekh, 2009, 2010, 2014) consider the action research process as the means for change and amelioration, thus empowerment. Such a betterment of one's immediate environment or the re-thinking of an action that led to nothing occurs through a number of cycles. These consist in:

- **Cycle 1** consists in the identification of a problem within the action researcher's context.

- **Cycle 2** involves the devising and implementation of a set of strategies to target that problem.

- **Cycle 3** includes the observation of the effect of these strategies in practice.

- **Cycle 4** is about the evaluation of the effect of the strategies used.

- **Cycle 5** entails the planning of the next steps to further improve the situation studied.

The initial cycle, according to Lewin (1946), starts with a reflection of the living situation whereby a problem is tackled, while for Elliott (1991) reflection is a consequence of the action and not its predecessor. In discussing some key considerations for educators as action researchers, Rossouw (2009) illustrated Elliott's understanding of action research through the model shown below.
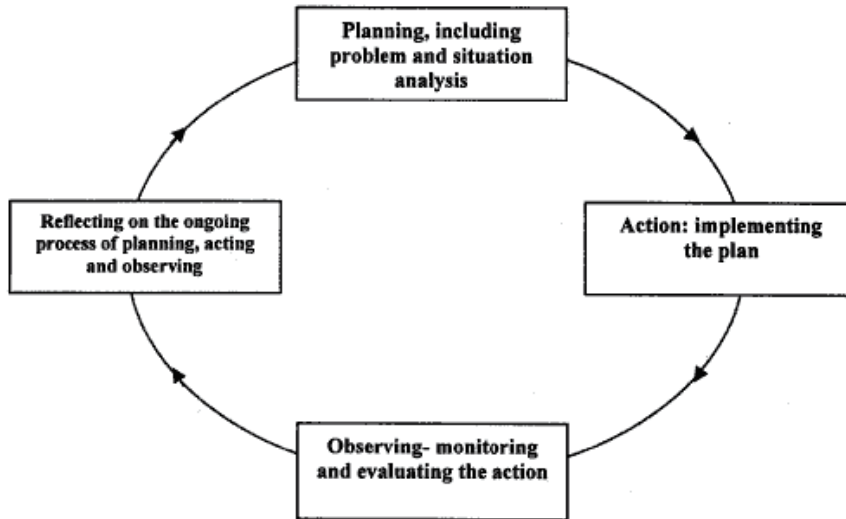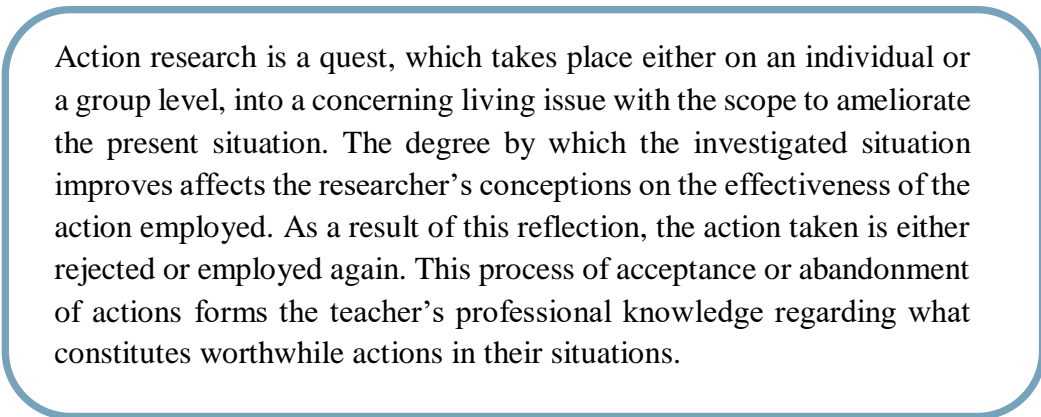
Figure 3.3: The model of action research where reflection follows action.
Source: From "Educators as action researchers: Some key considerations" (p. 9) by (Rossouw, 2009). South Africa

While reflection and action are two different processes, in the action research process there can be instances where the two are happening concurrently. In fact, although Elliott (1993, 2009) divides action research into a three stage process: planning, implementation and evaluation, he acknowledges that during the process there are instances in which the three elements are in synchronisation. A case in point is a researcher in the middle of the action where observation, reflection and ideas for future action are likely to be happening at the same time. In this light, Brydon-Miller, Greenwood and Maguire (2003) argue that action research is a work always in progress except when there are deadlines and time limitations, as the case with a study. Kemmis and McTaggart (1992) explain that the continuous process involved in action research stems from the self-reflective enquiry procedure that occurs when trying to understand how the situation within one's context can be improved.

Meanwhile, other definitions of action research brought forward by Freebody (2003), Somekh and Zeichner (2009) highlight the role of action research as a form of teacher-driven professional development and learning for professional improvement.

The variants of action research definitions indicate that action research is not guided by a standard definition whereby each explanation presents the fragmented aspects of action research - change, the bridging between theory and practice and professional learning. It would be beneficial if a comprehensive definition encapsulating these three main aspects were to be proposed. Furthermore, to date, there is not a definition which links the effect of action research on the teacher's beliefs and practices about teaching and learning. In view of this gap, I will attempt to provide a new definition (as shown in Figure 3.4 below) of action research that makes explicit the powerful link of action research onto the teacher's beliefs to practices.

Action research is a quest, which takes place either on an individual or a group level, into a concerning living issue with the scope to ameliorate the present situation. The degree by which the investigated situation improves affects the researcher's conceptions on the effectiveness of the action employed. As a result of this reflection, the action taken is either rejected or employed again. This process of acceptance or abandonment of actions forms the teacher's professional knowledge regarding what constitutes worthwhile actions in their situations.

Figure 3.4: My definition of action research

To summarise, the action research process assists the teacher in finding out the right strategy that would ameliorate a particular class situation. Thus, the teacher, as an action researcher, becomes the sole judge of what constitutes successful and unsuccessful outcomes in his/her classroom. Ghaye et al. (2008) explain that when teachers determine what has worked in their

classes, they would be using an appreciative intelligence, a dimension of participatory action research (Ghaye, 2014). In recognising, focusing and developing on the positive influence of a particular employed strategy, teachers "get better [because they would be] playing on their strengths", personal correspondence (see Appendix II) with Ghaye (2014). Therefore, awareness and capitalisation of the successful moments is an ongoing inquiry embedded in the process of action research, in which the researchers are either continuously asking, according to Whitehead (1989), "how do I improve the situation?" or, as Ghaye et al. (2008) put it, "how do we improve the situation?" It follows that in action research teachers can be working on their own individual projects in their classrooms, they can join other teachers to participate in each other's project, or else, they can collaborate with outside researchers to improve their specific situation. When teachers work on their own or participate or collaborate with others, they are engaging in three different branches of action research, namely, action research, participatory action research and collaborative action research. Whatever the type of action research undertaken, the overarching scope is always change (Elliott, 1991). Given that change is the fundamental common characteristic, the difference between the three types of action research is one of focus. As Riel (2017) pointed out, in a personal correspondence (see Appendix III):

> all action research is really participatory action research at one level because research is done with people and not on them. However, when different researchers are working on the same project in the same setting, it is participatory. On the other hand, when different projects are involved, but researchers are supporting each other it is collaborative.

In this explanation, the current study would fall under the collaborative umbrella because the participant teachers were working on their own class projects, yet supporting each other in the group discussions (one of the methods of data collection).

In a personal correspondence (see Appendix IV) with McNiff (2017b), she highlighted that although collaborative and participative action research are often used interchangeably, thus agreeing with Riel (2017), the main difference lies in whether the participants' scope is participative or participatory. When taking on a participative role, participants work with others to improve their situations, whereas in participatory action research the scope for change is getting out from the oppression (Swantz, 2008). Therefore, if participative research is taken as collaborative, then this type of research is a sub-set of participatory action research, where in this sub-set the scope for collaboration is to improve a situation which is not necessarily oppressive.

The diverse views held by McNiff (2017b) and Riel (2017) are a clear example of how elusive the line between collaborative and participatory action research is. In view of this difficulty, the next section explains the rationale used in adopting a collaborative action research (CAR) with a participative participant role in this study.

3.4.3 Collaborative Action Research

Collaborative action research, Sagor (1992) explains, is the process through which "teams of practitioners with common interests who investigate issues related to those interests" (p. 10), come together. According to Raymond and Leinenbach (2000), CAR is a systematic way of how teachers identify their class problems and plan a solution to their difficulties. It is the support and help they provide to each other that makes the process collaborative (Riel, 2017). The way collaborative action researchers support each other can differ from one educator to another and this is why Sagor (1992) and Savoie-Zajc and Descamps-Bednarz (2007) emphasised that common interests do not imply sameness of focus and process. What is of utmost importance, according to Sagor (1992, p. 10), Bryant (1995), Raymond and Leinenbach

(2000), Townsend (2014) and Wamba (2014) is the central role and full control of the action researchers. The prominent role of the people whose situation is being studied is a sign of their active participation and "…….commitment towards learning as part of a community of professionals." (p. 10). Therefore, collaborative action research is subsequently imbued with an element of participation. However, what distinguishes participatory from collaborative action research is the degree, the scope of participation and the role taken by the guiding researcher.

McTaggart (1989) summarises the aim of participatory action research (PAR) by focusing on five main ideas that:

- seek to improve practice by changing it;

- is collaborative and systematic;

- involves people who are engaged and thus inquisitive of their own practice, situation and circumstances;

- is political;

- can start small and grow into a wider group of reflective critical communities.

Reason and Bradbury (2001) sustain that in participatory action research (PAR), the researchers engage in a democratic process to co-construct valued knowledge of practice from their knowledge in practice whereby the role of the guiding researcher, according to Townsend (2014), is to work with the specific community to facilitate change. A characteristic of PAR, Somerville (2014) maintains, is the inclusive nature of the participants' participation at all the stages of the research starting from the identification of the problem, the design aimed at solving that problem and the data collection and analysis involved. Similarly, Wamba (2014) argues that PAR is the combination of participatory research (PR) and action research (AR),

whereby PR includes not only the involvement of the participants at all the stages of the research project but also the involvement of the organisation in the research process.

Dickson and Green (2001) point out that none of the researchers take on an authoritarian role because their participation is underpinned by the democratic principles of social justice, equity and parity during the learning that evolves from the action research process. In lieu of this, each participant's expertise and knowledge is valued (Reason and Bradbury, 2001). Valuing and using the teachers' experiential information, Lomax (1986) explained, cultivates trust in the teacher's capability and self-efficacy to be agents of change because they do not look at the knowledge generated as something foreign to them. The celebration and status of the teachers' created knowledge, Brydon-Miller, Greenwood, and Maguire (2003) argue, facilitate the teachers' ownership of the new generated data. Additionally, this first-hand understanding, Mitchell, Reilly, and Logue (2009) maintain, also benefits non-participant teachers because the new theory has been rooted in practice. This is precisely how McMahon (1999) described the theory of experiential learning which entails the subjective co-construction of a researcher's, in this case teachers, own knowledge from a familiar context. However, even CAR is underpinned by social dialogue, respect and value of each participants' knowledge, thus making the separation between CAR and PAR a very elusive one. In fact, Townsend (2014) acknowledges that CAR is closely related to PAR, in that they share certain similarities like the professional dialogue they engage in, (Howes, 2001), and the subsequent outcomes gained from each participant's sharing of personal knowledge and strengths of practice (Ozanne and Saatcioglu, 2008).

Notwithstanding these similarities, Townsend (2014) explains that the distinguishing factor between the two is the level of social partnership because CAR brings in two levels of action

research - the change aimed at by the guiding researcher and the transformation aimed at by the participant teachers. In view of the above-mentioned diverse families of action research perspectives, as McNiff (2017a) refers to them, the different approaches within the broad church of action research create a challenge and might confuse the users of action research (Rowell, Polush, Riel and Bruewer, 2015). To mitigate this confusion and to clarify further the distinction that is being made in this research between CAR and PAR, Table 3.3 summaries their differences.

CAR	PAR
Teams with common interests but NOT necessarily working on the same problem.	Team of participants working on the same project.
Different projects carried out by different researchers who support and help each other.	Same project carried out with the involvement of different researchers.
Guiding researcher is involved in a parallel action research project.	Guiding researcher facilitates the change process.
Central role of participants in their individual projects.	Full control of participants at all the stages in PAR: planning, action, reflection and evaluation.

Table 3.3: The similarities between CAR and PAR

With this backdrop, CAR can be understood as the combination of collaborative research (CR) and action research (AR). According to Savoie-Zajc and Descamps-Bednarz (2007) and Savoie-Zajc (2016), collaborative research is about the learning and improvement of teaching practices, thus it is a significant contributor to teachers' professional development and learning. Action research, however, is about change consisting of the production of new knowledge and the learning experience resulting from that change. Hence, collaborative action research concerns the mutual change that the participants who are collaborating with each other go through in learning about and improving on their teaching practices. This process of mutual learning and improvement in one's teaching practices, according to Mitchell et al. (2009), is

distinct from the traditional transmission model as it takes the form of an inductive approach towards teacher's professional development and learning. Furthermore, Mitchell et al. (2009) insist that "the collaborative action research framework provides the necessary support to brainstorm, plan, implement and critique the exploration of beliefs" (p. 346) because the action research framework, according to earlier work by Avison et al., (1999) reveals the real theories-in-use about practice (Argyris and Schon, 1974).

In applying the above understanding of CAR and PAR, the general framework adopted in this study was Sagor's (1992, 2009) five-stage process to CAR, which included also a small element of PAR in the co-planning of the demonstration lesson about the implementation of AfL with each participant teacher.

The five-stage process consisted of the:

- formulation of the problem;

- collection of data;

- analysis of data;

- reporting and sharing of findings;

- plan of action used.

Stage 1: Formulation of the problem.
• The study's overarching goal was shared. • The participant teachers discussed their current understanding of AfL and their own class problems. • Each participant identified the problem for investigation and translated it into the project's goal. • A discussion of the AfL strategies and implementation techniques was held. This discussion was supported by online YouTube videos about the subject and by personally created videos from past class practices with AfL. • Finally, I offered suggestions as to which strategies might help them to improve their own situation. The ultimate decision whether to endorse or refute the suggestions was entirely the participants.
Stage 2: Collecting data.
• The participant teachers were provided with a record-keeping booklet to take note of their in class actions. • The audio recorded group discussions, interviews and feedback sessions together with the teachers' self-written stories were the sources of data collection. • The learning walls and the success criteria notes created by the teachers were also a source of data collection as they showed and exemplified the teacher's understanding of the AfL strategies at the level of implementation.
Stage 3: Data Analysis.
• During the data collection process, a first level of analysis through rephrasing and checking permeated the different discussions held. • Eventually, the data was analysed using NVIVO software. An interpretation from a content analysis lens followed. • My interpretation of the data was sent to each participant for feedback.
Stage 4: Reporting and Sharing of Findings.
• The participant teachers reported on their journey, first within the group itself, and secondly, in the multiple data collection sources. • They have shared their findings, first within the group, and then with their non-participant colleagues in a school staff development day. • Moreover, a by-product booklet for dissemination was created.
Stage 5: Plan of action
• Each group discussion and individual feedback sessions have always ended up with a plan of action generated from that same discussion.

Figure 3.5: Adaptation of Sagor's five-stage process to collaborative action research

The successful completion of this project relied on the positive relationship and research roles adopted in this collaborative action project.

3.5 Research Roles in a Collaborative Action Project

Given that this study is about the teachers' beliefs and practices of AfL, the process adopted during the action research phase reflected the philosophical stance of a learner-centred approach. Therefore, learning about the teachers' standing on AfL knowledge was the first step taken. Hence, learning was a mutual aspect in this journey. Initially, the teachers looked to me for guidance and information because they were not familiar with either the process or the content. In fact, in her inquiry about whether action research was a natural process for teachers, Johnston (1994) found that action research is not something that teachers engage in spontaneously and thus, they need support in carrying it out. The participants, in this study, still needed guidance even though they had been given an information sheet (see Appendix VI) and the record-keeping booklet, (see Appendix VII) one week before the start of the project. This implied that, at first, I had to take on a "disseminator's role" (see Figure 3.6), which led the participants to be less of an equal partner in the construction of knowledge. With the intention to keep this role temporary, Elliott's (1991) advice to act carefully and be ethically considerate in establishing a well-balanced approach to action was followed. The aim was to reach Greenwood and Levin's (2007) term of "the friendly outsider" coordinating researcher (p. 115). Indeed, this was a complex and delicate role because of the multiplicity of duties whereby, as Messner and Rauch (1995) explain, I was leading through facilitation, advising without imposing while interpreting the unfolding events in a professional and trustful relationship atmosphere (Postholm and Skrøvset, 2013). Hence, the main tension experienced during the initial phase of the project, as Platteel, Hulshof, Ponte, van Driel, and Verloop (2010) point out, was reducing the degree of control by one participant with the sole aim of reaching a more equitable distribution of control (see Figure 3.7). Achieving this distributed leadership necessitated the continuous encouragement of the participants to believe in what they had to

offer. It was hard for the participants to come to accept that their contributions were all valid and thus, being right or wrong was not an issue. An equal level of partnership cannot be said to have been achieved completely. However, the teachers' increase in AfL knowledge boosted their confidence to participate more during the sessions, thus ensuring a more equitable level of participation. Moreover, the inclusion of the students' voices about the effect of the AfL strategies on their learning has leveraged the students' role in this project. Therefore, the main transformation portrayed in Figure 3.7 centres on the greater involvement of both the participant teachers and the students.
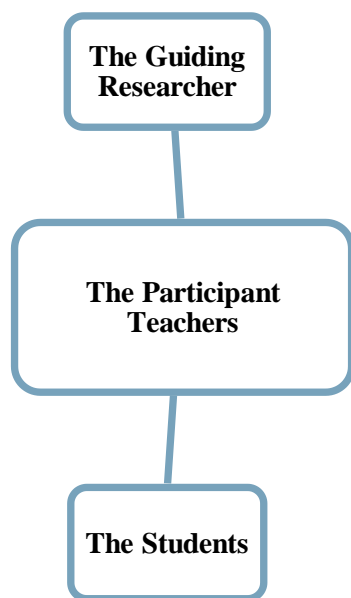
Figure 3.6: The roles at the beginning of the project
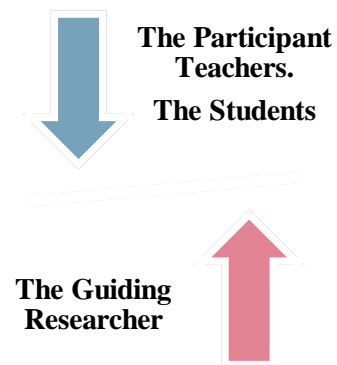
Figure 3.7: The change in roles during the collaborative action research process.

3.6 Research Methods of Data Collection

In the introductory chapter, I mentioned the multiple data sources used in both phases of this study. The following sections explain and justify the rationale for adopting these procedures and the content of each.

3.6.1 Research Methods in the First Phase: Open-ended Questionnaires

In the first phase of the study, the main data collection instruments, consisted of two slightly different open-ended questionnaires intended for eighty-five primary school teachers and their eight Heads of Schools. Using two questionnaires was necessary as in Malta Heads of Schools do not have a teaching load, and thus certain questions about lesson implementation were not appropriate. Therefore, whereas teachers were asked about their in-class lesson practices, the Heads of Schools were asked about their monitoring and support practices in relation to AfL.

Cohen, Manion, and Morrison (2011) argue that when the objective of a research question is to explore and understand a specific situation, "an open-ended questionnaire may be more appropriate" (p. 382). Furthermore, they are convinced that "an open-ended questionnaire can contain "gems" of information (p. 392) and can catch the authentic richness, depth of response, honesty and candour, all of which are hallmarks of qualitative data" (p. 393). Moreover, they affirm that the non-contamination of responses by pre-set statements lead to more ownership of the data on the respondents. This was also pointed out by Reja, Manfreda, Hlebec and Vehovar (2003); Boynton and Greenhalgh (2004) and Greener (2011) who argued that responses to open-ended questionnaires are more creative because responses are not suggested. This helps shape further the teachers' answers.

Given that this study revolves around democratic principles, an open-ended questionnaire design reinforces and reflects further this stance. Another reason for using such questionnaire

design stems from my professional position at work, which is one of authority in relation to the participant teachers. More than that, since the research area is directly related to the line of work, face-to-face interviews were not deemed appropriate. This is because anonymity at that point in time of the interview could not be maintained. In this respect, Cohen et al. (2011) assert that greater honesty in open-ended questionnaires can be ensured through the confidentiality, the time, the cost and space commodity they provide due to their self-completion (Greener, 2011). A paper and pen questionnaire could be carried out anywhere and is not dependent on Internet facilities.

Notwithstanding these advantages, open-ended questionnaires, according to Reja, Manfreda, Hlebec and Vehovar (2003), Boynton and Greenhalgh (2004), Cohen et al. (2011), and Greener (2011) have their limitations which emanate from the lack of human interaction between the researcher and that which is being researched. For instance, the researcher cannot interact and probe for further clarification or be available to respond to the participants' queries about what is being asked. In the absence of such an interpersonal interaction, it is crucial that the questions are clear, non-threatening and that their order moves from less to more invasive questions. The design, structure and sequence of questions were piloted with two teachers. No content issues were raised. Hence, the original questions were kept and used for the main study. A similar procedure was held for the Heads of Schools' questionnaire that was handed to two persons in a schools' administrative position.

The questionnaires were printed on an A4 paper in double sided format for a total of two back to back pages. The front page informed the participants about the scope, use, rights, confidentiality and anonymity in the data collected. On the second page, the field questions

were listed with ample space for writing (Appendix VIII and IX). The content of each question is the focus of the next section.

3.6.1.1   Teachers' Questionnaires

Table 3.4 presents the field questions included in the teachers' questionnaire while explaining the rationale for each one. Influenced by the research design discussed in section 3.2 above, the questions in Table 3.4 reflect the interests of the first research question and its subsidiary questions.

Various authors, Rokeach (1968), Nespor (1987), Pajares (1992), Osterholm (2010), Borg and Al-Busaidi (2011) and De Vries, Jansen, and Van de Grift (2013) argue that because beliefs are a messy construct and hard to unearth, it is necessary to tap secondary avenues to be able to delve deeper in analysing the teachers' beliefs. These secondary avenues, reflected in the formulation of the questions, include the teachers':

- thought processes;

- descriptions of their understanding of AfL;

- talk about their practices, which enables me to identify the congruence or incongruence between their beliefs and practices;

- explanations of their concerns through which I can examine whether their concerns are impinging on their practice and the way they are influencing their beliefs;

- talk about AfL and achievement to find out their standing on the matter.

Question Item	Rationale
1. How did you come across the notion of Assessment for Learning, if you did?	**Question 1** asked the teachers to state the first time they came across AfL. This information would reveal whether they came across it during their pre-service, in-service training or on their own as part of their lifelong learning journey. Gauging the time-frame would help me establish whether AfL was an innovative approach, or if they have been already familiar with it, but they did not use it.
2. In view of what you have heard, what do you think of Assessment for Learning?	**Question 2** asked for the teachers' thoughts about AfL based on their learning about AfL. The underlying intent of this question was to shed light on whether teachers perceived it as a worthwhile teaching and learning investment tool.
3. What do you understand by Assessment for Learning?	**Question 3** questioned the teachers' understandings of AfL, a term by which my intention was to know how they defined it as that would provide the teacher's guiding framework. Moreover, I would be able to examine the kind of relationship that exists between the teachers' thoughts and understandings about AfL.
4. Are you using Assessment for Learning in your lessons? If yes, explain how and in which lessons? If no, explain why?	**Question 4** sought to find out whether teachers were embedding AfL in their lessons and the kind of strategies they used. The teachers' explanations of their practice would lead to insights on whether their practice reflects their level of understandings and thoughts. Consequently, a triangular link could possibly be established between understanding, thoughts and practice.
5. In case you are using it, what is the learners' response? Explain your answer.	**Question 5** asked teachers to take an introspective and reflective look to determine the learners' response to AfL practice. Were the learners learning in a more meaningful way? Did AfL strategies not matter? Was there a link between the teachers' understandings of AfL, their practices and the learners' response?
6. What would you like to know more about Assessment for Learning?	**Question 6** offered the possibility to teachers to state what they wanted to be more knowledgeable about with regard to AfL. Getting to know the teachers' gaps and interests would help me to understand better the responses they give to Qu. 2 (thoughts) and Qu.3 (understanding).
7. What is your greatest concern, if any, with Assessment for Learning?	**Question 7** provided teachers with the opportunity to share their concerns about AfL. Identifying their concerns would help me to understand better their practice, apprehending and thoughts about AfL. Furthermore, it would help me establish whether their concerns are externally (system) or internally (teacher) controlled. An insight into these concerns could open up a discussion on whether these concerns arose from mistaken beliefs or malpractice.
8. In your opinion, what would be the best way to support you in using the Assessment for Learning approach?	**Question 8** invited teachers to offer their own suggestions about the kind of professional learning they are likely to engage in to ameliorate their situation. Listening to the teachers' voices, who in this situation are the learners, reflects not only as a learner-centred approach but also enables the planning of innovations in the teachers' preferred medium of learning. The ways that teachers value best new learning is important as it ensures their preliminary interest in the subject and perhaps engagement with the topic.
9. Assessment for Learning is said to be a powerful method to raise achievement. Do you agree? Explain your answer. 9b) If you do not agree, what in your opinion, are the factors that raise learners' achievement?	**Question 9** sought to find out whether teachers believed in this association between AfL and achievement or not while also asserting valid justifications. It is likely that if they believed in this link, they would try their best to use AfL as much as possible.
10. Feel free to add any other suggestions which you might deem important for the implementation of this approach.	**Question 10** was a very general question inviting teachers to add further comments about the topic especially if they did not have the opportunity to voice their opinion on specific matter in their previous answers.

Table 3.4: The teachers' field questions and their rationale

3.6.1.2 Heads of Schools' Questionnaires

The overall rationale of including the voice of the Heads of Schools stems from a subsidiary question in the first research question. As has been argued in Chapter Two, every person in the learning organisation has to be an agent of change if a pedagogical innovation is to take place. Therefore, the Heads of Schools' actions and talk about the innovation has a major influence on the teachers' practices. It is in this light that the questions presented in Table 3.5 were formulated.

Question Item	Rationale
1. How did you come across the notion of Assessment for Learning, if you did?	**Question 1** sought to find out when the Heads of Schools have learnt about AfL. Identifying the Heads of Schools' learning time-frame about AfL helps to establish not only whether AfL was an innovation for the Heads, too, but whether they were a step ahead of their teachers in terms of AfL knowledge and practical tips about it.
2. What do you understand by Assessment for Learning?	**Question 2** looked for the Heads of Schools' understandings about AfL. By understandings, I was interested in knowing how they viewed it as their definitions would provide a guiding framework to support better their teachers.
3. What would you like to know more about Assessment for Learning?	**Question 3** offered the possibility to Heads of Schools to state aspect of Afl they wanted to know more about. It is very likely that the Heads' gaps reflect the school's and the teachers' gaps. Being familiar with their gaps could assist me in understanding better their responses to Qu. 2 (understanding) and Qu.4 (concerns) and the link between their beliefs and practice of support.
4. What is your greatest concern, if any, with Assessment for Learning?	**Question 4** sought to find out whether Heads of Schools were facing any concerns about the AfL pedagogy, or else, in the monitoring and support of AfL implementation in their schools. An insight into these concerns could open up a discussion on whether these concerns arose from mistaken beliefs or malpractice.
5. How would you describe the school culture in relation to Assessment for Learning within the teaching and learning?	**Question 5** was about the school leaders' description of the school culture in relation to AfL. By asking this question, I tried to find out whether there was a convergent or divergent relationship between their understanding of AfL and the present culture.
6. In what ways is formative assessment used at your school?	**Question 6** looked into the Heads of Schools' knowledge on what kind of AfL practices were being used at their school. If Heads of Schools were unaware of what was going on in terms of AfL practice, it could indicate that they were not giving it due importance. This could impinge on the school's culture about assessment.
7. What kind of measures do you take to monitor the implementation of Assessment for Learning?	**Question 7** was about the measures they took in the monitoring of the AfL implementation. Responses to this question could indicate the real value that the school leaders attributed to AfL. If supportive monitoring was not the practice, then it could be argued that they were not taking a central active role in the teaching and learning change that was being envisaged. As the literature in Chapter Two had shown, all the stakeholders need to be active participants in the change process. Moreover, if they were not monitoring, then their responses to questions 6 and 7 would have only been based on assumptions and not on what they really witness in their schools.
8. What do you look for when monitoring the implementation of Assessment for Learning?	**Question 8** sought to elaborate on the previous question as it inquired what the school leaders look for when monitoring AfL class practice. Unless the school leaders enter classrooms with a specific teaching and learning goal they want to see, they cannot offer specific drip feed suggestions to teachers. Consequently, the monitoring and the feedback activities that followed from the support visit would not have been as meaningful as when there is a specific purpose. By this, I am not implying that Heads of Schools should not be open to any other important teaching and learning moments during their monitoring. However, having a set of criteria on what to look for helps both the observer and observed.
9. In your opinion, what would be the best way to support you in using the Assessment for Learning approach?	**Question 9** invited Heads of Schools to offer their own suggestions about the kind of support they deemed important for effective implementation of AfL. Getting to know what the Heads of Schools valued, wanted and needed was an important source of information to get closer to their interests and needs.

Table 3.5: The Heads of Schools' field questions and their rationale.

3.6.2 Research Methods in the Second Phase: Multiple Data Sources

Multiple data sources in the form of teacher group discussions, a record-keeping booklet for the teachers and myself, one-to-one feedback sessions, semi-structured interviews and self-written stories were the methods of data collection in the second phase of this study. These methods allowed for the uniqueness, self-reflexivity, thick descriptions, triangulation and member reflections which, according to Tracy (2013), are amongst the quality markers in qualitative research. Using a variety of data collection sources allows the checking of data for congruence from a variety of sources (Creswell and Miller, 2000), thus increasing the confidence in the data collected (Sagor, 1992).

While these methods provided for depth through thick descriptions of the teachers' and the students' authentic voices, thus, according to Guba (2004), emphasising the truth value and originating source of the data, these methods were not intended to, and did not, provide the broadness to generalise the findings. Notwithstanding this lack of generalisation, which is not possible to achieve in qualitative research (Guba, 1981), the data gathered provides a working hypothesis against which the trustworthiness of this study can be judged. Instead of generalisation, the findings of these methods allow for transferability and applicability to similar contexts (Cain, 2011). Shenton (2004) maintains that for applicability or transferability to be considered, the report must contain a thorough description of both the context, the content and the process of data collection, which is what the following sections attend to.

The data collected from each method were audio recorded to maintain the data's integrity (Lodico, Spaulding and Voegtle, 2010). Audio-recording the data collection process, as Cohen et al. (2011) point out, is unobtrusive in nature, thus ensuring the

continuous access to the participants' original data (Seidman, 2013). The continuous availability of the original data, rather than notes which might have missed on important information, ensures more robust evidence for analysis since the evidence used is in its purest form (Olsen, 2011, p. 35).

3.6.2.1 Group Discussions

Group discussions provided the opportunity to the three participant teachers to form and participate in a professional teachers' learning community within their school context and during their school hours. Therefore, the familiar context, the familiar colleagues and not being away for too much time from their respective classes provided a safe and re-assuring zone (Birenbaum et al., 2009). The conditions of this community rested on the principle of covenant groups, as explained by Sergiovanni (2000), and on a relationship based on trust (Postholm and Skrøvset, 2013). This trust manifested itself in the participants' acceptance and use of their colleagues' knowledge of practice to co-construct the new knowledge about AfL. Consequently, this model of knowledge construction offered the participant teachers a similar structure to what they are expected to offer to their students (Guskey, 1986, 1988; Duke, 1990). The group discussions were not called focus groups as, although their structure had similar elements to those of a focus group, such as the interaction between the participants, their scope went beyond the collective view of information, which is the intent of a focus group (Gill, Stewart, Treasure and Chadwick, 2008). Instead, the purpose of these group discussions was to make available to participant teachers the space to voice out their individual views and the reasons for possible changes in their individual views. According to Hargreaves and Fullan (2012), such

space enhances the teachers' human capital whilst, also, contributing to enrich their social capital and the group's professional capital.

Table 3.6 outlines the content planned prior to each meeting and the actual content that was covered during the meeting. The prior planning was not intended to impose a strict agenda, otherwise the process would have been undemocratic and non-collaborative, but it offered an initial structure for the group discussions. After each session, the major issues were recapped and collated information was passed on to the participant teachers. In this way, the participant teachers would have a record of what had been discussed, which also serves as an aide-memoire and reference for the future.

Meeting	Proposed Outline	Actual Outline
Session 1 **17th October** **(60 mins)**	• Icebreaker activity. • Discuss the booklet's contents. • Discussion of the class situation. • Identification of the problem. • Assessment for Learning rationale. • Answering and discussing parts of the booklet.	Most of the discussion time was taken up by Belle's argument about the learning goal. She argued that the sharing of the learning goal might go against her current teaching style. Yet, she was willing to observe and study the effect of using the learning goal with the students.
Session 2 **17th November** **(90 mins)**	• .Last session's recap. • Overview of the Assessment for Learning seven strategies. • Co-planning of demo lessons. • Discussion of statements about AfL concepts that were taken from the literature.	3 lessons were co-planned. Participants contributed their ideas to the lesson plan while I suggested ways how the AfL strategies can be included during the lesson. The seven AfL strategies used in the Maltese context were discussed.

Session 3 **19th January** **(90 mins)**	• Sharing of teachers' feedback on the lesson observed. • Answering and discussing other parts of the booklet. • Success criteria strategy discussed. • The last phase – in the last two months the participant teachers had to reflect and take note of the effect of their AfL actions in class. The record-keeping booklet provided a structured form of record-keeping, but they were free to choose other ways of recording their reflections at that moment in time.	Each participant teacher has shared her feedback, within the group, about the demonstration lesson. They discussed the effect of the AfL strategies on their students' learning. Interestingly, a number of similarities were pointed out even though the year groups were different. In this discussion, which was close to the half yearly exams, Belle, the Year 6 teacher, brought up the issue of mismatching between her students' abilities and exams.
Session 4 **25th March** **(90 mins)**	• Sharing of the teachers' AfL lessons. • Discussion of the next strategies: effective questioning and feedback. • Answering and discussing other parts of the booklet. • Discussing the possibility of having the students' voices about their new learning experiences with AfL. • Discussing the possibility of peer observation between the participant teachers.	Since the Head of School requested two whole-school professional development sessions about: • 'understanding where the learners are', • 'the learning goal' and 'the success criteria', and • effective questioning, the feedback strategy was not included in our discussion to avoid repetition. Instead, the participant teachers discussed their enquiries and concerns about different aspects of AfL.
Session 5 **13th May** **(90 mins)**	• Sharing a synthesis of the students' voices. • Story writing and discussion. • Voluntary sharing of their stories.	The planned activities were successfully completed. Teachers were: • assured of my support after the conclusion of the research. • informed that they would receive a document with the translation of all the audio recorded data for their verification and feedback.

Table 3.6: The Content Outline of the Group Discussions

3.6.2.2 The Record-Keeping Booklet

Hyland (2000) maintains that a record-keeping booklet allows for the rich capturing of experience close to its place of action, without which teachers might forget about critical episodes that took place. If the participant teachers had forgotten important class episodes, the subsequent group discussions would have been impoverished as 'gems of data' would have been lost (Cohen et al., 2011).

The record-keeping booklet was self-designed, and its content was drawn from the literature issues discussed in Chapter 2 above. A self-designed instrument was opted for as it suited best the research questions and the circumstances of the local context. The structure of the record-keeping booklet consisted of three main sections: the initial phase, the middle phase and the final phase of the study.

The first phase was intended to enable the researcher gain insight into the teachers' espoused and in-use theories so as to establish the level of congruency between the two (Argyris and Schon, 1974). This could be established through the teachers' reflections on their current:

- understandings of AfL;

- teaching and learning style and the reasons for using that style;

- class characteristics;

- concerns about their class;

- beliefs about teaching and learning;

- teaching and learning practices.

Moreover, the record-keeping booklet offered the space for the inclusion of the participant teachers' reflections on the AfL strategies embedded in the demonstration lessons.

In the middle phase, entitled Term 2, the participant teachers had the possibility to take note of the flow of events during their lesson trials, to state which strategies they used, and to comment on the outcomes as well as on whether they were satisfied with the results.

The final phase, entitled Term 3, required the participant teachers to evaluate the learning process by reflecting on their new understandings, what affected the change, what they were still sceptical about and whether they would recommend the use of AfL to other teachers. This evaluative process served as a stepping-stone for the semi-structured interview.

3.6.2.3 The Demonstration Lessons

Since the participants had never received support in the implementation of AfL prior to this research they were offered the possibility to observe an in-class demonstration lesson before their trials with AfL. Each class had a different lesson based on the teacher's topic of choice. The lessons (see Appendix X), were co-planned with the teacher during the second group discussion meeting, so they could observe and enquire about the AfL planning process. The lesson topics were:

- Adding the value of three or more coins – Year 2;
- Clockwise and anticlockwise turns – Year 3;
- Equivalent Fractions – Year 6.

In the middle phase of the CAR, the Year 2 and Year 3 participant teachers, Nina and Samantha, asked for another lesson. This time it focused on the language subjects. Nina opted for a creative writing lesson based on the Little Red Riding Hood fairy-tale while Samantha's theme for the creative writing lesson was about 'A holiday'.

3.6.2.4 Individual Feedback Sessions

Three individual feedback sessions, varying between thirty to forty-five minutes per session, were planned for each participant teacher. Two of the participants, Nina and Samantha, had three sessions, while Belle had two sessions. Close to February's individual feedback session, Belle stated that she was doing well and had no issues to discuss, so the session was cancelled upon her request.

These sessions offered an additional possibility to the participant teachers to share any concerns pertaining to their classes, which they either had not had the time to share during the group discussions, or else they might not have been comfortable to do so in the group (Seidman, 2013). Moreover, these sessions helped to maintain contact in-between the group discussion meetings.

Each session was held either in the respective classrooms during the teachers' non-contact time with their students, or else in another room within the school premises. At each location, both the participant teacher and I could focus on what was being said as we were never disturbed by the students or other school staff.

3.6.2.5 Semi-Structured Interviews with the teachers

An interview is a social interaction between two or more people (Goode and Hatt, 1952; Olsen, 2011) who share a common interest to converse about. When the purpose of this conversation is characterised by an "interest in understanding the lived

experience of other people and the meaning they make of that experience" (Seidman, 2013, p. 9), with the intent to "explore……the beliefs and motivations of individuals on specific matters" (Gill et al., 2008, p. 291), then interviews are fit for the purpose. In this study, the semi-structured interviews could capture and provide the unique, the personal and the non-standardised view of each participant (Cohen et al., 2011). This individualistic view was the main reason for using an individual rather than a group interview. Since the aim of the single interview was to unearth each participant's change, if any, about AfL, a group interview would not have fitted the purpose because the collective view was already emerging in the group discussions.

Another reason for using an interview was that this instrument is another means for checking the consistency in the data across the other methods (Seidman, 2013). Moreover, the interview offered an additional space to elaborate on each teacher's position throughout the whole project.

The interview questions were distributed to each interviewee three weeks before the actual interview, to let the participants familiarise themselves with the questions, thus reducing the fear of the unknown and also providing enough time to the participants to ask for any clarifications.

The interview consisted of eight open-ended questions. Each question had a focus heading to assist the interviewee to keep to the aim of the question in her responses (see Table 3.7). A semi-structured interview was used because it allows the interviewer to ask further questions beyond the planned questions (Lodico et al., 2010). Probing, according to Goode and Hatt (1952, p. 204) and Seidman (2013), helps "to get beneath the easy answer", or an answer which needs further clarification to get a deeper understanding of the issues being discussed.

Paraphrasing is another technique which I used to instantly check whether I was understanding the interviewees correctly, thus avoiding future misinterpretation of the data.

This question is about your definition of assessment for learning after the training. 1. Now that the research training is over, what do you think of assessment for learning?

This question is about you, before and after, the training.
 	
2. As a result of this training experience, have you changed your position, ***in terms of what you believe and your way of doing***, towards assessment for learning? **(If No, go to question 2b)**
                    • In what ways? and
                    • What was the contributing factor?
b) In spite of what you learned, why do you think that ***you cannot change*** your deep inner thoughts about assessment for learning?

This question is about the students' response to the strategies from the teacher's point of view. 3. How did the students react to your change of practice?
Questions 4-6 are about a teacher to teacher sharing of knowledge and practice. 4. Would you recommend the use of these strategies to other teachers? Why? 5. If you had to write a story about your journey, what would be the highlights that you would want to feature in the story? **This question is giving you the opportunity to voice your opinion on the obstacles that you encountered.** 6. On the other hand, what were the downsides, if any?
This question is about the training exercise that we have been through. 7a. What do you think about the quality of support and training given? Feel free to suggest any improvements. b. If you had to suggest training ideas for the introduction of 'new' ideas related to teaching and   learning, what would they be? c. Which part of the training did you like most and why?
This question is about sustainability and further support beyond the research. 8. Do you intend to keep on using these strategies? Why? What would you like to know more about?

Table 3.7: The participant teacher's semi-structured interview questions

3.6.2.6 Semi-structured group interviews with the students

In contrast to the teachers, the thirty-four students, who had the parental or guardian consent to participate in the interview about their learning experience with AfL, participated in a group interview. Since thirty-four single interviews would have been too time-consuming, a group interview was opted for to make the exercise more manageable and thus save on time (Cohen et al., 2011). Furthermore, group interviews, according to Cohen et al. (2011), have the advantage of encouraging reluctant students to participate in the on-going interaction because they feel confident in a group of familiar persons. Yet, the group setting can also be a disadvantage for other students who might not feel comfortable to share their views in front of others. In this study, this has happened with a girl from the Year 2 cohort. She did not want to speak in the group, so the possibility to speak afterwards was offered, to which she consented. So the Year 2 students' voices were gathered from a combination of group interviews and a single interview. Another single interview had to be carried out with a Year 6 student because she was absent on the day of the group interview.

The group size was discussed and agreed upon with the participant teachers. Initially, groups of four have been suggested, but since two of the classes were odd-numbered, and to allow for the eventuality that every student would participate, we needed to alter the group size. The participant teachers' opinions on the composition of the groups was another factor contributing to the choice of the group size. For instance, Nina, the Year 2 teacher, preferred a mixed-ability group because she thought that "low ability students might not tell me anything" (group discussion, 25/03/2015), while, Samantha, the Year 3 teacher, preferred a same-ability group as she thought that some students would simply echo what their peers might say. Similarly to Nina,

Belle, the Year 6 teacher, preferred a heterogeneous group stating that "the high ability students might inspire the less able students" (group discussion, 25/03/2015). In the end, it was decided that the teachers could choose the formation of each group and send the students to be interviewed in equitable group sizes according to the number of guardian consents received.

For the Year 2 class, sixteen consent forms were received and the teacher opted for a formation of two groups of six students and one of four students.

For the Year 3 class, thirteen consent forms were received, and the class teacher opted for a five, four and four group formation.

For the Year 6 class, six consent forms were received, but on the day of the interview two of these students were absent. Consequently, a group interview was held with four students and another date was set to interview the other pair of students. In the second session, only one student could be interviewed as the other was again absent. Another attempt at a later date was made to interview the remaining student, but it was futile. So the Year 6 group ended with five students' voices.

In agreement with the participant teachers, the questions asked in the group interviews were complemented by photos of classes' artefacts that the teachers used during their lessons. The intent of using this material was to aid the students' recall of their experiences. Examples of interview artefacts from each year group are shown in Figure 3.8 to Figure 3.3.10 below.
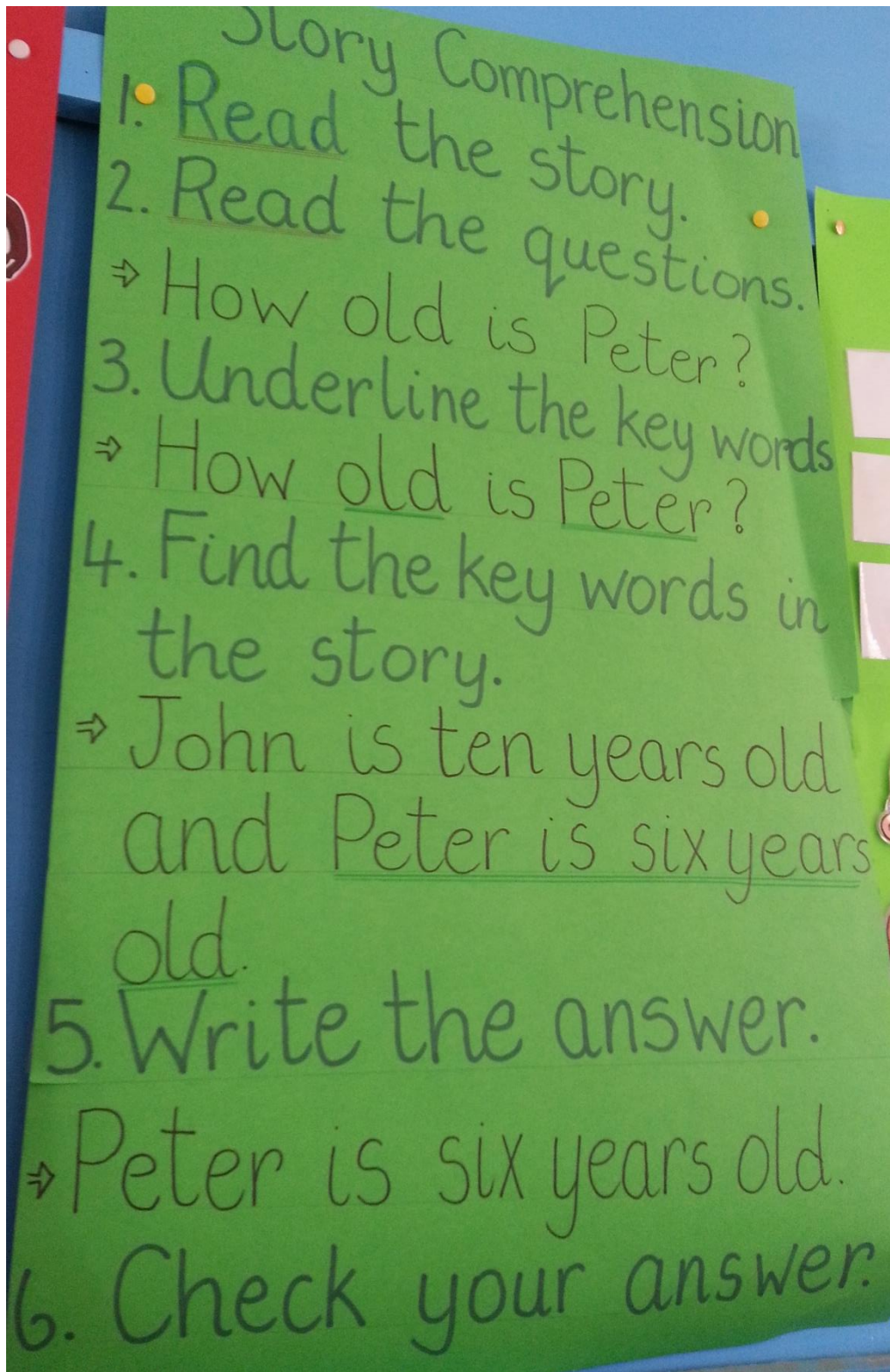
Figure 3.8: The green chart artefact from the Year 2 class
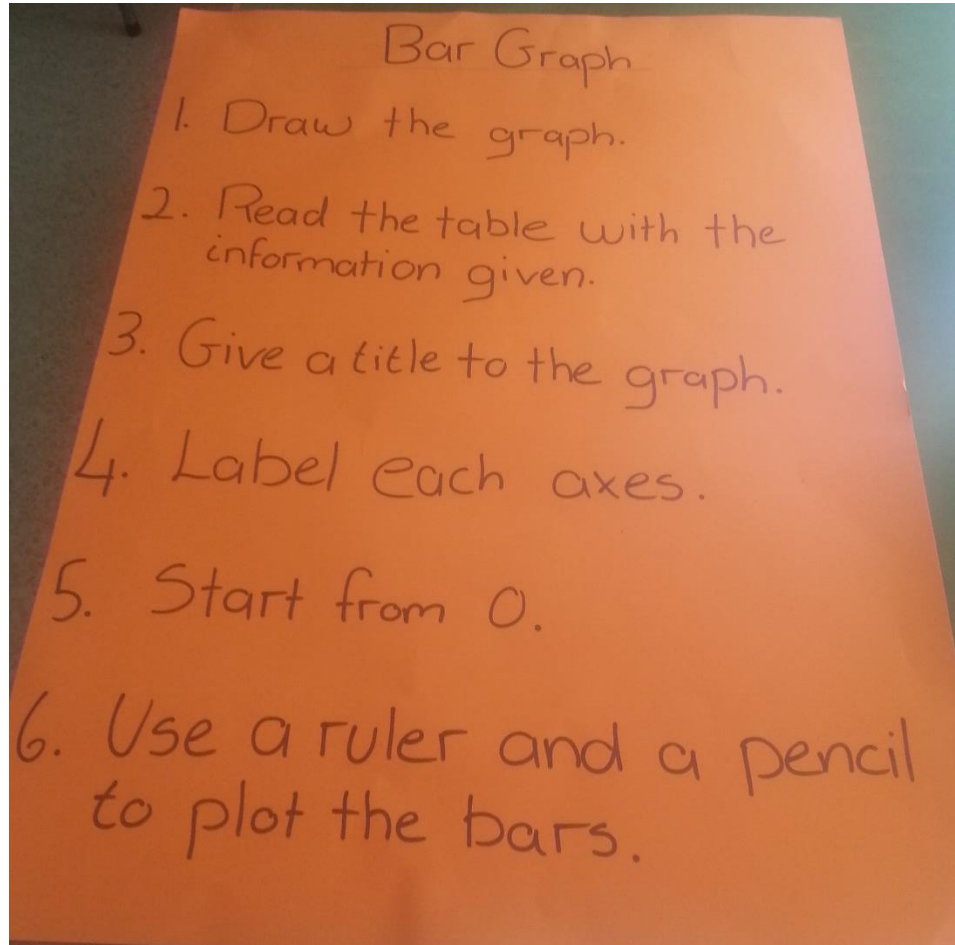
Figure 3.9: An artefact illustrating the SC for a bar graph by the Year 3 teacher
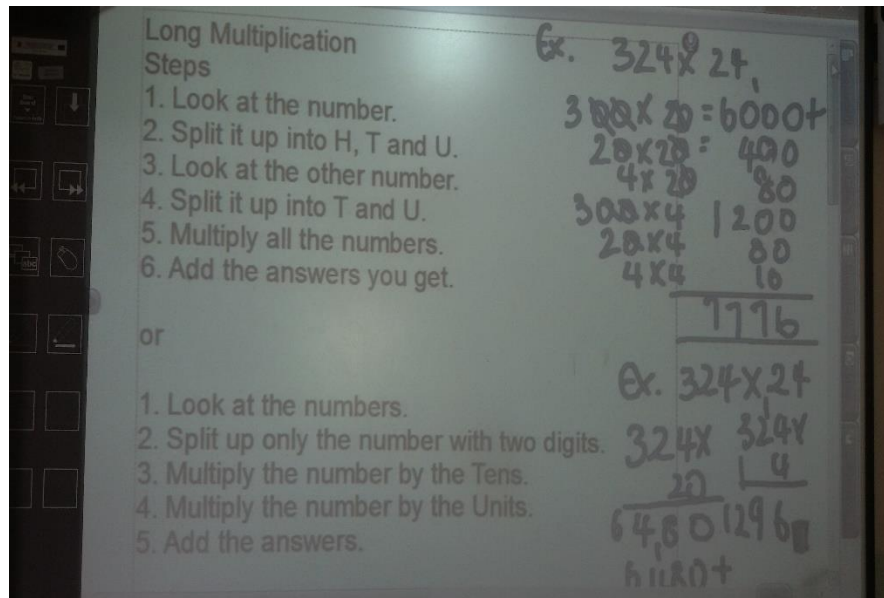
Figure 3.3.10: A picture of the SC notes as illustrated on the Year 6 class IW

The structure of the group interview consisted of an ice-breaking activity as an introductory activity. Then, the interview proceeded with five questions as shown in the shaded row in Table 3.8. Following right after are the probing questions that I asked the students in each year group according to their responses.The table below includes also the probing questions asked to the students in each year group.

Introduction	**Table 3.8 p. 1**

Introduction

- Hello! How are you?

We are going to talk a bit about when I came to your class and did a lesson together. It's been a long time.

Do you remember that?

Note for me: If they do not remember, I will recapitulate the lesson's outline while referring to the artefacts.

- Look at these pictures (as shown in Figure 3.8, Figure 3.9, and Figure 3.3.10). I took a photo of them from your class.
- Did you like our lessons?
- What did you like most?

Technique used for self-assessment purposes.

Note for me: The lessons steps were:

- I wrote the lesson goal and pointed to it on the picture. Has this helped you? In what ways?
- I wrote or showed you the steps to success, how did these help you?
- I used the thumbs up or down.

Main questions asked:

- Have these hints (steps) helped you in your work?
- Can you tell me how these helped you in your classwork and homework?
- Has the sharing of the learning goal helped you? In what ways?
- Do you want your teacher to keep on using these hints (steps)? Why?
- If she does not remember, what can you do to help her?

Probing questions according to the students' responses: **Year 2**

- How do you use them (steps) to write good sentences?
- How has the chart helped you?
- Do you look at it (the chart) for guidance?
- If you are not using them (steps), what do when you get stuck in your work?
- How do you check your work?

Table 3.8 p. 2

- Do you self-check against the steps on the chart?
- Which method of learning do you prefer?
- Would you like her to continue using them? Why?
- What do you mean by reading slowly?
- You are saying that without steps, you take longer to complete your work, do you think that with the steps you would work at a faster pace?
- Is learning a matter of whether we feel like it or not?

Year 3

- How?
- In what ways, are they helping you?
- Are you saying that you can create them yourself?
- Has your learning experience got better? In what ways?
- Why didn't you feel the need to use them?
- Are you saying that you use the steps when you get stuck?
- Can you explain further or give some examples to show what you mean by understanding more?
- Can you explain a little bit more about this?
- What do you mean?
- What kind of hints?
- Would you like to add something else?
- How is this related to the steps?

Year 6

- Why?
- In what way?
- Can we say that they are helping you when you need them?
- What's your reason for that?
- Would you still panic?
- If you had to make a suggestion to the school administration about the teaching and learning, what would that be?
- In your learning, is the teacher's role only that matters, or else, you have a role too?
- What do you mean by the teacher has to teach us properly?
- What do you need to do to make more effort?
- Why aren't you understanding?
- Can you give me an example?

Table 3.8: Students' Group Interview Questions and Probing

3.6.2.7 Teachers' Stories

The self-written stories offered teachers the opportunity "to write a free account in their own terms, to explain and qualify their learning experiences" (Cohen et al., 2011, p. 382). More than that, the teachers' written stories offer the highest level of authenticity and truth value as they are the authors and the protagonists of the stories (Guba, 2004). Writing, rather than interviewing, was opted for, so the story-writing process would be entirely teacher-led rather than interviewer-led. Thus, the participant teachers would have the complete freedom to tell the parts of the story they felt were most valuable to share. Since the participant teachers were to be the protagonists of the stories they would author, their stories would have the power to offer a practical account for others to live by (Connelly and Clandinin, 1990). It is intended to collate these stories in a booklet (see Appendix XI) for possible dissemination amongst Maltese Primary Teachers.

The above sub-sections explained the process of data collection in each of the methods employed. Table 3.9 below illustrates the breakdown of the time spent on each activity. The first column indicates the type of activity while the subsequent three columns represent the time spent by or with each participant on that activity.

The first row shows the number of in-class demonstrations that were carried out. The next row illustrates the number of lessons that the participant teachers tried. Then, the third row shows the total time taken for the individual feedback sessions and the semi-structured interviews. Together, the in-class lesson, the teacher's lesson trials, the individual feedback and the final interview amounted to the respective totals shown in the 'total support time per teacher' row.

The total time spent onsite with the teachers in the group discussions, in the individual feedback sessions, in the lesson demonstrations and in interviewing their students is highlighted in the last shaded row, 'Researcher's total input time on-site'.

Type of Input	Nina	Samantha	Belle
In-class lesson demonstration	**2 lessons** 50 minutes 50 minutes	**2 lessons** 50 minutes 50 minutes	**1 lesson** 50 minutes
Lesson trials by the teachers. Officially recorded in the booklet	4 lessons 60 minutes each	4 lessons 60 minutes	5 lessons 60 minutes
Individual Feedback and Final Interview	125 minutes	137 minutes	107 minutes
Total support time per teacher	**465 minutes**	**477 minutes**	**457 minutes**
Students' Voice	60 minutes	48 minutes	26 minutes[3]
Total time per class	**525 minutes**	**525 minutes**	**483 minutes**
Group Discussions	**Overall time per teacher: 420 minutes**		

My overall on-site time with each teacher	Onsite Group Discussion + Onsite Individual teacher's time:	
		Overall Contact Time
	Nina	**525 + 420 minutes = 945 minutes = 15.75 hrs**
	Sam	**525 + 420 minutes = 945 minutes = 15.75 hrs**
	Belle	**483 + 420 minutes = 903 minutes = 15.05 hrs**

Proportion of on-site time per group		
		Percentage Proportion of time as one group.
	Nina	$\frac{420}{945}$ **X 100 = 44.4 %**
	Sam	$\frac{420}{945}$ **X 100 = 44.4 %**
	Belle	$\frac{420}{903}$ **X 100 = 42.7 %**

Researcher's total input time Onsite	**2793 minutes = 46.55 hours**	

Table 3.9: A breakdown of the time spent on each activity during CAR

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[3] Discrepancy in interview time is due to a lesser number of participants.

3.7 Trustworthiness of this study

Sandelowski and Barroso (2002) argue that in the qualitative research world it is very difficult to establish one set for all criteria by which to judge the quality of a research work due to the "multiplicity of paradigms" (p. 310) available to researchers (Rolfe, 2006). Therefore, the judgement markers of the quality of a study depend on the operating paradigm. This study operated from an interpretive paradigm on events occurring in a natural setting. Hence, the specific contextual nature does not allow for generalisation. Though generalisation was neither aimed for nor attempted, other measures like the ones mentioned in section 3.7.2, together with the participants' active role in their construction of knowledge and prolonged engagement in the field, have been carefully considered and included to ensure the quality mark of this study. Transferability and applicability of the findings (Cain, 2011) are two attributes of the study, as are its uniqueness, self-reflexivity, thick description, triangulation and member reflections – characteristics which, as Tracy (2013) emphasises, constitute the contemporary markers of quality in qualitative research.

Uniqueness, in this study, was attended to at both the content and process level because the three participants were new to both the action research process and the implementation of the AfL pedagogy.

Self-reflexivity was accounted for during the discussions and the self-written stories, while triangulation of data was catered for in the multi-methods used. Multivocality was ensured as the voices of the teachers and the students were audio recorded and referred to as a source of evidence in the data analysis.

Thick description is being provided in this chapter, wherein the details provided substantiate the dependability of the study (Shenton, 2004), even though dependability in qualitative research is difficult (Shenton, 2004). On this matter, I argue that while consistency across multiple sources should be expected, consistency in the case of a re-run of a study like this, even with the same participants, would be difficult, if not impossible, since the teachers would have changed. In fact, Creswell and Miller (2000) argued that dependability might be attained from the consistency in the data found in the multiple sources used.

Member verification of the entire data translation was carried out by the participants themselves. Member reflections were included in the discussions, and the three participant teachers were given the opportunity to reflect and comment on my interpretation of the data. These kinds of member checks are of particular significance in action research as, according to Levin (2012), they are cautious ways to deal with research partnering and bias because the participants' expertise is added, thus contributing to a deeper understanding of the situation. Kornbluh (2015) reaffirmed the importance of member checks by arguing on "…their uniqueness in building the participants' capacity and understanding of the data analysis process to ensure rich and genuine input, thus enhancing the rigour of the research findings" (p. 398). In allowing the participants to check the data and provide feedback, the researchers risk that their interpretation is questioned by the participants and be possibly challenged. Nonetheless, this inclusion should enrich the study and it confirms the democratic and ethical ways of appreciating, accepting and valuing of the teachers' knowledge as a valid form of knowledge (Stremmel, 2007). Furthermore, including both voices, the researcher's and participants', in the interpretation of the findings can contribute to

increasing the persuasiveness of the interpretations (Silverman, 2013). Thus, the measures taken meet the four criteria of trustworthiness: credibility (truth value), transferability (applicability), dependability (consistency) and confirmability (neutrality) explained by Guba (1981) and Lincoln (1995). Moreover, the teachers' written stories offer the highest level of authenticity and truth value as they are the authors and the protagonists of the stories (Guba, 2004). Additionally, the inductive approach used in the data analysis ensures that the findings were extracted from the data, thus increasing the study's confirmability, and are not a representational hunch of the researcher (Shenton, 2004).

In an action research study, Anderson and Herr (1999) and Reason and Bradbury (2001) explain five forms of validity as follows:

- outcome validity – a successful research outcome reflects the degree of resolution of the problem under investigation;

- democratic validity – the level of collaboration with the persons who have identified that problem;

- process validity – the space allowed for ongoing learning and improvement;

- catalytic validity – the extent of the participants' motivation to solve the problem within the study and even beyond;

- dialogic validity – the peer debates about the actions taken and their outcomes.

According to Newton and Burgess (2008), the evidence reflecting the transformation process in action research is in itself a form of validity, as they argue that validity is "contingent on the mode of action research, in that, it determines the configuration of

validities to assess the knowledge claims of the project" (p. 25). This is why McNiff and Whitehead (2002) stress on a clear account of the change in knowledge that would have occurred.

While Ozanne and Saatcioglu (2008) maintain that it is very difficult to meet all these five criteria within one single study, this research project, attempted to reach these forms of validity as follows:

- outcome validity is evident in the participants' improvement in their understanding and practices of AfL;

- democratic validity is evident in the thick descriptions about the teachers' involvement throughout the process;

- process validity, a by-product of outcome validity Anderson and Herr (1999), is outlined in the CAR data collection process;

- catalytic and dialogic validities are illustrated in the teachers' evidence-based comments that will be discussed in Chapter Five.

3.7.1 The Importance of Validity in Assessment

An instrument is valid if it measures what it intends to measure (Price, Chiang and Jhangiani, 2015). Therefore, an educational programme is valid if it manages to reach the aims and purposes that it was designed for. Such task requires a valid assessment tool that aligns well with the intent of the programme, the in-class and external mandated assessed work (Biggs, 2003a). Teachers, whose core responsibility is to offer an effective teaching and learning experience, are the most suited persons to design the assessment tasks that are most appropriate for their students. Black (2018) sustains that in passing teachers the responsibility for both the school and summative assessment they would feel more respected, valued and owners of a holistic approach

to teaching and learning. Furthermore, he stresses that there needs to be support and training so that as designers of the assessment tasks teachers would benefit from "the public trust" (p. 156) in the worthiness of these assessment results. An additional benefit, according to Black and Wiliam (2018), is that the teacher's involvement in assessment for accountability purposes helps to reduce the tension that they are currently experiencing between the formative and the summative assessment.

For an assessment tool to be valid, teachers need to be clear on "What does it mean to be good in their subject?" (Black, 2018, p. 151), thereby establishing the criteria for excellence. Eventually, these criteria will serve as a guiding framework for the markers to ensure inter-reliability, comparability and trust. More than that, being clear about what good performance in the subject looks like, helps the teacher to incorporate in the lessons the skills, knowledge and competences that they will assess. Hence, the assessment criteria provide multiple benefits in that they can shape the in-class learning opportunities. For instance, if, in Malta, the ultimate aim of the students' educational experience is the fulfilment of the European Council's (2006) recommendations for the economic growth demands in the 21st-centruy, then in-class activities have to mirror such purpose. In taking an example to clarify the matter, one of the key competences is "learning to learn" meaning that the students must be guided in how to be independent in their learning and if they are to be assessed on such factors, then the assessment must give students the space to show this independence. This requires an active and dynamic approach to learning (Demirci, 2017). Although such line of practice is at odds with current traditional practices, Mercer, Dawes, Wegerif and Sams (2004) found that instilling in students the requisites of higher-order

thinking, among other things, is possible only if they have had richer dialogic experiences.

Applying the above argument to this study and the Maltese context, it has to be recognised that the local policymakers have gone to great lengths to ensure more meaningful learning experiences. Some of the attempts they have made include – the introduction of a basic skills programme whose details were given in a Letter Circular CMeLD 209/2013 by Spiteri (2013), locally known as the Core Curriculum Programme (CCP) for thirteen-year-olds which later was extended to eleven-year-olds, a one-day training workshop with all the primary teachers about ways how to create and foster in-class opportunities to think, support for school learning communities as per Letter Circular DLAP 160/2018 and others discussed in section 2.9.

Notwithstanding these efforts, up to the scholastic year that ended in June 2018, most of the assessment decisions were based on the summative results, thereby ignoring the collective effort of teachers, learning support educators and other support teachers in tailor-making the day-to-day teaching and learning to the needs of the students. The school assessment taking place during the teaching and learning process is mostly in the form of informal teacher-constructed tests. Official assessment occurs twice a year, in February (the mid-year exams) and in June (the annual exams). The former exercise is college based in that each college under the coordination of the exam committee works on the setting of the exam papers. In the latter case, the exam papers are centrally set by the Educational Assessment Unit (EAU). Therefore, while the mid-year papers have a certain degree of teacher involvement, the annual exams do not have any, as they are set by the Heads of Department and the Education Officers. All

exams offer the possibility of access arrangements on the basis of the recommendations of a professional psychological report. The types of possible provisions comprise:

- Reader – reading all the paper without any explanation, simplification, translation or clarification that can put these students at an advantage over other test-takers.

- Amanuensis – due to a temporary physical writing impediment the student would need an assistant to write what s/he says.

- Extra Time – 25% of the allocated exam time are added.

- Prompter – to help the student re-focus on the work.

- Enlarged Print – for students with visual impairments.

- Scribe – writing in green of illegible words.

- Multiplication Tables – for those who would require it during the Mathematics examination.

- Communicator – for students with hearing impairment.

The praxis of having papers set by professionals who are not the teachers of the students to be assessed widens further the gap between the teaching, learning and assessment. It could be interpreted that the message being conveyed tells the teacher, "You are responsible for the teaching and learning but not for the assessment on which crucial decisions about the learners' progressions are made." Even in the new assessment system – the Learning Outcomes Framework Approach – the percentage mark of forty percent that is being delegated to teachers is much less than the summative mark of sixty percent attributable to the exam. In the reform, the end-of-year exam will still be issued by the EAU.

With the forty percent in the hands of teachers, the next step for colleges would be to collaborate with each other so that the assessment tasks are of comparable quality and level of difficulty for fairness and ethical purposes. It is perhaps with this intent, which augurs well, that the Ministry of Education and Employment has recently issued a call and is in the process of appointing an Education Officer – Curriculum in each college (Ministry For Education and Employment, 2018b). This role needs to be pivotal in inculcating the practices of blind marking and moderation amongst class teachers, practices which are routine ones in national high-stakes exams like the BM and Ordinary Level Certification. In discussing the challenges brought forth by the marking of scripts, class teachers, in their role of exam markers, would give more importance and perhaps follow strictly the guidelines set by the criteria for excellence.

In terms of assessment validity, Malta has a particularity in that few subjects are taught and examined in the Maltese, while others like Mathematics, Physics, Chemistry, Biology, Science, and many others, are examinable in English. The implications of the latter mean that the student has to be competent in both the content and the language to access that content.

This account shows that much has been done, or at least tried, to have a rigorous, valid and reliable assessment system in the centrally set summative system. However, the next big challenge is a parallel assurance of rigour, valid and reliable school based assessment. In doing so, the latter's status would be leveraged and can be used with confidence for accountability and certification purposes.

3.8 Ethical Considerations

The ethical considerations in this study were many due to my professional role. In the following sections, I describe the ethical steps taken to minimise the influence of the professional role while bringing forth the researcher's role throughout the duration of the study.

3.8.1 Access

The local Research and Development Department is the body which grants permissions to carry out research in state schools. Prior to the submission of the necessary documentation, two meetings were held with the Directorate General of the Quality Assurance Department in the presence of the Director of Curriculum and with the Director for Research and Development to explain the aim and operationalisation of the study. This meeting was imperative due to the topic sensitivity of the study within the Maltese educational context and the possible professional conflict and threat that could arise. The Director General (DG) welcomed this study and offered his full support. In fact, he not only added that the action research approach was something that the directorate was working on as the future professional development practice to support teachers but also offered an official letter of acknowledgement to the future participant teachers. The intent of this letter of acknowledgement was simply to recognise and express appreciation for the teachers' voluntarily effort in furthering their professional learning by participating in this study. A copy of this letter is found in Appendix (VII). The DG's comments and action highlight further the timeliness and importance of this study.

Another meeting was held with the President and Vice-President of the then Malta Union of Teachers (MUT). In Malta, the MUT is not only the strong advocate for the

educators' interests and conditions of work but also a trade unionistic body and a major stakeholder in all the Ministerial and non-Ministerial educational initiatives and reforms. Consequently, the MUT plays an important role in the successful implementation of any national educational reforms, or projects happening in schools, whatever their scale. Since the operationalisation of this research could have affected other non-participant teachers, in having to accommodate the participant teachers' students during the group discussions, it was deemed best to discuss my research with the MUT to avoid union's directives that will halt this study. The meeting was very cordial, and both officials (as can be seen in the personal email communication in Appendix XII) did not object to the research as long as the teachers' participation was voluntary and the research operationalisation did not place any burden on the school and the non-participant staff. Avoiding this burden required the continuous liaison with the Head of School to work out a time-table to accommodate the research whilst not creating any inconvenience to the non-participant teachers.

After acquiring the endorsement of the local education authority and MUT officials, the College Principal's permission needed to be sought. According to local protocol, a meeting with the Head of School cannot take place without the College Principal's approval. Following the grant of the Principal's permission, the Head of the School was approached.

Following these permissions, all the necessary documentation was filled in and submitted to the local Research and Development Department for their official permission. Concurrently, the ethics application as per the University of Sheffield regulations was completed and submitted for the approval of the Ethics' Board. Once

the local and the University of Sheffield's permissions were granted the participants were approached.

3.8.2 Recruitment

This study recruited two groups of participants: all the primary teachers within the college and three participants for the CAR process.

For the first phase, the pencil and paper open-ended questionnaires were distributed to each Head of School during a monthly Council of Heads College (COH) meeting. The purpose of this meeting was not limited to asking the Heads to distribute the questionnaires but, above all, to explain the rationale of the research and the questionnaire, while stressing that this data collection was not an audit into the teachers' and the schools' situation of AfL for professional work related purposes. It was also explained why I opted to carry out this research in this college and how I chose the school for the CAR.

At the chosen school for the CAR, year group meetings were held to inform, both verbally and through an information sheet, and invite the teachers to participate in this project. Even though, the teachers and I were familiar, due to my former professional role of Inclusion Coordinator, this did not affect the teachers' response. Three participants from different year groups voluntarily offered to take part and signed the informed consent. Following an email reminder to attempt to increase the number of participants, five teachers approached me to justify their non-participation, something which they were not obliged to do. Therefore, the CAR process involved three teachers and myself. During the CAR process, the participants' informed consent was renewed at various intervals-October, January and April.

3.8.3 Distribution of the Open-Ended Questionnaires

The distribution of the questionnaires was a great concern since the field questions were directly related to the profession. To mitigate the possibility that this research could be seen as an audit, it was agreed with the Head of Schools that the questionnaires would be distributed through the daily line of internal communication, that is, through posting of material in the staff members' personal pigeon-holes. A postal box was set up in every school for the collection of the teachers' questionnaires. On the other hand, the Heads of School's questionnaires were collected from another postal box at the College Principal's premises, where the Heads meet regularly for the Council of Heads meeting. In this way, I would not know who has participated or not. If the Heads had been asked to deposit their questionnaire in the school box, such anonymity would not have been possible.

3.8.4 Data Ownership

The participants, as the main protagonists, were owners of the data, but the ownership of the data interpretation was entirely mine. The Malta Government Scholarship Scheme – Post Graduate of 2013 (MGSS-PG-2013), as the sponsoring body of this research, has never made any claims, in its regulations, for data ownership rights (Ministry for Education and Employment, 2013a). The sole purpose of this body was to provide financial assistance to successful applicants to further their academic levels, and in so doing, they would be contributing new knowledge in identified areas of national priority as well as increase the country's professional capacity.

This study has received full funding as the topic of research is an area of great national interest.

3.9 Approach to Data Analysis: Qualitative Content Analysis (QCA)

Krippendorff (2004) defines content analysis (CA) as a "research technique for making replicable and valid inferences from texts (or meaningful matter) to the context of their use" (p. 18). These interpretations, Krippendorff (2004) emphasises, can derive from different repertoires of data like verbal, pictorial, symbolic and communication data, and thus, making it a highly suitable analytical approach to get to the "verbal attitudes of behaviour….[in particular the]…latent constructs constituted in language" (p. 76). In fact, Weber (1990) points out that the inferences made can be about the author of the message, "…the message itself or the audience of that message" (p. 9); therefore, the process varies according to the focus of the researcher. This means that the central focus of content analysis, Stemler (2001) argues, is the content of the text rather than the structure of the language used or, as Crawford (2004) further explains, the power relations exposed through the language used. In the analysis of the content about the phenomena under study, Elo and Kyngäs (2008) emphasise that the interest centres on unearthing the concepts within that content. Hence, the focus, here, is different from other types of analysis involving talk, such as discourse analysis. In the latter, Hardy, Harley and Phillips (2004); Herrera and Braumoeller (2004), maintain that the major differences lie in where the focus of the analysis is, whether it is the power relations or the structure of the language in use. Furthermore, another central difference is the operating paradigm and theoretical philosophical backgrounds of both approaches. Various scholars, Hardy et al. (2004); Mayring (2014); Hsieh and Shannon (2005), acknowledge that content analysis is primarily rooted and associated with quantitative methods and a positivist stance. This is because classical content analysis has been mainly used to calculate word frequencies and to find statistical patterns in text (Krippendorff, 2004, 2017). In a

personal communication (see Appendix V), Krippendorff (2017) asserts that the statistical significance would not be possible to emerge through "…historical trends patterns of highlighting and omissions." Therefore, content analysis offers the possibility to approach an investigation from two ways of knowing, the quantitative and qualitative, thus putting forth its flexibility (Mayring, 2014; Neuendorf, 2002; White and Marsh, 2006). This is a strength of content analysis because the possibility to use both quantitative and qualitative measures to "support the findings", Hardy et al. (2004, p. 19) argue, further enriches the trustworthiness of the study. During the stage of analysis, quantitative methods were used only to find word counts and word percentage coverage of a particular word that was repeatedly emerging in the qualitative analysis. In enhancing the latter results by other findings on the same issue from another way of knowing, increases the trustworthiness of the study and the claims that follow.

Such flexibility emerges from the wider spectrum that content analysis is situated in. At the qualitative end of this continuum, CA gets close to a discourse analytical approach, where Hardy et al. (2004, p. 22) explain that:

> …[when] the creative interpretation seeks to show how reality is constructed through texts that embody discourse…content analysis provides an important way to demonstrate these performative links…

The analytical interpretation, as Krippendorff (2012) explains, "goes beyond the descriptive questions of what and how because it goes into the merits of why, for whom and to what effect" (p. 27). Consequently, when the aim of the research, as with the case of this study, is to understand and to interpret the teachers' perceptions,

thoughts and practices in a particular situation from a myriad sources of data collection, qualitative content analysis suits the purpose (Hardy et al., 2004).

Mayring (2000) and Schreier (2014) describe qualitative content analysis as a systematic procedure for eliciting the meaning within qualitative data; whose outcomes, according to Drisko and Maschi (2015), guide the community to "new ways of thinking or doing practice" (p. 20). These new ways of knowing, Elo and Kyngäs (2008) point out, emanate from the concepts or categories describing the investigated issue, which, in this case, is about the positive influence that CAR had on the teachers' beliefs and practices. Therefore, if through a qualitative content analysis new perspectives and ways of doing could be revealed, then this approach would also serve the purpose of each research question, in that, it would provide plausible answers to the investigation.

Interpretation of findings is a very delicate and personal matter as one's funds of knowledge and positionality affect the coder's understanding of the data and, consequently, the creation of themes. Overriding these difficulties is possible with a well-defined parameter of each theme as this would not only ensure for inter-reliability, in the case of different coders (Krippendorff, 2004), but would also enhance the credibility and dependability of the research analysis process, thus increasing the reliability of the qualitative research (Krippendorff, 2016). This argument is understandable and expected from the quantitative research domain. However, in qualitative research, the rigour of the study is assessed in terms of the trustworthiness it offers, (Lincoln and Guba, 1985). Therefore, from this lens, the definition of each category makes clear the researcher's positionality during the data interpretation and analysis processes. The choice and descriptions of the themes, according to White and

Marsh (2006)White and Marsh (2006)White and Marsh (2006)White and Marsh (2006), depend on the purpose of the research questions, the epistemology of the study and the researcher's investigative interests (Weber, 1990).

3.10 Summary of Chapter

This chapter has presented a strong justification of the methodology and the methods used in this study. At every stage of the research design, careful attention has been given to maintain the important alignment between the research questions, the methodology, the methods and the mode of analysis. Since this study was spread over two phases, the data collection instruments used in each phase were fully explained and justified. This was done by providing the field questions together with the rationale of each, thus showing how the literature has informed the researcher with regard to the application of the theory to practice. Both phases generated qualitative data which was analysed from a qualitative content lens perspective with the assistance of NVIVO[11] software.

A detailed explanation of the underpinning methodology of action research, especially the sub-branch of collaborative action research adopted in this study, has been given. More than that, the difference between CAR and PAR has been explicitly stated. One of the main differences is the role adopted by the guiding researcher and the participants, an aspect which was discussed which highlighted the role of the friendly outsider co-ordinator taken by the former.

Additionally, the pragmatic implementation of the research was clearly described, thus making the study easily replicable. Moreover, the ethical considerations have been given due importance in view of the close relationship between the researcher's

professional role and the topic of study. Several measures were taken to ensure the trustworthiness of this study, one of which was maintaining objectivity in the data analysis and interpretation through member checks, verification and feedback. These facets are the foci of the next two chapters whereby each chapter presents and discusses the approach to data analysis and data management and supports this by an exemplar of how they were tackled.

The following chapter discusses the results and the data analysis of the first phase, while the subsequent chapter presents the results of the second phase, that is, the investigation carried out with three teachers as collaborative researchers. Data analysis of the responses of the three teachers is presented in a separate chapter.

3.11 Visual Summary of the Research Methods and the Participants involved

Table 3.10 summarises the methods, the number of participants involved, the returned items suitable for analysis and the context of the participants.

Data Collection Instruments	**Two** Open-Ended Questionnaires for Teachers and Heads of School
Number of Questionnaires Sent	**Teachers**: Eighty-Five **Heads**: Eight
Returned Questionnaires	**Teachers:** Forty-Five **Heads**: Six
Participating Schools	**Seven** schools had been supported in the implementation of AfL prior to the commencement of this study. **One** school was not supported in the implementation of AfL because the school management team had not asked for such support. Hence, this school was chosen for the second research phase – to participate in the CAR process.

Table 3.10: Phase 1-The Investigation of the State Primary Teachers' Beliefs and Practices.

Table 3.11 below outlines the methods used in the second phase, as discussed in this chapter and as outlined in Table 3.2, together with a short pen portrait of the three teachers that participated in the CAR process.

Data Collection Instruments (as outlined in Table 3.2)	Five Group Discussions. Three Individual Feedback Sessions. Three Record-Keeping Booklets. Three Semi-Structured Interviews with teachers. Ten sessions of group interviews with the students. Three self-written stories by the participant teachers.		
Level of Participation	All the sessions were always held as scheduled with full participation.		
Data Collected	Qualitative Data from all the sources listed in the first row of this table.		
The Participants	**Nina** • is in her early forties; • has been teaching for seventeen years; • has mostly taught the Junior Years (8 to 10 year olds); • has been teaching the Early Years, a Year Two class (6 year olds); • is quite shy but very disciplined in class; • seemed to lack the self-confidence in her self-efficacy for the right implementation of AfL; • showed self-initiative in preparing SC learning walls during the research; • hoped that the CAR process would help her ameliorate her students' level of concentration and level of motivation towards learning.	**Samantha** • is in her late twenties; • has been teaching for four years; • has each year taught a different year group; • has taught in different schools due to being redundant from each; • had taught a Year 3 class during the research study; • seemed to blame the students for their lack of achievement as she attributed it to a lack of interest; • was mostly concerned about the teaching activities rather than the alignment between the learning goal, the activity and the assessment; • hoped that the CAR process would her to reach every student without boring the high-achievers.	**Belle** • is in her late thirties; • has been teaching for nine years; • has mostly taught the Junior Years (8 to 10 year olds); • plays the guitar; • directs the school's students choir; • directs the school's celebration day; • is very passionate about the thematic approach to teaching and learning; • had taught the lowest Year 6 band group during the study; • was the most outspoken participant; • showed a high degree of self-initiative in the preparation of SC notes for the main subjects; • aimed at increasing the standards of mathematics and literacy through the CAR process.

Table 3.11: Phase 2-The Influence of CAR on the Participant Teachers' Beliefs and Practices

Chapter 4 : Discussion of Findings – First Phase

4.1 Overview

This chapter presents and discusses the findings obtained from the teachers' and Heads of Schools' open-ended questionnaires. The discussion of these results seeks to answer the first research question of this study, which investigates the connection between teachers' beliefs and practices in the context of AfL.

This discussion starts by introducing the college's demographic context, the participants and their classroom settings and the response rate. This is followed by an explanation of the data management exercise, together with an example of how the data was interpreted and analysed. Subsequently, a discussion of the themes and sub-themes follows; this is supported by direct excerpts, bar charts and comparison diagrams. This powerful combination of visual representations offered by NVIVO[11] software assisted me in moving along a continuum of analysis, starting from surface features (via simple word frequency) to a deeper and more rigorous analysis. The charted visual representations contain numeric reference codes; however, their interpretations are meant to enhance and support the qualitative data. Using numerical data during the data analysis stage provides the "benefit of data elaboration and provokes new thinking" (Bazeley, 2006, p. 68). Furthermore, mixed methods assist in "the building of initial findings as they improve the accuracy of data and the development of analysis" (Denscombe, 2008, p. 272), In fact, the analysis discussion not only portrays the overall relationship between the primary school teachers' beliefs and practices but also explores the situation in each year group. Thus, the findings show the relationship across year groups and how it is similar to or different from the overarching situation.

4.2 The Field Context: One College and Eight Primary Schools

The sample population consisted of eighty-five teachers and eight Heads of School from eight primary schools clustered in one college. The student intake of each school is by age-group. In Malta, students can start attending pre-compulsory education from the age of two years and nine months. Primary-school education in Malta consists of two main cycles: the Early Childhood Education Years and the Middle to Junior Years. The first cycle is further subdivided into two segments consisting of two and a half years of non-formal and non-compulsory education, depending on the age of entry (Kinder I and II), and two years of formal compulsory education (Year One and Year Two). Although the current NCF has included the first two years of compulsory education in the Early Childhood Education cycle, where non-formal teaching practices should take place and are being suggested, the current practice is still very formal. The second cycle, Middle to Junior Years, caters for students in Year Three up to Year Six. To date, the Year Three, being the bridge year, is still considered with the Early Years because no formal examinations take place. Consequently, in the analysis of this study it is also being included with the Early Years so that the influence of the summative assessment, if any, can be better investigated.

During the middle stage of compulsory education, formal examinations are introduced in Year Four. Students sit for formal examinations in February (mid-yearly exams) and in June (annual exams). At the end of the primary cycle, Year Six students sit for the National End of Primary Benchmark Exam. This exam is compulsory for all the state schools, but schools from other sectors can participate. The purpose of this exam is to give a national snapshot of the ten-year olds' knowledge, competences, skills and abilities.

The participating college, one of the most long-standing, clusters a group of schools from neighbouring villages spanning a distance of around ten kilometres. The primary student population is approximately of two-thousand eight hundred students.

The primary schools within the college are situated in rural or coastal areas. The schools' populations vary from ninety-four students, catered for by six class teachers, to six hundred and fifty students, catered for by twenty-one teachers. The college has a team of visiting teachers for the teaching of Science, Physical Education, Music, Art and Personal and Social Development. When these teachers take over the class, this enables the class teacher to have ninety minutes of non-contact time per week.

4.3 The Participants: Teachers and Heads of Schools.

The Maltese teaching cohort is predominantly female; this was also reflected in the sample population which included seventy-nine female and six male teachers. Consequently, the findings reflect a feminine view of AfL; with such underrepresentation of males it was not possible to investigate whether there are any gender differences determining beliefs and practices with regard to AfL.

Forty-five teachers, amounting to almost fifty-three percent of the sample population, returned the questionnaires. According to Baruch and Holtom's (2008) findings, individual level response rate of around the fifty percent is to be considered as a good return. Nonetheless, Email reminders were sent to the schools to improve on this first response rate, which they did as there was an increase of eight percent from the initial rate of forty-five percent.

The Heads of Schools' response rate was of six out of eight participants, seventy-five percent of the sample population. An email reminder was also sent to the Heads of School but their response rate remained unaltered.

The teaching experience of the respondents varied from one to thirty-four years, which enriches the findings further as they provide novice and veteran teachers' views of AfL. Demographic data, as shown in Figure 4.1 below, reveals that the majority of the returned questionnaires were from teachers with fifteen years' or less teaching experience, as indicated by the first half of bars. Hence, notwithstanding the widespread range of teaching experience, the majority of the data responses came from teachers with few to several years of teaching experience rather than from veterans.
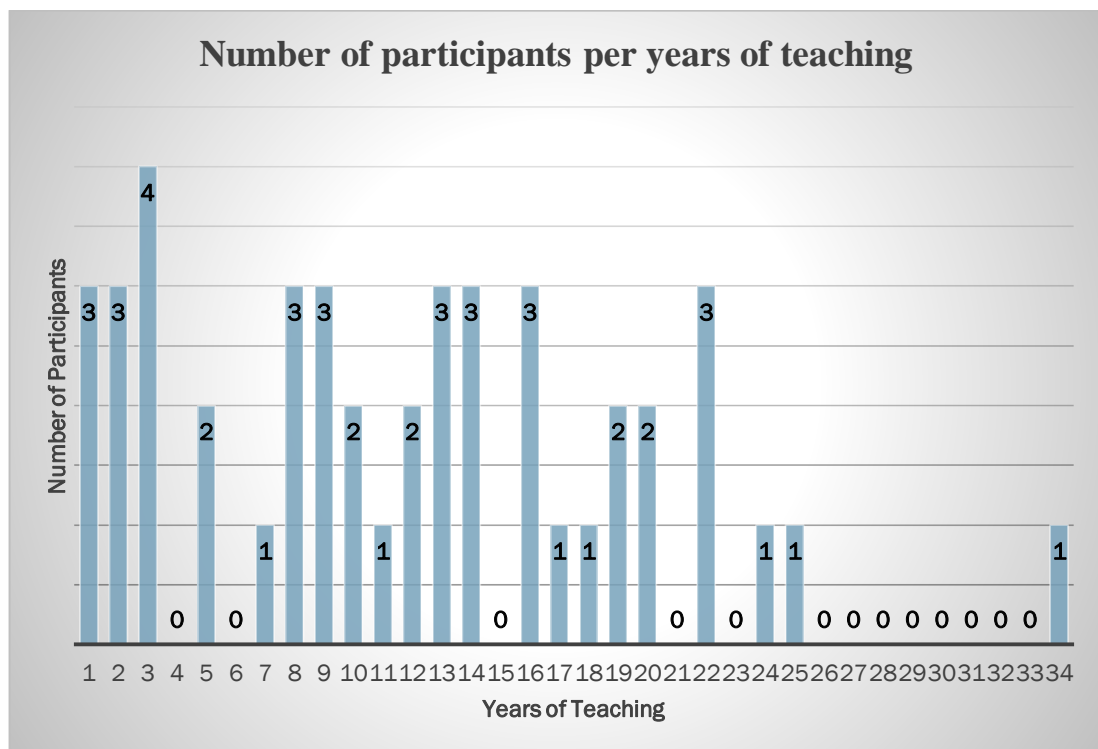
Figure 4.1: Distribution of the number of participants per years of teaching

As can be seen, the younger generation of teachers (teaching experience ≤ 15) amount to thirty, while the older generation (teaching experience > 15) sum up to fifteen.

Furthermore, Figure 4.2 shows that the respondents are spread across all the primary year groups, with the blue bars representing the Early Years educators while the turquoise bars pertain to the Junior Years, thus the data reflects the teachers' standings across all contexts. This unanticipated strength enriches further the analysis as the different contexts could be investigated, especially with regard to whether the presence of summative examinations was influencing the relationship between the teachers' beliefs and practices.
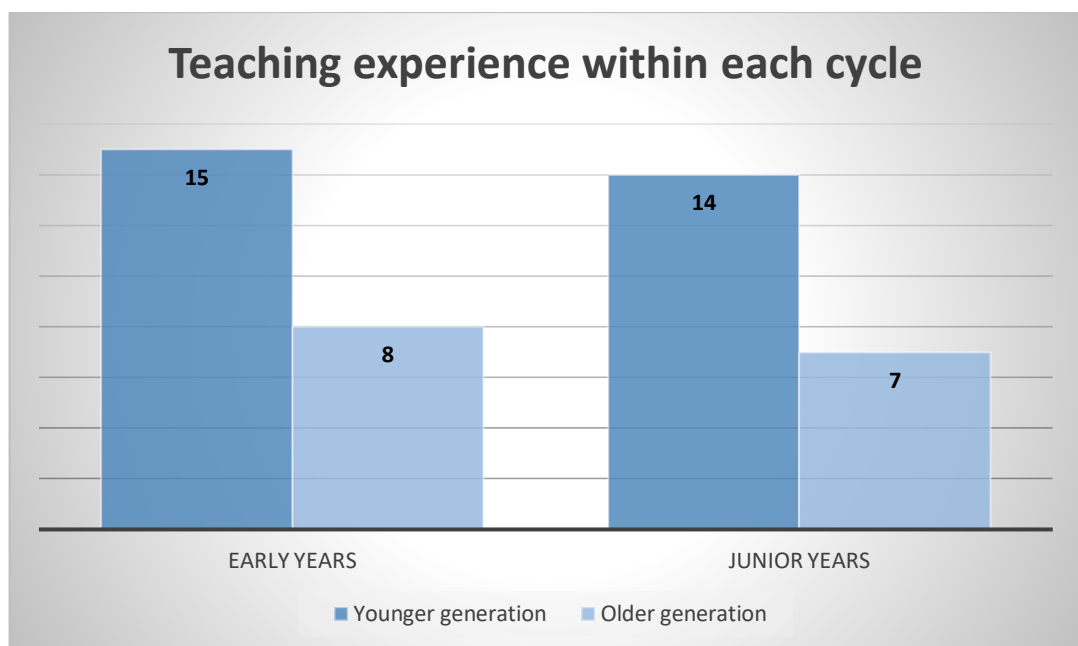
Figure 4.2: The number of participant teachers from each sector

Moreover, Figure 4.2 shows that twenty-three responses came from Early Childhood Educators while twenty-one responses came from teachers in the Middle and the Juniors' cycle. One teacher did not indicate the year group and an 'unassigned' attribute was given, which is why the total amounts to forty-four rather than forty-five.

A further breakdown of the responses in each cycle reveals that the number of participating teachers per year group is as follows:

- Year One – eight teachers;

- Year Two – ten teachers;

- Year Three – five teachers;

- Year Four – nine teachers;

- Year Five – six teachers;

- Year Six – six teachers.

4.4 Data Management

Qualitative research and analysis aim at providing in-depth description of the issue and its context to develop new knowledge about the situation (Flick, 2014). Doing so entails the reduction of large amounts of data through specific and thick descriptions of the coding rules adopted for each category (Weber, 2011). This process is outlined in Table 4.1 and expounded in the sections that follow.

Data Management of First Phase	
Step 1	Data entered in a Microsoft Word Document
Step 2	Data imported in NVIVO[11]
Step 3	Careful re-reading of the data
Step 4	Ran an auto-code for each question
Step 5	A word frequency search for each question to get an initial overview of the situation.
Step 6	Text search queries were run to investigate the occurrences and the context of particular words.
Step 7	Creation of parent and child nodes.
Step 8	Each category was defined as outlined in Table 4.2 below.
Step 9	Data coded according to the parameters of each category.
Step 10	Matrix searches were run to investigate and understand better the emerging situation in the Early and the Junior Years.
Step 11	Charts and comparison diagrams were run to explore further the emerging issues.

Table 4.1: The process of data management

Data management and analysis followed Mayring's (2014) general step-by-step model to qualitative content analysis. The above table outlines the adapted step-by-step

model which comprised five main procedures: getting sense of the whole (Steps 1 to 3), establishing and defining the themes and sub-categories (Steps 4 to 7), interpreting each unit of analysis (Steps 8 to 11), and reporting.

4.4.1 Data Interpretation: descriptions of the categories used in the first phase

Table 4.2 presents the description of each category and sub-category that has guided the coding process. The development of this table has been informed by Krippendorff's (2004, 2016) suggestion that defining the categories upfront not only mitigates subjectivity but also exposes the researcher's entry point to data interpretation and analysis.

Parent Node - Understanding of AfL The data responses emerged from the second field question. This prior interest led to two sub-categories indicating the level of understanding that the participant teachers held.	AfL is about the quality of the teachers' and students' interactions in checking on whether the actual learning reflects the intended learning during the learning process. **Table 4.2 p. 1**
Child 1 Node - Deep understanding This category emerged from the response data given by the participant teachers to the second question.	Statements which indicated the interactive use of the AfL strategies between the teachers and the students in order to move the latter forward in the process of learning.
Child 2 Node - Limited understanding This category emerged from the response data given by the participant teachers to the second question.	Statements or word phrases which i. indicated that AfL is only a teacher thing. ii. did not mention the students' involvement in the learning process. iii. referred to AfL as a list of strategies, e.g., AfL is about sharing the learning goal with the students.
Parent Node -Thoughts **Teachers' and Heads' Thoughts** This was another area of interest I wanted to investigate. Particularly, I was interested in finding out whether: i. there was a discrepancy between the teachers' understanding and thoughts about AfL, and ii. the teachers viewed AfL as the unlocking key for increasing students' achievement.	**Teachers' Thoughts** Statements which reflected i. the teachers' opinions, based on their teaching experiences, about the effectiveness of the AfL philosophy and its practical implementation. ii. the teachers' linkage, or otherwise, of AfL with learning achievement. **Heads' Thoughts** i. reflected the Heads of schools' opinions about AfL and their school's assessment culture. .
Child 1 Node - Positive thoughts	Statements which indicated the teachers' agreement with the benefits of AfL.
Child 2 Node - Mixed thoughts	Statements which indicated the teachers' undecided position about AfL.
Child 3 Node - Misconceptions	Statements which indicated that the teachers' rationale about a particular strategy was based on a misconception of that strategy. E,g., *sharing the learning goal kills discovery learning.*
Child 4 Node - Neutral	Statements which indicated a "yes, but no" stance.
Parent Node -Type of AfL Practice A third area of interest consisted in knowing the kind of practice in AfL, if any, the teachers engaged in. The data generated revealed four sub-categories of practice.	
Child 1 Node -Practice 'to the letter' (mechanical) This category emerged from the quality of response data given by the participant teachers.	Statements or word phrases indicating that the strategies were being implemented in a mechanical way without any rationale for their use, or statements which contain adverbs of frequency like *often*, *almost*, *randomly* and other similar words. E.g., *I use the learning goal at the beginning*, or, *I share what we are going to learn verbally.*
Child 2 Node - AfL within its 'spirit.' This category emerged from the quality of response data given by the participant teachers.	Statements or word phrases showing how the teacher collected evidence of the students' prior knowledge and the action that was taken to move them forward. Also, statements showing the explicit purpose for using a particular strategy were included in this sub-category. E.g., *I use the learning goal to help the students focus on where we are heading*; *I ask questions to check whether they are on track.*
Child 3 Node - No practice	Statements which clearly indicated that none of the AfL strategies were being used.

Child 4 Node - Unclassified	Statements which were too general and no evidence could be derived or concluded on whether the teacher was implementing the practice in a mechanical way or within its 'spirit'.
Parent Node - Time This category emerged from the data responses to the question exploring the teachers' concerns about AfL.	Statements which referred to AfL as a time consuming activity.
Child 1 Node -Planning and Preparation This category emerged from the data responses to the question exploring the teachers' concerns about AfL.	Statements which referred to the different preparations and planning required for a lesson structured upon AfL strategies.
Child 2 Node - Class Group Characteristics This category emerged from the data responses to the question exploring the teachers' concerns about AfL.	Statements which referred to class characteristics such as mixed-ability, behaviour, class size and in-class support.
Child 3 Node - AfL internal and external challenges	Statements which referred to the internal pressures faced by teachers to meet the demands of the syllabi and to the external parental pressures regarding the type of assessment processes they expected for their children.
Parent Node - The learners' response to AfL This was another area of interest that I wanted to explore, the teachers' views about their students' response to the AfL strategies.	Statements which indicated the effect of the AfL strategies onto the students. E.g., *students were more focussed*; *students were not affected by it*; or *students did not show any better performance than with the usual practice.*
Child 1 Node: Proponents	Statements which showed the positive effect that the AfL strategies had on the students. E.g., increase in participation or focus.
Child 2 Node: Objectors	Statements which showed that the inclusion of the AfL strategies did not leave any impact on the students' learning.
Parent Node - Leadership and AfL. This category emerged from the data given by the Heads of schools.	Statements indicating the type of support in monitoring the teachers' work and in providing opportunities for further professional growth on the topic.
Child 1 Node - Leadership Support	Statements which highlighted the monitoring activities that Heads of Schools engaged in to encourage the use of AfL.
Child 2 Node - Look-Fors	Statements which included the specific activities that Heads of Schools looked for during their in-class observations.
Parent Node - Professional Learning and AfL The first question in the open-ended questionnaire tried to capture the timing and the context where teachers learned about AfL. This would have enabled me to identify whether AfL was a recent phenomenon for teachers or something which they had heard about long before it was introduced in schools. The data responses would indicate whether AfL was a recent innovation or not.	Statements which indicate where the teachers and/or the Head of Schools came across AfL for the first time and what they consider as valuable support in their professional learning. Examples include pre-service university training, courses organised by the Education Department and Professional Development sessions at school.
Child 1 Node - Heads' PL	Statements which included how and when Heads of Schools learned about AfL.
Child 2 Node - Teachers' PL	Statements which included how and when the participant teachers learned about AfL.
Parent Node - School Learning Culture and Teachers' Attitude	Statements about the prevailing school's AfL ethos and the teachers' disposition towards AfL.
Parent Node - AfL and Achievement	Statements about the connections and lack of that teachers and Heads made about AfL and achievement.

Table 4.2: The description of each parent and child node that guided the coding selection process

The above categories reflect the main areas of interest identified through the particular field questions which guided the first phase of the investigation. According to Schreier (2014), preliminary and initial main categories consist of concept driven priori categories about which the researcher wants more information. For the purpose of relevancy, Schreier (2014) maintains, the main themes of certain field questions like 'understanding', 'practice' and 'thoughts' have been used as part of the main categories. Cohen et al. (2011) refer to this type of question setting as planning with the analysis in mind.

In view of this, a combination of deductive and inductive approaches were used in the data analysis, thus counteracting the limitations of each approach (Drisko and Maschi, 2015). An inductive limitation, Drisko and Maschi (2015) argue, includes the alienation of existent literature concepts because the focus will be on the participants' perspective. Conversely, a deductive limitation will ignore the data emergent themes to focus only on existent literature concepts. The use of both deductive and inductive approaches to data interpretation was used only in the first phase. The second phase of the research, consisting in the CAR, used a fully inductive approach to data interpretation. An exemplar of how this combined-approach process was carried out is given in Table 4.3 below.

Unit of Analysis: Open Ended Questionnaire
Question considered: What do you understand by Assessment for Learning?
Categories: Deep and Limited levels of understanding of AfL.
My Guiding Definition: AfL is about the quality of the teacher's and student's interactions in checking on whether the actual learning reflects the intended learning during the learning process.
Responses: **T3:** *Assessment is part of the work of the teacher who has to know what level the student is at all times (not just at exam time).* **T8:** *You try to make the pupils more conscious about what they are going to learn.* **T17:** *By AfL, I understand a method used by teachers during lessons to encourage their students to be active learners.* **T19:** *The teacher understands the learning level of each student*

Selection of meaningful units:
 	
    i.   part of the work of the teacher --- **limited understanding**
    ii.   know what the level is at all times (not just exam) --- **deep understanding**
    iii.   You try to make the pupils more conscious --- **deep understanding**
    iv.   a method used by teachers --- **limited understanding**
    v.   The teacher understands --- **limited understanding**

Interpretation:
 	
Data responses indicate that although there is a general understanding of what AfL is, the teachers seem to belong to two groups of understanding, deep and limited. This data raises further questions as to:
   • What is the role of the learner in learning?
   • Do the teachers see a role for the learner in the learning process?
   • Could it be that this limited understanding of AfL is influencing the level of AfL class practice?
   • Could it be that this limitation is leading the teachers to look at AfL as an added burden?

Table 4.3: An exemplar of a data analysis unit.

4.5 Reflecting on the data prior to coding

Figure 4.3 below illustrates two sets of questions indicating the depth of reflection that was delved into. The introductory level was guided by the questions, 'What is the teachers' understanding of AfL?', 'What do teachers think of AfL?', 'Do teachers see a connection between AfL and student achievement?' At a secondary level, the questions comprised issues pertaining to the relationship between 'thoughts, understanding and practice', 'the type of practice' and whether 'the teaching experience' affected this relationship and the levels of thoughts and understandings.

The multiple levels of reflection show that the data was not approached with a blank mind (Ormston et al., 2013), and that the analysis process was open to what the data had to tell, despite the initial assumption, stated in Chapter One, that AfL was not being practised. In fact, as the analysis will indicate, the data revealed different types of practices which show that teachers were implementing some form of AfL.
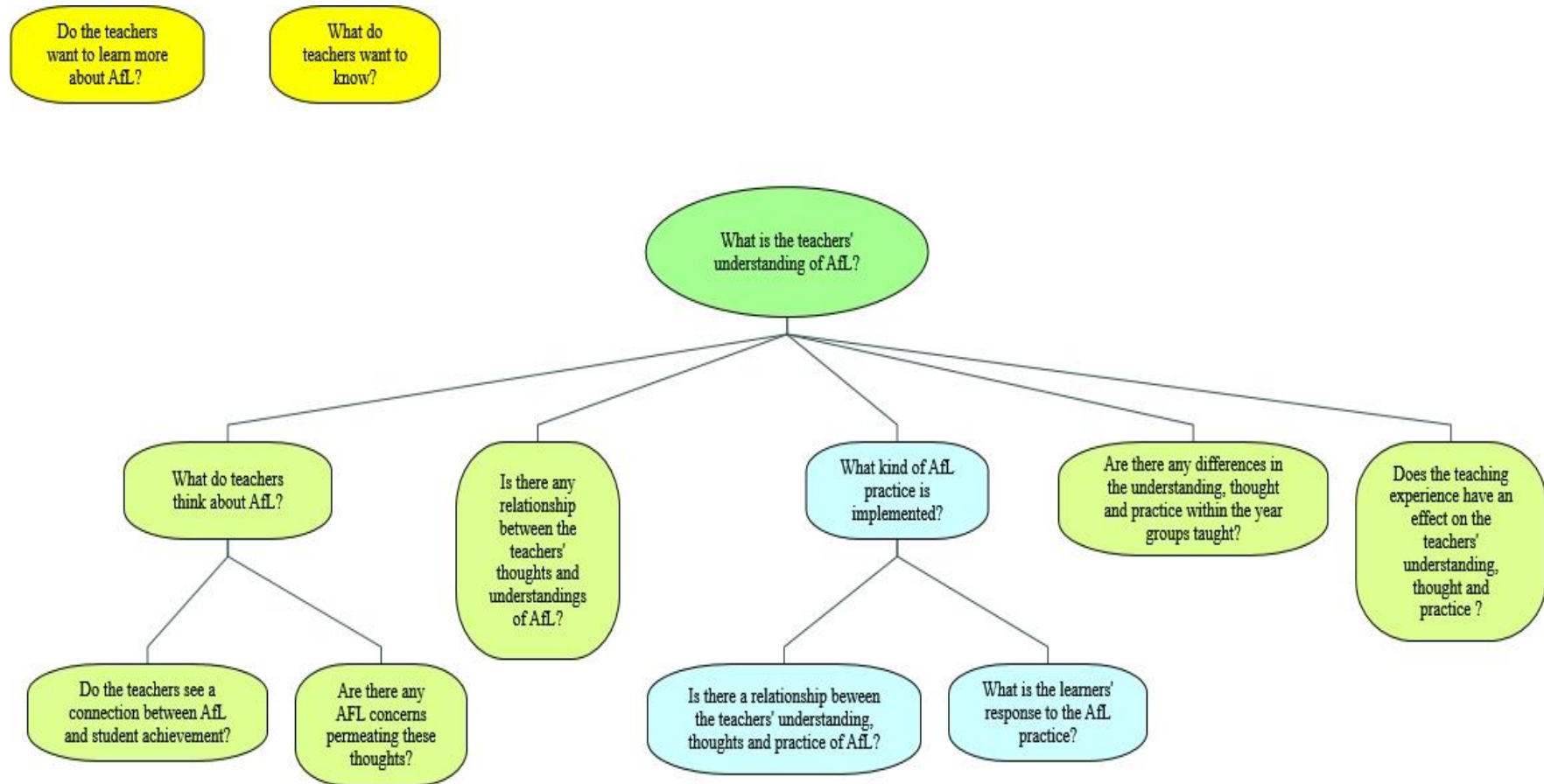
Figure 4.3: Preliminary questions with which I approached the teachers' data analysis

A similar exercise was adopted with the data responses of the Heads of School. Here, the background assumption was that Heads of School could not provide proper monitoring and support if they were not or did not consider themselves more knowledgeable in this pedagogy than their teaching staff. The mind map in Figure 4.4 portrays the guiding questions that accompanied my quest to establish the influence of the Head of Schools' positions about AfL on the teachers' beliefs-to-practice relationship.
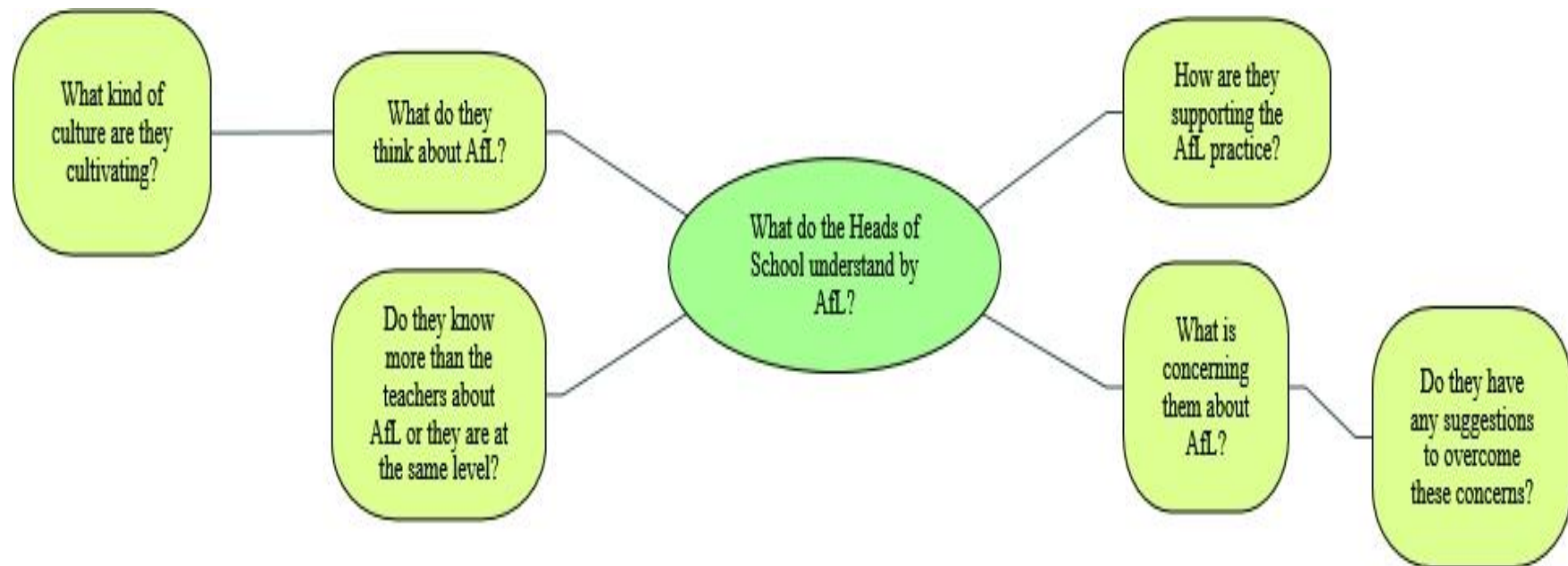
Figure 4.4: The preliminary questions which guided the data analysis of the responses of Heads of School

4.5.1 NVIVO's Contribution in the data analysis process

Given that data was collected in a paper and pencil format, a Word Document template was created to input the data which was then imported into NVIVO[11]. This process, albeit old-fashioned, helped me to start familiarising with the data while reflecting on what the data was saying. For example, in reading the first question about the teachers' entry point to AfL, I found myself asking, "How many teachers have reported that their entry point to AfL was University or school or both? How can I find out more about this? What if I run a simple query with the term 'University' or 'school' or both? If the teachers' findings indicate that the majority learned about AfL at school, what is the Head of School's position? Is it different or similar?" If teachers' initial learning about AfL was at school, then AfL knowledge would be a relatively recent phenomenon, and for teachers this would be another innovation or reform in teaching. In turn, this assumption led to the enquiry of whether teachers were seeing AfL as part of the ongoing educational reforms, thus another burden.

As outlined in Table 4.2, twelve code themes were created as parent nodes in NVIVO[11], six of which had more than one child node.

4.5.1.2 Organisation of the Discussion of the Findings.

The discussion of the findings emerging from the themes listed in Table 4.2 departs from the participants' current professional learning and what they would like to learn more about AfL. After establishing the participants' level of AfL knowledge, the discussion focuses on the teachers' thoughts and understandings regarding AfL, where the thoughts section includes the teachers' perspectives on:

- AfL and Achievement;

- Preparation and Planning;

- In-Class Application of AfL;

- The Class Group Characteristics.

In discussing these results, light is shed on the participants' attitude towards AfL together with the prevailing school assessment culture they are operating in. From the insights generated by the participants' espoused theories, the discussion will then focus on the participants' in-use theories and will conclude with how the learners responded to the teachers' AfL practices.

The arguments put forth are substantiated by coded direct excerpts, such as T1 or H1, which stand for "Teacher One" and "Head One". The numerical code is according to the order of entry of the questionnaires.

4.6 Professional Learning about AfL

This theme incorporates two aspects of professional learning (PL) about AfL, the context of how the teachers and Heads of School came to know about AfL and what they would like to know more about. On one hand, the focus is on the circumstances in which the transmission of knowledge occurred, while on the other hand, the focus is on the real needs and interests of the participants.

4.6.1 The Context and Content of Learning about AfL

The teachers' responses were characterised by two contexts: the University and/or the school. In contrast, the School Heads' AfL knowledge was gained either at school or through in-service courses organised by the local education authority.

4.6.1.1 The Teachers' Scenario

An in-depth investigation into the 'Teachers' PL' node revealed that the majority of the teachers' learning about AfL occurred at school as part of their in-house professional development. Table 4.4 below shows that only eleven teachers mentioned that they had heard of AfL during their pre-service training at University.

Participants	Percentage Coverage of Source in the query about who learned about AfL at University
Tr1	0.57%
Tr2	0.64%
T3	0.48%
Tr4	0.34%
Tr11	0.71%
Tr19	0.49%
Tr27	0.66%
Tr25	0.53%
Tr26	0.32%
Tr38	0.56%
Tr43	0.63%

Table 4.4: Percentage Coverage of participants who learned about AfL at University

According to the evidence in the above table, it follows that only one-fourth of the participants had had prior exposure to AfL before entering schools. More interestingly, in investigating the teaching experience of these eleven teachers (see Figure 4.1), the results revealed that only one teacher had more than fifteen years teaching experience, which indicates that AfL was given its due importance as part of the pre-service teacher training of the other ten participants.

Besides the teaching experience factor, Figure 4.1 and Table 4.5 show that the eleven teachers who claimed pre-service knowledge of AfL are evenly spread (T25's year group has an unassigned attribute) between the Early and Junior Years. Hence, in both cycles, there is a small minority of participants for whom AfL could not be considered

as an innovation whereas for the majority of the participants AfL was a relatively new pedagogical approach across both cycles.

Given that the participants were mostly young in terms of teaching experience, it is confusing how most of them did not attribute the learning of AfL to their pre-service training. Since data was not collected about the participants' qualifications, there cannot be the certainty that the rest of the participants are University graduates. In case they are, the teaching and learning about AfL at University did not seem to have left any impact. This claim reflects the need for "teacher training on pedagogical and assessment strategies needs to be improved" (Heritage, 2016, p. 340).

One possible reason for not recollecting pre-service training about AfL was that it could have been too theoretically oriented. Student-teachers have limited time for practice (Smith, 2011), and time is a crucial factor for the good development of AfL practice (DeLuca et al., 2012). In fact, as the following evidence shows, the participants' call is for more knowledge of and for practice (see Section 2.6 above): T1 requested *"more demo lessons on questioning techniques;* T3 asked whether *"AfL includes self-assessment";* T19 wished for *"more information and guidance on how it could be implemented including follow-up";* while T26 enquired about whether "…*FA or SA should be used in her class*…[and] … [*for support in informing parents about the new strategies*]. This plea for support is also shared by their fellow participants for whom school was the place of learning about AfL. More specifically, the latter group, which T13, T14 and T16 to T18 form part of, respectively asked for *"more practice on success criteria";* *"more ways to be implemented during lessons"* and *"more practical tips of how AfL can be adapted in class";* *"other strategies which*

can be implemented with the early years" and *"more tools and strategies that can be adapted with the very young."*.

These exemplars indicate that the teachers still need to grow further in their confidence in the implementation of AfL. Such lack of experience with AfL might impinge on the effectiveness of the immediate observable impact on the students' learning, which might contribute to teachers being negatively influenced about AfL. In turn, this degree of influence could affect the teachers' thoughts (see section 4.7 below) about AfL because they would not have been direct witnesses of the key promise of AfL on student achievement. According to Kirton, Hallam, Peffers, Robertson, and Stobart's (2007), the practical impact on student achievement is one of the promising ways to entice teachers into a new pedagogy. Apart from this, more recently, Wain (2016) has passionately argued and stressed that using practice as the gateway to theory offers a more educated approach to teacher learning for the twenty-first century teaching profession. If teachers are expected to make good use of AfL, then they should learn about the theory by building it from their professional experiences (Hargreaves and Fullan, 2012) through a reflective process of learning (Postholm, 2012).

In view of the finding that AfL was an innovation for most of the participants, which makes sense in the light of the recent emphasis of local policy on AfL, as discussed in section 1.8, it follows that the teachers could neither claim expertise nor that they have been using it for a long time. One such claim was made by one teacher, T26, who stated that *"AfL is just a label for something which teachers have been doing all along."* Such a sweeping generalisation is not corroborated by the responses of most of the other participants in this study. If expertise in AfL was not yet developed, then

the current practices, if any, need to be more deliberate and require great effort (Wiliam, 2016; Wiliam and Leahy, 2015). Engaging in a conscious act of practice would enable teachers to develop a practice with meaningful intention, which is a must for an effective implementation of AfL (Black and Wiliam, 1998b).

What is encouraging from the teachers' comments is their willingness and readiness to know more about AfL, even though they are concerned about whether the new knowledge would overhaul existing practices. Hence, although the teachers want to know more, they are still hesitant to move out of their comfort zones to try new ways of teaching, which makes the journey towards a more assessment-based pedagogy more difficult (Leahy and Wiliam, 2012).

Year Group Taught	Number of coding references
1	0
2	2
3	2
4	3
5	3
6	0

Table 4.5: Year groups taught by teachers who learned about AfL at University

4.6.1.2 The Scenarios of the Heads of School

The responses of Heads of School in Figure 4.5 support further the finding that learning about AfL was part of their in-service training. Therefore, the latter's learning occurred in parallel with their staff's learning, implying that the school leaders did not have enough time to deepen their knowledge, to grow in their confidence to be the "skilled change agents" described by Fullan (1993, p. 4) in their learning organisation, so as to offer better support to their teachers.

H1: Through courses for newly appointed Assistant Heads.
H2: Through colleagues.
H3: AfL Head of Department.
H4: Through an initiative taken by the Directorate of Education.
H5: AfL was part of the school development plan.
H6: The Education Officer visited the school, and we discussed her remit. It was what I was after. I approached another school to organise a PD session together.

Figure 4.5: Heads of Schools' data about their AfL learning's context

The claim that Heads of School have limited confidence in their AfL knowledge is further strengthened by H6's statement that, *''little knowledge is dangerous, so we need to see, myself included, we are setting the right steps and helping all students to be part of their success.''* This shows further that HOS were not one step ahead of their teachers' professional learning, and were thus limited in creating and sustaining a culture of professional inquiry, as emphasised by Bezzina (2002). Hence, this restriction did not allow space for HOS to be professional leaders. Instead, they took on the role of professional administrators by engaging other personnel to support their teachers' learning about AfL. In fact, H4 asked for more professional empowerment *"when a staff member refuses or shows reluctance to implement AfL",* which underscores the lack of experiential knowledge, on the part of this Head of School.

Heads of School, like the teachers, were willing to know more about AfL, in particular, about the 'how' of AfL. Thus school leaders seemed to be more interested in increasing their pragmatic rather than theoretical knowledge of AfL. For instance, H5 has suggested *"more frequent visits",* while H6 has requested support in including AfL in the School's Development Plan and in the overseeing of its implementation. These examples relate well to Hargreaves's (1984) argument that teachers are influenced by experience and not by theory. In a way, Heads of School share similar interests to teachers' but from the wider perspective of the school's achievement.

4.7 The Participants' Thoughts about AfL

Two different levels of thought have emerged from the data: one at a definition level and one at the implementation level. At the former level, the statements were quite generic and reflected four sub-levels of thought: misconceptions, mixed, neutral and positive. In turn, in the latter level, two categories, out-of-class and in-class issues, have arisen from the teachers' responses about their thoughts on AfL and its implementation. The former category comprises the activities taking place before the lesson, like preparation and planning, while the latter category consists of matters related to the actual lesson delivery. These include AfL as a time-consuming activity, the internal and external community challenges faced by teachers in the implementation of AfL, the class group characteristics and the relationship between AfL and achievement. Interestingly, the data revealed three groups of thoughts about the rapport between AfL and achievement: those who agree, disagree and those who are neutral.

In discussing the teachers' responses of their thoughts about AfL, it will be possible to analyse and reflect on their attitude towards AfL and the prevailing school culture they are operating in. This debate is further enriched by the inclusion of the thoughts of the Heads of School.

4.7.1 The Teachers' Thoughts about AfL

Thinking is an intrapersonal action between the mind and the self. When a person thinks about something, that person is engaging in a meaning-making process to start forming an idea or opinion which might lead to a stronger position about what is being

thought. Therefore, the meaning-making process leading to the formation of ideas or opinion is one way of understanding and defining thought.

The connection between thoughts and beliefs is not a recent phenomenon because both Rokeach (1968) and Nespor (1987) argued that the thought process is a precursor of the beliefs a person holds but Nespor (1987) added that thoughts are influenced by the person's operational context. Hence, an investigation into the teachers' beliefs necessitates an exploration of both the teachers' thoughts and the learning environment they are operating in. This has also been recently pointed out by Birenbaum (2016) who stated that a study of the context is important to get to the practitioners AfL knowledge.

In this study, four classifications of thought represent the teachers' standing about AfL: a positive outlook which includes the teachers' acknowledgement of and agreement about the benefits of AfL as explained in the literature; a mixed stance whereby the teachers are still undecided about the benefits of AfL on students' learning, in that their responses are more of a 'yes, but' nature; a misconception which reveals the formation of thoughts that are totally against the philosophy of AfL, and a neutral stance where the teachers' comments do not indicate any particular position.

In a recent study from a Norwegian context, Birenbaum et al. (2015) relates the teachers' mixed positions to their professional dilemmas, in that educators are being caught up in doing what the system demands rather than what they think is the most appropriate thing to do. A sample of the data evidence showing this stance includes T10: "*ideally, it is to be used in each and every lesson, but it is not always possible due to time*"; T16, "*it can be fruitful and helpful at times*"; T36, "*agrees with certain aspects of it*" and T44, "*if it is used, you will achieve better results*". These statements

show that, implicitly, these teachers are aware of the gains that AfL can bring forth, if used consistently, but somehow they (teachers) are either refraining from using it or they feel hindered in their endeavour. A further investigation into the teachers' data revealed a group of challenges which were impinging on the teachers' willingness to use AfL more consistently. These challenges were all class-related factors, which DeLuca, Luu, Sun and Klinger (2012) refer to as class barriers to implementation. The class obstacles that emerged in this study were about 'Time', 'Preparation and Planning', 'In-Class Application' and 'Class Group Characteristics'. Each of these themes will be discussed at length after the participants' thoughts about AfL have been discussed.

A positive view of AfL is reflected in T20's comment that "*it [AfL] is a good means of ensuring that the aims of the lesson have been achieved*", while other comments by T31, "*sharing the learning goal does not allow for discovery learning*", T33: "*children's work is sufficient evidence of what they have learnt and there is no need for success criteria*", and T42: "*with certain low achievers it (AfL) may work the opposite way*" show that these teachers were not abreast with the rationale of AfL being debated in the literature. In the first stance, very recent work by Leahy and Wiliam (2015) explicitly states that the timing to share the learning goal is not necessarily at the beginning of the lesson but in the first part and it can also be elicited from the students. Thus, a lesson with AfL allows and provides the space for discovery learning. Another misconception which has been answered in the literature is whether correct work mirrors learning. This is not necessarily so, and Leahy and Wiliam (2015) suggest the use of hinge-point questions to check for this, the correct understanding and reasoning over the issue of simply getting correct work through momentary

surface learning. A huge misconception is the thought that low achievers might find AfL difficult, which contrasts greatly with the findings of the very first initial studies on AfL (Natriello, 1987). The difficulty is not in AfL but in not making it accessible to the different learners.

4.7.1.1 Early and Junior Years Teachers: Differences in AfL thoughts.

Prior to this data analysis, the preconceived idea was that the exam pressures could affect the teachers' thoughts about the implementation of AfL. Hence, it was expected that the teachers teaching the Junior Years, where summative exams are present and effectively dictate the content and delivery of the work carried out in the classroom, would hold less favourable thoughts about AfL than their colleagues in the Early Years. Surprisingly, this did not turn out to be the case as the chart in Table 4.6 below illustrates.

The Early Years teachers are represented by the blue bars, while the Junior Years teachers are represented by the turquoise bars. Interestingly, while the bar chart shows an overall majority for a positive stance about AfL, the situation within each cycle is slightly different. Amongst the Early Years teachers, although the four sub-levels of thought, previously mentioned, are present at different degrees, positive and misconception stances lead the way. Contrastingly, amongst the Junior Years teachers, these two stances are the only types of thoughts to which they subscribe. However, the level of misconceptions amongst the teachers of the Junior Years is significantly lower than that of the teachers in the Early Years, Thus, the former group of teachers are showing a higher positive inclination towards AfL.

Levels of Thought	Early Years	Junior Years
Misconceptions	10	5
Mixed	3	0
Neutral	3	0
Positive	15	19

Table 4.6: Distribution of teachers' thoughts per cycle

With these findings, it was exciting to look into the contextual origins of these levels of thought. Table 4.7 illustrates the distribution of the four sub-levels of thought amongst the participants.

Year Group	Type of thought per number of reference codes			
	Misconceptions	Mixed	Neutral	Positive
1	1	2	3	4
2	7	0	0	7
3	2	1	0	4
4	1	0	0	9
5	5	0	0	5
6	2	0	0	5

Table 4.7: Levels of thought across the year groups

What is most striking in the above table are three particular factors: the Year One and Year Three teachers exhibit the lowest number of reference codes on positive thoughts about AfL; however the former group is the only group where all the sub-levels of thought prevail. Interestingly, another particularity within the Early Years is that the Year Two teachers are the cohort with the highest number of reference codes for the misconceptions.

The results from the Early Years cohort further support the claim they are less confident in the AfL pedagogy. This is interesting since the assessment envisaged in

the Early Years by the local education authority, as per the Letter Circular (074/2015) issued by Grima (2015), is on formative assessment. Such type of assessment would be more authentic and fair with these young students (Nutbrown, 1999). On the basis of this evidence, it can be claimed that, in the Early Years, either no form of assessment is being used or that unofficial and unapproved forms of summative assessment are being used.

There is also another emerging factor which might impinge on the teachers' confidence in the implementation of AfL: the perception that young learners are not capable of handling AfL. Astonishingly, this perspective, in its explicit form, was expressed by a Head of School, H2, who wanted to know whether "*AfL could be applied at the kindergarten level*" and by T3, a teacher from the Junior Years, who stated her "*... [uncertainty about] how much younger students can handle.*" On similar lines, T12 remarked, "*it is difficult to hold a lesson with higher order questioning techniques [...and I am] not sure whether students are reading the objectives.*" In turn, T17 and T18, two Early Years teachers, wanted to learn more about "*other strategies which can be implemented with the early years*" and for "*more tools and strategies that can be adapted with the very young learners in my class.*" Similarly, T25 commented that "*a lesson with AfL can be more challenging and frustrating*" while T32 pointed out that "*some children may get mixed up or do not understand a concept*" and T37 enquired about "*how AfL can be applied to all the lessons.*" These comments expose the teachers' doubts and uncertainty about the success of AfL with all the students regardless of age or ability. According to Dweck (2010), such association about the limitations imposed by the students' ages reinforces a fixed mind-set which is not conducive to learning within a culture of assessment. In

a similar vein, Black and Wiliam (1998a, 1998b); Wiliam (2007a, 2007b) and Wiliam and Leahy (2015) emphasise that the teaching and learning methodology involved in the AfL process needs to be taught to and shared with the students as they are habits which need time to be internalised.

If teachers and/or school leaders are sceptical about the students' capability in handling AfL, it is likely that little or no time will be invested in trying it out. Consequently, students will rarely have the opportunity to practice the skills of being assessors of their own learning. Black and Wiliam (2009) assert that AfL can be used by people of any age as it does not impose age or ability restrictions. It follows that these sceptical teachers hold a misconception about AfL, which could well be the result of a misunderstanding in the way they define AfL or of an unnecessary concern, which reflects also their levels of understanding. As Gipps (1994), Burke and Hall (2003) and Wiliam (2010) put it, these misconceptions are related to the manageability or practicality of the innovation. Such claim will be delved into further in section 4.8.1, so as to explore whether there is a relationship between the levels of thought and those of understanding.

Although the Junior Years teachers seem to have a more positive outlook about AfL, if the positive faction in the mixed stance of the Early Years had to be included with the positive responses, the bar will increase marginally. Similarly, the misconception bar will rise if the 'but' contention in the mixed thoughts is a misconception. This would imply that there is no significant difference in the number of teachers holding a positive thought across the two cycles, which further supports the claim that the participant teachers' thoughts about AfL are not affected by the demands of summative assessment prevalent in the Junior Years. What is even more interesting

and further supports the lack of influence of summative assessment is the different degree of positive thoughts and misconceptions amongst the Junior Years' contexts. Since the Year Four to Six contexts share the same examination pressures, the outcome of which dictates the banding or track group that the students will be placed in the following year, a more equitable relationship between the groups was expected. Therefore, this diversity indicates that notwithstanding similar contextual features, what matters most is the teacher's position on the pedagogy that is being promoted. Hence, the surrounding culture could change if the group members within that culture change implying that a collective change can emanate from the sum of individual's change. This finding follows on and is in line with existent debates about what matters most in education and in schools for a transformed and more effective teaching and learning experience (Hargreaves and Fullan, 2012; Wiliam, 2011a, 2016),

As to the neutral thoughts, T6 stated that "*Assessment for learning is a process of assessing children throughout the scholastic year*", thereby giving a very broad explanation of what constitutes AfL. This is one example of a teacher who could articulate the notion of AfL but could not take a favourable, or otherwise, position. In turn, this raises again the issue of having practitioners being good in the theory but falling short in the practice. It is important to investigate and understand where the participant teachers are to be able to support them. Unless the teachers are guided to come to accept the innovation because of its worthiness, they cannot start to change their beliefs. As already acknowledged, such process of change in beliefs takes time, a factor which was of utmost concern for the participants in this study.

4.7.2 Time

Time was one of the most concerning and mentioned factors, a challenge which has also featured in Klinger et al.'s (2012) study about building teacher capacity within an evolving assessment culture. The teachers' responses revealed that two sub-categories of time were present; the time involved before and during a lesson embedded with AfL. To distinguish between these two categories, the former sub-category, which will be discussed first, was named 'Preparation and Planning' while the latter was just named 'Time in-class'.

Figure 4.6 displays the way the word 'time' was used in the teachers' responses. Although the word on its own was used several times, what is of interest is the context in which it was used.
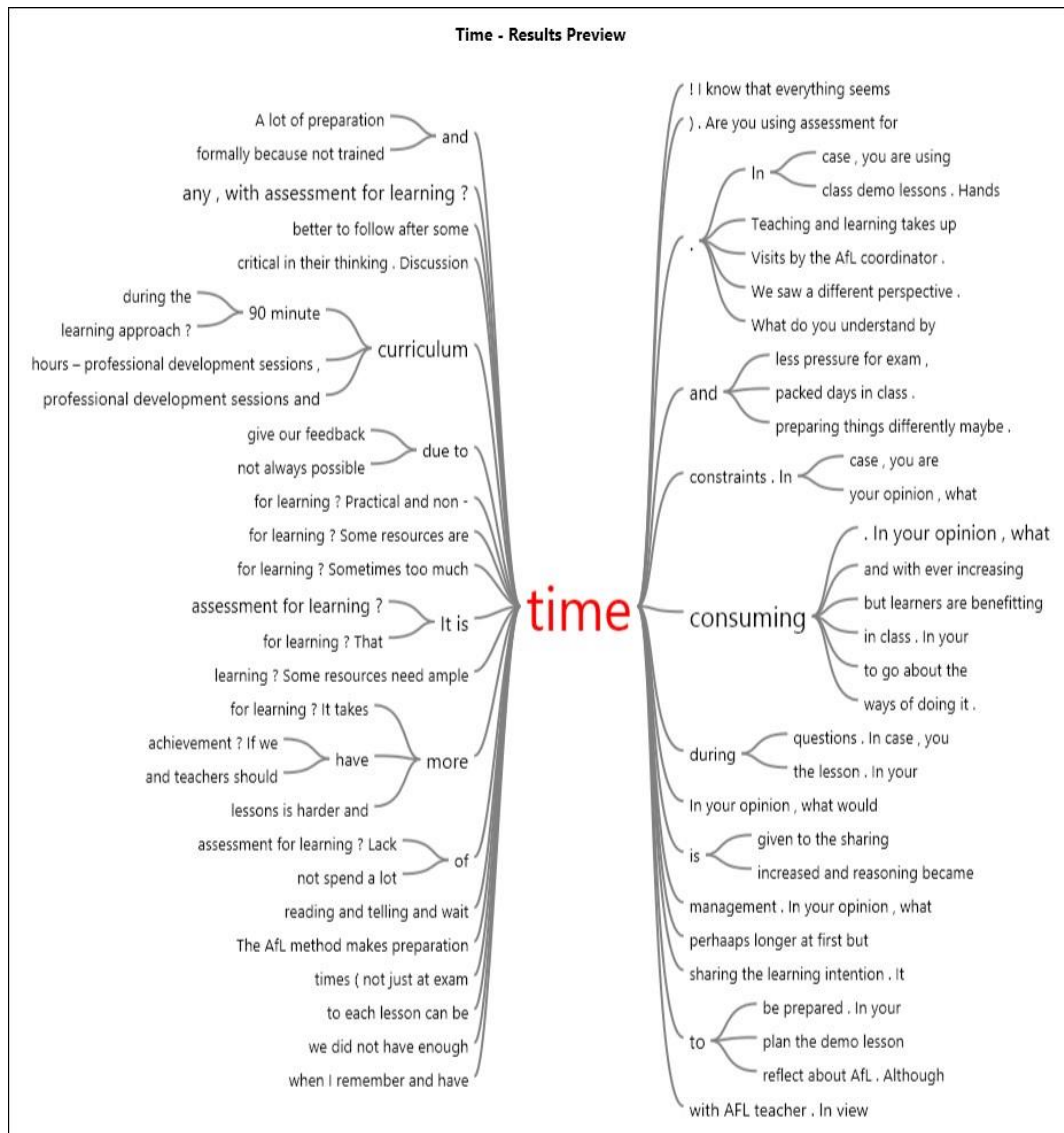
Figure 4.6: A text search by the word 'time'

The context is revealed in two ways: the data statements given by the participants and the illustration in Table 4.8, which portrays the percentage coverage of the number of coded references for 'time' in each year group. Interestingly, the configuration reveals that the highest percentage coverage came from the Year Four teachers followed by the Year One teachers. Yet, the former group has registered the lowest percentage coverage of misconceptions, which could imply that the time issue is partly a misconception. Therefore, other factors affecting the time available for instruction

could be impinging on whether to introduce a new practice such as AfL. In this respect, T4, a teacher teaching the Upper Years expressed that *"when trying to cover all the syllabus every minute seems crucial."* Therefore, if the participants' work is dictated by coverage rather than depth of understanding, then the demands of the summative assessment are clashing with the rationale of AfL. This could be the reason why T42 argued that *"AfL is time consuming in class."* Yes, it is if coverage is the aim. In a system where teachers are judged along their students on whether they have managed to complete the syllabi, time is crucial and needs to be first used to manage the completion of the syllabus.

What is rather confusing or surprising from this data is that the degree of the time factor is not equally reflected in the Junior Years teachers, who all experience the same pressures of summative exams: teachers in Years Five and Six expressed a lower level of concern than their colleagues in Year 4. If the pressures are similar, the differentiating factor could lie in the way these teachers are managing classroom assessment. If the benefits of the latter type of assessment are used for both the formative and the summative, then teachers will no longer feel the burden to meet the requirements of two types of assessment (Taras, 2005). So, the lower concern about time in Year Five and Six could be attributed to either an absence of AfL practice or else to better handling of classroom assessment. The first claim does not hold, as Table 4.11 below shows that AfL was being practised at both a partial or mechanical level and also within its spirit. Consequently, the second claim is more plausible and will be looked into in the following sub-sections.

Time issue in context	Percentage Coverage of the source at this node
1	16.19%
2	4.38%
3	15.01%
4	53.46%
5	6.24%
6	4.72%

Table 4.8: Time issue in context

In contrast, the Early Years' situation indicates that the Year Two group is exhibiting the lowest percentage coverage concern about time, despite the fact that in Table 4.7 this group reflects the highest presence of misconceptions. This indicates that the issues of time go beyond the misconceptions level of thought. The following sections will attend and respond to this.

4.7.3 Preparation and Planning

Planning a lesson with AfL is a hard and time-consuming task when it is not an established practice. As the data in section 4.6.1.1 above has shown, AfL is an innovative pedagogy meaning that the teachers are still accumulating their practice on the subject to build the required expertise. The initial stages of such a process demand a certain degree of effort on the part of the teacher, thus rendering the activity more difficult to master and more time-consuming. Due to the difference in the time taken to plan a lesson with AfL in mind from the planning currently in use, teachers might resist the innovation (De Vries et al., 2013). Rogers (1995) attributed this conflict to the level of uncertainty that is experienced when challenging the old by the new. The latter necessitates re-thinking and re-working on the already planned lessons. In doing so, teachers have to move out of their current comfortable zones during the planning stage

Evidence of this resistance is seen in: T1's comment "*it is time-consuming to go about the lesson plans and find the AfL points for everything*", T10, who stated her concern about the *"time and [the need to] preparing things differently"* and T29, who remarked that the *"preparation time required prior the lesson could be time-consuming"*. Actually, planning a lesson with AfL takes more time because teachers need to re-design the way they go about lesson planning. So, in itself, AfL as a more time-consuming task is, on one hand, a misconception, while, on the other hand, it is partly true until this process becomes embedded in the teachers' practices. Eventually, the time spent will pay off if good use is made of the assessment evidence for both summative and formative purposes, as suggested by Harlen (2005).

Interestingly, the 'time' challenge at the preparation and planning stage is a matter of concern mostly for the teachers from Year Three onwards, that is, those teaching the bridge year and the Junior Years. If the Year Three group did not feature in this illustration, it would have been possible to conclude that the preparation and planning design is dictated by the pressures for exam coverage. However, the data is telling that the time barrier is present in both circumstances. While in the Early Years the concern is more about the time taken during the lesson, that is, the implementation of AfL, in the Junior Years the concern is more about the time taken to prepare and plan a lesson embedded with AfL. This is interesting, yet difficult to explain as, regardless of the year group context, teachers still have to prepare and plan. So, this could mean that either both the Year One and Two teachers do not have an issue with time during the planning phase or else that they have not tried planning with AfL in mind. In the eventuality of the former claim, the Year One teachers' issue with 'time' would be during the in-class implementation of AfL, thus reflecting the important role of the

students during lessons, something which they need to learn about and therefore, takes time. If the issue belongs to the second claim, what would certainly be effected is the quality and effectiveness of teaching and learning practice as it would not reflect a backward design to planning (Mc Tighe and Thomas, 2003; Wiggins and Mc Tighe, 2005), where a student-centred approach is adopted.

4.7.4 AfL_Internal and External Class Challenges.

This sub-category emerged from the data responses to the field question, "What is your greatest concern, if any, about AfL?" It includes the views of the class teachers and one HOS.

As already defined in Table 4.2, the coding refers to statements about the internal syllabi pressures put on the teachers and the external challenges offered by the external community, such as the parents, on the process of assessment in class. Overcoming these difficulties requires a robust justification complemented by strong evidence from teachers and school administrations about the overarching benefits of using AfL, that would convince parents to support its inclusion.

In this study, it emerged that the Year One teachers are not facing external or internal challenges. Therefore, in combination with the data evidence presented in the previous section, it can be stated that this group has neither an issue with time during the planning stage nor internal or external pressures.

In relation to the second finding, a possible interpretation could be that the Year One teachers did not experience any internal challenges because they do not have coverage pressures in the absence of summative exams. Another interpretation could be that they are either using traditional assessment activities, which are endorsed by the

parents, or else they have overridden these difficulties. If this is the case, it would be important to have these teachers share how they managed to do so.

The type of practices currently in use will be delved into in section 4.9 below, thus making it possible to draw the relative conclusions related to this finding.

In turn, H1, a HOS, is more affected by external challenges related to the issue of accountability. The concern put forth was about the tangible effect of "*the AfL strategies on the academic results*" because the students' performance is the quality marker by which society judges the school's and the teacher's effectiveness. H1's comment reflects the need for and the importance of having local users as direct witnesses of the existent theoretical and evidence-based claims regarding AfL. In this way, the local advocacy for AfL would be equally justified by local exemplars, on which the HOS could draw to convince the external community of parents that the new way of teaching and learning is the right way forward.

Fullan (2011), stressing the importance of holistic change, maintains that the accountability lens is the wrong driver for a system change because it alters only the structure rather than the substance of reforms. In relation to this, the most recent sectoral agreement between the MUT and the Government, which is being described as a historical and unprecedented consensus, is supposed to facilitate these kinds of reforms while also supporting school leaders who are facing these dilemmas. This is because the new emphasis of the agreement is precisely on a fresh system which moves away from old forms of assessment. Consequently, in using more practical and authentic assessment methods that will attend to the instant collection of evidence and remedy during the learning process, the fixation on marks or grades will be mitigated (Demarco, 2017).

This new vision will definitely have an impact on the external community as this will have to come to accept the revamped way of working. In so doing, it is expected that teachers will no longer have to face, or at least not to the same extent, concerns similar to that voiced by T26 about the "*parents' [negative] reaction to differentiated work.*" Such a worry reflects that the parents are currently still entangled in the old school of thought of how they learned, and are thus misinformed about new ways of teaching and learning (Gardner and Gardner, 2012).

4.7.5 Class Group Characteristics

In section 4.7.1.1 above, the association between the effectiveness of AfL and the students' abilities has emerged in the participants' thoughts about AfL. Subsequently, in section 4.7.3, the data indicated that teachers were not planning with a student-centred approach. Therefore, issues of class management and organisation during a lesson with AfL have surfaced. Eventually, other class related factors comprising matters of students' behaviour, class size, mixed-ability and in-class learning support have appeared in the teachers' thoughts as impinging on the implementation of AfL. These subjects have been grouped under the label 'class group characteristics'.

Surprisingly, these factors are present in only two particular year groups, Year Two and Three. Since classification of students in band groups prevails in the last two years of the primary sector, the respective teachers might not be experiencing the difficulties described in this section. Despite this explanation, the same argument cannot be applied in Year One and Year Four. This vacuum can possibly be filled by the findings in section 4.9 below.

Examples of data excerpts include T12's comment *"with ever increasing problems it is difficult to hold a lesson with higher order questions"*, especially when, T26 pointed

out, *"[we are] faced with a wide range of abilities and without a teaching assistant."* When the latter occurs in a large class, according to T41, the teacher's ability to monitor and offer individual support is affected. These comments indicate that the teachers are justifying minimal or lack of input of AfL practice by referring to an external characteristic beyond their control, which, here, is being referred to as system controlled. However, the class dynamics are also teacher controlled, in that the latter have to enthuse the students through interesting and engaging lessons. This is more so in the case of young learners, as the data in the above illustration indicates. Hence, the successful implementation of AfL benefits from, and requires, the mutual and collaborative effort of teachers and school leaders. Consequently, there has to be a paradigm shift at both the system's and teacher's level if student achievement through AfL is to be reaped. For this to happen, teachers must believe in such a link, which is what the discussion of the following section will look into.

4.7.6 AfL and Achievement

Data responses to the question about the relationship between AfL and achievement revealed two groups of thought: those who agree and those who could not take a position (neither agree nor disagree). The 'agree' group consists of views that acknowledge and accept the positive influence of AfL on student achievement. In contrast, the neither group does not express a fully-favourable position on the link between the two elements, that is, they adopt a 'yes and no' stance. In this study, the former group includes thirteen reference codes from teachers within the Early Years and eight reference codes from teachers in the Junior Years while the "neither" cluster consists of one reference code from the Junior Years and two reference codes from the Early Years. Hence, the data indicates a higher presence of agreement among the Early

Years teachers. This contrasts with the lower level of positive thoughts exhibited by the same group of teachers. The immediate question is, "What is causing this lower level of positive thoughts given the teachers' awareness of the link between AfL and achievement? The instantaneous response is whether it is a matter of cultural paralysis in the clash between what it is better to do and what we prefer to do.

A positive stance is reflected in T4's statement, who justified her agreement by stating that "… *assessment for learning helps increase children's self-confidence which I believe is a key factor in learning. We want to help children achieve.*" On a slightly different note, which reflects a 'neither' stance, T6 affirmed and recognised that *"Achievement depends more on how the teacher delivers the lesson rather than all the new 'titles' we are giving to strategies we have been using."* Therefore, T6 is placing most of the onus of achievement on teachers, thus agreeing with Wiliam's (2011a, 2016) stance about what matters most, the role and actions of the teacher. However, T6's statement does not take into account the role of the students' in AfL and, consequently, their contribution towards their own learning achievement. Hence, while this teacher's observation is an important one, it reflects a limited understanding of the AfL philosophy. Overcoming this type of understanding would require this teacher, and others with a similar line of thought, to re-think the function of assessment, which would ultimately lead to a re-culturing of assessment (Black and Wiliam, 1998a, 1998b; James and Pedder, 2006). This is needed because AfL should be considered as a different kettle of fish to past and current assessment practice in Malta, which has been – and to a certain extent still is – exam-oriented, endorsing a completely different philosophy.

Interestingly, T10 brings forth other issues that could impinge on achievement: home and family background, interest and intelligence. Precisely, this teacher stated that *"Various factors influence what a child learns, like home and family background, interest intelligence, etc. Thus, this could be a good method together with others already in use."* So, while T10 speaks favourably about the link between AfL and achievement, the argument is that AfL is not the only contributor to achievement. The problem, here, is that AfL is seen as a method rather than a philosophy of teaching and learning. Perhaps, AfL is being perceived as a programme of instruction instead of the rationale behind the instruction. In fact, while Black and Wiliam (2009) acknowledge the research evidence about the use of different programmes and students' success, they also point out that the underlying principles are based on formative assessment.

Certainly, the environment plays a significant role in learning, but it should never be used to excuse underachievement. As to the argument about intelligence, if achievement is attributed to the latter and not seen as a malleable pattern (Dweck, 1986, 2010), then T10 holds a fixed mindset, which is the anti-framework of a conducive learning environment where AfL can flourish.

In recapitulating the findings of this section, Table 4.4 below summarises the results for each cycle together with the overarching picture.

Year Group	Levels of Thought	AfL and Achievement
Early Years	**Four varied levels of thought – misconceptions, neutral, mixed and positive -** but with an **overall positive** stance. **Time** – **More concerned** about how much it takes during the **in-class implementation**. **Class Group Characteristics – only present** in this **segment.**	**Two levels of thought – agree and neither -** in favour of a relationship between the two. **Stronger agreement** than the Junior Years teachers.
Junior Years	**Two varied levels of thought – misconceptions and positive** – but with an **overall positive** stance. **Time** – **Less concerned** about the time factor in general and the low level of concern is related to the **preparation and planning phase.** **Class Group Characteristics – not present** in this **segment.**	**Two levels of thought – agree and neither** but the degree of agreement between the two factors **is less than** that of the Early Years teaching cohort.
Overall Picture	Participant teachers hold **a positive level of thought about AfL** and **believe in the relationship between AfL and achievement**.	

Table 4.9: A summary of the findings about the AfL thoughts and AfL and achievement

On the basis of these results, it can be concluded that these teachers hold a positive inclination towards AfL, but the hesitance of some reflects that more work needs to be done on the surrounding culture.

4.7.7 School Culture, Leadership and the Teachers' Attitude

In line with the above mentioned conclusion, the HOS's responses confirm that their teachers were receptive to the advantages of AfL. In fact, H1 reported that *"despite the infancy stages of AfL in the school, the interest among teachers was growing."* However, H1 also pointed that *"some teachers have the wrong impression that AfL is an added task"*, thus reflecting and reaffirming the novelty of this practice. Similarly, H5 commented that *"some teachers take it more seriously while some see it as an added burden."* Further to this, H4 was concerned that *"AfL might not be accepted by teachers with more than twenty years of teaching experience."* These comments reflect the spectrum of the teachers' attitudes about AfL. In turn, these varied dispositions could be echoes of the emerging school cultures. Related to this, H2 noted that *"the support received in the previous three years helped to ingrain AfL as part of the school culture",* while H3 remarked that *"experienced teachers tend to teach upon AfL as nothing new."* The term 'experienced teachers' is vague and confusing because if it refers to long years of teaching experience, the evidence in the study shows that for this group, AfL is still a new teaching and learning pedagogy so whatever they have been practising might either not be AfL or it had elements of AfL. This implies that either in three years the school has made a substantial effort, and succeeded, in changing its culture or else this HOS does not know what she has to look for when monitoring and supporting teachers in AfL.

The last claim about the HOS's limited knowledge is likely to be the case as the response given by H3 to a related field question was simply *"a clear aim for the lesson."* This is indeed a very limited vision of what AfL has to offer, since having an aim is a basic requirement for each lesson regardless of whether AfL is being used or

not. Additionally, H3 reported that *"[nothing] in particular is done to support teachers because they are professional enough in the way they go about their work."* Hence, one may question how this HOS can be sure that experienced teachers are practising AfL in the right way if they are not being monitored to provide bespoke support. Could it be that what is looked for is the mechanical implementation of a particular strategy? For instance, H1 mentioned *"class visits and [collection of] copybooks to check for formative feedback"*, while H5 looked for the sharing of a clear learning goal, verbally and in writing, the questioning techniques and the closure of the lessons. None of the HOSs have made reference to evidence gained from using these strategies. This indicates that the HOSs might be after the mechanical inclusion of the AfL strategies rather than the effective use of these strategies.

According to Shepard (2000a), Marshall and Drummond (2006), Klenowski (2009) and Boyle and Charles (2010), the use of AfL strategies as a checklist is a common malpractice that not only, Klenowski (2009) argues, devalues the spirit of AfL but also shows the users' lack of understanding about AfL. In this case, the user is the HOS. Therefore, HOS are not better situated than their teachers in AfL matters and that is why the school needed, and still needs, external support. Moreover, none of the HOS have mentioned professional learning communities as a form of support they themselves offer to their teachers which supports further the current Maltese NCF's recommendation for a re-thinking of the professional development format.

The teachers' attitudes, together with the practices adopted by Heads of School to monitor and support the implementation of AfL, continue to show the different stages in the slow-moving re-culturing process. This is because each of the school leaders is facing different challenges. One particular difficulty is the lack of recognition of the

students' role in the AfL process by the majority of the participating Heads. This is quite an interesting paradox as, in defining AfL, HOS recognised its student-centred pedagogy. Therefore, it sheds light on the incongruence between the theory at the definition level and the understanding in practice. In fact, in this data, only one HOS, H6, referred the role of students: *"Children must understand what is expected of them. The children rise to the occasion and are keen to do well. Given the chance and the right coaching this method would be a huge asset to better performance."*

Amidst these gaps in knowledge and quality of support, there is the willingness to learn more to start building the right surrounding culture.

4.8 Understanding AfL

The discussion of the findings in the previous sections has already indicated that some of the participants hold a limited understanding of AfL. In addition, further analysis of the data responses revealed another category of understanding: a deep one. These two levels of understanding will be discussed first. This will be followed by an analysis of how these levels relate to the teachers' levels of thoughts regarding AfL. Moreover, this section will include and conclude with the levels of understanding of AfL expressed by Heads of School.

4.8.1 Deep or Limited Understanding of AfL

Data coded at the 'deep' level of understanding had to satisfy two requirements: the active involvement of students in the learning process and the use of the evidence by the teacher to move the student forward.

Teachers' responses that reflected such stance include T25's comment who wrote that *"Assessment for Learning helps students take an active part in their own learning,*

making them aware of how and why they learn", and T26's who argued that *"[AfL is] a continuous process owned by both [the] teacher and students consisting of feedback re school work"*. Furthermore, T26 elaborates that the feedback is given orally, as written work, drawings, etc., and shows teachers where students are and how they are improving/learn best. On a similar note, T29 stated that *"AfL is a process used by learners and teachers to decide where the learners stand in their learning, what they need to do to improve and how best to achieve success."* These statements, unless they are simply regurgitating the definition of AfL, show that these teachers, and others alike, have a good knowledge of what AfL is, meaning that the pre-requisite knowledge for practice as explained by Cochran-Smith and Lytle (1999) is present. However, the actual level of deep understanding is shown when the level of knowledge held is translated into practice. In the case of a gap between the level of knowledge representing a deep level of understanding and AfL practice, then the type of understanding held will only be of a theoretical nature. This is probably the case for T25 who, in another response to a different question, expressed concern about whether *"AfL is hindering or helping the flow of the lesson."* Such an anomaly reveals the possibility of a deep level of understanding at the definition level, yet a limited comprehension at the practice level. The varying degrees in the levels of understanding of AfL in each cycle of the primary sector reveals that the levels of deep and limited understanding amongst the Early Years educators are almost balanced out. Contrastingly, within the Junior Years, the level of limited understanding outnumbers the level of deep understanding.

Upon a closer analysis at the levels of understanding within each year group, the major contributors of the current level of understanding among the Junior Years is the Year Five cohort, as no references of deep understanding have been coded.

These levels of understanding contrast with the results regarding the levels of AfL thought held by the teachers, discussed in section 4.7. In the first instance, the degree of difference in the positive thoughts held by both year groups was much less than the variation in the level of deep understanding between the same groups. This implies that in both cycles there are two groups of teachers who hold a very close level of positive thoughts about AfL but the same degree of closeness is not equally represented in the level of deep understanding held by both groups. Therefore, there is a divergent relationship between the variance of deep understanding and the positive thoughts held by both groups. A divergent relationship occurs when one factor does not seem to affect the other factor. Furthermore, another contrast lies in the overarching level of understanding, a limited one, and the overall level of thought, a positive one. This divergence shows that while the level of understanding is not affecting the level of thought, it is affecting the type of practice. Hence, to change the AfL practice of these teachers, professional support providers must work on the teachers' understanding rather than the thoughts. However, in the Early Years teaching group, the limited level of understanding may be affected by their variances in the levels of AfL thoughts, which in itself indicates a degree of uncertainty about AfL. Hence, the limited level of understanding converges with the degree of misconceptions, mixed and neutral thoughts amongst the Early Years' teaching cohort. A convergent relationship occurs when one factor seems to affect the other.

In relating this finding to what Rokeach (1968) argued about thoughts as precursors to beliefs, then the Early Years' teachers are likely to hold a weak set of beliefs about AfL. However, Nespor (1987) emphasises, thoughts are also shaped by the teachers' operational context meaning that the surrounding culture is still not as strong about AfL, which, in turn, might be the cause of these variations in the levels of thought. This conclusion is supported by the HOSs' comments in the previous section that the school culture is still in its infancy but growing steadily.

Contrastingly, the Junior Years teachers hold a higher level of limited understanding than their Early Years colleagues, in that they like their counterparts, consider AfL as a teacher thing rather than as a teacher-and-student thing. This stance is reflected in T3's argument that "*Assessment is **part of the work of the teacher** who has to know what level the student is at all times (not just at exam time)."* It is true that assessment is part of the teacher's work, but in AfL this is carried out so as to be able to make sound decisions on the next steps in collaboration with the students as partners in the learning process. A similar response has been shared by T23 who said, *"Afl is a process of finding out where the students are in their learning."* Once more, this statement misses the whole point of AfL which is about the now and the next steps in learning. Therefore, although this explanation is true, it is not sufficient to explicate what AfL is. If the purpose of AfL, which is the identification and the closing of the student's gaps in the learning (Boyle and Charles, 2010), is not fulfilled, there is the risk that AfL becomes a technical approach to teaching and learning.

This procedural approach, which is present in the response of T8, who stated that *"You try to make the pupils more conscious about what they are going to learn",* continues to show the emphasis that teachers put on themselves. This could be the reason why

AfL is perceived as an added task. Additionally, T34's and T35's responses not only reinforce this mechanical approach but also show the lack of student involvement in such thinking about assessment. Respectively, the latter points out that "*mainly, **I do this through different questioning,***" and that AfL is about "***writing objectives and success criteria** at the beginning of the lesson.*" According to Hargreaves (2005), these data excerpts reflect teacher-centred formative assessment conceptualisations which contrasts with the social constructionist philosophy that AfL is based on.

These findings are also echoed in a recent study by Jonsson et al. (2015) who found that teachers still take on the workload of the AfL practices, thus limiting the students' opportunities for involvement in the AfL process. Such practices could possibly be influenced by the type of thoughts held, a claim which will be explored shortly in the discussion about the participants' AfL practices. Although the teacher's role is crucial in setting and establishing an AfL environment, the role of the student is equally important and should be stressed upon. Sadler (1989) pointed out that formative assessment cannot be seen as just the teachers' responsibility. Instead, "the student has to come to hold a similar concept of quality as much as the teacher and, in doing so, be able to monitor the quality of production during the act of production." (p. 121). The important role of the student has also been highly envisaged by Wiliam (2011a, 2011b) who argued that the students must take an active role in their learning process because they have to do the learning and not the teacher for them. The extent of how much students should be provided with opportunities for independent learning is affected by a war of opposing beliefs on how much teachers should let go (Marshall and Drummond, 2006). This conflict creates a discomfort (Pedersen and Min, 2003),

especially in exam-oriented systems, where teachers are affected more by peripheral beliefs (Nishino, 2012).

According to the data on the teachers' thoughts in Table 4.8, the Junior Years teachers reported issues with 'time', 'preparation and planning' and with 'AfL internal and external challenges', and not with class group characteristics. Moreover, this group does not seem to be convinced of the link between AfL and student achievement as much as the Early Years teaching group. Hence, it could be argued that this group's thoughts are more dominated by issues of coverage and accountability. This makes sense because these teachers' work is judged by the students' performance in the summative assessment. Therefore, the demands of the summative assessment, though not negatively impacting on the type of thoughts held, are shackling the teachers' *modus operandi*. In fact, one of the main findings of the next section is that the most common type of practice amongst the participant teachers is a partial (mechanical) one. Consequently, this shows that schools and teachers must work on what Black et al. (2003), Harlen (2005, 2009) and Harrison (2005) refer to as better synchronisation of both the formative and summative assessment. A comment by T26 about "*whether she should still use summative or start using formative assessment*" reflects precisely the teachers' uncertainty and the professional dilemma (Birenbaum et al., 2015), When placing the types of assessment in an 'either or' mode, teachers' decisions on what to opt for are influenced by what is most valued in their culture, here presented by the theme of internal and external challenges to AfL. The ways in which these challenges influenced the teachers' practices are discussed next.

In summary, the relationship between the levels of thought and understanding is not a neat and straightforward one due to the variations being highlighted in the data. When

comparing the data about the level of understanding and the level of misconceptions, two participants have misconceptions without limited understanding, ten have both misconceptions and limited understanding, and twenty-one show only limited understanding. Therefore, it can be argued that the level of understanding is partly responsible for the level of thought – misconceptions – held.

The overall situation reveals that the teachers holding a limited understanding outnumber the group of teachers holding a misconception, indicating a divergent relationship between the two. Nonetheless, the group of teachers holding a misconception and a limited understanding exhibit a convergent relationship between the two factors. Therefore, the participant teachers belong to either the group with a divergent relationship or the group with a convergent relationship, which makes the relationship between the levels of thought and understanding a complex one. Whether this kind of connection reiterates in the AfL practice will be analysed and discussed shortly.

4.9 AfL Practice: four different types

Four types of practice have emerged from the teachers' data responses. These are practice within the spirit of AfL, a mechanical or partial practice, absence of practice and unclassified practice. Each type of practice is defined in Table 4.10.

Type of Practice	Description Statements or word phrases:	Example
Spirit of AfL	showing how the teacher collected the evidence of what the students already knew, and the action that was taken to move them forward.	T34: *'What are we learning today? is one of the questions which I repeat throughout each lesson to keep my students focused on what is being taught. I also make use of different graded activities.*
Mechanical or Partial AfL	indicating that the strategies are being implemented in a mechanical way without any rationale for their use. Also statements containing adverbs of frequency like often, almost, randomly and other similar words were coded at this node.	T12: *I use the learning goal at the beginning, or, I share what we are going to learn verbally.*
Absence	which clearly indicate that none of the AfL strategies was being used.	T5: *Not yet*
Unclassified	which were too general and no evidence could be derived or concluded on whether the teacher was implementing the practice in a mechanical or spirit way.	T15: *Yes. I use it in Maths and English.*

Table 4.10: Four types of AfL practice.

The varying degree in the type of AfL practice across the years groups is listed in Table 4.11. In total there were fifty-five reference codes for the different types of AfL practice. The highest number of references, thirty-one, belong to the partial/mechanical subgroup followed by the practice within the spirit of AfL with thirteen references.

Year Group	Spirit of AfL	Mechanical/ Partial	Absence	Unclassified
1	0	5	0	1
2	2	5	1	4
3	5	3	0	1
Total reference code in the Early Years	7	13	1	6
4	3	9	0	1
5	2	4	0	2
6	1	4	1	0
		1 reference has an unassigned year group		
Total reference code in the Junior Years	6	17	1	3
Total reference code	13	31	2	9

Table 4.11: Number of reference codes per year group per type of practice

As the data in the above table indicates, the overarching AfL practice is more mechanically oriented. In a further analysis of the total reference codes per cycle, if the unclassified responses were more elaborate in that they could be categorised under the "spirit of AfL" practice, then it could be argued that within the Early Years there is a balance of practice among two different groups of teachers. If the unclassified

responses had to be categorised under the partial/mechanical practice, then the gap between the spirit of AfL practice and the mechanical/partial type would be wider implying that the latter type outnumbers the former.

The Junior Years represent a slightly different situation whereby the combination of the spirit and unclassified practices is still much less than the degree of partial practice. This means that the particular year group's contextual differences among the Early and Junior Years did not affect the teachers' type of practice. Hence, the only difference between the two cycles, if the unclassified belong to the spirit group, is that in the Junior Years there is a greater group implementing a mechanical/partial type of practice. Furthermore, the implications of such finding is that the end-of-year assessment decisions might be partially negatively impacting on the type of practice. Given the conditional on which this claim is being made it cannot be argued with certainty that the summative assessment context is influencing the nature of in-class practice.

This is partially at odds with Skott's (2009) argument that the relationship between the context and the practice embedded in it is a social phenomenon which can shape but also (re) shape the context. Within this study, Skott's (2009) argument holds for the overarching cultural context rather than the individual class context (see Table 4.11). In fact, this configuration clearly shows the inconsistent degree of AfL practice within the Junior Years, where summative examinations are present. Also, in the Early Years, where formative assessment is supposed to be the leading assessment, the degree of the spirit of AfL practice is not that high, either. More than that, Table 4.11 reveals that in the case of the Year One group, where no references for the Spirit of AfL have been coded, the claim that other factors could play a part is further

substantiated. In fact, this cohort of teachers present an enigma as they did not report any spirt of practice, any class characteristics, and preparation and planning issues, yet this group holds the highest number of reference codes for both levels of understanding. Precisely, nine and six reference codes for a deep and limited understanding, respectively. Therefore, in Year One, despite that the teachers are in either-or group, the latter does not seem to have affected their practice. Consequently, the question raised is, "Are these teachers trying to fit AfL in a culture which is still unfit for it?" Answering this question necessitates further research, however, favourable evidence would indicate that the changes being made are simply surface changes.

This finding answers the inconclusive results in sections 4.7.4 and 4.7.5 about the absence of external and internal challenges and the class characteristics amongst the Year One teachers. On the basis of the type of practice found among the Year One cohort, it can be concluded that the absence of such factors was entirely due to the mechanical nature of practice. This reason could also apply to the Year Four group, who also did not report any issues with class characteristics. As the data shows, the latter group hold the highest references of mechanical practice and the least number of reference codes for both types of understanding. One notes, however, that while such AfL practice also features in the other groups, the teachers in these groups did face the mentioned challenges. Therefore, the difference could lie in the consistency and sustainability of such practice, whereby the rate at which AfL practice was used might not have provided enough instances to these teachers to reflect on the challenges brought about by this practice. Hence, it could be argued that partial practice is a direct result and a reflection of the level of understanding. However, this claim cannot be

generalised across all the specific contexts as in comparing the references between the the level of understanding and the type of practice, the data revealed that:

- thirteen have limited understanding only, eighteen have limited understanding and partial/mechanical AfL, and nine show only partial/mechanical AfL.

- four have deep understanding only, fourteen have deep understanding and partial/mechanical AfL, and thirteen have partial/mechanical AfL only.

Consequently, this evidence indicates that there is not a specific link between one type of practice and one type of understanding, implying that regardless of the type of practice both levels of understanding are present. Thus, the relationship between AfL practice and understanding can be both of a divergent and a convergent nature, which makes the link between the two a complex one.

4.10 Thoughts, Understanding and Practice: what is the relationship?

This section brings together the conclusions of the three previous discussion segments portraying teachers' levels of thoughts, the types of practice and the degree of understanding across the year groups. The aim is to draw one final conclusion about the relationship between the investigated facets: thoughts, understanding and practice. To do so, each year group's conclusion has been re-examined and the reference codes of each category have been expressed as a ratio of the total number of references in that sub-category.

Reading of Table 4.12 can be done in two ways, horizontally and vertically. The former mode highlights the situation across the year group while the second mode illustrates how a particular year group compares with the rest. In taking the Year One

as an example, a vertical reading of the data shows the varying degrees of understanding, thoughts and practice across the year groups. However, a horizontal reading highlights the association within the year group.

Three classifications – divergent, convergent and semi-convergent/divergent - have been used to describe the relations. A divergent link occurred when one decimal ratio was high and the other one was low, more than fifty per cent difference, indicating that one element did not affect the other. For example, a 0.46 decimal ratio for one element and a 0.16 decimal ratio for the other. In turn, a semi-divergent/convergent relation happened when the difference between the ratios was equal to or less than fifty per cent, indicating that one element affected the other but not with an equal ratio effect. For example, a decimal ratio of 0.2 when compared with a decimal ratio of 0.16. On the other hand, a convergent relation occurred with either the same ratios or with very close ratios up to a difference of +/- 0.01. A semi-convergent relation followed the same rule applied to a semi-divergent relation. These four categories led to a complex or semi-complex relationships.

The first part of Table 4.12, on the following page, portrays a recapitulation of the year groups with a semi-complex relationship, while on the subsequent page the second part of the table presents the two year groups with a complex relationship, Year Five and Six. This is an interesting finding into how the relationship changes across the primary cycle continuum, which gets more complex as the end of the cycle marked by the National Benchmark Examinations approaches.

Year Group	Type of Relationship	Reflection
1	Divergent relation between deep understanding and the spirit of practice, and between the level of mixed thoughts and the partial practice. Semi-convergent/divergent relation between limited understanding and partial practice.	The levels of understanding have a much higher ratio than the types of practice. A deep understanding is expected to be reflected in an equally high level of spirit of practice, while a limited understanding is expected to be reflected in the partial practice category. In view of this, the above relationship between deep understanding and the spirit of practice, and the level of mixed thoughts and partial practice is **a divergent one.** On the other hand, the degree of limited understanding is not being equally reflected in the degree of partial practice and the mixed thoughts, albeit all being high. For this reason, **a semi-convergent relationship has been assigned.** Hence, **the relationship between the levels of understanding, thoughts and the types of practice is divergent to semi-convergent, thus a semi-complex one.**
2	Semi-convergent/divergent relation between the levels of understanding and the types of practice and between the positive thoughts and the spirit of practice. Divergent relationship between the misconceptions and the partial practice and the limited understanding.	Both levels of understanding are very close in their ratios and the same applies to the types of practice. In view of this, a **semi-convergent relationship between the levels of understanding and the types of practice is being established.** Since the high degree of misconceptions is not being equally reflected in the degree of partial practice, the levels of understanding seem to be the factor which affected mostly the type of practice. Therefore, **the relationship between the levels of thought, understanding and practice is a semi-convergent/divergent to a divergent one, thus a semi-complex relation.**
3	Semi-convergent/divergent relation between the levels of understanding and the types of practice and between the level of misconceptions and the partial practice. Divergent relationship between the level of positive thought and the spirit of practice.	The spirit of practice has the highest ratio, which is followed by a deep level of understanding. Thus, the relationship between the two is **a semi-convergent/divergent one.** However, the rate of positive thought is low, which does not justify the deep level of understanding held and the spirit of practice. On the other hand, the rate of misconceptions is reflected in the rate of partial practice. Hence, **the relationship between the levels of understanding, the levels of thought and the types of practice** is **a divergent to semi-convergent one and therefore, a semi-complex one.**
4	Semi-convergent relation between the level of deep understanding and the types of practice, and the positive thoughts, the spirit and the partial practice. Divergent relation between the misconceptions, mixed thoughts and the partial practice.	Both levels of understanding have a very close ratio indicating the presence of two categories of understanding and an equal presence of two groups of practice. In this year group, the situation is **a semi-complex one but not to the same extent as in the previous years.** This stems from an almost three types of possible relations are present.

5	Divergent relation between the deep understanding and the spirit of practice, and between the limited understanding and the mixed thoughts. Semi-convergent/divergent relation between limited understanding and the types of practice. Convergent relationship between the positive thoughts and the spirit of practice, and with the limited understanding. Also, this relation is reiterated between the misconceptions and the partial practice.	The anomaly between the level of understanding and the level of positive thought does not seem to be adding another type of relationship. Despite this fact, still three categories of relationships are present, thus making **the overall relationship in this year group a complex one.**
6	Convergent relationship between the levels of understanding, the levels of thoughts and the partial practice. Semi-convergent/divergent relation between deep understanding and the spirit of practice. Divergent relation between positive thoughts and the spirit of practice.	With the teachers' levels of understanding being equally shared, the misconceptions might be a determining turning-point for the change of practice. These levels of thought can also be an effect of the culture in the run-up for the National Benchmark Examinations. Similarly to the Year Four and Five situations, here the relationship is again of a complex nature.

Table 4.12: The relationship between the thoughts, understanding and practice in this study

In recapitulating the findings and conclusions stated in the above table, which are also reproduced in abridged version in Table 4.13, it is interesting to note that the Early Years teachers and the Year Four cohort present a **semi-complex relation** between the levels of thought, understanding and practice, while the Junior Five and Six Years teachers exhibit **a complex relationship.** Hence, the relation between the participants' beliefs and practice is a matter of degree, which increases in complication according to the sector of taught.

Year Group	Type of Relationship between Thoughts, Understanding and Practice
1	**Semi-Complex Relationship**
2	
3	
4	
5	**Complex Relationship**
6	

Table 4.13: Abridged version of the type of relationship per year group.

4.11 Learners' Response to the AfL practice

The data responses indicated that the participant teachers have either experienced a positive or neutral learners' response. The former type embraces those teachers whose students have mostly increased their in-class participation as a result of the inclusion of the AfL strategies. Examples of such responses include, T9, *"increased discussion time"*; T14, *"more reasoned answers"*; T17, *"more participative and motivated to learn"*; T20*, "more focused and can self-assess themselves"*; T23, *"are more aware*

of what they are learning"; T26, *"more inquisitive and active in their learning"*; and T28, *"know what they are doing and eager to succeed.*" This augurs well for the further implementation of AfL because, according to Kirton, Hallam, Peffers, Robertson, and Stobart (2007), the practical impact can entice teachers in the use of the new pedagogy.

Contrastingly, teachers reporting a neutral response did not experience any different learning behaviours than those in the lessons without the AfL strategies. Evidence of such stance is reflected in the data by T4, *"I believe it does motivate certain children, but others completely ignore it"*; T3: *"many children do not bother to check their work…."*; T33: *"it does not make any difference to them whether I use the learning intention or not"*; and T41: *"those who do not study find it annoying."*

The above two response categories seem to indicate an association between a positive learners' response and the type of learning disposition, conforming or indifferent. A conforming learner is one who always does what the teacher suggests, while an indifferent learner ignores the teacher's instructions. The former type of learner can be taken as one who would be a proponent of the use of AfL, while the latter type would be an objector to the use of the AfL strategies.

In trying to make sense of this data, the main question asked was whether the 'indifferent' students were taught about their new role within the AfL process. The answer to this question depends on two issues; whether teachers were convinced of the students' capabilities in handling the AfL process and whether these educators were willing to share their power and knowledge in the teaching and learning process. The responses by T25: *"struggling learners might not understand the main objective for AfL"*, and by T3 that *"students do not bother to follow the success criteria"*

questions the teachers' attitudes and perceptions about AfL and the students' self-efficacy. Unless teachers create and promote a learning environment whereby all the students experience some form of success, the high achievers will continue to be at an advantage, thus widening the gap between them and the struggling learners, which would further reinforce the misconception that AfL works for the high and not the low achievers. Margolis and McCabe (2003) emphasise that students' self-efficacy is what distinguishes high achievers from struggling learners, therefore, the latter have to grow in their self-efficacy and AfL can be the pedagogy that will enable that (Wiliam, 2007a, 2011a, 2011b).

4.12 Summary of Chapter

This chapter presented the analysis of the findings from the open-ended questionnaires used in the first phase of this research study. First, the overarching situation was looked into and it was found that inconsistencies exist between the levels of thought, understanding and action. Precisely, the broad view shows that the participants hold a high positive level of thought. This is supported by the belief in a link between AfL and achievement. However, this positive inclination is not complemented by an equally deep level of understanding, nor by an implementation of AfL within its spirit. Thus, there is an indirect relationship between the level of thought, understanding and the type of practice but a direct relationship between the latter two factors. In view of this, a semi-complex to a complex relationship between the level of thought, understanding and the type of practice was established. This overarching association transcended into varying degrees of relationships within each year group, with the most predominant link in the Early Years being the semi-complex one, while in the Junior Years it is a complex one.

Interestingly, the discussion about the teachers' perspectives of the learners' response to AfL has highlighted a link between the type of response and the learners' learning disposition. A student who conforms to the school culture is likely to respond more positively to the incorporation of AfL in lessons.

This lack of a simple direct link between one factor and another implies that any serious attempt towards the implementation of AfL in primary schools has to take account of the various overt and subtle influences that are at play in the current local scenario. The findings in this chapter have exposed a wide range of such influences within the primary schools in one college, thereby providing a snapshot that may serve as a platform for strategic decisions towards the wider implementation of AfL.

The findings discussed in this chapter indicate that the beliefs-to-practice relationship of novice practitioners of AfL is a matter of degree. This relationship becomes more complex amongst the Junior Years teachers.

The next chapter discusses the findings of the CAR undertaken with three primary school teachers teaching a Year Two, a Year Three and a Year Six class, thus ensuring the inclusion of both Early and Junior Years scenarios for the next phase of this study.

Chapter 5 : The CAR's Findings

5.1 Overview

This chapter presents the findings of the second phase of the research study, the CAR with three primary school teachers. These results seek to answer the second research question, "How could a collaborative action research study influence the connections between the teacher's AfL beliefs and practices, and therefore of prospective AfL practitioners?"

The context of this research phase, which will open the discussion, was one primary school within the same college that took part in the first phase of same study. This primary school had never received support in the implementation of AfL prior to this study's invitation, thus the participants were never in receipt of any form of support. The three teachers come from both the Early and the Junior Years, thus bringing in and enriching this study with both scenarios: an entirely formative assessment approach and an exam-oriented assessment approach.

The approach to data management and interpretation will be discussed after the field context. Right after, the participants will be introduced and each story will follow. A flashback approach to the story's recount will be adopted, in that the participants' self-written story is given first and followed by the findings. Then an analysis of these results will weave the findings into a coherent whole, which will follow in the subsequent chapter.

The chapter concludes with my own story.

5.2 The Field Context

The primary school involved in this phase is a big school, according to the Maltese context, with a student population of over six hundred students. The school building is divided into three sections: the Kinder, the Early Years (Year One to Three) and the Junior Years (Year Four to Six). For the compulsory years of education, there is a teaching staff of nineteen teachers who are supported by in-class learning support assistants (LSAs). The number of LSAs per class depends on the number of students with a statement of needs. However, as per the GOV_MUT agreement, (Ministry of Education Youth and Employment, 2007), the number of LSAs per class should not be more than two.

The school's vision, as stated in the *School Development Plan Report (2014-2015)* puts *"the child: [at] the centre of all teaching and learning experiences."* Complementing this, is the school's mission, which states that *"the school strives to educate every child within a caring and safe environment, empowering individuals by promoting values, skills, knowledge, creativity and attitudes towards tolerance and inclusion to become reflective citizens."* The school's espoused vision and mission are very inclusive and student-centred and, therefore, the school's culture already provides the right backdrop for the introduction, development and sustainability of AfL because they both share the same philosophy. This augurs well for both the participants' content knowledge of the CAR process and their receptiveness. However, as the data evidence will show in each story, the school's actions, according to the participants, focus more on 'what to teach' rather than on 'how to teach.'

5.3 Data Management

Elo and Kyngäs (2008) explain that the process to content analysis is divided into three phases: the preparation, the organisation and the reporting. This three-step approach is similar to other qualitative approaches to data analysis, such as thematic analysis. In the latter approach, Vaismoradi, Turunen and Bondas (2013) equate the preparatory phase with the familiarisation of the data, the organisation phase with the sorting, coding and themes process and the last step of reporting with the write-up of the analysis. Table 5.1 below outlines how this three-phase process has been adapted and used in this study.

Data Management of Second Phase	
Phase 1: Preparation	
Step 1	Ad verbatim transcription of the multiple data collection sources that were audio-recorded.
Step 2	Translation of the transcriptions from Maltese to English.
Step 3	Translated data collated into one document that was sent to the participants for their verification.
Step 4	One sentence from Nina's data was removed as per her request.
Step 5	Careful re-reading of the data while highlighting important word segments that related to the research question.
Phase 2: Organisation	
Step 6	Formation of categories and sub-categories
Step 7	Sorting of data into three phases: the beginning, the middle and the final phase of the CAR process.
Step 8	Re-reading of the sorted data while highlighting the segments that denoted the changes in the teachers' thoughts and practices. Also, initial remarks about the observations made were written in an adjacent column. (see Table 5.5)
Step 9	Importation of all the data collection sources into NVIVO[11]
Step 10	Each category was defined.
Step 11	Data coded according to the parameters of each category.
Step 12	The main topics mentioned by each participant were tabulated in a three-column table to acquire a better understanding of what was happening.
Phase 3: Reporting	
Step 13	The writing-up of the results for the eventual conclusions about the new knowledge generated by this study.

Table 5.1: The general process for the management of data

5.3.1 Data Interpretation: An Exemplar

Following the inputting and categorisation of the data in NVIVO, three main categories were established from nine sub-categories: **Knowledge and Perspectives of AfL, Class-Related Factors affecting AfL, Professional Learning and Pedagogical Awareness.**

The first category includes the transformation of the participants' knowledge about AfL and their perceptions about the worthiness of AfL, which was influenced by the impact they themselves witnessed on their students' learning. In turn, the scale of the impact shaped and formed the teachers' attitudes towards AfL.

The second category deals with the classroom context, in that it comprises issues within the teachers' control such as the management of mixed-ability classrooms and the organisation of the class size into smaller and more manageable groups and the students' perspectives about learning through AfL. In particular, this theme reveals the students' readiness, or otherwise, to embrace and adopt the new habits of learning as required by a social constructionist approach like AfL. In revealing the teachers' and the students' roles in assessment-based learning, this theme uncovers the extent to which the class environment was conducive to AfL. In other words, it exposes whether the AfL pedagogy was being backed by the right learning framework.

The last category consists of the teachers' views and justifications about their preferred mode of teaching and learning. Interestingly, the teachers' discussions and reflections revealed that in actual fact they were already engaging in some assessment-based activities, yet their unawareness of the rationale of their actions lessened the effectiveness of that very same act. Furthermore, while the teachers did not object to contemporary modes of professional teacher learning, they have strongly insisted on the need for it to be structured and led by a person they trust.

Definitions of the three overarching categories and their sub-categories are explained in Table 5.2. An exemplar of how these descriptions guided the data selection and interpretation follows in Table 5.3.

Category: **Knowledge and Perspectives of AfL**	This refers to the overarching knowledge that teachers have constructed about AfL from the practice-to- theory approach to AfL.
Sub-Category: **AfL and students' ability**	Statements indicating that the success rate of AfL depends on the cognitive ability of the students.
Sub-Category: **Worthiness of AfL**	Statements indicating the teachers' agreement or disagreement with the effectiveness of AfL or lack of it.
Sub-Category: **Teachers' attitudes towards AfL**	Statements indicating a teacher's positive or negative attitude towards the AfL pedagogy.
Sub-Category: **Teachers' perspectives of the learners' disposition**	Statements indicating factors of attention, concentration and co-operation with the teacher in the learning process.
Category: **Class-Related Factors affecting AfL**	This category includes issues of class size, mixed-ability, class management, organisation and students' learning behaviour.
Sub-Category: **Students' perspectives of their learning disposition**	Statements indicating the students' involvement, or lack thereof, in the learning process and the attributes the students refer to when explaining their involvement in learning.
Sub-Category: **Teacher controlled factors**	Statements mentioning issues of class management, organisation, control of behaviour and the stimulation of the students' interest in learning.
Sub-Category: **Learners controlled factors – teacher's perspective**	Statements referring to issues of attention, carelessness and laziness.
Sub-Category: **The surrounding learning environment**	Statements indicating the type of learning atmosphere within the classroom.
Category: **Professional Learning and Pedagogical Awareness**	This includes the type of teaching and learning they value, the preferred mode of learning and the role of the school in their professional learning.
Sub-Category: **Teaching and Learning Rationale**	Statements indicating the teachers' descriptions and justifications of their preferred teaching and learning style.
Sub-Category: **Collaboration for teachers' learning**	Statements indicating the teachers' suggestions about the topics relevant to them in the current circumstances and their position about the feasibility of teachers' learning through collaborative groups.

Table 5.2: The definitions for the categories in the second phase of the research

Unit of Analysis: Nina's Data
Data Source - Record-keeping Booklet: **Field Question:** What is your teaching and learning style?   **Response***: the move from the known to the unknown, use hands-on, visual for better learning and various questioning techniques*   **Selection of meaningful units:**   • *the move from the known to the unknown.*   • *various questioning techniques.*   **Interpretation:** Nina seems to adopt a constructive teaching approach. This is evident in her description of certain inclusive strategies like the 'various questioning techniques' to tap each learner's level of ability. Additionally, her description indicates that she uses some features of the multiple-intelligence approach, like kinaesthetic and visual intelligence.   **Coding Category: Teaching and Learning within the PL and Pedagogical Awareness.**
Data Source - Group Discussion: about teaching and learning in their classroom circumstances.   **Response:** *it is impossible to reach everyone when you are alone in a mixed ability class.*   **Selection of meaningful units:** *is impossible to reach everyone*   **Coding Category: Teacher Controlled Factors within The Teachers' and Students' Roles.**   **Interpretation:** This is about class management in the process of teaching and learning. There seems to be a contradiction with her stated teaching and learning philosophy. It might indicate that the stated 'move from the known to the unknown' is not being applied to every student. Thus, a fully student-centred approach is not being adopted.
Data Source - Interview: Would you recommend these strategies to other teachers?   **Response:** *Definitely. When I observed you, I realised that I could do them. They do not take a lot of time or require any significant sources; what is different is the way you go about your lesson planning.*   **Selection of meaningful units:**   • *Definitely.*   • *I realised that I could do them.*   • *do not take a lot of time.*   • *what is different is the way you go about your lesson planning.*   **Coding Categories – Worthiness of AfL, Teacher's attitude, AfL Literacy**   **Interpretation:** Nina has found the strategies she implemented useful. Otherwise, she would not have recommended them to other teachers. Moreover, her AfL knowledge has changed as she has identified what needed to be changed from her previous practice to offer a more meaningful experience to her students.

Table 5.3: An exemplar of data interpretation

Prior to the categorisation exercise, each participant's data was sorted into three phases: the beginning, middle and final phase of the CAR process. The purpose of this sorting was for a better visualisation of how and when the change has occurred in each teacher's thinking and practices. Each phase was guided by a set of reflective questions, as outlined in Table 5.4. A sample of one of the teachers, Nina's, sorting follows and is outlined in Table 5.5. This example was simply chosen as a prototype rather than for any particular reason. The small print in the second, third and fourth column refer to the data collection source and the page from where this evidence was retrieved.

Beginning Phase	Middle Phase	Final Phase
• What is the participant's understanding of AfL, prior to the action research? • What is the participant's teaching and learning style? • Under which theoretical framework does her teaching and learning style fall? • How does the participant describe her learners?	• What kind of evidence shows the incorporation of the AfL strategies? • What is the participant's reaction to the outcome of the AfL strategies? • What is the learner's response to the AfL strategies used?	• What does the participant think of AfL, now? • What do the class learners think of AfL? • What kind of evidence shows that the participant teacher will continue to use AfL?

Table 5.4: Reflective questions that guided the sorting process

Teacher and Category	Beginning Phase October-December Term 1	Middle January-March Term 2	After April-May Term 3
Nina **Knowledge and Perspectives of AfL**	➢ To me, AfL is something different from my colleague's view….having specific learning intentions and informs the student about them. Gp.Disc.1..17/10/14 Booklet Pg.7 ➢ AfL benefits…students are focused and have a specific goal for the lesson. Gp.Disc.1…17/10/2014 Booklet Pg.7 ➢ Concern….due to their young age, my concern is to keep them focused as they have a short attention span. Gp.Disc.1…17/10/2014 Booklet Pg.7 ➢ Interesting concept but was a bit sceptical. Felt at a loss on how to start implementing it. Teacher story recount…13/5/2015	See also…… Part 2: Action Phase In Teaching and Learning Section. ➢ I would like them to be more independent by being less reliant on me or their mothers. Does it make sense? Is it good? Feedback Session 12/01/2015 ➢ They understand the concept and be able to work on their own even in slightly changed situations. Feedback Session 12/01/2015 ➢ I think it is a good system.	➢ My conception of AfL has changed. I used to do these things orally. ➢ I have a better understanding and use of AFL, as when I heard it, I realised that I was already doing some things but at a verbal level only. Now, that I am writing them, they are helping more the students. They are gaining more. I am noticing that they look at the charts wall. Both the learning goal and the success criteria have worked a lot and made a real difference. Interview 27/04/2015 ➢ The students' enthusiasm and the fact that it works motivates and encourages you to try it again. It is a kind of direct proof that it works.

Table 5.5: A sample of Nina's sorting process

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5.4 The Participants: Nina, Samantha and Belle

Nina, Samantha and Belle were the participants who collaborated in the CAR process. All the three participants hold a Bachelor's Degree in Education from the University of Malta and their teaching experiences vary from seventeen to four and nine years of teaching, respectively.

Nina, a very quiet person, has taught mostly the Junior years of the primary cycle. However, in the last scholastic year, when she was still unaware that she would be participating in the research, she had voluntarily asked for a change of year group. Thus, during the research study, Nina was in her first year teaching the Year Two group. Her class population was of seventeen heterogeneous learners.

Samantha, the youngest teacher in the group, has been teaching different year groups and in different schools since her engagement with the Ministry for Education. Initially, she was engaged on a supply basis with a temporary warrant because her degree in education was in the teaching of a secondary subject. However, since then, she has had the opportunity to follow a conversion course that allowed her to change the status of her engagement from supply to indefinite and for her teaching warrant to be up-scaled to permanent. This means that during the research she was a teacher with a permanent warrant and employed on an indefinite basis. Samantha's class, Year Three, had a student population of fifteen heterogeneous students including three international students. Similarly to Nina, this was the first year that Samantha was teaching this year group.

Belle, the most outspoken and participative teacher, has been teaching the Year six group for a number of years. Consequently, she has experienced streaming and, in the

year of the research, the banding measure was implemented nation-wide across all the Year Six classes. The setting of the banding is according to the "overall level of achievement, based on standardised scores calculated by the Research and Development Department, in the Maltese, English and Mathematics examinations" (Fabri, 2014). Therefore, Belle's class, in being the lowest band in the group, had the lowest levels of registered academic achievement.

5.4.1   The Assessment Context of each participant

The three pillars of the current Maltese educational vision and mission are social justice, inclusion and the fulfilment of each student's potential to be a lifelong learner in the 21st-century (Ministry for Education and Employment, 2014b; Ministry for Education Youth and Employment, 2014; Ministry of Education and Employment, 2012). Consequently, the assessment system has to reflect these principles too. In the attempts for such success, the assessment system has undergone a roller-coaster of initiatives in both the primary, middle and secondary sectors.

In the Early Years, the current assessment system is, or should be, of an entirely formative assessment nature (Grima, 2015), while the one in the Junior Years is mostly based on the summative assessment. Within the former years, students progress automatically to the subsequent level of learning and the placement is determined by the month of birth, as per the guidelines in the Letter Circular DCM 75/2014 by Fabri (2014). Although there are no exams in this segment, there are other assessment procedures in the form of checklists, designed by the Literacy Support Unit, to evaluate the student's proficiency in English and Maltese. Currently, there is a three-tier level – Checklist One, Two and Three, on which students are evaluated by either the complementary, offers further support in the teaching and learning of literacy, or

the literacy support teacher, offers support in various reading strategies like shared and guided reading. Although the class teachers are encouraged to participate in this assessment process, they are not obliged to do so (Vassallo, 2012).

Checklist one is commensurate with the expected learning targets in Year One, that is, partial Level Four, while the others for their respective years, whereby Year Two represents the second part of Level Four and Year Three the first part of Level Five. It is to be noted that each level of competence represents two years of schooling. If the assessment results indicate that the students have not mastered the expected level of achievement, then they are shortlisted for further learning by the complementary teacher. These intervention sessions can be both in-class and/or on a withdrawal basis. Eventually, when these students are in Year Four and have to sit for the formal exams, if their situation on the first two checklists persists, then they cannot sit for the mainstream exam (Debattista, Muscat Agius and Muscat, 2015). Instead, they will be allowed to sit for an alternative paper in the reading and writing skills with a weight of sixty percent (Spiteri, 2012b). Their performance will be included in the result sheet, but the different level of assessment exercise – Level 4 and 5 - will be highlighted. At present, there are two levels for the alternative papers in the languages, while three levels for Mathematics. The setting up the number of levels is at the discretion of the Education Officer of the respective subject. There might be situations where students in the last two years, Five and Six, of the primary cycle are still performing at a much lower level than that expected. In such cases, the class teacher together with the school's support personnel – Inclusion Coordinator (INCO), the Literacy Support Teacher (LST), the Maths Support Teacher (MST) and the respective Education Officers (EOs) might decide that the student would benefit from a Year

Four exam paper rather than the alternative one. However, since this praxis is not officially endorsed, the results cannot be inputted in the electronic platform.

Different schools might have different systems of recording the learning progress of the students and its reporting. Some might have record cards while others might have portfolios. The former's end-of-year decisions are based on the teacher's professional judgement based on the observations during the teaching and learning process. The evidence could include performance in homework, classwork and also on tests carried out during the year.

Until the end of the 2017/2018 scholastic year, half of the taught subjects in the primary were examinable by a test twice a year, in February and June. Each student in the last three years of the primary cycle has to sit for five exams, with only one – the Social Studies – having an aggregate mark of fieldwork/project – 20% - and exam – 80% (Pace, 2014).

The effect of the summative assessment scenario in this study is reflected in Belle's context. More than that, Belle's students have been placed in the lowest band group as they got the least total of marks in the five summative assessment subjects in the previous years. As explained in Chapter Two, the purpose of the pending is to narrow the mixed-ability gap so that teachers can handle the class better (Micallef, 2014). Nonetheless, her students, at the end of the year, still have to sit for all or part of the components of the National Benchmark Exam (BM). The standardised scores would then stipulate the level of learning of the students in the middle school. For instance, for the scholastic year 2018/2019, the Letter Circulars DLAP 186/2018 and DLAP 187/2018 issued by Bugeja (2018) provide the guidelines for the Heads of School for the setting of the Year Seven classes. Four classification options are possible - Track

3 (previously known as Level 7-8), which is the highest level of cognitive achievement within the year, Track 2 (previously known as Level 6-7), Track 1 (previously known as Level 5 -6 -7) and the Core Curriculum Programme (CCP – previously known as Level 4-5). The latter aims at supporting the students on the lower end of the achievement continuum in the acquisition of the basic skills (Spiteri, 2012a). Despite the initial placement, upward and downward movements across levels are permitted and based on the summative performance. Therefore, notwithstanding the adaptations that teachers do along the teaching and learning process, the student's progression is still heavily based on the summative assessment. However, with the introduction of the learning outcomes approach in Year Seven in the 2018-2019 scholastic year, the current privilege and influence of the summative assessment is hoped to subsidise. As from the forthcoming scholastic year, the new assessment system will be a combination of continuous (40%) and summative (60%) assessment, with the exception of Year Six, where the BM exam will still be of an entirely summative nature. Hence, the end-of-year mark will be an aggregate total. Additionally, the Science subject will be added to the examinable subjects while Religious Education and Social Studies will no longer be assessed in a summative way.

This detailed background account of the participants' old and forthcoming assessment contexts hopes to shed light and put in perspective the teachers' responses to the AfL innovation being proposed.

5.5 The Results

5.5.1 Nina's Story

Figure 5.1 presents Nina's authentic and unedited account of her learning journey about AfL throughout the collaborative action research project. Her story highlights

the transformation and more importantly what has influenced the change in her

thoughts, understandings and practices regarding AfL.

The first time that I have heard about AfL was in a staff development session from Ms Doreen Said Pace. Although the concept was interesting, I was sceptical to use it in my class. When I was invited to learn more about AfL, on an individual basis, I was interested to learn more. In the beginning I was a bit at a loss on how to start using it in my class. The continuous support and visits from Ms Doreen Said Pace kept me hooked to this project.

The main turning point was when she came to my class and showed me how to use AFL in my class with my students. In that moment, I realized that I could do it as well and that it really works with my students. I started telling the students what was the goal of the lesson and it kept them more focused about the outcome. The steps of criteria had a great impact on the children as they could refer to them whenever they needed. I used charts of different colours which I kept around the class. Teaching a Year 2 class, I was a bit worried about how to teach them how to do a written comprehension. I used the steps of criteria for the children to follow and they were a huge success. Before every comprehension the children read the steps and they manage to do it on their own. They apply the same steps even for the Maltese comprehension. The steps on how to do a picture composition were also very helpful. I like to build the steps together with the students to make them feel part of the lesson and understand more. For Maths lessons, the steps were also important, especially for adding and subtracting. Having the punctuation hand template on their desk helps the children to remember capital letters, spacing, full stops and to check their work. The no-hands-up approach could reach all the children and keep them more focused on what I am teaching them. The children liked also the thumbs up and down technique.

After this experience, I can say that AfL really works and that it should become a policy to be used by all the school. I will definitely use it with more lessons that I will plan in the future. Besides charts, I can do simple steps to be included in the children's copybooks so that they can follow them at home as well. It was a fruitful learning experience.

✎ *Nina*

Figure 5.1: Nina' authentic account at the end of the CAR

Although it is a very succinct story, it captures the most important moments of her

journey. Details of the unfolding journey that led to this story will be discussed by first

presenting the results per theme for each participant and then an analysis of the results

will follow.

Since all the data was collated in a document that was sent to the participants, this

source will be used as reference of the evidence quoted. For example, in case of citing

a statement from one of the group discussions, the reference format will be by the data

collection source – e.g. (group discussion/interview/reflective-booklet/individual feedback). The rationale for using these sources has been amply explained and justified in Chapter Three.

5.5.2 Nina's Description of her class

Nina described her class as a group with *".....various abilities and characters. From intelligent young students to others who struggle to understand. Some have a problem with focusing and others who do not like to write"* (record-keeping booklet). In one of the group discussions, she shared that *"the reluctant writers were the brightest students."*

In light of these class characteristics, her major concern was *"how to keep them focused given their young age and related short attention span"* (group discussion; record-keeping booklet). Particularly, she looked at this CAR opportunity as the means that would hopefully empower her "*to reach the students of various abilities while keeping them focused, motivating them more, be sure that they understood and whether a visual will suffice for struggling learners in literacy"* (record-keeping booklet; group discussion). These concerns were turned into and formed Nina's goal for the CAR journey, which she phrased as *"how to keep them focused given their young age [and] related short attention span"* (group discussion; record-keeping booklet). Hence, she looked at AfL as the means that would provide her with "the correct strategy" (record-keeping booklet) to help "*the students become more independent ..... learn how to learn and be more active learners*" (record-keeping booklet).

5.5.3 Nina's Knowledge of and Perspectives on AfL

In the first session of the CAR, Nina explained that her understanding of AfL was "different from her colleague's description" (group discussion), thus highlighting the subjectivity of interpretation. Her understanding consisted in *"having specific learning intentions and informing the students about them"* (record-keeping booklet; group discussion one). She associated the incorporation of the learning intentions with one of the benefits of AfL because, according to her, *"they [students] are more focused and have a specific goal for the lesson"* (record-keeping booklet; group discussion one).

At a later stage, she reported that during her lesson trials the *"learning goal [was] written so that the children [would] know the aim of the lesson"* and this has helped the

> learners [to] focus and participate more in the lesson while the steps to work out the problem helped them a lot, [too]……because the success criteria are repeated over and over again (record-keeping booklet).

The immediate impact encouraged her to adopt the "process success criteria, the visual pictures accompanying them and the use of the no-hands-up technique" (record-keeping booklet). In fact, she remarked that "being in [her] class with [her] students, [she] could not argue that this does not work with [her] students….[and] that encourages you to try it out" (interview). In experimenting with AfL, she concluded that "…*with the SC they do not keep calling, 'Ms, what do we need to do?"* (individual feedback session one). She seemed so impressed with the effectiveness of the success criteria (SC) that their practice was sustained in several lessons, as demonstrated in the below exemplars from the individual feedback sessions.

Exemplar 1: Lesson about the article a/an.

> I was so disappointed that I was not successful [with the traditional method that I decided to try the SC]...I was really surprised with the outcome though some still did not get it.

Exemplar 2: Reading the time.

> With time…….I prepared a wall chart with the steps and [they] got them
>
> correct.

Exemplar 3: Doubling.

> They [the students] came up with the success criteria……asked what I was doing…..told them that I was writing them out to help them remember the steps.

Exemplar 4: Reading Lesson.

> …they kept asking what to do. I decided to give them the steps and it turned out to be helpful as those who got stuck looked at the steps for the next action.

Despite her success with the SC strategy, she was still not yet fully convinced of the strategy's equal effect on all the students. This is because *"some students do not care less to follow the success criteria"* (record-keeping booklet) and *"there are still those very few students, who I feel I have not reached and are at a loss"* (fifth group discussion). This concerned her as she had set herself a personal and professional goal that through AfL *"... learners [will] be more independent [by using] the steps as helpers instead of the teacher/parent at home"* (record-keeping booklet).

Notwithstanding this, in the interview she said that *"[she would]…..definitely recommend it…[as]…..learners are gaining a lot [because] they can transfer the skills learnt"* and, as her story clearly shows, she intends to use it in the future. More than that, she already had a clear action plan on what she needed to improve on: *"produce simpler SC steps and use more visuals"* (interview).

On a larger scale, she suggested that *"AfL should become a school policy which binds and directs all the teachers' efforts in one common direction because it [AfL] really works"* (see Nina's story in Figure 5.1).

As her story reveals, Nina was not only willing to learn but also very humble to seek support in areas of need. For instance, in an individual feedback session, she shared,

> *I am about to introduce pronouns and I am at a loss about what to do and [in] comprehensions they found it difficult to find the answer from the text. I tried to guide them by looking for the keyword, however, they were quite at a loss.*

At times, the extent of how much she sought re-assurance that she was acting in the right way put into question her belief in her self-efficacy. Queries raised during an individual feedback session like *"Does it make sense?", "Is it good?", "Can I do these steps?", "Are these enough?"* show her confidence levels in the new way of action. However, the fact that she shared her experience with her non-participant colleagues in the yearly School Development Plan Day indicates that, even if she has not completely overcome her lack of sureness, she has at least put considerable effort into her attempts at doing so. This latter activity was carried out following an unanticipated request by the Head of School. In collaboration with the other two participants, she put up and delivered a presentation about her learning journey.

5.5.4 Nina's Perspectives on Teaching and Learning and on her Professional Learning

In both the record-keeping booklet and one of the group discussions, Nina described her teaching style in terms of *"the move from the known to the unknown, use hands on, visuals for better learning and various questioning techniques."* She justified such an approach in terms of the confidence and comfortableness that has been accumulated

over the years, which she explained as *"maybe, I've been using it for various years"* (record-keeping booklet).

Subsequently, in a group discussion, Nina commented that *"it is impossible to reach everyone when you are alone in a mixed ability class."* However, in the final phase of the CAR process, during the semi-structured interview, Nina reported that AfL was more about a different way of lesson planning rather than being something impossible to do. In fact, she admitted that

> …you tend to give up and dishearten yourself… when I observed you, I realised that I could do them. They do not take a lot of time or require any significant sources, what is different is the way you go about your lesson planning" (interview).

This comment together with others from the data interview highlight the professional gains that Nina benefited from in participating in a professional learning community. To this effect, she said that:

> I appreciated the continuous support. If you had talked to us at the beginning and left us on our own, I would not have tried as I would have given up. Even the practical in class support was good… [For me], it's useless to listen to talks with no practical-in-class gains. Seeing a practical example makes all the difference.

Furthermore, she pointed out that the peer observation, that is teachers observing other teachers, could be possible if it had to be structured. Precisely, she remarked that *"[unless it is] structured, it will not materialise* [because] *we do not have the time to meet and talk, let alone to observe each other"* (interview).

5.5.1.1 Nina's Beliefs about Formative Assessment

In section two of the record-keeping booklet (see Appendix VII for a sample), Nina had to tick favourably or otherwise about eleven statements on the foundations of AfL

as explained in the literature discussed in Chapter two. Then, she had to list down her actual enactment of these beliefs. She explained that she uses positive reinforcement to motivate the students to move forward in their learning. Also, not to dishearten her students, she matches the questions posed according to their ability, as perceived by her.

5.5.5 Nina's Perspectives on Class-Related Factors

The class factor node incorporates issues related to the teacher's perspectives about the student's ability and their learning disposition, the teacher-controlled factors like class organisation and management, and the ethos of the in-class learning environment. Nina commented that, in the duration of the study, AfL did not seem to have impacted in the same way on all the students. She explained that *"while the majority of the students were enthusiastic, there were those who were reluctant about learning"* (interview). Particularly, she seemed perplexed about the fact that *"[the students] know what they have to do but still they do not do it"* (interview). Furthermore, she shared that *"some students do not get there maybe....low ability or laziness"* (interview), because, according to Nina, *"with low ability students nothing seem to work"* (interview). This statement seems to be more of a teacher expectation rather than a fact. Related to this, a post-action reflective comment that *"[I]...did not expect them to come up with such a number of ideas, ...[even though] not all the students participated.* [She emphasised that she] *had to prompt and encourage them to do so ...ability might come into play"* (individual feedback, p. 78), highlights the powerful effect of pre-conceived thoughts. Apart from the ability factor, Nina has also mentioned the issue of carelessness. She stated that *"despite having the steps they [students] still do not check their work with them.....I think it has to do more with*

carelessness" (group discussion), and that the students' escapist mantra is *"I do not know"*.

Interestingly, the students who resisted to the use of SC asserted that the latter did not make any difference to their learning and that they preferred the old way of learning, that of relying on the teacher rather than being independent. Students' comments indicating such stance include: *"I ignore them as I do not feel like using them", "I do not use them as I do not want them", "I do not use them, if I get stuck, I either ask the teacher or figure it out myself"* (students' group interview).

The rest of the students, who welcomed the use of SC, here referred to as the conforming students, thus the proponents of AfL, maintained that AfL has made a positive difference to their learning experience. Their statements include: *"I follow them through so that I learn and remember", "Learning is better as I am making fewer mistakes", "Success criteria are helpful as I use them to check my work", "Helped me as they have guidelines on what to do"* and *"I would need them until I get used to what I have to do"* (students' group interview). One student has connected the benefits of SC with exam performance. Precisely, the student said, *"It's good to know what you are going to learn as when you grow up you have exams",* while another, who said, "*Helped me as you can be like grown-ups.....but you have to do exams"* seemed to indicate that new ways of learning might negatively affect the student's exam performance. This is further evidence of the strong cultural effect because a Year Two student should not be thinking about exams.

To recapitulate Nina's findings, the main issues that she brought forth for discussion during the CAR process are being outlined in Table 5.6.below.

Nina	Learners' Voices
From • AfL – the move from a conceptualisation of just a learning intention. **To** • AfL is a holistic approach, which starts at the planning stage **But** • Still some students do not seem to have changed their learning experience **And** • The expectation for the success of AfL, that students become more independent learners, was not fully met **Because** • The learners' short attention span, class-size, composition and the students' resistance might impinge. **However** • In using positive reinforcement, AfL worked with the majority of the students. **And** • The students' enthusiasm entices the teacher. **Otherwise** • The teachers' limited understanding and the lack of continuous support leads teacher to give up when faced with something new. **Therefore** • Professional Learning has to be practical and structured.	• Success Criteria re-assured me. • I used them up to a certain point. • Success Criteria used for checking.

Table 5.6: Summary of Nina's Results

5.5.6 Samantha's Story

Samantha's unedited story is portrayed in Figure 5.2 below.

> It was an experience that I knew for sure would help me through my teaching experience.
>
> At the beginning of this journey I was not sure what assessment for learning stands for. Thus, I checked on ilearn for the meaning to have an idea of the steps they follow.
>
> Through meetings with Ms Doreen, I started to be more curious and excited to look, check and follow the AfL steps. Prior to lesson planning, I became more aware to try to include AfL steps. When I told my pupils that we will try something different, they were excited and more attentive. I explained that they will have the learning intention written on the board.
>
> My main intention through this experience was to focus more on children's ability by starting my lessons from the very beginning and on the success criteria. Through the various topics like 'particelli' (like 'with', 'of' etc.), 'superlattiv assolut' (superlative), bar graphs, punctuation and past tense, I noticed that children understood more. I had the opportunity to know where my pupils were so I could adapt and work better with each pupil. The children showed me that they understood more. They also found it very helpful when I presented them the list of instructions. The students confirmed that they found them useful during homework, in my absence. Most pupils became more aware to check their work before they presented me their work. The demonstration lessons allowed me to observe and ask questions to check whether I was on the right track. I have always found encouragement and help from Ms Doreen.
>
> I am looking forward to continue using them in the coming years. For now, I used them mostly in grammar lessons and in Mathematics. However, my next goal is to include them in comprehensions and compositions.
>
> ✎ **Samantha**

Figure 5.2: Samantha's self-written story

5.5.7 Samantha's Description of her class

In her record-keeping booklet, Samantha described her students through two-classification clusters, *"a few learners are lethargic and demotivated, while others are interested and participate in the lesson activities."* Throughout the group discussion, she has repeatedly expressed her concern about the barriers that the students themselves were creating to their own success in learning. Specifically, she put emphasis on the students' *"lack of concentration and [their] easy distraction"* (group discussion). Then, in the subsequent group discussion, she remarked that *"a handful*

of students are motivated but there are others who are not even aware of what is going on" (group discussion). Yet, during the same meeting, she had noted that *"if the topic is to their liking, it will make a difference"* (group discussion).

With these perspectives, Samantha's concern is about the frustration of the high-achievers (group discussion), who have to wait for the others because it is the teacher's practice *"to start a lesson from the very basics of the topic [under discussion]."* Hence, she hoped that this CAR opportunity would equip her with new techniques to *"reach everyone's ability [by] adapting lessons and worksheets according to the [diverse] levels"* (group discussion).

5.5.8 Samantha's Knowledge of and Perspectives of AfL

In her story (see Figure 5.2), Samantha stated that *"at the beginning of this journey, [she] was not sure what AfL stands for."* Notwithstanding this uncertainty level, her initial understanding of AfL was explained as "AfL is about assessing pupils' previous knowledge on particular topics" (group discussion; record-keeping booklet). Prior to learning more about AfL, she set herself a judgement criteria, which should see *"learners remembering every step before they start doing their own work, [thus] will be more independent"* (record-keeping booklet). Eventually, she reported one particular lesson, where this yardstick was reached – "division lesson was successful because they remembered. I thought that they were going to forget" (individual feedback). On this lesson and her other trials, she argued that *"[while] the instructions (referring to the SC) were useful, they cannot be applied to all the topics, say compositions (creative writing)"* (interview). Additionally, she noted that *"[the students] showed [her] that they understood more, found the [SC] very helpful and became more aware to check their work"* (self-written story, Figure 5.2). More than

that, since she *"witnessed their (SC) impact"* (interview), she commented positively about recommending this AfL strategy to her colleagues, even though she reiterated her *"hesitancy about their effectiveness in every subject and lesson."*

This partial conviction about the impact of AfL across all subjects affected her self-efficacy to showcase this practice to her colleagues. In this respect, she suggested that *"it would be better if they observe [me-the researcher] rather than [her – the teacher] as [I am- the researcher] the expert"* (interview). Apart from not being sure of the effect of AfL across all subject-areas, she concluded that AfL *"works with some students, [while] with others nothing seems to work [because] they simply do not follow the rules"* (interview). Despite this stance about AfL, she was *"looking forward to continue using them (the learning goal and the SC) in the coming years"* (self-written story, Figure 5.2).

5.5.9 Samantha's Perspectives on Teaching and Learning and on her Professional Learning

Samantha described her teaching and learning style as "student-centred", in that through her actions of *"advising and guiding" she assists the student to [retrieve] what they already know"* (record-keeping booklet; group discussion). Furthermore, she explained that *"it is important for the teacher to understand [different] forms of assessment and to [use] inquiry based learning."* In line with this philosophy of teaching and learning, she commented that her actions try to impart the belief that *"everyone can learn according to their abilities"* and, consequently, she *"teaches [in a way to meet] their abilities"*, while *"motivating and encouraging them to participate",* even when *"they make mistakes"* (record-keeping booklet).

Notwithstanding this social constructivist approach to teaching and learning, in the interview, she said that *"[she] used to write only the title but now [she is] specifying what they have to do."*. Additionally, she explained that *"prior to the demonstration lesson, [she] used to keep [the learning goal and the steps] in [her] mind but now I am sharing them."*

Apart from this learning gain, she remarked that *"...observing [me] was something she really liked as [she] could see a practical example"* (interview). More than that, *"[she] appreciated the constant support, which helped [her] to identify the right methodology for a particular lesson."* She has also expressed her positive experience of acquiring more *"practical ideas, especially from the Year Six teacher."* Despite her high regard for collaborative learning, she declared her discomfort if colleagues had to observe her teaching. Specifically, she noted that *"[she would] not feel comfortable,...like your head empties at that time"* (group discussion). Although she does not yet feel competent to showcase this pedagogy, she would *"encourage teachers to observe a demonstration lesson"* (interview). According to her, impact at the school level can, and will be, reached if more teachers are involved in the learning of this pedagogy, rather than just being *"only three"* (interview).

5.5.10 Samantha's Espoused Beliefs about Formative Assessment

Samantha's ticking of the belief statements revealed that she did not take a position on the significance and contribution of group learning conversations and the students' self-assessment competences. In her prioritisation of beliefs, her list revolved around the notions that everyone can learn and that mistakes are a useful part of the learning journey, while dwelling on the need for motivation and encouragement.

5.5.11 Samantha's Perspectives on Class-Related Factors

Samantha was deeply concerned about her students' attitude towards learning. She believed that their lack of attention, concentration and distractibility impinged on their performance, and thus on the effectiveness of AfL on them. More than a concern, it became a frame of mind, in that this worry began to influence the teacher's expectations, prior to the lesson, of the students' performance. A case in point is the teacher's disclosure, during a group discussion, whereby she expressed, *"...[the] foreseeing of total confusion [and] am dreading the last lesson of this topic"* (group discussion). In another group meeting, she shared her frustration that although she would give them all the necessary preparation for writing a letter, *"it is unbelievable that they have all the features of a letter...they [would] ignore them"* (group discussion). More than that, she stressed that *"[the students] tell you I do not know and leave the work incomplete."* Furthermore, she noted that *"they [the students] give up on trying"* (group discussion) and *"some....are really hard-headed and ignore the first step"* (group discussion). Subsequently, in the interview, Samantha revealed that she, too, had *"given up in creative writing"* (interview).

In referring to one particular student, Lara (name changed), the teacher's belief was that *"nothing seems to sink in as she does not pay attention"* (interview). However, the latter characteristic could be a disguise for the student's lack of understanding. For instance, in the letter writing lesson, Lara was not very successful in her first attempt, as Figure 5.4 illustrates.
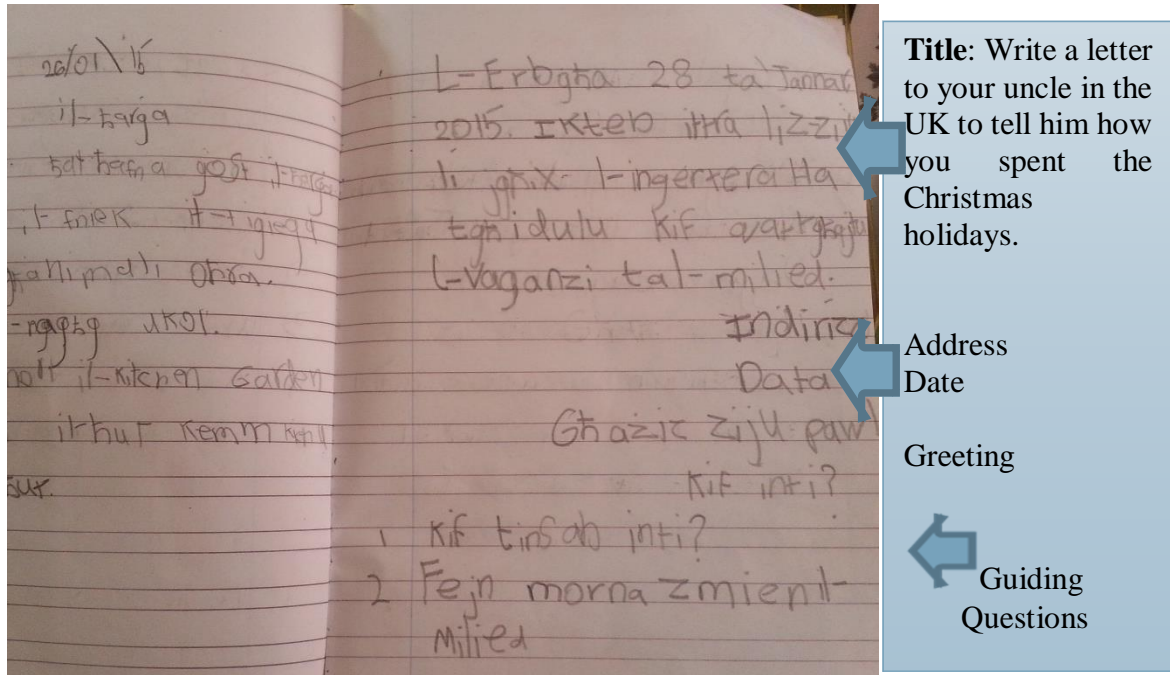
Figure 5.3: The letter's title and guiding tips as given by the teacher
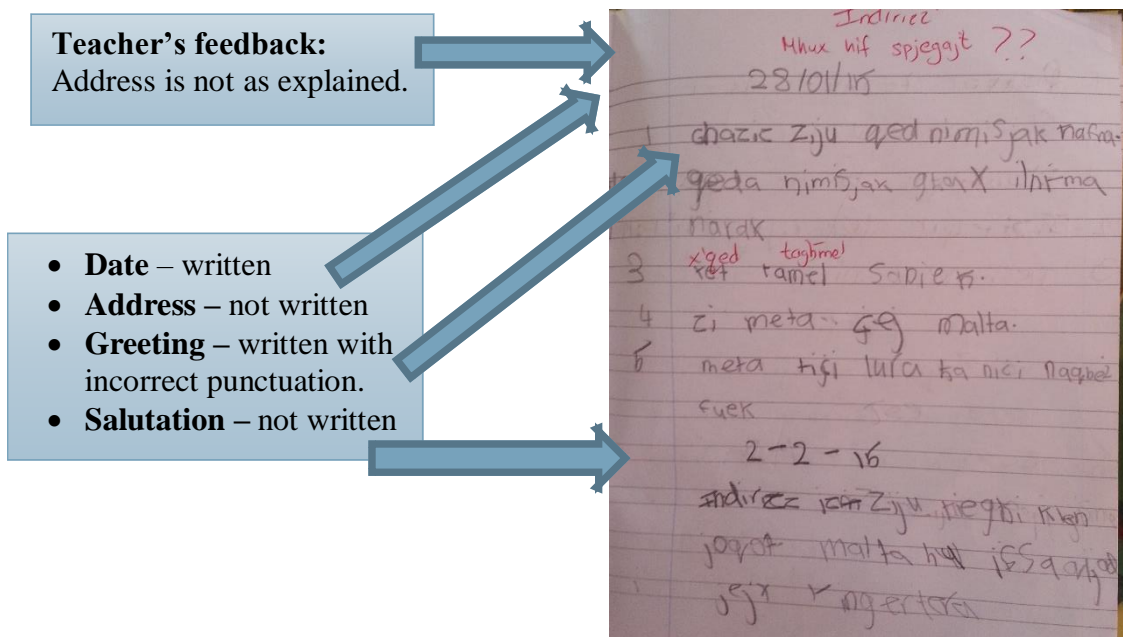
Figure 5.4: Lara's first attempt
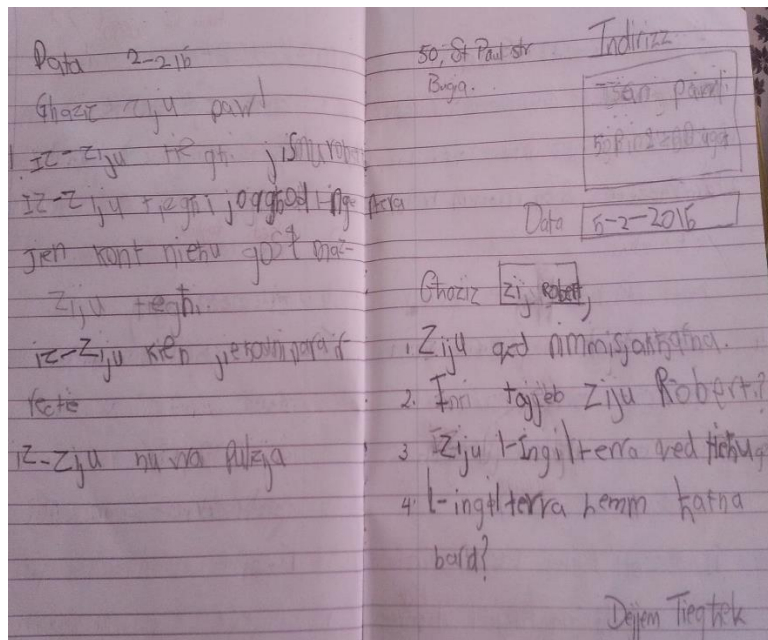
Figure 5.5: Adapted letter completed.

With probing, she managed to fill-in the spaces for the:

- **Address** – even though the street name preceded the house number, which then was modelled, as shown on the right side of the word 'Indirizz' (address).

- **Date**
- **Greeting and**
- **Salutation.**

When asking Lara about whether she understood the teacher's feedback, she responded negatively by swaying her head. Hence, this situation was not a matter of attention but of not knowing what an address is. Consequently, she needed to be guided through the formulation of an address, see Figure 5.5.

Despite these perceptions and expectations, Samantha, in her story, concluded that *"pupils were excited and more attentive [by this change of practice]."* On their part, the students' responses supported the teacher's conclusion when they confirmed the *"...use of the instructions to check if [they] have something wrong"*, and when they *"...forget, they look back at them, remember and check"*, *"...can understand more.....give you a lot of hints........now, we are working better, as we can work at a higher level."*

In recapitulating Samantha's findings, the main issues that she put forward are being outlined in Table 5.7 below.

Samantha	Learners' Voices
From • AfL - assessing pupil's knowledge on particular topics. **To** • AfL – SC were useful as the students remembered, especially in the division lesson. **But** • Learners are careless, lazy, and they lack concentration, lethargic and demotivated. **As** • They do not always use the instructions given. **Therefore,** • I am concerned about how this lesson's topic is going to turn out. **Because** • Pedagogical success occurs when there is retention accompanied by the right learning attitude. **However,** • I have learned more from the Year Six teacher. **And** • Although I still do not feel an expert, with the majority of the students AfL has worked.	• Helped me in lessening my mistakes. • Learning got better as we understand more. • I use them when I need. • With them we can work at a higher level.

Table 5.7: A Summary of Samantha's findings

5.5.12 Belle's Story

Similarly to Nina's account, Belle's story is being reproduced unedited. Its structure is different from that of her colleague, in that Belle has decided to divide it into sections, which reflect herself prior, during and after the journey. Detailed findings of Belle's journey follow right after her account.

The Context…..

I teach. I try to….

This year was particularly challenging because it was the first time banding was implemented, and I have been assigned the lowest band. In my class I have 16 children, all of whom have many difficulties: academic, social and psychological in nature.

I learn…..

I have decided to embark on this project because I am always open to learning new things, and because I trusted Ms Doreen – I know her, and I was sure that working with her would be profitable.

The Journey…

At first I did not know much about AfL, however, after the very first few meetings and the demo lesson, I quickly got a grip of this and I liked it a lot. I realized that I was already implementing many strategies of AfL without knowing I was. The more I learned about it, and the more I tried my hand at it, the more I could appreciate this forward approach to teaching and learning.

I began to plan more and more lessons using this approach. The pupils quickly assimilated this, and found the success criteria very helpful. In fact, I produced a set of notes for Maltese, English and Maths with success criteria for the students.

In my view, the most beneficial aspects of AfL are:

- They help children focus – knowing the learning goal gives them a sense of purpose. Also, it should help them evaluate whether or not they have achieved it. E.g. Did I learn how to measure an angle using the protractor?
- Success criteria help the children gain more confidence – they do not need the constant explanation of the teacher, but can rely on the steps (thus on themselves) to quickly revise the steps they have to take to master any task.
- Questioning – the awareness of the various types of questions one can ask is very helpful, because one might tend to ask always the same type of questions to the same number of students. Questions help one **think**. It is important that we help our students become reflective persons.

Lifelong Learning

I link AfL to LLL, because once the children get used to working using goals and steps, they should become able to apply these few and simple techniques to any area in their life.

Conclusion….

The situation of my class, this year, was particularly challenging and there were times when I really felt like giving up on them. Sometimes nothing I did seemed to have a lasting effect on them. However, in the long run, I am thankful that I have implemented AfL, because I truly believe that it is a very effective tool, especially with children who face academic difficulties.

I look forward to continuing to implement AfL in the years to come, always fine tuning with the class I have. I also believe that this should be a whole school approach for the students to gain the most of it.

✎ *Belle*

Figure 5.6: Belle's authentic account at the end of the CAR process

5.5.13 Belle's Description of her Class

Belle's narrative of her class (see Figure 5.6) reflects the setting that these students have found themselves in, the lowest band. In fact, she explained that her students are *"of such a low ability, almost illiterate, that you really need to break everything down into smaller steps"* (group discussion). Furthermore, she highlighted that her cohort was *"always at the margins [of the school's education system] and the academic material was always beyond them and they managed to bypass it. I feel that they gave up and shut down"* (group discussion). More than that, she admitted that in her teaching experience she had never faced such *"low extremes…[and]…this frustrated her …[because she was convinced]….that she was not reaching everyone"* (record-keeping booklet). In relation to this, she stressed that it was very upsetting to be in the *"fourth week of the scholastic year and [still] feeling that I am failing a number of learners [because] the work does not match their level of competence"* (group discussion).

With these concerns, she decided that her participation in the collaborative action research project should help her to assist the students in gaining *"a full understanding of the mathematical concepts especially the day-to-day computational problems"* as well as *"an overall and general improvement in literacy"* (record-keeping booklet). It must be said that she put herself two very broad, challenging and ambitious goals. However, this high-achieving bar was set because she believed that the benefits of AfL lie in *"[not only] moving from the known to the unknown [but also in getting a] deeper understanding of where each student is"* (record-keeping booklet).

5.5.14 Belle's Knowledge of and Perspectives on AfL

In the first group discussion, Belle had vividly pointed out that, according to her, the sharing of the learning goal might undermine the discovery process to learning. While this shows Belle's lack of knowledge about AfL in this regard, it supports her statement on the *"[un]familiar[ity] with AfL*, at the beginning of the process"* (group discussion). Other areas which highlighted Belle's level of AfL knowledge were those related to feedback, namely, her understanding as to why this strategy should result in more work for the receiver (group discussion), and her assertion that low ability students cannot handle higher order questions (group discussion).

Despite this dearth of AfL literacy, in the first group discussion, Belle defined her understanding of AfL as the *"assessment of the individual student level, skills, aptitude and motivation, to use that, as the starting point for further learning"* (group discussion). Eventually, as the discussion progressed, she claimed that *"in reality, we, [teachers], do these things, but we [teachers] do not make the learners aware of them, but when you make the learners aware, AfL is more successful"* (group discussion). In the first individual feedback session, which took place towards the end of the first term – two months into the action research – and after she had witnessed the effects of AfL on the teaching and learning, she concluded that *"AfL is about empowering the learner with the right tools to learn"* (individual feedback session). This was reiterated and emphasised further in both the record-keeping booklet and in the sharing of her experience with her non-participant colleagues, where she stressed that *"AfL is a tool which empowers students by making them aware of the learning goal and the steps to achieve it"* (PPT presentation, School Development Day).

In the record-keeping booklet, she commented that *"AfL is a great teaching and learning tool, which [she] will continue to learn about and implement in [her] class in the years to come"*. In her view, AfL entails just *"...a little more effort....it is so simple, yet effective and it is a good thing that teachers get to know about it"* (individual feedback). Subsequently, towards the end of the group discussions, she concluded that AfL helps the teacher to structure the lesson, *"...it is like a template...."* (group discussion), which is *"...not rigid"* (group discussion) and *"...in being aware of what you are doing you make sure that [it is done] well because [you] believe in [its] benefits"* (interview). She insists, *"....it [AfL] helps you in the planning and delivery of the lesson"* (individual feedback).

For Belle, the knowledge gained about AfL led to two major breakthroughs: "*...more explicit use of the learning goal"* (individual feedback, p.107), and *"...the SC, as in sharing them with the students ... [thus] making them aware of the path [helps] them to become independent learners"* (interview). More than that, she associated the SC with lifelong learning, in that she has linked the use of the SC with other branches of life. Precisely, she argued that *"if they [the students] get used to follow a set of steps, [then they] can transfer this skill to other aspects of [their] life"* (interview and self-written story – see section 5.5.12). This position started to emerge at the end of the first-term when, in the first individual feedback session, she strongly argued in favour of the SC. According to her*, "SC are really a well of gold...as they are giving them [the learners] the power to master their own learning, ...[that is] the instructions and tools to work with"* (individual feedback session). Furthermore, Belle pointed out that *"[she was] already noticing improvement as [the students] have used the steps when they were stuck"* (individual feedback). This outcome was not something that she had

set as a quality marker by which to judge the effectiveness of AfL. Instead, in the subsequent discussion, she revealed that *"[with the use of AfL]….[she was] expecting better answers to questions asked and empowerment"* (group discussion; record-keeping booklet).

Such expectation must have been met, either in full or to a certain degree, as in the discussions, she expressed her gratitude for implementing AfL, *"[because] it alleviated her situation"* (group discussion). Her satisfaction re-surfaced in her story (see section 5.5.12), when stating *"...[her belief in the effectiveness of the] tool, especially with children who face academic difficulties."* It is worth noting pointing out that Belle was conscious of the fact that the similarities between the AfL philosophy and the thematic approach might have eased the understanding, use and acceptance of the new, or not so new, pedagogy (interview).

Notwithstanding the overall positive change in Belle's standing about AfL, in one of the group discussions she remarked that *"...with some students [she] will not break through as the level is so low."* Therefore, although her level of AfL literacy has improved considerably, there is still the belief that with some students AfL has not been effective. The possible reasons for this might be discovered in section 5.5.17 below, which looks into about Belle's perception of her students' disposition to learning within the scope of the discussion about class-related factors.

5.5.15 Belle's Perspectives on Teaching and Learning and on her Professional Learning

Belle's teaching and learning style is based on the *"thematic approach"* (group discussion; record-keeping booklet) and a *"child-centred approach"* (record-keeping booklet). In the interview, she reiterated that her style was *"not a chalk and talk*

approach." Evidence for this statement is shown in Figure 5.7 and Figure 5.8 where

students are seen outside the greengrocer shop that is situated in front of the school,

and then in class handling the vegetables and fruit they bought.

Figure 5.7: Some of the students after they shopped at the greengrocer

Figure 5.8: Students being hands-on during a lesson about recipe writing and meal-preparation

Furthermore, she stated that *"no child is ever humiliated, the slightest effort carries praise [,] lots of group opportunities and differentiated work are provided",* (record-keeping booklet). She has also said that no assumptions are made about the students' knowledge and therefore, "*… [she] starts every lesson from scratch and she keeps on repeating until everyone gets it….[because] everyone can learn"* (record-keeping booklet). According to Belle, thematic teaching is the most effective strategy that she has ever used and because of this she was not going to give it up easily. During the interview, she insisted that *"nobody gets bored with the thematic approach, not even the high flyers, [although] I am concerned that I am not stretching them enough"* (interview). In this respect, when discussing one of the strategies of AfL, the sharing of the learning goal, she was adamant that this went against a discovery approach to learning. Precisely, she emphasised that *"the learning goal would kill the discovery process"* (group discussion) and since "*this strategy [goes] against [my] current practice…it might jeopardise the work that [I have] been doing"* (group discussion), which, she feared, might de-motivate her students further. She stressed that this was very risky, when considering that *"[she was] trying to move hills and mountains to break the de-motivation of students"* (group discussion). Notwithstanding her uncertainty, she was willing to experiment with this new strategy and other AfL strategies.

In the record-keeping booklet, she wrote about *"…[her learning of the] new techniques, strategies and how to provide opportunities for self-assessment"* (record-keeping booklet). Also, in the first individual feedback session, she was really ecstatic in telling that *"[she was] really enjoying it, as [she was] really learning and they [SC] are really effective"* … *"and they [AfL strategies] are not a big thing"*. The direct

witnessing of the effect of the SC must have encouraged Belle to further her learning. In fact, she pointed out her *"openness to learn new things as long as [she believes] in them"* (interview). Particularly, she remarked that *"the ongoing support….the duration of the training ….and the fact that it was about pedagogy kept her interest"* (group discussion; interview). Her involvement and commitment is clearly evident from the resources that she created out of her own self-initiative. These consisted of a set of notes and exemplars based on the SC strategy for the main subjects. Three examples from these notes and from the students' copybooks are being illustrated below,

Figure 5.9: Process SC for Long Multiplication as on the IWB
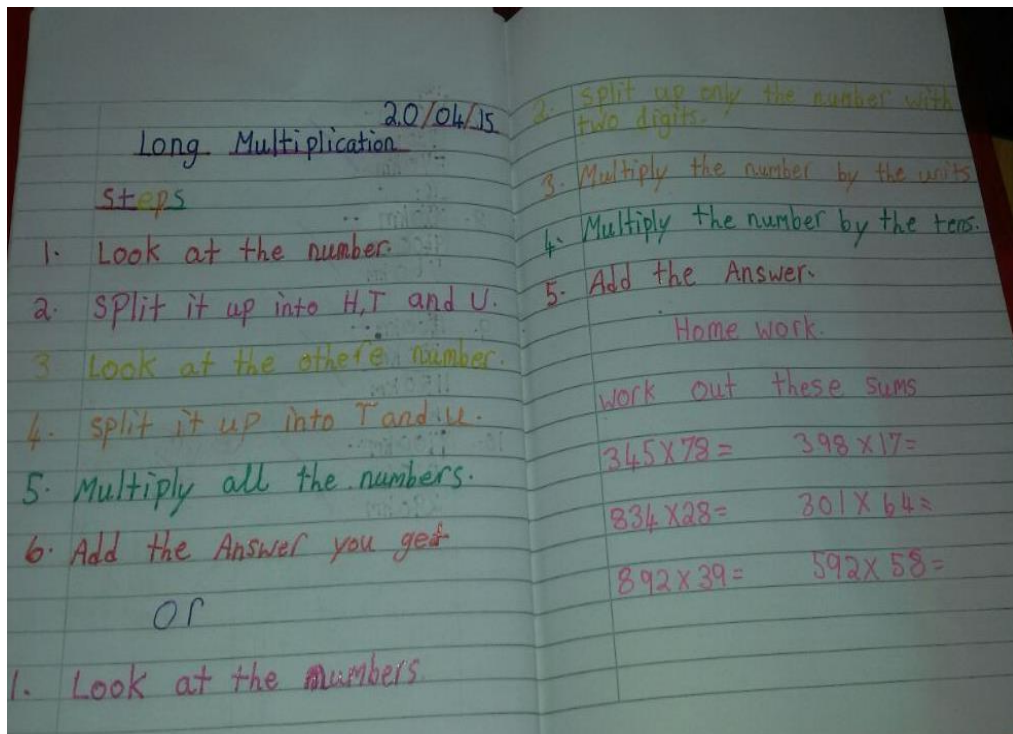
Figure 5.10: Process SC for Long Multiplication on a student's copybook
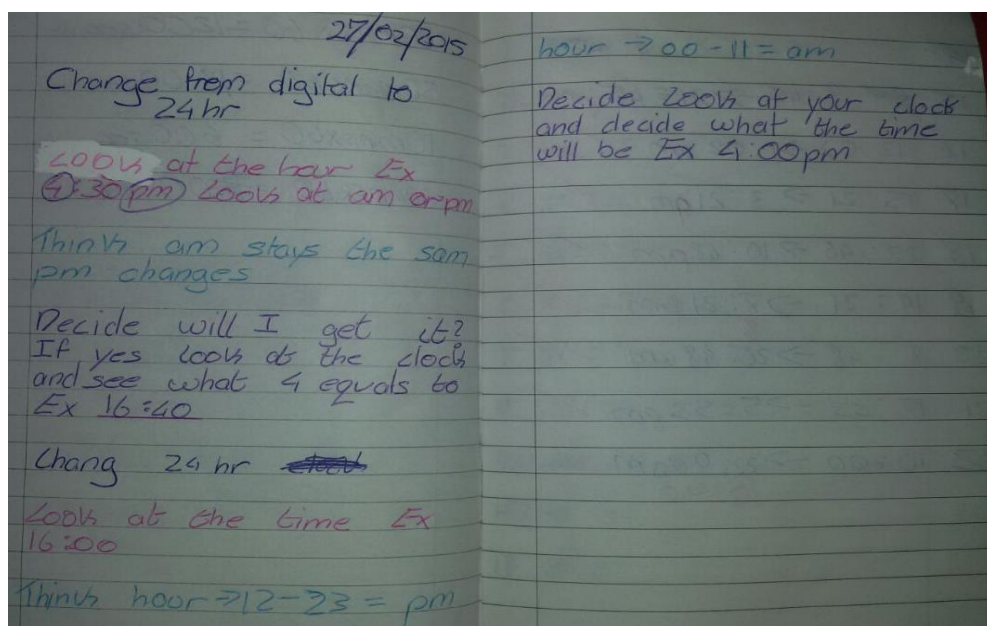
Figure 5.11: Process SC for changing the digital time from 12hr to 24hr

Nonetheless, Belle noted that interest is something subjective and personal. It reflects a person's character and ways of doing things and, therefore, her interest and enthusiasm might not be shared by other teachers. Consequently, she pointed out,

> …..[her liking] in venturing into new initiatives to gain something, [but she acknowledged that] there are those [teachers], who are set in their own ways and would not be happy to try new things (interview).

At a later stage, during the interview, she argued that success criteria (SC) can be the yardsticks for reflection. Courageously, she confessed that *"...in our [the Maltese] culture we [teachers] do not stop to reflect, and these criteria help you do that."* She continued to argue that the school action plans, whose aim should be "to address the attitude and spirit behind the teaching and learning" (group discussion), could help with this because they would not only provide *"...something structured but would also be the means that connects teachers as a whole school approach to teaching and learning"* (group discussion). Also, she emphasised that *"action plans should grow from teachers as otherwise they would not relate to them"* (group discussion). This is more so when the new pedagogy is rated as *"...forward thinking for our [the Maltese] context…"* (group discussion).

5.5.16 Belle's Espoused Beliefs about Formative Assessment

Belle has contested only one statement - use of higher order questions encourages participation from all learners and it increases the students' reasoning skills – because *"some students cannot answer higher order questions"* (record-keeping booklet). Other than this, she enacts her beliefs through positive encouragement, no humiliation, differentiated work, and by motivating them because everyone can learn.

5.5.17 Belle's Perspectives on Class-Related Factors

This section comprises the findings about the teacher's perspectives on the students' disposition towards learning, class-size and setting as well as the ethos of the surrounding learning environment.

Belle's description of her class characteristics has already shed light on some class-related factors that seem to locate the problem within the students. She attributed this state-of-affairs, de-motivated learners, to a wrong system, which has marginalised further these students when it changed to a mixed-ability one. Belle insisted that it is *"difficult to reach every student in a mixed-ability class of twenty-four"* (record-keeping booklet; group discussion). In line with her criticism of the system's faults, she was convinced that *"past teachers cannot be blamed"* (group discussion) because when she was in the same situation *she "used to teach the average and the rest you try to reach them, but it's difficult"* (group discussion). Therefore, the gap between those at the lower end of the periphery and the rest of the class would be widened further (group discussion). In this respect, she suggested that *"the adult-to-student ratio should be high and the banding range within the group should be narrower"* (group discussion).

Apart from Belle's concerns about the system, she raised another problem, that of the students' attitudes towards learning, which factor might impinge on the effectiveness of a new pedagogy. Particularly, she finds it difficult to come to terms with the students "laissez-faire" (group discussion) attitude, which she attributed to the learning culture. In fact, she argued that *"...think it's a culture. If they [the students] can get away with doing nothing, or with the minimum effort, they will."* (group discussion). This was also acknowledged by one student during the interview, who recognised *"the need to*

put more effort" in the learning. Additionally, Belle pointed out that her *"students do not bother to check their work against the SC"* (group discussion). In the interview, this claim was supported by a number of students who, unaware of the teacher's concern, reported that - *"I do not use them [SC] when I understand what I have to do. Otherwise, my mum helps me"*, *"Not that much…not always"*, *"As when you are not used to doing something, you will not do it"* and *"to me it made no difference as I am not used to them."* Contrastingly, other students with a more favourable stance said, *"Now, I can say that I know Maths and if I do not know something or forget how to work, say, the long division, I will look up in the notes and they will help me."* Another one added that both the learning goal and the SC are being beneficial as *"the goal helps me [in that] I would know what's going to happen and I [would] think on what I had done, previously, about that topic."* Belle, in not being aware of the students' standing on the SC and their arguments for its non-use as a learning habit, has questioned whether the learners' attitudes were a matter of *"…lack of concentration, aptitude or attention"* (group discussion).

With this background, she admitted that her own and, therefore, the class's areas for improvement were the way they (she and the students) deal with mistakes, feedback, as *"most of the time, we [teachers] do not give them [the students] the time to act upon it [feedback]"* (group discussion) and the checking of the quality of the work produced. Notably, she suggested that *"if we [teachers] manage to instil in learners the skill and competency to create their own steps for everything they do, we would be helping them to become more reflective persons"* (interview). In recapitulating Belle's findings, the main issues that she has brought forth are outlined in Table 5.8.

Belle	Learners' Voices
• AfL as a tool to understand the learner's skills, aptitude and motivation. • AfL hinders discovery learning. **To** • AfL structures the lesson because it shapes how a teacher plans and delivers the lesson. • AfL is really a set of skills which should be extended to non-academic subjects too. • Success Criteria are very useful. **But** • Learners need to be made aware of why we are using these strategies. • Learners need to take more responsibility in their learning. **And** • The learning culture has to focus on the spirit and skills needed for learning. • Classes have to be smaller and with a narrower ability range. • Training is best when it is short and about pedagogy. **Otherwise** • Teachers give up when hearing something new. **Because** • Pedagogy is a teacher's sacred domain.	• We need to put more effort. • The use of SC is not in our habit of learning.

Table 5.8: Summary of Belle's Findings

5.5.18 Doreen's Story

The following personal story highlights the professional learning curve that I went through as a result of my participation in the CAR process.

Initial Preoccupations

This was my first experience as a professional leader and guide in an action research project. It was not any action research project, but a central component of my doctoral studies. Therefore, its success or failure would have a huge ripple effect in this regard. The tension was high, uncertainty too, with a lot of questions such as "How would I be looked at by the participants?" "Would I be accepted?" "Would I manage to keep the participants' interest until the end?" "Would I be able to handle unexpected disruptions?"

The Goal

My goal was two-fold. Primarily, it consisted of assisting the participant teachers in the understanding and implementation of AfL, thereby changing their practices and, as a result, improving their classroom situation. Secondly, I wanted to have a good research product not only because I believed in what I was doing but also because it was very timely and much needed in the Maltese context. Hence, I felt that this study would be contributing to my personal and professional growth, whilst possibly informing educational policy in Malta

Recruitment

June 2014 marked my first face-to-face encounter with all the Heads of School within the college and, also, the staff at the chosen primary school. The former meeting brought forth the first challenges as one HOS remarked how risk-taking my research was, given my professional positionality. In the latter meeting, the teachers' concerns were mostly about the amount of work that their participation would involve when considering their already packed days at school.

Following these meetings, the staff had a week window frame to reply to the invitation. Only three teachers came forward and it worried me that this number might be too little. However, since this type of research is about the depth, richness and improvement of a particular situation, what mattered most was the quality of the data rather than the quantity. In relating this to the data collected, I, humbly, think that the data collected is meaningful and provides several grounds for thought, reflection and analysis.

Retrospectively, from a logistics point of view, I think that if more participants had volunteered, its organisations would have been more complicated and difficult to handle. In such case,
I would have needed to adopt a selection process that would have left a number of teachers out.

Following the teachers' response to the invitation, there was the summer recess. I feared that there could be some re-thinking, which would have necessitated a new recruitment process. This possibility could have only been known once school re-started the following September.

After the summer recess, I was prudent to let the teachers settle in with their new class groups before making the first contact.

The Initial Stages of the CAR

The first group discussion brought forth the first challenges: Belle's disagreement on the effectiveness of the learning goal. Handling such professional disagreement was not easy and I decided to give the teacher the benefit of doubt by avoiding confrontation, while inviting her to observe this strategy in action before commenting further about it. At the end of the session, I was relieved that I managed to positively control and chair the meeting.

Being there…..

Eventually, as I began to make my presence more felt at school, I had the opportunity to meet the teachers informally in the corridors. It was not anticipated that they would stop me to comment about our project, but short comments like, 'I am looking forward to the practical part', indicated that while the interest was growing, the teachers were more interested in the practical action rather than the discussions we were having. In view of this, video-clips showcasing AfL in practice were included and followed by discussions in the group meetings.

Given the huge interest in how AfL would work in their classrooms, I felt that the impact of my performance was decisive. This is because by the end of it, the teachers would have formed their first initial thoughts about the worthiness of AfL. Again, the tension was high, on my part, as I wondered what their feedback could be.

The Aftermath of the Demonstration Lesson

All the three teachers were satisfied with what they had seen. Although the three of them took different follow-up measures to emulate the implementation of, at least, some strategies of AfL, Belle was really taken by it. In less than two months, she worked on a new set of notes while expressing her gratitude for this opportunity. Once she shared, *"Ms, I am not feeling that I am doing this for your research but for the learners."* Needless to say, this feedback raised my spirits and showed the positive rapport that was being developed with the participant teachers.

A secondary unanticipated impact was revealed by a Learning Support Assistant (LSA), who commented on how helpful she found the SC with her high-functioning student on the autism spectrum.

Nina, who also commented favourably on the lesson's outcomes was the most quiet of the three. I wrongly assumed that she was not taking the learning process seriously. This was definitely not the case as she not only developed colourful learning charts but also expressed her interest to learn more about AfL in other pedagogical content areas.

Samantha was the teacher who used social media private messaging to enquire about particular methodologies and resources for particular lessons. Perhaps, this was due to the limited time that we had at our disposal for the sessions and the lack of opportunities for teachers to discuss their queries about approaches to practice.

My Role

These three teachers had neither participated in a CAR nor had they been given such a central role in discussions about pedagogical practice. Hence, at first they relied very much on my guidance and expected it. I felt that they looked to me as the problem-solver that could provide them with quick-fixes to improve or radically change their situations. This brought a dilemma about the extent of support that I should give. Because I wanted to adopt a learner-centred approach, my intention was to co-construct knowledge rather than transmit it. In this light, Belle's remark about, *"how democratic [I was]"* was greatly welcomed and appreciated, and a sign of success, too.

All along the process, I wore three main hats of knowledge - disseminator, advisor and guide. Wearing of these hats depended on the situation, as each one places you at the right distance from your learner at the right time. I learned to adapt and adopt the different positions according to the circumstances and to always suggest rather than impose. I can safely say that most of the things suggested were taken up, and change has taken place to different degrees.

Despite the small successes of this project, I did not manage to get the participants observe each other teaching. Interestingly, they could talk, discuss and share resources but taking the self-initiative to arrange these teaching practice observations was still a demanding task for them. Perhaps, we should have co-structured it, as they suggested in the last group discussion.

Concluding Comments about what I learned.

During the CAR project, I grew in my appreciation of the teachers' craft knowledge and felt that leaders in professional learning need to help teachers be more confident in their knowledge. Eventually, this knowledge should be capitalised on through a distributed leadership relationship. This kind of leadership facilitates a trusting and collaborative working relationship, thus contributing to a safe learning zone between the participants, as no one would feel threatened.

Also, I learned that teacher requires similar approaches to those adopted in class, but which have to be suitable for adult learners, in that teachers, too, have to go through their zone of proximal development (Vygotsky, 1978).

I was also struck by the influence of the teachers' expectations on the teaching and learning process. In this study, Samantha's expectations have not only limited the extent of the students' performance right from the beginning but also the teacher's belief about what they can and cannot do. One possible way to override this barrier is to work with teachers on the right attitude towards a teaching and learning episode and to focus on the successes of that same episode. Being a direct witness of a successful outcome entices the teacher to try again because success breeds success.

> Although I was conscious of a certain level of tension within myself, particularly in the early phases of the CAR, the participants and I have both learned from each other and we surely came out of this process as different persons in our thoughts and practices concerning teaching and learning through assessment.
>
> ✎ **Doreen**

5.6 Summary of Chapter

This chapter presented the stories and the findings of each participant teacher, which together showed the transformations and the persistent concerns that they went through and still have. Their responses not only indicated their levels of thought and understanding but also their in-use attitude towards AfL. Despite having stated that they all operated from a student-centred approach, certain paradoxes were identified in terms of the teachers' issues with regard to mixed-ability classes, class size and students' abilities, among others. The discussion of the results has also made explicit the teachers' journeys through AfL at the levels of thought, understanding and practice. On the basis of the data presented, it is clearly evident that a certain degree of positive change has occurred, implying that the intent of the CAR has been reached. However, the extent of such change and what might have contributed to or hindered it will be discussed in the following chapter, the analysis of the CAR.

Chapter 6 : Discussion of the CAR's Findings

6.1 Overview

This chapter provides an in-depth analysis of the results presented in the previous chapter. It does so by bringing together the issues put forth by each participant in the sharing of their knowledge and perspectives with regard to AfL, their outlook on teaching and learning, their views about professional learning, and their perceptions about the effect of class-related factors on the implementation of AfL.

These insights have been grouped under three types of beliefs: beliefs about pedagogy, beliefs about teaching and learning culture and beliefs about the influence of the students' competences on learning and being successful through AfL.

6.2 Beliefs about Pedagogy

Analysis of the participants' beliefs about pedagogy revealed that the degree of belief in a particular teaching methodology is strongly related to the extent of the pedagogical impact on the learners.

Table 6.1 illustrates that two of the participants', Nina's and Samantha's, initial understanding of AfL was limited to a specific AfL strategy, the learning intention and knowing where the learners are.

Participant	Understanding Prior to CAR	Understanding After CAR
Nina (17 years teaching)	*…having specific learning intentions and informing the students about them.*	*My perception of AfL has changed. I used to do these things but only orally. Now, the learners are gaining more because I shared them in writing and they remain visible in class. I am noticing the students are looking at the wall charts and they read the steps.*
Samantha (4 years teaching)	*AfL is about assessing pupils' previous knowledge on particular topics.*	*I used to write only the title but now I am specifying what they have to do. I noticed that for that particular lesson it worked for some students. Some of them do not even read the title.*
Belle (9 years teaching)	*Assessment of the individual student level, skills, aptitude and motivation to use that as the starting point for further learning.*	*AfL is about empowering the learner with the right tools to learn because it makes them aware of the learning goal and the necessary steps to achieve it.*

Table 6.1: The Shift in the participants' understanding

Contrastingly, Belle's initial understanding was more elaborate as she perceived AfL as the tool that would help her identify the students' aptitude and motivation. Therefore, Belle looked at AfL as the key to finding out what motivates students, so as to plan her teaching and learning accordingly. Although the influence of assessment on motivation has been acknowledged by Black and Wiliam (1998a, 1999), none of the definitions that were discussed in Chapter Two regard AfL as the yardstick with which motivation can be measured. Belle's explanation seems to indicate that motivation should be a prerequisite for learning. Such a stance contrasts with Wiliam's (2017c) position that motivation should stem from learning rather than being an a priori cause. In this light, assessment showing the mastery of the learning outcomes would be the cause for motivation instead of its identifier. The way in which the assessment evaluation influences the students' volition for further learning is similar

to the attribution theory process (Dickinson, 1995) on what might influence the students' future performance. In such case, the learning experiences influence the students' motivation. Consequently, if formative assessment is practised in the way it should be and thus the students develop a certain degree of autonomy, then student success becomes the predecessor of motivation.

Interestingly, the topic of motivation has also featured in Nina's goal for the CAR project. It follows that both Nina and Belle are seeing a link between AfL, motivation and students' learning. They are both using Dickinson's (1995) theory on different levels. Nina is focusing on motivation as a cyclical process, for and from learning, through the use of SC to help students be successful in their learning, which would encourage them to approach new learning episodes. Belle, on the other hand, considers assessment to be the means through which she unlocks what motivates students, so as to teach them according to their interests, thus motivation for learning. Therefore, both participants perceive an interplay between assessment, motivation and learning, albeit in different ways.

As stated above, Belle looks at assessment as an identification tool that reveals the students' interests, which would act as a motivator for the forthcoming learning episodes. In turn, this behaviour facilitates the student's journey towards independent learning. Therefore, Belle's outlook on assessment, motivation and autonomy echoes with Spratt's, Humphreys' and Chan's (2002) order of motivation and autonomy, for whom "in many cases motivation precedes autonomy" (p. 245).

A possible explanation for Belle's association of AfL with aptitude and motivation is her class context. When describing her class, she had repeatedly referred to her students as a group of de-motivated students, which indicates the influence of the class

environment on the teacher's pedagogy. The situational element has also featured in Samantha's final thoughts about the impact of AfL. She has stressed that *'...for that lesson it worked...',* which highlights the teacher's need to try it across the subjects to be really convinced of its worthiness. Furthermore, it demonstrates that the new knowledge is shaped by the added-value that the AfL experience must have offered to the participants (Hay et al., 2015). However, the additional benefits depend on the teacher's action. For instance, if feedback is not used in an effective way, it will not make a significant impact, and, ultimately, reap the benefits that research findings have shown (Hattie, 1999).

In discussing a set of belief statements, given in the record-keeping booklet, about feedback, higher-order questions and learning intentions, Belle and Nina showed that not only their initial understanding was limited but also their AfL practices. However, such convergence between understanding and practice was not always synchronised, as some contradictions were highlighted between the espoused and enacted beliefs. In Belle's case, she stated that she always starts from scratch without assuming anything, yet she also stated that she starts from where the learners are at. Similarly, Samantha wrote that she believes in the students' capabilities to learn according to their levels of ability. This is interesting as it highlights the perception that learning has limitations stemming from the fixed nature of ability, that is, a fixed mindset (Dweck, 1986, 2010). The participants expressed this belief when stating that they motivate students by encouraging them with positive reinforcements. Such emphasis on encouragement and being and feeling positive about learning indicates that the students have a passive approach towards learning.

Hence, the participants' standing about AfL prior to the CAR process consisted in:

- a limited level of understanding, albeit to a different degree, - because, as explained earlier, their definitions of AfL were restricted to one particular strategy and did not mention or implied the use of assessment to make inferences from the evidence.

- a lack of formative assessment opportunities, - because they did not have the support that other schools had meaning that they could neither witness examples of AfL in practice nor be in a learning community to discuss the pertaining issues.

- teachers relating learning to ability, - their input in the first phase exposed their belief that academic success in learning is heavily related to one's cognitive ability.

- teachers who needed to constantly motivate their students to engage in and with the learning process – their input indicated the presence of motivated and amotivated students and their biggest struggle was getting to the latter group of students.

At this same time, in the initial phase of the research, the participants had set extremely ambitious goals for both the CAR project and, particularly, for their judgement of the effectiveness of AfL. Their goals consisted of reaching all the learners, independence in learning and keeping every student motivated. Thus, for AfL to be accepted and sustained, these outcomes had to be met. Certainly, at this stage of the CAR process, the participants were not yet aware that the success of AfL did not depend solely on them but also on the input of the learners. If the students were not involved as active contributors, these expectations might not be reached in their entirety. Consequently,

the teachers might come to the wrong conclusions about AfL not because the AfL pedagogy is at fault but because of unintentional malpractices or perceptions.

On the basis of the evidence portrayed in Table 6.1, the participants' understanding of AfL has improved because the CAR process enabled them to be direct witnesses of the impact of their AfL actions and to reflect on them. According to the data evidence, the most influential strategy that really left its mark on the teachers' practices was the success criteria. This was so because it worked in their own classes and its immediacy triggered a reflective process on action. In line with this, Hargreaves's (1984) and Kirton et al.'s (2007) had argued that teachers' interest grows when something works because the reassurance of its success (Haggarty and Postlethwaite, 2003) entices them to continue using the new pedagogy. Furthermore, having observed that this pedagogy could work in their own classes helps the participants to make more sense of this teaching and learning application (Coleman and Kottkamp, 2015). In fact, Nina's data clearly revealed how, in particular instances, she decided to adopt the new pedagogy when her established ways of approaching certain areas had not proved successful. This is an example of the uncertainty pointed out by Rogers and Murcott (1995) in the acceptance of a new pedagogy, that sees practitioners move away from their comfort zone because of a clash between the old and the new (Leahy and Wiliam, 2012). It also shows the lack of self-confidence, thus the belief in her self-efficacy that the new adopted practice will be more effective than the routine one. Despite these hesitations, the three participants, on reflecting about the new practice, have come to important and significant conclusions, which would not have had the same effect if these conclusions had simply been told to them. The deductions they made consisted in:

- AfL is about a different approach to lesson planning (Nina),

- AfL structures the lesson more (Belle),

- AfL helps you not to take things for granted (Samantha).

These conclusions are in line with what Mc Tighe and Thomas (2003) and Wiggins and Mc Tighe (2005) describe as backward design to planning, that is, planning from the student's point of view. Also, in taking a different planning approach, the teacher will be more on the alert for the moments of contingency (Black and Wiliam, 2009), which are an essential feature of the AfL lesson. The participants' recognition of the fact that with AfL the whole lesson process has to be re-thought shows a mind shift from working harder to working smarter (Hargreaves, 2004). Therefore, this shift is not only commendable but highlights the positive effect that the CAR process had on their teaching.

On the basis of the evidence presented in Table 6.1, the three teachers ended the process with different levels of understanding, which Quilter and Gallini (2000) refer to as assessment literacy, each portraying a different teacher attitude towards AfL. This finding is consistent with the outcomes of Quilter's and Gallini's (2000) study about the correlation between teachers' assessment literacy and attitudes. According to Bennett (2011) and Laveault and Allal (2016), the diverse levels of understanding offer a challenge as teachers are likely to implement a practice that mirrors their understandings, a relation which featured in the first phase of the study, as discussed in Chapter Four. Therefore, different understandings will be reflected differently in the classroom, (Calderhead, 1996), which might confound teachers' understandings and beliefs. Hence, the effect of the intervention is highly related to the teacher's values about how teaching and learning should be measured, and on their readiness to challenge that culture if it conflicts with the new mode of assessment. Since individual

values are as personal as teachers' beliefs, the intervention must target the shared community values about the pedagogy that is being studied. Put simply, the impact of the CAR can be greater if the external and internal cultures of assessment are attended to. Having teachers' actions guided by the right set of shared teaching community values mitigates a roller-coaster type of practice while providing parameters for the right level of understanding about AfL. In turn, this structure would ensure a more balanced and effective AfL practice across teachers.

Furthermore, the final interviews revealed that the participants' perception was that while AfL worked with the majority of the students, it did not work with some. This latter category includes students who are either perceived as being on the lower continuum of ability or those who do not exhibit the expected disposition for learning. This indicates that the participants related the handling of AfL and, consequently, its successful outcomes on students' learning, to students' abilities (Missett et al., 2014). In holding such a view, the teachers themselves are risking to set an unconscious barrier as to how much the student can be involved in the process of assessment. Here, Stiggins's (2004) advocacy for the reconsideration of these beliefs is very relevant.

Such perception would reinforce some of the students' belief that they do not need to involve themselves in learning, (Black et al., 2006), which would, in turn, reinforce further Jonsson et.al's (2015) finding that AfL practice is still teacher-centred. This belief would not only limit the opportunities offered to students but might also act as an 'excuse' as to why teachers would not offer equitable nutritional diet of learning. Consequently, the high-achievers would become better while the low-achievers would either remain in their status quo or else regress. If the participants looked at AfL as a one-size-fits all approach that would help all the students arrive at the same pinnacle

of learning, then their claim would be understandable, though not justified. However, the effectiveness of AfL does not lie in each student reaching the same ultimate goal. Instead, the success of AfL should be measured by how much the student would moved forward in his or her learning. Therefore, if a lesson's overall goal has been broken into five scaffolding steps and low–ability students have mastered three, then they should gain an equal merit as those who have reached the learning goal in its entirety.

On the other hand, the participants' level of thought, where the success of AfL is perceived to be dependent on students' abilities, indicates that, notwithstanding the fact that the new knowledge has been rooted in practice, they still had a "wobbling belief" about its effect (Fives and Buehl, 2012, p. 485). Furthermore, such a stance indicates a discrepancy between the teachers' improved understanding at the theoretical (definition) level and the ultimate belief based on their newly formed knowledge of practice (Cochran-Smith and Lytle, 1999). This divergence does not seem to be relative to the teachers' years of experience (see Table 6.1). One possible explanation could be that these teachers needed more time to deepen further their understanding of AfL. Change in thoughts and practice is an exercise which needs and takes time (Nespor, 1987). This study took only nine months, a duration which, according to Darling-Hammond, Wei, Andree, Richardson and Orphanos (2009), is within the acceptable parameters of "six to twelve months…to offer a positive effect and significant gains on student achievement" (p. 9). However, it might be the case that the participants needed more time to reflect on their actions to refine their thoughts, which is also in line with Gordon et al.'s (2014) recommendation for the necessity of a long term programme that would assist in the overriding of this

difficulty. Nonetheless, the change that occurred within these nine months was significant and this is all due to the focused commitment of the participants (DeLuca et al., 2012). Having said this, it is worth pointing out that this change has occurred in a context with a strong history of an exam-oriented system which prevails despite the current policies towards a more formative assessment approach. This implies that the new demands placed on teachers were totally divergent from their current experiences with students, thus requiring them to work against a strong set of peripheral beliefs (Nishino, 2012).

In recapitulating, it can be argued that the perspectives about AfL were less malleable than the knowledge and practice about AfL. Nonetheless, the teachers' thoughts have changed to a certain degree. Therefore, in this study, it was easier to change the practice and the knowledge rather than the thoughts. Such result contrasts partially with Randel et al's (2016) claim that change in knowledge is easier to achieve than change in practice. Since the change in knowledge stemmed from the change in, and on the outcomes of, practice, it follows that there was a positive influence on the level of understanding and the type of practice but a less positive influence, of the 'yes, but' type, between the knowledge of practice and the thoughts. Hence, the CAR has created a semi-positive influence on the participants' beliefs-to-practice relationship regarding AfL. Consequently, it is perhaps safe to conclude that the belief about this teaching and learning pedagogy is interrelated with the teachers' beliefs about the learning environment culture, the beliefs about the students' competences in relation to that pedagogy, and the teachers' perceptions about their competency in the use of the

pedagogy. Figure 6.1 illustrates a pictorial representation of the interrelatedness of these constructs.
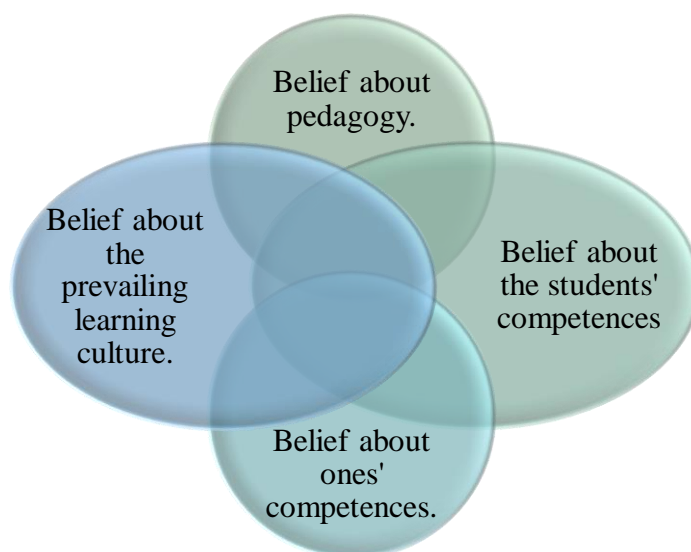
Figure 6.1: The interrelated beliefs present in this study

Although the topic of the study was the beliefs-to-practice relationship regarding AfL, an unexpected construct which has surfaced amongst the three CAR participants was the students' motivation. Hence, this finding indicates that the belief-to-practice relationship is not only a matter of degree but rather complex, in that the link has to attend to the students' outlook and approach to learning. In turn, the students' stance is highly shaped by the learning context and the actions taken therein by the teacher to change the traditional classroom roles (Spratt et al., 2002, p. 251). This indicates that the failure of a pedagogy cannot be attributed to a problem within the student but to a problem within the whole system-a problem of misconceptions, a problem of methodology or a problem of roles. Such an interpretation was corroborated by Belle in her feedback about the data analysis explanation. Her comment is included in the section, Dissemination of Findings (see pg. 307).

6.3 Beliefs about the Teacher Learning Culture and Self-Competency about AfL

The quality of teaching, learning and the teachers' professional learning have gained increased attention in Malta. The numerous policy documents referred to in section 1.7 above, together with the most recent sectoral agreement, which will come into effect as from the 2018-2019 scholastic year, are an evidence of this growing interest and need.

The three participants have pointed out that sustained professional communities of practice involving teachers from different year groups is not a common practice at school. This supports further the claim by Attard Tonna and Shanks (2017) that professional development in Malta is still very traditional, the transmission-of-information type. According to Willis (2011), through such absence of communities of learning, teachers do not only miss out on the educational value of working as a group but also on the possibility to be more affiliated with each other, which would affect their individual and collective capacity for change (Fullan, 2011)

This lacuna could explain why it was not a natural process for the participants to carry out reciprocal class observations. Although Nina and Belle were willing, though they had never taken the initative, to have another colleague observe them in the integration of AfL in class (Smith, 2011), Samantha did not yet feel confident to be observed as she did not consider herself knowledgeable enough. Apart from lack of self-confidence, it could also be the fear of her past experiences with class observations. In both pre-service and in-service class visits, the observer, the tutor or Head or a delegate, usually assesses the teacher's performance for record purposes and, in the former case, for examination purposes. Thus, class observations are not seen as a

professional learning experience shared mutually with a critical friend in a constant habit of enquiry, a custom which needs to be established (Birenbaum et al., 2009). When this happens, both the participants and their colleagues would have the opportunity to debate about and negotiate effective ways of teaching and learning, an exercise which would affect their perspectives about current modes of pedagogy (Leirhaug and Annerstedt, 2016; Osterman and Kottkamp, 2004).

Although the three participants have not managed to observe each other in practice, they did succeed in sharing their experience with their non-participant colleagues. This was an unplanned step, which ensued from a request by the Head of School. Having teachers teaching teachers is a highly effective form of professional development and learning because teachers can not only relate more to the context in which the practice was embedded but also because they give more credit to practice-based experiences rather than just theoretical ones (Coleman and Kottkamp, 2015).

The three participants remarked that they would be willing to embark on such an activity, but they suggested that it would need to be structured by another person, such as a senior management team member or any other professional person other than them. This is in line with Wiliam's (2007a, 2007b) suggestion that when teachers feel supported and guided in the development of the capacities required by the activity they would participate. Another important characteristic that emerged from this study is the sense of trust (Postholm and Skrøvset, 2013) that teachers need to have in the person facilitating the professional learning. This trust is easier to establish if the professional leader is a person who is familiar to the staff. Therefore, having already established a good rapport with the professional leader, teachers would feel safe to try out and fail in the new learning (Smith, 2011). Such trial and improvement system would provide

the right foundation for an ongoing culture of professional inquiry which, Bezzina (2002) emphasises, should be driven by the Head of School. In Said Pace and Seguna (2018), it is suggested that this role could be taken up by another person whose remit would be the curriculum and the staff's professional learning. Having a person on site at the school would create that sense of continuous support through having someone to refer to. With the changes that have been going on in Malta, and still are, especially now that the move towards continuous assessment has been formalised (Ministry for Education and Employment, 2018a), teachers need this sense of direction. After all, as DeLuca et al. (2012) point out, change happens when teachers make it happen because they are the mechanisms of change. In being the drivers for and of change, the participants have invested in their respective human capital and have begun to develop a degree of social capital through their participation in this collaborative community. Thus, the school now has a very small nucleus of teachers whose professional capital about AfL is better than that of their colleagues (Hargreaves and Fullan, 2012). If the school capitalises on this by spreading and expanding the same, or similar, activities with the rest of the teaching staff, the influence of the CAR could be exponentially greater.

In sum, the mode of professional learning based on the CAR model has had a positive influence on the participants' perspectives on AfL and has been received well by them. However, the CAR, within the time-frame of the study, has not managed to raise the participants' self-competence to a level at which they can act as mentors to their colleagues. This implies that when embarking on teachers' professional learning of an innovation, not only the content and cognitive aspect has to be taken into account but also the affective domain (Fives and Buehl, 2012).

Another aspect which this model of learning did not tackle, yet which the teachers' data showed to be an important contributing factor in the formation of their beliefs about the AfL pedagogy, was the student's agency and self-regulation (Andrade and Brookhart, 2016; Birenbaum, 2016). Figure 6.2, starting in a clockwise direction, represents the two areas that were positively influenced by the CAR professional learning medium and the two areas which needed more attention and time. This indicates that the mode of professional learning needs to take a holistic approach to an innovation and not just focus on the knowledge needed for practice.
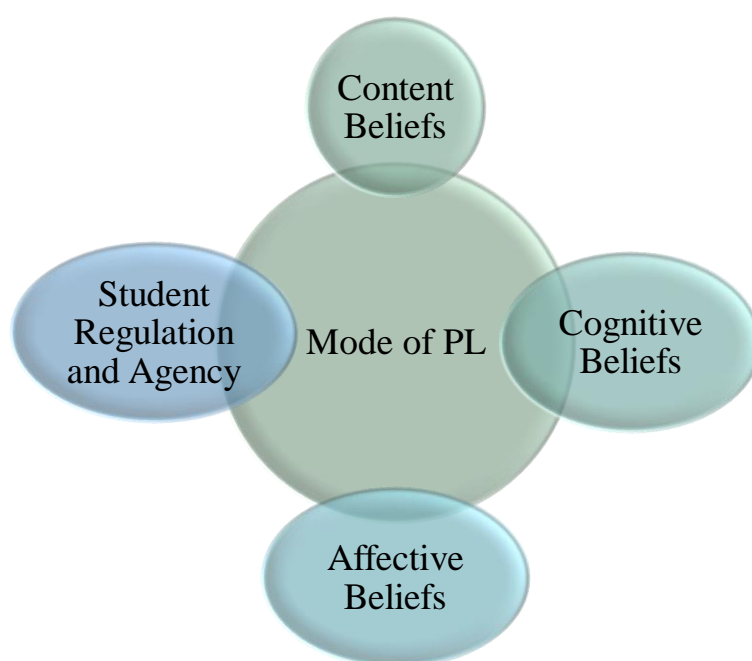
Figure 6.2: Areas of Professional Learning in Pedagogical Innovations

6.3.1   Class Teaching and Learning

On the basis of the three participants' descriptions of their teaching styles, it could be concluded that their teaching modes were all student-centred. On one hand, Nina's style, *to move [learners] from the known to the unknown,* reflects the inclusion of different intelligences, thus tapping on the Multiple Intelligences (MI) such as the

kinaesthetic (*hands on)* and the visual intelligences (*visuals for better learning)* (Faculty Development and Instructional Design Center, 2009).

Belle, on the other hand, used the thematic approach to teaching and learning, while Samantha mentioned different forms of assessment and inquiry based learning. These explanations indicate that these teachers operate from a social learning theory framework (Vygotsky, 1978). Notwithstanding this, two of the participants, Nina and Belle, in one of the discussions, brought up the issue of mixed-ability classes. Nina argued that being alone in such a setting makes it almost impossible to reach every student, implying that she would prefer to have a teaching assistant that would help her handle the demands of this setting. In a similar vein, Belle insisted that the adult-to-student ratio in a mixed-ability system should be higher as otherwise, recalling her past experiences, teachers teach the average students while trying to reach those at the periphery. For her, not even the banding measure, which aimed to narrow the gap in the classes' mixed-abilities, was appropriately structured. These statements support further the claim by the Hon. Minister of Education, in an interview by Micallef (2014), that mixed-ability is a current teaching issue in Malta. Furthermore, such assertions reveal a conflict in the participants' espoused and in-use theories. It might be the case that their actual practices are not as student-centred as the teachers themselves emphasised. Hence, the CAR process, though did not resolve the conflict completely, has helped to mitigate it.

6.4 Beliefs about Students' Competences

The participants were strongly convinced that success in learning and, in this case, the success generated by the implementation of AfL, follows if students present the right and necessary characteristics for learning. These features include attention,

concentration, participation and compliance with the teachers' instructions. The data indicates that students who deviated from this norm were regarded as objectors to AfL on whom the pedagogy did not have any tangible effect. Hence, the objectors of AfL can be considered as those students who were amotivated towards both the content and the type of pedagogy that was being presented to them. Therefore, these students were not being intrinsically motivated by what they were learning (Deci, Vallerand, Pelletier and Ryan, 1991). These authors stress that to exhibit this kind of intrinsic motivation, their teachers would have to engage in an internalisation process that would increase the students' willingness for learning. In looking at this from the lens of self-determination theory (Deci and Ryan, 1991), the students in this study who exhibited little interest in the process of learning portray a kind of regulation, either external or introjected, that is indicative of least determined students. Thus, unless problems of attention and concentration are transcending from a particular disorder on the Attention Deficit Hyperactive Disorder continuum, the social learning context is underpinned by a teacher-controlled regulatory behaviour (Deci et al., 1991, p. 336). Furthermore, it follows that the participants' beliefs about AfL are conditioned by the students' external manifestations during the learning process, which signs are indicators of a teacher-controlled learning environment. In turn, this level of control affects not only the level of student autonomy in learning but also shows that what the students learn is neither their own choice nor the teachers. Instead, pedagogical content is still based on a syllabus script.

Additionally, this interrelatedness between the pedagogical beliefs and the students' attitude and motivation affected the teachers' expectations of the students' efficacy in the content to be taught. For example, Samantha, during the group and individual

feedback discussions, has shared her concerns about the likelihood of any mastery in learning when teaching particular topics such as the plural and the division concepts. This indicates that she approached particular lessons with the pre-conceived idea that the content might prove difficult to teach and to be learned. According to Cauley and McMillan (2010), the lack of belief in the students' abilities can unknowingly reduce the students' motivation. Thus, Samantha might be unconsciously setting limitations to how far students can reach in their learning. In relating this situation to the expectancy-value theory, (Wigfield and Eccles, 2000), it is a case where the teacher's expectations are shaping the teaching and learning context (Nespor, 1987), which might be keeping the students in their old habits of learning within a fixed mindset paradigm (Dweck, 1986, 2010). Interestingly, while the teachers attributed the ineffectiveness of AfL to the absence of the right learning disposition, the students ascribed it to AfL not being a learning habit. This divergence between the teachers' and the students' interpretations sheds light on the prevailing learning culture.

The current learning culture is one where the teachers do not sufficiently believe in the students' capabilities for success, which might explain why the students are not given, or are rarely given, opportunities to be partners in learning. However, overturning this situation requires teachers to teach students how to employ strategic methods that direct the learning on a metacognition process (Fadel, Trilling and Bialik, 2016), a methodology which would need high teacher resiliency and perseverance, and does not depend on the students' starting levels of ability or achievement. This implies that the teaching practices must be re-thought and re-modelled to overturn the current cultural teaching practices (Fullan and Erskine-Cullen, 1995).

The belief about the students' competences was not the core focus of the CAR process. However, it turned out to be a highly influencing factor on the teachers' beliefs about the AfL pedagogy. Changing the teachers' perceptions of their students' competences required more time and perhaps more work with the students themselves. Putting this finding in the perspective of Black and Wiliam's (1999) argument that assessment influences motivation, it turns out that this study's participants believe that student's motivation is the determinant of whether AfL is successful or not. This clashes with one of the re-considerations suggested by Stiggins (2002) for teachers to hold high expectations for every student.

6.5 Summary of Chapter

Analysis of the participants' shift in their understanding, knowledge, practice and thoughts about AfL revealed that the first three factors were more easily influenced than the thoughts. Although there has been improvement in the latter, there is still room for more refinement since an AfL user cannot hold the mixed belief of 'yes, for some, but no, for others.' If AfL does not work with everyone, the prevailing belief and practice is that AfL is a pedagogy for the privileged, that is, those who are motivated to learn – the compliant and the ideal learners. Therefore, the relationship between the beliefs and practice resulting from the CAR process is a matter of degree, which does not depend on the years of teaching experience, but which is mostly influenced by the teachers' perceptions of the students' abilities with regard to how well they can master the content and the AfL pedagogy. Other secondary factors include their prevailing school learning environment and the teachers' competency in AfL.

Interestingly, the same features that teachers have mentioned to be crucial for the success of AfL with their students apply also to their own learning. For instance, the teachers repeatedly mentioned the construct of motivation for learning and learning enhancement (Lamb and Little, 2016), and they, too, need to be motivated to pursue further learning. Their motivation can stem from an identified personal need for improvement (Deci and Ryan, 1991), whose quest is continuously supported by trusted colleagues. The CAR process has provided this space to these participants, and although it cannot be claimed that CAR has offered the solution to introduce and develop an innovation, it has certainly been a significant contributor to ameliorate the participants' position in relation to AfL. At a school level, this research must have been the first seed for future work on AfL. In an unrelated school visit, during the mentoring of a teacher who was following an *Introductory Course for Supply Teachers Without A Teaching Qualification*, organised by the Institute for Education as per IfE 31/2017, this teacher's file included an AfL policy that was being implemented at the school. At the time of the research, no such thing was in place.

The next and last chapter draws the conclusions of this study while discussing the implications and putting forth recommendations for future work.

Chapter 7 : Conclusions, Implications and Recommendations

7.1 Overview

The undertaking of an educational course programme is done with the intent to gain some form of learning from the content of that programme. Measurement of learning can be gauged through the good use of assessment. Therefore, assessment is the yardstick through which the quality of the teaching and learning is revealed. When the mode of assessment changes, the users of assessment might question its effectiveness in measuring the learning that has occurred. If assessment is viewed as the mirror of the past, it might be too late for the teacher to intervene to remedy the situation. This study challenges this view of assessment by supporting the perspective that assessment should be the mirror of the present rather than the past, that is, it should reveal what is happening now during the teaching and learning process, so as to render the said process more effective.

Assuming that if teachers think positively about AfL they will be more inclined to use it, the study explored the relationship between teachers' espoused beliefs and actual practices regarding AfL. The investigation adopted the premise that holding a favourable view about AfL stems from a conviction in the soundness of its pedagogy. Thus, any potential changes in practice can only result from a transformation in one's internalised beliefs.

The investigation into this relationship between beliefs and practice took a two-phase research approach. Both phases were of a qualitative nature and the methodology in

the second phase was a collaborative action research approach. Two main research questions guided the inquiry.

These were:

- What are the connections between the beliefs and practices of teachers who are novice AfL practitioners in a Maltese state primary school?

- How could a collaborative action research study influence the connections between the teacher's AfL beliefs and practices, and therefore of prospective AfL practitioners?

7.2 AfL Pedagogy in Maltese Schools

In 2011 AfL was introduced in state primary schools on a voluntary basis. The following year the *National Curriculum Framework For ALL (NCF)* specifically recommended it as one of the pedagogies that could assist teachers in enhancing the learning experience and achievement of their students. In turn, such accomplishment would be meeting the NCF's aims of inclusivity, quality education for all, and active citizenship and employability. Subsequent to the NCF, the *National Literacy Plan for Malta and Gozo* envisaged an assessment-based-planning approach to the teaching and learning of literacy in schools. Following these two major policy documents, a framework strategy encompassing four broad goals for Maltese Education was laid out, indicating that the EU2020 targets for Malta can be met if an assessment-based philosophy is adopted.

Notwithstanding this strong policy background, the European Agency for Special Education found that assessment-based learning was seriously lacking in the Maltese state primary schools. This finding revealed the teachers' low level of engagement

with assessment-based practices, even though they were being supported by Heads of Department for Assessment.

Since then, the Institute for Education (IfE) has been established and the support in AfL that was being offered in schools has been revised. Currently, a group of teachers from different state primary schools are following a course with the IfE leading to a post graduate certificate in teaching and learning, under the professional support of the Institute's Heads of Department. The first cohort is expected to finish the course in 2018. It would be interesting to evaluate the participants' thoughts and quality of practice as a result of this course. More than that, it would be of further interest to investigate the professional role that these new teacher experts in AfL will take at their schools with their colleagues in promoting the AfL pedagogy.

Unless AfL is perceived as a complementary rather than a competitor type of pedagogy to a teacher's existent practice, it will continue to be seen as another additional burden. Therefore, identifying the way teachers perceive AfL is as important, and crucial, as changing their practices. This is more so in the current unprecedented time when at the heart of the new sectoral agreement signed between the Government of Malta and the Malta Union of Teachers lies a fairer and more just assessment system than the exam type of assessment. While the AfL pedagogy in Maltese schools has always been somewhat scant, the new vision and mission require that it take a more central and leading role.

7.3 The Significance of this study

This study enriches the international debates about the implementation of AfL not only by providing another insight from a different context but also by adding a student-

friendly framework to guide the implementation. The definitions and the framework have been influenced by the works of Black and Wiliam (1998b), Hattie (2002), Stiggins, Arter, Chappuis and Chappuis (2004) and Klenowski (2009), among others. It aims to enrich the literature in the field with further understandings about the challenges faced by primary school teachers in introducing, developing and sustaining the practice of AfL in a setting dominated by a culture of testing, and which has been characterised by two decades of ongoing reforms.

A particularity of this study is the authentic stories of the three CAR participants and their students' voices about AfL, a first for Malta. The students' discussions revealed two groups of students: the proponents of and objectors to the AfL strategies. I have created three video clips which portray the students' stance for or against the use of AfL strategies. Together with the teachers' stories, these provide an original contribution to the international and local AfL literature. These short video clips can be used in professional development learning programmes to showcase perceptions regarding AfL after nine months of consistent practice. Having local exemplars would help Maltese teachers to identify with both the content and the process, and perhaps this connection can stimulate and motivate teachers to, at least, start trialling with AfL.

In addition, the research design of the collaborative action research might serve as a prototype to Heads of Schools in their endeavour to fulfil the recommendation of the previous National Minimum Curriculum, *Creating the Future Together* (Ministry of Education, 1999), to use action research for curriculum development.

Another significant issue that arises from this thesis, and which can call for further debate, is the similarities in the teachers' concerns about the implementation of AfL. The participant teachers' apprehensions were very common despite the fact that two

participant teachers belonged to the early education sector where no end of year exams are present. Despite the improvements in AfL understanding, knowledge, practice and thought, the last-mentioned was still wobbly at the end of the CAR process. Mainly, this was due to the participants' beliefs about students' competences in the handling of AfL and the lack of opportunities to reflect on and discuss these issues. Hence, the beliefs were also being affected by the prevailing learning culture regarding the continuous professional development of teachers.

This study is particularly significant for Malta because, since the introduction of AfL in state primary schools, no research has been carried out about the connection between Maltese teachers' beliefs and practices. This interrelatedness has neither been researched nor combined with a collaborative action research investigation. Local studies by Grima and Chetcuti (2003), Buhagiar (2007) and Satariano (2015) have shown that there is the need to revisit the testing territory of assessment from a participatory lens and possibly come up with local evidence which can be disseminated amongst teachers. In this respect, this study has striven to provide such evidence, albeit limited to a particular context, by locals and for locals.

7.4 Implications

7.4.1 Pedagogical Implications for Teachers' Professional Learning

A common theme across the local policy documents discussed in this thesis (see section 2.9 above) is the call for more student-centred teaching and learning approaches through assessment-based planning. In response to this plea, the current study sought to investigate the AfL beliefs and practices of a group of teachers by adopting a learner-centred approach to the participants' professional learning. This procedure was influenced by Lamb and Simpson's (2003) suggestion that teachers

have to go through the same process of learning that they are expected to provide to their students. For this reason, a CAR process was adopted because it put the professionals involved in a partnership mode of learning. This was not an easy task as Maltese state school teachers have grown into a system where they are told what to do rather than being listened to, and this style of learning is reproduced in the teachers' approach to teaching and learning in the classroom context. It was only recently, and to date on one occasion, in May 2017, that Maltese teachers have been summoned to evaluate, discuss and propose changes to the new 'syllabi' based on a *Learning Outcome Framework (LOF)* approach. However, calling teachers for a one-off one-day event is certainly not enough to discuss and work on such a revolutionary approach to teaching and learning, at least for the Maltese state primary school teachers. Hence, the procedure adopted in this study could not be timelier, as it can be used to debate the new LOF assessment measures. The participant teachers, being the prospective users of these measures, would feel part of the new system and would not see the proposed continuous assessment system as yet another reform. Such inclusivity in deciding on the way forward would also indirectly be addressing issues pertaining to the differences in the learning culture, the educators' self-confidence and their views of the students' competences.

7.4.2 Implications for the School Management Team (SMT)

In such an ever changing global world, education is definitely not a static affair, thus schools need to adjourn themselves to attend to the current and future needs of society. Consequently, school leaders should not wait for the education authorities to start a process for change. Instead, they should be at the forefront as agents of change.

The process used in this study shows how school leaders could work with their teachers by starting from an internal audit analysis to identify issues raised by individual teachers, particular groups and, eventually, the whole school. Then, on the basis of this needs analysis and in collaboration with a representative group of teachers who could constitute one of the School Development Plan (SDP) teams, the SMT could design a plan of action to target the teachers' concerns. In the eventuality that the SMT feels the need for external support, they can always make a request to the MEDE and the IfE to engage a professional on a definite but long-term engagement contract. This would ensure that enough time is allotted for the building of a good teaching and learning rapport.

7.4.3 Implications for Training Institutions

The IfE's Prospectus for 2018 announces the introduction of Bachelor's and Master's Degree courses. These are intended either for prospective teachers or for those already in teaching but who do not have all the necessary qualifications to be considered for a permanent warrant. The Institute's courses challenge the privilege that was enjoyed by the Faculty of Education for the last forty years in being the sole provider for pre-service teacher training. These two new courses come at a time when the Faculty of Education is phasing out its Bachelors Course to make way for the Masters in Teaching and Learning (MTL).

The findings of this study have shown that when knowledge in formative assessment is covered through a transmission model, teachers are likely to be passive receivers, little affected by the power of this pedagogy. Hence, teaching practicums have to include a strong element of student observation prior to the take up of the class and the identification of, at least, two possible strategies that will likely target the areas for

improvement revealed by the observations. Eventually, the practicum will revolve around an action research cycle for personal and group reflections on the AfL strategies and their outcomes. These discussions can take place in online forums on a weekly basis during the practicum. Additionally, teaching mentors have to encourage a level of reflection, on the student-teachers' part, that would delve not only into the current knowledge of AfL for practice but also into how the knowledge in practice is shaping the knowledge of practice. As the findings of this study have shown, particular attention has to be given to background factors like the learning culture, the teachers' self-efficacy and the perspectives about the students – whether the student is the problem or whether it is the system that is creating the problem.

An important move that programme developers and course coordinators can make is the embedding of formative assessment knowledge in the teaching of subject pedagogy. In this way, even at teacher-training level, assessment would not be seen as another unit or module but as an underlying philosophy which fits in the academic or vocational subjects.

7.5 Limitations of this study

This study has some limitations that need to be acknowledged. In this section I will discuss four of them. The first one deals with the specific field context. The second limitation stems from the sample of the population in the first phase of the research. Thirdly, the variation of the participants' year group in the CAR process is also another limitation. Fourthly, the absence of the in-class observation as part of the methods of data collection might constitute another limitation.

7.5.1   The Field Context

This study has taken place in one state college, and therefore the findings represent the views of a cohort within a specific geographical region in Malta. Although the country is small, there can be variations in the teachers' beliefs and practices between state colleges. This is because of differences in the students' cohort context. For instance, in particular areas, the number of foreign students outnumbers that of the local students to the extent that the teaching and learning vehicular language is either English or a mixture of code switching across the languages rather than Maltese. These issues make the assessment matter more complex in that it has to be fair and culturally just for all students, which can affect the beliefs-to-practice relationship of the teachers.

Apart from possible differences within the same state sector, there can be dissimilarities between the sectors, namely, the state, the church and the independent school sectors, that together make up the Maltese educational system. Consequently, this study cannot claim that the findings hold true for all the primary school teachers teaching in Malta.

7.5.2   Sample Population

First Research Phase

The teaching population within the state primary level of education in Malta is predominantly female. This is reflected in the sample population in both phases of the research. Hence, the findings are mostly the female voice of the field context about AfL. Additionally, in the first phase, the majority of the returned questionnaires came from teachers with fifteen or less years of teaching experience. Consequently, the results portray the female voices of a relatively young teaching cohort.

Second Research Phase

The CAR participants, apart from being all female, represented only three year groups from the six possible year groups at the primary level. Hence, this study could not investigate whether there were any differences in the AfL thoughts, knowledge and practice among teachers of the same year group. Additionally, it could not portray the teachers' standings within each year group, although the three participants came from both the Early and the Junior Years cycles.

7.5.3 In-class Observation

Studies which investigate the beliefs-to-practice relationship include the observation method as an integral part of the data collection process. In this study such method presented a professional conflict as, although I was the researcher, my background was still that of a professional in authority to the teachers. Thus, to avoid putting teachers on their guard during the observations, it was decided that it would be best not to include them. Nonetheless, this has not hindered the emergence of important insights between the participants' beliefs and practices. However, its absence meant that the participants could not be given constructive feedback on areas for improvement, which could be only deduced and elaborated on from the one-to-one and group discussions.

7.6 Recommendations from this study

Following from the above limitations, the first recommendation is that further studies to examine the beliefs-to-practice relationship with regard to AfL in the different sectors are needed, either conducted on the same lines or taking a different approach. Standalone studies of the issue within the different sectors can be further enhanced by a comparative study across the sectors to identify any variances. It would be interesting

to investigate the secondary schools, where teachers are isolated on account of their subject interests, and understandings about a pedagogy might be affected by the teachers' beliefs about the nature of their subjects.

Further studies are also needed on the effectiveness of AfL with students of different abilities within the different sectors. In the primary schools, studies could be carried out with students from different band groups and even with students with a statement of needs, such as those with Attention Deficit Hyperactivity Disorder (ADHD) or students on the high functioning side of the Autism Spectrum Disorder (ASD). Meanwhile, in the secondary schools, students are usually grouped in classes according to their level of competence in the main subjects, namely, Mathematics, English and Maltese, as explained in section 5.4.1. In turn, a student may even be placed on different tracks in each of these three subjects and the sciences, according to one's level of competence in the particular subject, especially in the senior years (Years Nine to Eleven). Thus, in-depth into the impact of AfL within the different settings would provide useful insights. In this way, Malta would have local evidence about the effects of AfL on different categories of students.

 A second recommendation would be to investigate the differences, if any, between veteran and novice teachers about their notions of AfL. Also, with the recent developments at both the University of Malta (UOM) and the newly established Institute for Education (IfE) in the teacher preparation courses, it would be interesting to find out the student teachers' standings on AfL and whether these courses are affecting the student teachers' beliefs and practices.

A third recommendation would be to utilise better the mentoring or tutorship visits during the teaching practicum to tap into aspects of practice which can be improved,

thus strengthening the theory-to-practice link. Turning these visits to episodes of professional learning would help teachers to mitigate their fear of being observed. A rather innovative and revolutionary mode of professional learning for Malta would be for teachers to video-record themselves and then discuss that recording with another professional. In this way, the teachers themselves would be engaging in a self-assessment exercise to identify their own areas for improvement and perhaps suggest ways for amelioration.

A fourth recommendation would for policymakers to consider taking a more holistic approach to pedagogical innovations by working with the external community as much as they work with the internal one. Parents are the teachers' supporters at home and it is important that they are kept abreast of, and helped to understand better, the changes that are taking place in education, including the changes in the teaching and assessment methods. In Malta, this is very timely in view of the forthcoming changes to replace the mid-yearly exams with continuous formative assessment and to have the Secondary Education Certificate (SEC) Ordinary Level final assessment include an aggregate of the Year Nine and Ten assessment.

A fifth recommendation is to the Ministry of Education and Employment (MEDE) to seriously consider the introduction of a Professional Learning Coordinator or a Head of Professional Learning in schools, to work on the school staff's professional training needs. It would be best if these needs emerged from an analysis of the staff's training needs, to ensure the relevance to and interest of the intended beneficiaries.

A sixth recommendation would be to publish local stories by teachers and for teachers so that teachers can teach, and learn from, each other about their AfL experiences.

7.7 Self-Reflexive Note

"Reflection is a key activity" in any learning process (Postholm, 2012, p. 407). Since a doctoral journey is an intensive learning experience from beginning to end, reflection is a central exercise in both the research quest undertaken and in peripheral matters that surface, unexpectedly, during the process. In my case, the secondary matters unearthed an overwhelming pain about the areas of improvement that should have been tackled in my secondary cycle of education. Perhaps, these stemmed from the second class curriculum that students not attending the grammar school type were offered because they were looked at as students of a lesser ability. Ironically, this is the antithesis of a conducive learning environment pertaining to a class which celebrates and cherishes the values of formative assessment, the main argument in this thesis. Hence, in rejecting the perception that ability would fail me, the resiliency and perseverance put forth has helped me to manage the barriers that I encountered. Despite this, there were instances when the effort and hard work did not translate into an equal matching level of achievement. Since a growth mind-set (Dweck, 1986, 2010) entails that effort and practice are the factors leading to achievement, and since in this case the amount of effort was unquestionable, the new focus had to be on practice. This is what I engaged in to manage this final product.

At the beginning of this journey, I would have never imagined that the lacunae of two decades ago would re-surface and needed to be tackled. The learning that I went through to override these difficulties together with the new insights gained from the research itself, have changed me and left an impact. In this respect, I humbly admit that this journey has achieved a dual change: in the subject of the research and other peripheral matters related to the presentation of the research. In other words, the

change was both on a professional and personal level. For this, I will always be indebted and grateful to the School of Education at the University of Sheffield, which unknowingly led me to face these barriers and, with the support of my supervisors and other numerous people, I managed to overcome them. Thus, this research has reached its intent in changing both the researcher and the researched (Clough and Nutbrown, 2012). The change in the research participants is best described by the following comment of one teacher-participant:

> I am not taking it as if I am doing you a particular favour. Instead, you are doing it to me as I am really learning. I really work hard and when I find something effective…I feel that you are equipping me with an extremely powerful and helpful tool...I really feel honoured and thank you on behalf of the learners as they are really benefiting.

Therefore, whatever the outcome I am glad that this research has contributed another drop in an ocean of so many debates about assessment, teaching, learning and the vital roles they play in education.

7.8 Dissemination of Findings

This study, underpinned by democratic principles, has tried to put the participants at the centre of the learning process. Thus, the methodology offered the three teachers the opportunity to be active co-constructors of knowledge. Such approach has been informed by Lamb and Simpson's (2003) belief that teachers must undertake the same learning experiences they are expected to offer to students. Since twenty-first century education places more emphasis on skills and competences rather than knowledge, the participants were also involved in the analysis of my interpretation of the findings, by sharing their views about it, which enriches the data further (Kornbluh, 2015). The

extract below is an example of an A4 page summary that was sent to Nina for her feedback.

For your feedback.

Hereunder, please find a summary of my interpretation of your data. Should you wish to add any further comments, do not hesitate to do so.

At the beginning of the journey, AfL was something new to you. However, with time, you realised that you were already implementing parts of it, but in not being aware of the rationale of your actions, the past practices were not as effective.

Your understanding of AfL has improved and changed, but at the end you were still of the opinion that there was an unaffected category of students, namely, the low-ability learners. Therefore, AfL has not reached your expectations in their entirety, which were about students becoming more independent learners. Nonetheless, it worked for the majority of your students and in seeing them using the SC it has encouraged you to take further action by creating more resources. Your coming to believe more in AfL was only after scrutiny and comparison with your past traditional methods. This direct positive judgement helped you to recommend this method to your colleagues without any hesitancy.

These methods were being used against a student-centred philosophy of teaching and learning. However, your concern about the effect of mixed-ability classes and the class population seem to contradict this same definition. Despite this, you still kept on experimenting with AfL and your interest has always grown because you were continuously engaged and because the professional learning was structured and practical.

In conclusion, the study has had a partially positive influence on your beliefs about AfL. Furthermore, the latter have changed because the outcomes of your own practice have led you to this belief.

By means of this process, Nina, like the other participants, was treated as a research partner even at the interpretation stage. Thus, through the member reflections, the researcher's bias was under control (Levin, 2012). This was really appreciated by the participants, as their expertise was valued (Stremmel, 2007). Nina's response to the above interpretation, in a personal communication, was that *"It [was] fine with [her]."* Hence, prior to the submission and eventual publication of this thesis, the participants were fully informed about what I had written.

Including the participants' expertise not only provided invaluable insights of the field context but also helped to clarify the researcher's (mis)interpretation. In fact, Belle, while agreeing with all that [was] said (see excerpt below), she alerted me to the use of the word 'but' in the conclusion. She clarified that:

> it is not AfL that concerns [her] but the current [educational] system, which in [her] belief is so shifty and unstable, thereby making the implementation of any strategy extremely challenging. Furthermore, she argued that currently the system is entangled between two forces: one which promotes new and modern ways of teaching and learning like AfL, guided reading, LOF's and tablets, among others, in a background of traditional teaching and learning systems which are not being officially replaced. She concluded that we (teachers) are stuck between two very different systems.

Belle's clarification indicates that teachers are willing to try new ways of teaching and learning, but the huge professional dilemmas they are facing due to the lack of a holistic change is shying them away from seriously engaging in such contemporary activities. In view of Belle's clarification, it is perhaps safer to conclude that the system, she is operating in, is camouflaging her real beliefs.

The interpretation sent to Belle.

For your feedback.

Hereunder, please find a summary of my interpretation of your data. Should you wish to add any

further comments, do not hesitate to do so.

At the beginning of the journey, AfL was something new to you. In fact, you acknowledged it as a forward-thinking approach for our culture. However, with time you realised that you were already implementing parts of it, but in not being aware of the rationale of your actions, the past practices were not as effective.

Your understanding of AfL has improved and changed considerably. You have shared a profound reflection in equating AfL with a tool that equips students for lifelong learning. But at the end, you were still of the opinion that there was an unaffected category of students, namely, the low-ability learners. You have questioned whether this was due to factors of concentration, aptitude, attention or carelessness. You were concerned that in spite of the SC, they still did not check on their work.

Therefore, although you spoke favourably of AfL because you believed in it, after being a direct witness of its impact, it still has not reached your expectations in their entirety, which were about students becoming more independent learners and reflective practitioners. These two goals were quite ambitious to be possibly achieved in the duration of the study. Nonetheless, it worked for the majority of your students and in seeing them using the SC it has encouraged you to take further action by creating more resources. Your coming to believe more in AfL was eased by the already similar philosophy that you held, thematic teaching and learning. This direct positive judgement helped you to recommend this method to your colleagues, without any hesitancy.

Your teaching and learning acts were underpinned by a student-centred philosophy. However, your concern about the effect of mixed-ability classes and the class population seem to contradict this same rationale of your teaching and learning. You argued that it is not the teacher's fault but the system's fault for having students, like you had, at the periphery. Despite this, you still kept on experimenting with AfL and your interest has always grown because you were continuously supported and because the professional learning was short, practical and about pedagogy.

In conclusion, the study has had a deep positive influence on your beliefs about AfL at the theoretical level. However, in practice there still seems to be that 'but' issue, which makes the influence of the study onto your beliefs a partial one. Furthermore, your thoughts have changed because the outcomes of your   own practice have led you to this belief.

7.8.1   Sharing with colleagues, initial teacher trainers and others.

In the initial stages of this study several information meetings were held with various education officials and trade union members, which can be replicated to discuss the findings of this research. Particularly, the discussion can possibly identify ways of how the booklet in Appendix XI can be distributed in schools.

Another possibility for sharing these findings is by writing a paper in the *Malta Review of Educational Research (MRER)[4],* a journal published by the Faculty of Education, University of Malta, and by delivering a presentation at the MRER lecture series. Publishing in a local journal, in addition to international ones such as the Journal of *Educational Action Research, Assessment in Education: Principles, Policy and Practice*, among others, might make it easier to reach the local non-academic audience of policymakers, school administrators and teachers, because areas of local interest are being presented.

School leaders can also be reached through the monthly Council of Heads (COH) meetings. The COH is called by the College Principal and is constituted of the Heads of each primary and secondary school within the college. In this meeting, the latest policies and how these are to be translated in practice at college and school level are discussed.

A further opportunity for current and prospective school leaders is *The Maltese Society for Education Administration and Management (MSEAM).* This society aims at "promoting good practice, professional development and research in educational administration, management and leadership" (www.mseam.info). This is done through its informative website, the publications in the form of discussion and research papers, among others, and the bi-monthly continuous professional development opportunities. Participating in such avenues would help to disseminate these findings with educators involved in the running of schools.

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[4] www.mreronline.org

Lastly, participating and presenting in international conferences like the European Association for Educational Assessment (AEA-Europe), among others, would help me to reach a wider audience of international experts on assessment, students and others interested in promoting the effective use of assessment.

7.8.2 Focus of Future Publications based on this study

Subsequent publications of this research can focus on three areas:

- the arguments put forth in the literature review about teacher and student-friendly definitions that would possibly facilitate the teachers' and the students' use of assessment;

- the interrelatedness between the levels of thoughts, understanding and practice regarding AfL amongst the Early and Junior Years teachers;

- teachers' perceptions about student motivation and how those perceptions shape the teachers' beliefs about AfL.

7.9 Final Thoughts

In the same way that "beliefs are never a finished process because humans are continually in the process of changing and becoming" (Fives and Buehl, 2012, p. 490), the teaching and learning processes are also never ending. This is because the global and local needs of society are constantly evolving. It is due to this continual change that this study did not intend to seek or provide the solution for the complexities brought about by the introduction of a pedagogical innovation such as AfL. Instead, it is proposing what has worked with these participants and in their particular context. On the basis of the evidence presented in Chapter 5 above, the relationship between the participants' beliefs and practices is a complex matter. The extent of this

complexity is influenced by the participants' perspectives about the learning culture and by their views about the students' competences, the latter factor being the most striking in this study. These outlooks tended to influence and limit the teachers' actions with a category of students, thus denying these students an equitable approach to teaching and learning. In view of these personally set limitations, Mahatma Gandhi's words are very appropriate and applicable:

[People] often become what they believe themselves to be. If [they]
Keep on saying that certain things cannot be done, it is possible
That they become incapable of doing [them]. On the contrary,
If [they] shall have the belief that they can do it, they shall acquire the capacity to
Do it, even if they may not have that capacity at the beginning.

In applying Gandhi's words to the central theme of this study, if teachers really believe that for each and every student to learn they are required to engage in the latter's learning process within his or her particular situation, with all the effort that this may entail on their part in terms of attitude, lesson preparation and practical implementation, then their beliefs in teaching and learning will not be hindered by these limitations. As Wayne Dyer[5] aptly put it,

The only limits you have

Are

The limits you believe

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[5] https://www.linkedin.com/pulse/only-limits-you-have-believe-erik-noot?trk=portfolio_article-card_title. Accessed: 13th February, 2018.

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Ethical Approval

The University Of Sheffield.

The School Of Education.

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Dear Doreen

ETHICAL APPROVAL LETTER

Action Research and Assessment for Learning: Do they go together
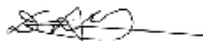
Thank you for submitting your ethics application. I am writing to confirm that your application has now been approved.

We recommend you refer to the reviewers' additional comments (please see attached). You should discuss how you are going to respond to these comments with your supervisor BEFORE you proceed with your research.

This letter is evidence that your application has been approved and should be included as an Appendix in your final submission.

Good luck with your research.

Yours sincerely

Professor Dan Goodley
Chair of the School of Education Ethics Review Panel

cc   Cathy Nutbrown/Peter Clough
Enc   Ethical Review Feedback Sheet(s)

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