

**Understandings of evidence-based practice within a group of practising  
Educational Psychologists.**

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## **Abstract**

The drive for professionals to become more evidence-based has resulted in a climate of greater scrutiny and accountability. However the notion of evidence-based practice as a positive force in the work of practitioners is contested, particularly within the social sciences and psychology specifically. While some studies have sought to identify how the concept of evidence-based practice has been applied by practitioners, and what influences its implementation, the way in which evidence-based practice is understood by applied practitioners has as yet received little empirical attention. Employing a mixed-method design, the current study aimed to provide an empirical account of the understandings of evidence-based practice among a group of 21 qualified Educational Psychologists. The range and diversity of views were initially collected through two Focus Groups (n=6, n=7) which were analysed and interpreted using a thematic analytic approach. The resulting themes and codes provided 'naturalistic' statements that were used alongside 'ready made' statements taken from a range of sources to form a 'concourse' about evidence-based practice. From the resulting concourse a Q-methodological approach was used to explore the range of understandings that existed within the group of Educational Psychologists (n=20). Based on a shared interpretation of the results it appeared that a broad level of consensus existed in terms of how evidence-based practice was understood by the group, however there did appear to be philosophical differences among practitioners that may mediate the way in which understandings of evidence-based practice manifest themselves in applied settings.

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## **Lists of abbreviations**

<b>APA</b>	<i>American Psychological Society</i>
<b>BPS</b>	<i>British Psychological Society</i>
<b>CMR</b>	<i>Complete Member Researcher</i>
<b>CPD</b>	<i>Continuing Professional Development</i>
<b>CYPS</b>	<i>Children and Young People's Service</i>
<b>DCSF</b>	<i>Department for Children, Families and Schools</i>
<b>DPA</b>	<i>Dual Process Accounts</i>
<b>EBI</b>	<i>Evidence-based intervention</i>
<b>EBM</b>	<i>Evidence-based medicine</i>
<b>EBP</b>	<i>Evidence-based practice</i>
<b>EBPP</b>	<i>Evidence-based practice within psychology</i>
<b>EP</b>	<i>Educational Psychologist</i>
<b>ESRC</b>	<i>Economic and Social Research Council</i>
<b>EST</b>	<i>Empirically supported treatments</i>
<b>FG1</b>	<i>Focus Group 1</i>
<b>FGA</b>	<i>Focus Group A</i>
<b>GP</b>	<i>General practitioner</i>
<b>HPC</b>	<i>Health Professions Council</i>
<b>M.Ed</b>	<i>Master of Education</i>
<b>NMC</b>	<i>Nursing and Midwifery Council</i>
<b>PAR</b>	<i>Participatory Action Research</i>
<b>PCA</b>	<i>Principal Components Analysis</i>
<b>PhD</b>	<i>Doctor of Philosophy</i>
<b>RCSLT</b>	<i>Royal College of Speech and Language Therapists</i>
<b>TASS</b>	<i>The Autonomous Set of Systems</i>

## **Acknowledgements**

While I am proud of my role in the current thesis, I must admit to feeling somewhat like a figurehead for a piece of work where an enormous amount of credit lies elsewhere.

First and foremost this thesis results from, and reflects, the active participation and engagement of my friends and colleagues who contributed not only 'data', but also supported in the interpretation of the findings and provided ongoing commentary and insights into the narrative that developed. In addition to the support that is identified throughout the thesis, I am equally humbled by the kind comments and emotional support that have helped me to complete what at times felt like an insurmountable task.

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## **1. Introduction**

### ***1.1 Introduction to Chapter***

This Chapter attempts to place the current study within a wider practical, personal and professional context. Acknowledging the wider context in which the research is situated not only enhances the 'credibility' and 'trustworthiness' of the research (i.e. Patton, 1990; Silverman, 1997), but is also essential within the wider Action Research framework upon which the present study is based (Reason & Bradbury 2006).

### ***1.2 Background and context to the study***

The present study does not pretend to represent a dispassionate investigation of an arbitrary topic, but proudly acknowledges the confluence of diverse but related influences that have shaped the research. The following Section makes explicit the most significant of these.

At a superficial level the current study is submitted in partial fulfilment of The Doctorate in Child and Educational Psychology, a course that is overseen by the British Psychological Society (BPS) and also the Health Professions Council (HPC). However the influence of clinical governance has had a much deeper impact than the mere production of a thesis: as we shall see in Section 2.2.2 of the Literature Review, the emphasis placed on evidence-based practice by the BPS and HPC has also influenced the *topic* of enquiry.

Although submitting a thesis designed to enable me to gain a pass on my course and support my ability to meet the professional requirements of practice appears a necessary step, it does not sufficiently explain the passion and commitment that has driven the research forward. This will become clear as the personal and practical impetus for the research is described below.

While Section (3.3.1.1) on Action Research in Chapter 2 provides a theoretical rationale for the methods used in the current study, it is worth emphasising at this early stage that a key driving force behind the research is the desire to support changes in practice through research.

Alongside the developments taking place within my Local Authority, and Local Authorities nationally, that have shaped the topic and line of enquiry for the current study (described below), there is a personal interest that is worth acknowledging.

As a teacher I was constantly trying to adapt the environment children encountered so that they made greater progress towards a range of positive outcomes. The impetus for this approach is captured by the following quote which was stuck to my desk:

I have come to a frightening conclusion. I am the decisive element in the classroom. It is my personal approach that creates the climate. It is my daily mood that makes the weather. As a teacher I possess tremendous power to make a child's life miserable or joyous. I can be a tool of torture or an instrument of inspiration. I can humiliate or humor, hurt or heal. In all situations, it is my response that decides whether a crisis will be escalated or de-escalated, and a child humanized or de-humanized. (Ginott, 1972, p. 15)

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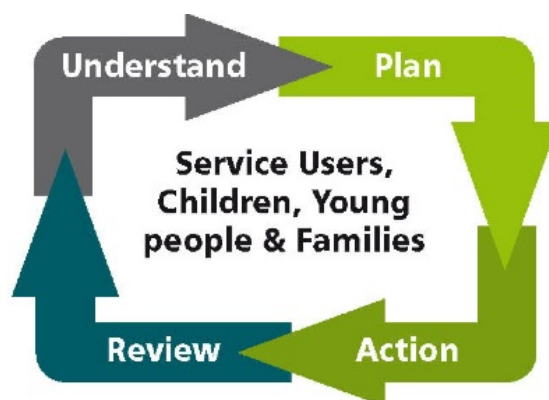
In an attempt to support the educational climate I provided I embarked on a part-time Masters degree which provided me with both an increase in knowledge of the types of adaptation I could make but also in the research skills needed to monitor the effectiveness of these adaptations. The Masters culminated in a practitioner-based action research exploration of how pupils can assess their own learning and the differences this form of assessment makes.

This thesis represents an extension to my earlier exposure to evidence-based practice and practitioner-based action research. This research orientation was aligned to the initial negotiation of my research with the Educational Psychology Service where I worked, where a recurring theme was identifying innovative research methods that could be shared with the Service to provide a development opportunity generally (i.e. a focus on the *process* of the research rather than purely on thesis *content*).

Based on my desire to support practice through research it was important that there was a high degree of congruence with the development plan and aims of the Educational Psychology Service as well as the wider Children and Young People's Directorate (CYPS) in which it is located.

The first step to achieve this was to familiarise myself with the internal policy documents that would influence the direction of both the Service and the Directorate in general (Appendix A for a sample of extracts from these). Not only did these guide the topic of research (evidence-based practice), but they also provided a valuable form of local knowledge that was used within the

research methodology employed (see Section 3.5.2.2.2). However the most enduring contribution to the present study of the initial preparation and negotiation phase was in the form of a research orientation provided by the local Children's Trust for the County in which the study was carried out. The 'cycle of exploration' suggested by the host Local Authority as an action research cycle upon which to base my research has been used to focus the research firmly on understanding local views as the first step in a larger process of potential change (see Figure 1, below).



**Figure 1- The Exploration Cycle provided by the local Children's Trust, which is used as a framework for the present study (reproduced with permission).**

As the description of the research below progresses, the Children's Trust's 'Exploration Cycle' will be cited often, and will provide a useful 'bigger picture' in which to situate the contribution of the present study in terms of its potential implications for practice.



### **1.3 Aim of the study**

The current thesis is concerned with exploring how evidence-based practice is understood by practising Educational Psychologists with a view to informing a process of professional change that is ultimately aimed at improving outcomes for children, families and young people (see Figure 1). While the potential for change exists, it is important to emphasise that the current study is specifically focussed on practitioner understandings of evidence-based practice (as the first stage of the 'exploration cycle') as any *a priori* hypothesis about avenues for change pre-suppose that change is necessary and desired. Successful uptake of evidence-based practice is problematic (Gotham, 2006), and this may result from initiating a programme of change that is not built on an informed understanding of the local context (Copley & Allen, 2009). Based on this the research aim is:

*To explore how practising Educational Psychologists understand evidence-based practice as the initial stage of a wider process of potential change.*

## **2. Literature review**

The forward march of evidence-based practice has broken through the boundaries of the health disciplines and is beginning to impact on other disciplines, including education, social work and probation and human resources management, far beyond the medical origins of the movement. Evidence-based practice has, therefore, the potential to transform the distribution and delivery of public services both in the UK and elsewhere. (Trinder & Reynolds, 2000, p. 212)

### ***2.1 Introduction to Chapter***

A number of authors offer support to Trinder and Reynolds' (2000) above claim, identifying that the evidence-based practice 'movement' has gathered considerable pace in recent years (Biglan & Ogden, 2008), not only in the medical field in which it originated (Brownson, Fielding & Maylahn, 2009) but also in allied disciplines (i.e. behavioural medicine, Marteau, Dieppe, Foy, Kinmouth & Schneiderman, 2006) and other more diverse fields (i.e. Human Resources (Briner, 2000); Architecture (Hamilton & Watkins, 2009); Education (Hammersely, 2000)). The wide-reaching implications of this movement may partly explain the focus on evidence-based practice as evident in the Local Authority in which the current study takes place (See Appendix A), and its emphasis within professional governance (see Section 2.2.2). However the concept of evidence-based practice is both multifaceted (Norcross, Beutler & Levant, 2011) and contested on a number of levels (Carter 2002). The purpose of this Chapter is to firstly clarify both the theoretical frameworks surrounding evidence-based practice (Section 2.2) and then how it has been explored within applied settings (Section 2.3).

The theoretical exploration opens with an examination of how evidence-based practice has been defined within the published literature (Section 2.2.1).

Section 2.2.2 then presents a brief theoretical orientation to the elements of evidence-based practice that its proponents argue justify its growing popularity (Trinder & Reynolds, 2000). This Section is followed by criticism of 'the zeitgeist of evidence-based practice' (Rousseau, 2006) on a number of levels (Section 2.2.3).

Following the general theoretical introduction to the topic of evidence-based practice provided in Section 2.2, this Chapter then reviews the practical aspects of evidence-based practice (Section 2.3), beginning with an exploration of how evidence-based practice has been implemented in applied settings (Section 2.3.1) and how practitioner understandings around evidence-based practice have been examined by researchers (Section 2.3.2). The Chapter concludes by revisiting the research aim stated in the Introduction, formulating a specific research question within the context of the literature reviewed.

## ***2.2 Theoretical orientation to evidence-based practice***

### **2.2.1 Literature definitions**

As the later sections of this Chapter will show, many of the criticisms of evidence-based practice stem from overly narrow conceptualisations that typically don't reflect the accepted definitions consistent across a range of fields (Pagoto, Spring, Coups, Mulvaney, Coutu & Ozakinci, 2007). A focus for

this Section is to show how conceptions of evidence-based practice have developed to encompass a whole range of evidence sources, allowing a quick resolution to some of the challenges posed to evidence-based practice from within the literature (Section 2.3.3).

It is generally accepted that the concept of evidence-based practice emerged from the medical field (Trinder & Reynolds, 2000), and could historically be characterised by the following definitions:

A shift in the culture of health care provision away from basing decisions on opinion, past practice and precedent toward making more use of science, research and evidence to guide clinical decision making. (Appleyby, Walshe & Ham 1995, p. 3)

The process of systematically finding, appraising, and using contemporaneous research findings as the basis for clinical decisions. (Rosenberg & Donald, 1995, p. 1122)

From these two early conceptualisations several common themes emerge, including the value of research, science and critical appraisal as sources of evidence in decision-making. However one of the most commonly cited definitions of evidence-based practice (Sackett, Rosenberg, Gray & Richardson, 1996), makes clear that a number of evidence sources exist in addition to published research:

the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research (p. 71)

According to Sackett et al. (1996) then, neither '*best available research*' nor '*clinical experiential knowledge*' are sufficient in themselves to justify

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evidence-based practice. Although there is a general consensus with Sackett et al. (1996) in the literature around evidence-based practice (Trinder & Reynolds, 2000), it was felt by some authors that patient and client values were marginalised within the proposed definition (i.e. Dodge Rea, 2001), while others argue that the original authors did not clarify key terms in enough detail (Gerrish et al., 2007)

Such criticisms led Sackett, Straus, Richardson, Rosenberg and Haynes (2000) to clarify evidence-based practice as follows:

Evidence-based practice is the integration of best research evidence with clinical expertise and patient values. Best research evidence refers to clinically relevant research, often from basic health and medical sciences, but especially from patient centred clinical research....Clinical expertise means the ability to use clinical skills and past experiences to rapidly identify each patient's unique health state and diagnosis, individual risks and benefits of potential interventions, personal values and expectations. Patient values refers to the unique preferences, concerns and expectations that each patient brings to a clinical encounter and that must be integrated into clinical decisions if they are to serve the patient. (p. 147)

It is important to emphasise at this early stage in the literature review that within both the medical literature, and in the theoretical literature across numerous disciplines, the broadly accepted definition of evidence-based practice (Singh & Oswald, 2004; Shlonsky & Gibbs, 2004) goes beyond simply using research from published studies to a broader definition that reflects the sentiments offered by Sackett et al. (2000).

To support with the developing theoretical understanding of how evidence-based practice is defined and conceptualised within the literature, a

diagrammatic representation of the key elements produced by Haynes, Devereaux and Guyatt (2002) is provided in Figure 2, below.

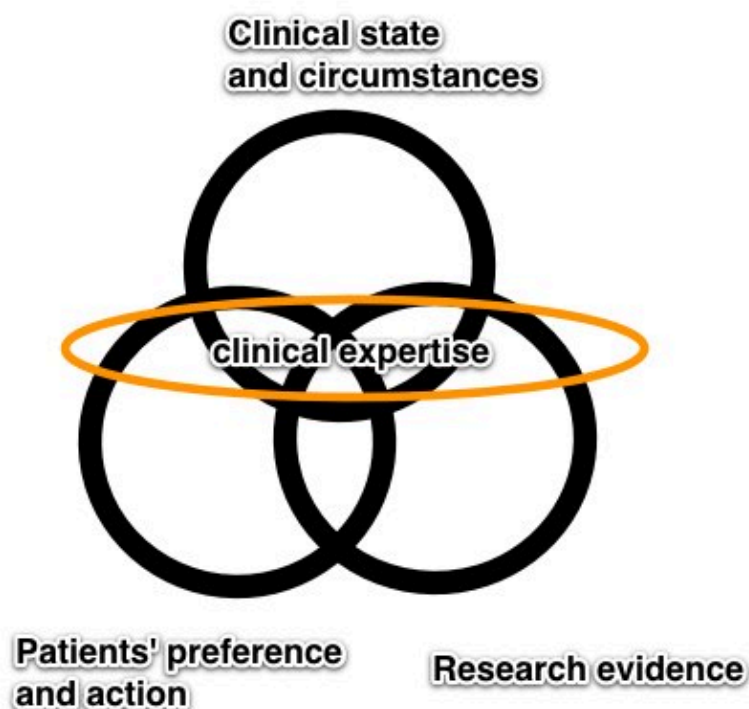


Figure 2- Haynes et al.'s (2002) diagrammatic representation of evidence-based practice (reproduced with permission (Appendix B)).

The diagrammatic representation of evidence-based practice provided in Figure 2 emphasises that numerous sources of evidence exist, none of which may be taken to mean evidence-based practice in isolation. It is also useful to note that Haynes et al. (2002) identify the role of 'clinical expertise' as an opportunity to make judgements on the differing forms of evidence that are available.

### **2.2.1.1 Evidence-based practice as defined in psychology**

As discussed in Section 2.2.3 a criticism of evidence-based practice is that because the majority of these definitions emerged from a medical perspective, they are inappropriate for those working within the social sciences

(Hunsberger, 2007). However it is worth recognising that for the profession of Psychology a recognised definition does exist, developed by a broad range of psychology professionals (APA, 2006), and it is almost identical to those emerging from the medical field.

In 2008 the president of the American Psychological Association (APA) identified the need for Psychologists to be proactive in avoiding adhering to definitions of evidence-based practice that emerged from out with Psychology, saying,

psychology needs to define EBPP [Evidence Based Practice in Psychology] or it will be defined for us...if psychologists do not take on this task, the challenge will not magically disappear. Rather, someone else will dictate what treatments are acceptable and what types of evidence are privileged. (Levant & Hasan, 2008, p. 658)

Levant and Hasan (2008) identified a progression within the definition of evidence-based practice within psychology from early lists of empirically supported treatments (EST) (i.e. Chambless et al., 1998) to one which encompasses a much broader range of considerations:

Evidence-based practice in psychology (EBPP) is the integration of the best available research with clinical expertise in the context of patient characteristics, culture and preferences. (p. 695)

There appears to be a general consensus in the theoretical literature, across numerous fields and disciplines (Trinder & Reynolds, 2000), that evidence-based practice goes beyond published research (Levant & Hasan, 2008) and ESTs (Stoiber & Kratochwill, 2000) to encompass 'practice-based evidence' (Fox, 2011), in addition to client views and cultural contexts (Whaley & Davis, 2007). What remains less clear are the reasons why evidence-based practice

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justifies the attention it receives in the published literature, or the sources of considerable debate that the topic raises (i.e. Webb, 2001).

### 2.2.2 Explaining the rise of evidence-based practice

Implicit in the definitions of evidence-based practice provided above are some of the proposed benefits it may bring. This Section will briefly make explicit the main claims made by proponents of evidence-based practice, acknowledging some of the wider social, political and economic factors that may have influenced its growth.

In an interdisciplinary ‘Critical Appraisal’ of evidence-based practice, Trinder and Reynolds (2000) identify seven commonly identified benefits of evidence-based practice (see Table 1).

**Table 1- Proposed benefits of evidence-based practice adapted from Trinder and Reynolds (2000)**

<b>Outcomes proposed by ‘Champions’ of evidence-based practice.</b>
(1) Effective practice with exclusion of ineffective and rapid adoption of effective interventions on a universal basis.
(2) Efficiency: better use of scarce resources by practitioners and purchasers by utilising only effective treatments.
(3) Value for money research. Better and more useful research and narrowing of research-practice gap.
(4) Transparency and accountability of decision making.
(5) Empowerment of practitioners and ongoing self-directed learning of staff.
(6) Empowerment of consumers within research and practice.
(7) Enhanced multi-disciplinarity.

While Trinder and Reynolds (2000) also identify a range of criticisms, presented below, it is worth acknowledging some of the social factors that have influenced the rise of evidence-based practice including high profile



cases of negligible practices, modern understandings of risk, rising consumer interest in the quality of health care coupled with a greater accessibility of information and changes in public attitudes towards risk (Norcross et al., 2011). This notion is supported by Fox (2003) who claims, “one of the main reasons for the promotion of evidence-based practice is the pressure on, and from, politicians as a consequence of the wide variations in medical services in Britain” (p. 91).

However the political pressure is related not only to the medical services identified by Fox (2003), but also from other fields such as Education, as the following extracts from successive Education Secretaries demonstrate:

Social science should be at the heart of policy-making. We need a revolution in relations between government and the social science community we need social scientists to help determine what works and why, and what policy initiatives are likely to be most effective, and we need better ways of ensuring that those who need such information can get it quickly and easily. (David Blunkett, Secretary of State for Education and Employment (1997-2001), ESRC Annual Conference, 2000)

Evidence and analysis continues to be fundamental in tracking our progress: identifying which policies are working and which could work better; building insights into what children, young people, families and practitioners want to see done differently; strengthening our understanding of what drives outcomes for different groups; and identifying how we can improve those outcomes.

An effective use of a robust evidence base is more important than ever before in helping us achieve our aspirations for children and families within a tight fiscal environment. We cannot afford to be complacent – children, young people and families need to be able to rely on our services and support to help them through these difficult economic times. We therefore need to know which policies offer the best value for the taxpayer and which deliver the best outcomes.

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Ed Balls, Secretary of State for Children, Schools and Families ((2007-2010), DCSF, 2009)

I want to see more data gathered by the profession to show what works, clearer information about teaching techniques that get results, more rigorous, scientifically-robust research about pedagogies which succeed and proper independent evaluations of interventions that have run their course. We need evidence-based policy making, and for that we need more evidence. (Michael Gove, Secretary of State for Education, Speech to the National College's Annual Conference, June 2010)

As a result of the growing pressure for professions to become evidence-based, many Governing bodies have incorporated the concept into their professional guidance (i.e. RCSLT, 2009; NMC, 2008). Table 2 shows a number of extracts relating to evidence-based practice taken from the professional bodies that govern the practice of applied psychologists.

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**Table 2- Extracts relating to evidence-based practice taken from the two professional bodies that oversee Educational Psychology**

<b>Health Professionals Council's standards for practice (HPC, 2009)</b>	
2.1.b	-be able to engage in evidence-based practice, evaluate practice systematically, and participate in audit procedures, - be able to evaluate research and other evidence to inform their own practice  -be able to work with key partners to support the design, implementation, conduct, evaluation and dissemination of research activities and to support evidence-based research
2b.2	- be able to apply psychology across a variety of different context using a range of evidence-based and theoretical models, frameworks, and psychological paradigms
3a.1	-understand psychological theories of, and research evidence in, child and adolescent development relevant to educational psychology  -understand theories and evidence underlying psychological intervention with children and adolescents, their parents / carers, and education and other professionals
<b>British Psychological Society's Strategic Plan for 2010-2015 (BPS, 2010)</b>	
3.3.3.	promoting and publicising the provision of high quality evidence-based psychological services
3.4.1.	Providing and disseminating evidence-based expertise and advice to the media, policy makers and the public

This reflects an expectation from the professional bodies that represent and oversee psychological practice within the UK that practice should be evidence-based.

### **2.2.3 Literature based criticisms of evidence-based practice**

While the preceding Section identified some of the theoretical benefits evidence-based practice is reported to bring, as well as some of the associated social, political and economic factors that may have influenced its growth, it is necessary to acknowledge that criticism of the evidence-based practice movement also exists (Trinder & Reynolds, 2000). The following

Section draws on the work of Gibbs and Gambrill (2002) who identify several categories of objections to evidence-based practice.

### **2.2.3.1 Arguments from ignorance**

In the opening Section of this Chapter the broad nature of the widely accepted definitions of evidence-based practice in the theoretical literature (i.e. Sackett et al., 1996, 2000; Levant & Hasan, 2008) was emphasised. This was done in order to pre-empt many of the '*arguments from ignorance*' against evidence-based practice identified by Gibbs and Gambrill (2002). Straus and McAlister (2000) identify seven of the most prevalent criticisms of evidence-based practice that emerge from misconceived notions about what it is (and what it is not), as presented in Table 3.

**Table 3- General objections to evidence-based practice most frequently cited in the literature (adapted from Gibbs and Gambrill, 2002)**

<b>Objection</b>	<b>Counter-argument</b>
1. It does not acknowledge clinical expertise	<i>This criticism does not appear to be relevant to the widely accepted and cited definitions of evidence-based practice provided in section 2.2.1.</i>
2. It does not acknowledge client values and preferences	<i>This criticism does not appear to be relevant to the widely accepted and cited definitions of evidence-based practice provided in section 2.2.1.</i>
3. It is mechanistic (i.e. a 'cookbook' approach)	<i>Gibbs and Gambrill (2002) argue that, "consideration of client values and expectation as well as the extent to which research findings apply to a particular client shows that it is not a cookbook approach." (p. 459)</i>
4. It is primarily a tool to cut costs	<i>Although it may be unusual to consider cost reduction to be a criticism, it may be assumed that the insinuation is that cost-cutting is carried out at the expense of client outcomes. It is unclear how this could arise from evidence-based practice as defined above, and a number of studies have shown that in situations where the most effective treatment is more expensive evidence-based practice may actually raise costs (Straus and McAlister, 2000; Sackett, Richardson, Rosenberg &amp; Haynes, 1997).</i>
5. It is limited to clinical research	<i>Marsh (2005) argues that, "The different nature of most of the material in health and education fields means that in detail it must be different- but the concept of an accepted and rigorous evidential basis for innovation and change would be the same." (p. 704)</i>
6. It is an ideal and cannot be practically achieved	<i>Numerous studies suggest that evidence-based practice, as defined above, has resulted in positive outcomes for clients, practitioners and organisations (Trinder &amp; Reynolds, 2000; Norcross et al., 2011)</i>
7. It results in therapeutic nihilism	<i>Gibbs and Gambrill (2002) suggest this criticism is to deny the ethical and creative force of evidence-based practice in identifying and seeking to fulfil gaps in knowledge:  <i>EBP calls on professionals to search for practice related research findings and share what is found (including nothing) with clients and to involve in decisions made as informed participants. (p. 456)</i></i>

Straus and McAlister (2000) suggest that if the critics of evidence-based practice were familiar with the widely cited and accepted definitions of evidence that exist in the literature, many of the concerns cited above would be avoided.

### **2.2.3.2 Ad hominem arguments**

A second type of criticism identified by Gibbs and Gambrill (2002) relating to evidence-based practice comprises of claims made about those individuals who aspire to practice in an evidence-based way, and can be characterised as follows:

Those practitioners [who advocate evidence-based practice] are thoughtless, reckless, cavalier, and do not learn from experience. Since they follow charismatic-leader-driven treatment approaches without thought, they really need to be provided with manuals to tell them exactly what to do when... They do not read, they do not think; and, above all, they have lost all capacity and interest in learning. (Carter, 2002, p. 1286)

While Carter's (2002) proposal that individual differences exist between those who advocate for, and practice in, an evidence-based way (i.e. a diminished capacity and interest to learn) and those who do not is an interesting claim, no literature was found during the review process to support this assertion.

### **2.2.3.3 Philosophical arguments.**

While the previous categories of criticism appear to be misplaced (Straus & McAlister, 2000), those challenges to evidence-based practice made on philosophical grounds appear more robust. While Trinder and Reynolds (2000) suggest that once practitioners use the definitions accepted in the literature (i.e. Sackett et al., 2000), "few, if any, would be prepared to reject

evidence-based practice” (p. 218), others suggest that “incommensurable” philosophical positions are often overlooked:

Most scientists and EBM [Evidence-based medicine] advocates are ignorant of the philosophy of science and give little or no thought to constructing a philosophical basis for their activities. (Haynes, 2002, p. 2)

Perhaps the clearest manifestation of a philosophical divide is in the debate around hierarchies of evidence that have been established to guide practitioners in their evaluation of different forms of evidence. An example of Pawson’s (2006) frequently cited evidence hierarchy follows in the table below:

**Table 4- Hierarchy of evidence proposed by Pawson (2006)**

<b>Sources of evidence</b>	
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">More rigour</div> <div style="margin: 10px 0;">   </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Less rigour</div> </div>	1) Randomised Control Trials (with concealed allocation)
	2) Quasi-experimental studies (using matching)
	3) Before and after comparison
	4) Cross-sectional, random sample studies
	5) Process evaluation, formative studies and action research
	6) Qualitative case studies and ethnographic research
	7) Descriptive guides and examples of good practice
	8) Professional and expert opinion
	9) User opinion

From a relativist position, a meaningful hierarchy of evidence is impossible given that the realities from different forms of enquiry are equally valid (Burr, 2003). Conversely realists would suggest that some methods may provide a closer ‘truth correspondence’ than others (Niiniluoto, 2002).

My own position would be aligned to that espoused by theorists such as Niiniluoto (2002) and Sokal (2008) in which ontologically a single reality does

exist and is epistemologically accessible through different methods, some of which would have a closer truth correspondence than others.

The challenge faced by advocates of evidence-based practice is that theoretical positions such as solipsism, radical scepticism and relativism cannot be refuted through formal logic. The intractable nature of this debate is a longstanding thread of the philosophy of science (Chalmers, 1999) and is not one that is likely to be resolved in the present study, nor in the literature more generally.

However some authors suggest a pragmatic resolution whereby the utility of adopting certain ontological positions can be evaluated (Sokal, 2008). It seems that both the denial of reality (nihilism) or the notion of many potentially incompatible realities that arise from individual beliefs (relativism) leave the practitioner with little grounding on which to develop a rational form of practice (Anastasiou & Kauffman, 2011; Sasso, 2001).

#### **2.2.4 Summary**

This Section has provided a brief theoretical orientation to the topic of interest for the present study: evidence-based practice. Beginning with an outline of the common definitions that exist within the literature generally (i.e. Sackett et al., 1996, 2000), as well as psychology specifically (Levant & Hasan, 2008), some of the theoretical claims about the advantages of evidence-based



practice were then placed within a wider social, political and economic framework to understand its growth.

This was followed by an examination of the most frequent criticisms of the evidence-based practice movement within the literature. While some of these criticisms seemed to be misplaced, those provided on philosophical grounds appeared to provide an enduring challenge that could not be resolved through rational debate. In attempting to move the debate forward it was suggested that an orientation to evidence-based practice, while impossible to justify on purely theoretical grounds, was warranted by its pragmatic practical use to practitioners. Exploring this notion forms the basis for the following Section which seeks to examine how the theoretical notion of evidence-based practice manifests itself in applied settings.

### ***2.3 Evidence-based practice in applied settings***

The previous Section provided a theoretical introduction to evidence-based practice which sought not to resolve the debates around the concept, but to acknowledge the differences of opinion that exist within the literature.

Recalling the research aim articulated in the Introduction, it seems prudent to turn our attention to a more applied exploration of evidence-based practice.

This Section begins with an examination of how evidence-based practice has been implemented in applied settings, before reviewing the attempts made by researchers to establish the views of practitioners in relation to the concept.

### **2.3.1 Implementing evidence-based practice**

Despite the theoretical debate around evidence-based practice, it has undergone rapid adoption in numerous fields (Brownson et al., 2009; Marteau et al., 2006; Hammersely, 2000). There appeared to be a number of factors which may explain this growth including social, political and economic influences, as well as the requirements of professional registration for some groups (see Section 2.2.2). Despite these pressures and associated clinical guidance, implementation studies suggest a number of barriers to applying evidence-based practice in practitioner settings. Based on a review of these findings Gotham (2006) claimed:

Unfortunately, the decision to mandate or adopt an EBP is not equivalent to its implementation. Staff resistance to change, lack of continued commitment from leadership, insufficient funding, difficulties in securing appropriate training, applying skills actually learned in training with actual clients, and incompatibility with information technology systems are just a few of the problems encountered. (p. 606)

Copley and Allen (2009) set out to explore the apparent mismatch between an organisational or societal desire for evidence-based practice and its subsequent uptake and implementation by practitioners. Using a Focus Group methodology, the authors examined the perceptions of nine paediatric occupational therapists on how to increase the use of evidence-based practice within their field. Copley and Allen (2009) reported on three main themes that emerged following thematic analysis: 'Barriers to implementation', 'Research-generated evidence', and 'Knowledge from professional experience'. A particular strength of Copley and Allen's (2009) design was

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their use of a qualitative technique (thematically analysed Focus Groups) that was sensitive to the range of perspectives that existed within the participants (Millward, 2001). Although a number of criticisms around the use of Focus Groups exist (Sim, 1998), Copley and Allen (2009) identified several methodological adaptations to their design to overcome a number of these (see pp.194-196). What fails to emerge however, is an indication of the relative importance of the codes and themes identified within the Focus Groups. Although insightful in its own right, the incorporation of a complementary method to explore practitioner agreement may have provided an additional layer of context within which to interpret Copley and Allen's (2009) research.

The prevalence of certain attitudes towards different aspects of evidence-based practice implementation was also explored by Pagoto et al. (2007), who examined the barriers and facilitators of evidence-based practice implementation in a group of 37 'behavioural science health professionals'. Using Content Analysis to explore participant responses to open-ended questions, the authors identified seven thematic categories that influenced implementation ('Training', 'Attitude towards EBP', 'Consumer demand', 'Logistical', 'Institutional support', 'Policy' and 'Evidence'). Overall the responses emphasised the barriers to evidence-based practice (barriers to evidence-based practice accounted for 64% of responses, compared to facilitators 36%), which the authors ascribed to an overly narrow understanding of evidence-based practice within the sample,

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Negative attitudes were largely about empirically supported treatments and reflected the misconception that EBP means the unilateral use of empirically supported treatments. The process of EBP is actually quite multilateral, requiring that clinical decisions integrate three components: the evidence base, clinical expertise, and patient values. (p. 701)

Pagoto et al.'s (2007) analysis not only builds on the implementation research described by Copley and Allen (2009), providing a better understanding of the relative numerical saliency of certain aspects of evidence-based practice implementation, but also serves to contextualise earlier sections of this Chapter which identified overly narrow conceptions of evidence-based practice as the source of many of the theoretical criticisms espoused (Straus & McAlister, 2000).

However the contributions of Pagoto et al. (2007) towards the developing understanding of evidence-based practice within the Literature Review need to be considered within the context of some of the limitations contained in their study. Firstly, participants were identified and recruited from open access online forums associated with a range of topics. Although reported in *The Journal of Clinical Psychology* this method of participant recruitment, and subsequent lack of clarity in the Methods Section of their article, obscures pertinent questions about the demographics of the sample, and therefore leaves the reader to speculate about whose views the results could be representative of.

More significantly perhaps, the design of the study (Content Analysis of open-

ended questions) limits the reader's ability to critically examine the authors' conclusion that misconceptions around what is entailed by evidence-based practice is the source of the negativity. At no point in their study did Pagoto et al. (2007) either define, or collect definitions of evidence-based practice from the participants, through which one could draw stronger conclusions about how the understandings of evidence-based practice may influence the attitudes of practitioners and its subsequent implementation. It seems that in their espoused aim of providing, "an initial exploration of perceived barriers and facilitators to identify key themes that will inform future quantitative studies of attitudes about EBP" (p. 697), they have perhaps put the cart before the horse. In order to draw meaningful conclusions that implicate participant understandings these need to be explored in a methodologically sensitive way *first*.

Perhaps as an acknowledgement of this limitation, and as a useful conclusion to the current Section exploring studies of implementation of evidence-based practice, Pagoto et al. (2007) emphasise the importance of recognising practitioner understandings of evidence-based practice, saying, "misconceptions about what EBP is (and what it is not) could have the greatest impact on facilitating implementation" (p. 701).

It seems in the rush to adopt evidence-based practice (Gotham, 2006), the focus of applied research has been on the perceived barriers or facilitators to implementation. However the literature presented so far suggests that what is

missing is a more fundamental insight into practitioner understandings of evidence-based practice as a research question in itself.

### **2.3.2 Exploring practitioner understandings of evidence-based practice.**

Based on the literature reviewed thus far it *seems* that a mismatch exists in terms of the way evidence-based practice is defined in the literature (see Section 2.2.1) and how practitioners themselves understand it (Pagoto et al., 2007). The word 'seems' is used purposefully to recognise that this mismatch is *proposed* rather than established through sound methodological research (i.e. through studies designed specifically to examine understandings of evidence-based practice within practitioners). While the preceding sections have provided an important context in which the current study can be understood, the lack of carefully designed research seeking to examine practitioner understandings of evidence-based practice has emerged as a significant gap in the literature reviewed so far:

the lack of any empirical justification for the approach has meant that advocates have relied upon intuitive claims, whilst critics have countered on similar terms. Any critical appraisal of evidence-based practice can therefore only be based on opinion. (Trinder & Reynolds, 2000, p. 213)

Given the conclusions drawn by the researchers outlined above, there appears to be a need to establish understandings of evidence-based practice within groups of practitioners. This Section of the literature review will outline what progress has been made in examining this crucial area.

One of the first studies that set out to explore practitioner understandings of

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evidence-based practice specifically was carried out by Upton and Upton (2005). In their study, 500 General Practitioners (GPs) and 500 hospital medics completed a questionnaire designed to obtain information relating to a number of areas of evidence-based practice. Upton and Upton (2005) reported that while both GPs (57%) and hospital medics (66%) had a 'mid' to 'high' awareness of the principles of evidence-based practice, their applications of these principles was infrequent (i.e. 63% of GPs reported that they 'Never' or 'Rarely' critically appraised the literature). The difference between 'awareness' and 'implementation' was accounted for by Upton and Upton (2005) in terms resource barriers including 'Access to research' and 'Time'.

Brown, Wickline, Ecoff and Glaser (2009) attempted to build on Upton and Upton's (2005) research by using a version of their questionnaire, adapted for nurses. Following a similar procedure to the original study, Brown et al. (2009) reported that the sample of nurses (n=456) displayed a similar discrepancy between their identified knowledge of the principles of evidence-based practice and its subsequent application.

The two studies described so far (Upton & Upton (2005) and Brown et al., (2009)), have gone some way in illuminating understandings of applied professionals towards evidence-based practice. As the research by Pagoto et al. (2007) and Copley and Allen (2009) showed, this type of understanding is vital in terms of implementing evidence-based practice successfully within a team or organisation. However their (Upton & Upton, 2005; Brown et al.,

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2009) progress towards this aim is limited by the methodological approach used (questionnaire). It may be that in their attempts to achieve a large sample size (e.g. n=1000, n=458) they had to compromise their ability to gain a more qualitative response from their participants, which perhaps would have been better suited in gaining participant 'understandings' (Silverman, 1997). Moreover the use of self-report in relation to 'knowledge of EBP' may have resulted in exaggerated scores, a limitation recognised by Brown et al. (2009).

Practitioner-psychologist understandings of evidence-based practice were addressed more specifically in a study by Wilson, Armoutliev, Yakunina and Werth (2009), who explored the views of clinical and counselling psychologists. Using a Grounded Theory design Wilson et al. (2009) identified six themes that characterised the views of the psychologists interviewed ('Attitudes towards EBP', 'Best available research', 'Clinical expertise', 'Client context', 'The gap between research and practice', and 'The place of managed care'). The authors reported that the views of both clinical psychologists and counselling psychologists were similar, with both groups demonstrating that they were not entirely clear about how evidence-based practice was defined. The authors concluded that, "because attitudes towards EBP became more positive over the course of the interview, after the definition was provided and participants described its applicability to service provision, practitioners may want to explore EBPP and how it might apply in their practice." (p. 407)



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While Wilson et al.'s (2009) study provides a useful lens through which attitudes towards evidence-based practice within a group of practising psychologists can be viewed, a number of factors limit their findings in relation to the work of Educational Psychologists. Most significantly perhaps, Wilson et al. (2009) specifically excluded any psychologists who had children as their primary clients. The relevance of this becomes clear when Wilson et al. (2009) elaborate on the theme 'The place of managed care', whereby participants reported financial consequences associated with the move to evidence-based practice, characterised by the following interview extract taken from their study:

My jaded view of how that works out in the real world is based on the idea where evidence-based practice was all about limiting access. (p. 406)

For most state-employed Educational Psychologists, their primary clients (children and young people) are not typically granted or denied access to their service based on the perceived evidence-base of their intended intervention. Typically once a child meets a set of criteria, provided there is capacity, an Educational Psychologist is able to engage and support the client as they see fit (within the parameters set out in their professional Code of Conduct).

However, what remains clear from Wilson et al.'s (2009) study is not only that evidence-based practice is often narrowly understood by practitioner-psychologists, but that once a broader definition is provided, one that encompasses more than simply 'empirically supported treatments' or

'practice-based evidence', attitudes towards evidence-based practice improve.

Unfortunately the Literature Review revealed no empirical research in which the views of practising Educational Psychologists were sought in relation to their understandings of evidence-based practice. The absence of empirical (as opposed to theoretical) research into practitioner understandings of evidence-based practice was confirmed by one of the most prolific authors in the field of Educational Psychology (Kratchowill, Personal Communication, March, 2012 (Appendix D)). While the absence of empirical research into practitioner understandings clearly presents a gap in the literature, Fox (2003) does provide a theoretical exploration of the concept of evidence-based practice within the field of Educational Psychology. Significantly, Fox (2003) argues that there is an assumption that Educational Psychologists are *already* evidence-based practitioners, "Society expects EPs to make such judgements [around a child's difficulties] from an objective rather than subjective view. They expect that such judgements are made on a solid body of evidence- in terms of previous research." (p. 99)

Furthermore, Fox (2003) identifies the need for EPs to be able to make explicit the research on which their advice and intervention is based, particularly for clients,

clients may not know how the framework relates to the goal [of the intervention] unless the EP makes explicit the link. These linking statements are essential for client [sic]. How will the client know what he/she will gain unless there is an explicit link between the goal and the activity that is communicated? (p. 99)

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Of particular interest to the current study however were Fox's (2003) "Five Fundamental Objections" to evidence-based practice within Educational Psychology, captured in Table 5 below.

**Table 5- Objections to evidence-based practice from within the field of Educational Psychology proposed by Fox (2003)**

<b>Objection</b>	<b>How this objection is characterised by Fox (2003)</b>
I am a Practicing Psychologist not a researcher	<i>This first fundamental objection is I am a practicing EP not a research analyst. This means that I feel intimidated by research design and statistical analysis. I am not certain that I can recognise good research. Tied to this (but paradoxically) I also believe that there is not enough research material to base my professional practice on.</i>
The Research Evidence is Contradictory	<i>This second objection is that much of the evidence that there is seems to be contradictory. I do not have time to read, or make sense of, all these different points of view. Anyway things seem to come in and out of fashion.</i>
The Research Hierarchy is not Appropriate	<i>The next fundamental objection is that the research hierarchy as agreed for health is not appropriate for EPs. The focus on randomised controlled studies is not practical and is not the most valid form of research in educational psychology. It is a very medical model of gaining information. Quantitative analysis of data is a number crunching dehumanising style of research practice.</i>
Services do not Operate on an Evidence-Based Paradigm	<i>The fourth objection is that my service encourages EPs to use professional experience over research as a guide to good practice. This lack of respect for research is mirrored by my local education authority and the Department for Education and Employment, where research in education is not used to move forward the debate on improving standards in schools.</i>
My Professional Expertise is Based on Experience not Research	<i>The final point is that EPs' professional practice is an art not a science (as are teachers, social workers and even doctors). I know what to do through reflecting on my practice not from evidence-based research. I also have certain values as an EP. I do not intend to change my views even if the best (present) research evidence contradicts them.</i>

Each of the five 'fundamental objections' clearly have potential implications for the way in which evidence-based practice could be understood by practising Educational Psychologists. For example those Educational Psychologists whose psychology degree was an Arts based Psychology Degree as opposed to a Bachelors of Science may feel their views are captured by Fox's (2008)

final objection outlined in Table 5 above. Similarly those Educational Psychologists who work in Local Authorities where budgetary concerns impact on the ability to access certain resources may feel that Fox (2003) is correct in asserting that ‘Services do not operate on an evidenced-based paradigm’.

While Table 5 provides plenty of opportunity for speculation, it is not clear from Fox’s (2003) article how these ‘fundamental objections’ were arrived at or how representative they may be of the profession as a whole. It appears from the article that they in fact are based solely on the views of the author, “as an EP the author can identify five fundamental objections to evidence-based practice” (p. 95)

While the singular perspectives of those within the profession should not be overlooked, it is necessary to identify the degree to which Fox’s (2003) fundamental objections may be shared more broadly within the profession.

#### ***2.4 Research question:***

The present Literature Review examining evidence-based practice identified a number of perspectives that suggest it should be a concept already embedded in the work of Educational Psychologists (HPC, 2009). However it was clear that the debate around how evidence-based practice was applied within a number of fields (Gotham, 2006; Copley & Allen, 2009), including

psychology (Pagoto et al., 2007), made its potential implementation and acceptance within the field of Educational Psychology uncertain (Fox, 2003). It was suggested that some of the negative perceptions of evidence-based practice by groups of practising psychologists could be explained by the narrow definition of evidence-based practice they held (Wilson et al., 2009). However the Literature Review did not reveal any studies that had sought to examine how evidence-based practice is understood by a group of practising Educational Psychologists. Given this gap within the literature the principal research question guiding the current study is therefore:

*How is evidence-based practice understood within a group of practising Educational Psychologists?*

Detailed in the next Chapter are the methods by which the thesis aims to address the research question posed above. The analysis and results of the study are then explored within Chapter 4. Following a discussion of the limitations of the current study, Chapter 5 summarises some of the potential implications for research and practice. The thesis concludes with Chapter 6 which draws together each of the previous Chapters and identifies the contribution this study makes in terms of understandings of evidence-based practice within a group of practising Educational Psychologists.

### **3. Methodology**

#### ***3.1 Introduction to Chapter***

The Literature Review highlighted a gap both in terms of the use of sensitive and appropriate research methods that seek to explore understandings of evidence-based practice in applied professionals, but also a paucity of empirical (as opposed to theoretical) research that focuses on evidence-based practice within the profession of Educational Psychology specifically.

The purpose of this Chapter is to clarify the methodological decisions and research methods employed to address the following research question:

*How is evidence-based practice understood within a group of practising Educational Psychologists?*

This Chapter begins with a description of the methodological design (Section 3.2 and 3.3) which makes explicit the decisions made in selecting the data generation methods used. Following a brief summary of the procedures used in the study as a whole (Section 3.4), the remainder of the Chapter is spent outlining the details of the Focus Groups (Section 3.5.1) and Q-technique (Section 3.5.2) used in the present study, before concluding with a brief summary of how the methodology used aims to provide a complementary approach to answering the research question posed above (Section 3.6).

### **3.2 Design**

In addition to the influences that arise from the ontological and epistemological assumptions of the present study, certain methodological orientations have also played a significant role in determining which research methods would best answer the research question posed. The purpose of the present Section is to make explicit some of the research traditions that the present study follows from before clarifying which methods were selected from a range of options.

### **3.3 Methodological orientations informing the study**

While the hierarchy described by Crotty (1998) provides a useful framework in which to justify the methods selected, a significant aspect of the decision making process is not made explicit within that model: the influence of theoretical research orientations that resonate with the values of the researcher. While some readers might take such personal admissions as a slight on the desire for objectivity within a realist research orientation, if truth be told, the acknowledgement of the personal influences of the researcher have long been acknowledged in 'traditional' forms of research, leading to such methodological innovations such as randomised control trials, statistical confidence intervals and the disclosure of 'conflicts of interest' within published research.

Rather than limiting the objective rigour of the current study, making the research traditions that have informed the present study explicit provides the reader with additional information that can be used to identify and speculate

on other approaches that may have been more suited to answering the research question from alternative theoretical orientations.

### **3.3.1.1 Action research**

As outlined in the Introduction, an aim of the current study was to ascertain the views of practising Educational Psychologists as the first part (*'Understand'*) of a wider cycle of potential change (see Figure 1). As such it draws upon the Action Research orientation first described firstly by Lewin (1946). Subsequent authors have elaborated on Lewin's (1946) initial conceptualisation to incorporate a number of different but related sub-disciplines: *Action Science* (Argyris, 1995); *Cooperative Inquiry* (Heron, 1996); *Participatory Action Research* (Freire, 1970); *Developmental Action Inquiry* (Torbert, 1999).

At the core of each of the different disciplines is a focus on carrying out research alongside, and in collaboration, with the group in question within the day to day environment they inhabit:

Action research is an orientation to knowledge creation that arises in a context of practice and requires researchers to work with practitioners. (Huang, 2010, p. 93)

In addition to the emancipatory ethic underlying Action Research approaches (*'nothing about us without us'* (Charlton, 1998)), studies drawing on this research tradition are usually concerned with bringing about positive practical changes that are sustainable for those involved, bridging the gap between theory and practice:

[Action research is] a participatory, democratic process concerned with



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developing practical knowledge in the pursuit of worthwhile human purposes...It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people. (Reason & Bradbury, 2006, p. 1)

Anderson (2006) describes the methodological advantages that 'native' Action Research allows in terms of the sensitivity to the subtle nuances of the context and profession, noting that the researcher has access to forms of data that would not otherwise be available. Adler and Adler (1987) claim those who both participate in and research a certain context or group obtain the status of 'complete member researcher' (CMR), of which they claim, "CMRs come closest of all...to approximating the emotional stance of the people they study." (p. 67)

As the following Chapter will show, the practitioner-based action research orientation of the present study resulted in frequent shared interpretations of the findings which represented an additional layer of analysis to those outlined in the literature (i.e. Braun & Clarke, 2006; Brown, 1980).

### 3.3.1.2 Methods used

Based on the discussion so far, the present study proposes that the understandings of evidence-based practice with a group of Educational Psychologists represent an ontologically sound line of enquiry, the subjective nature of which, it has been claimed (Brown et al., 1999; Stephenson, 1953), can be identified and approximated. Not only have the ontological and epistemological foundations on which the study is based been clarified but the

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influence of Action Research has also been acknowledged. Based on this foundation two complementary research methods were selected in order to unpick how evidence-based practice is understood by a group of practising Educational Psychologists. The first is the use of Focus Groups which are employed as a methodologically sensitive approach designed to uncover the range of different opinions and understandings that exist within the group.

While the use of Focus Groups presents a robust methodology in uncovering the diversity of views that exist (Krueger & Casey, 2000), the approach struggles to provide a sound indication of how representative different points of view are in terms of the group as a whole (Sim, 1998). As such Q-methodology has been selected as a complementary method that will provide a way of determining how the Educational Psychologists make sense of the diverse aspects of the *concourse*<sup>1</sup> as a whole, as well as the range of agreement among each individual's holistic understanding of evidence-based practice within the group.

While both of these methods are described in detail below it should be noted that a number of other research methods were considered. Further discussion of these can be found in Appendix E.

### ***3.3.1.2.1 Mixed method design***

Before proceeding to a more detailed account of the Focus Group

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<sup>1</sup> 'Concourse' is a term used in Q-methodology to refer to the overall discourse that surrounds a topic, essentially all that can be said about it (see Section 3.5.2.2.).

methodology and Q-technique<sup>2</sup>, it is worth noting that Focus Groups are considered to be a broadly qualitative technique (Millward, 2001), while McKeown and Thomas (1988) identify Q-Methodology as broadly quantitative:

Q Methodology encompasses a distinctive set of psychometric and operational principles that, when conjoined with specialized statistical applications of correlational and factor-analytical techniques, provides researchers a systematic and rigorously quantitative means of examining human subjectivity. (p. 7)

Much has been written about the potential barriers to 'mixed method' research following 'paradigm wars' of the early 1980s (Gage, 1989). The conflict centred around the beliefs of some authors, alluded to briefly in Section 2.2.3.3, that the philosophical assumptions held by different camps were 'incommensurable' with certain methods. More recently a number of authors have suggested that mixed method research can offer a superior answer than monomethod research to certain research questions:

As a method it focuses on collecting, analyzing and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone. (Creswell & Plano Clark, 2007, p. 5)

While a theoretical basis for the integration of qualitative and quantitative research methods exists (Creswell & Plano Clark, 2007), the combined use of thematically analysed Focus Groups and Q-methodology used in the present study would be supported further still if evidence of their successful pairing

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<sup>2</sup> The terms 'Q-technique' and 'Q-methodology' are used interchangeably, and although Q-methodology is favoured in the literature in such cases as the sentence above, Q-technique will often be used out of stylistic considerations.

could be found to be applied in practice within published literature.

Such a pairing is described positively by Lazard, Capdevila and Roberts (2011) who identified the successful integration of thematic analysis and Q-methodology in a study seeking to identify what stakeholders felt were the reasons for the success of an offender rehabilitation scheme. Lazard et al. (2011) claimed that:

Q and thematic analysis intermeshed and produced a more nuanced analysis of social understanding...the use of both Q-methodology and thematic analysis produced a much richer and thicker analysis than would have otherwise have been possible...[and] allowed us to trace a path through the research that produced a more nuanced overview of the patterns relevant to the research question. This, in turn, made possible a conclusion that could be effectively translated into an applied setting. (p. 147)

What is perhaps most pleasing by this endorsement, within the Action Research context of the present study, is the potential for the combined use of thematically analysed Focus Groups and Q-methodology to have practical utility within an applied setting.

### ***3.4 Research Procedure***

Several phases were evident in the current study. While the details of each phase are explored in detail throughout this Chapter, it was felt that a summary of the main elements associated with each phase would provide an overview that would contextualise the methodological decisions described.

### **3.4.1 Initial negotiation around topic for research and research design**

The desire for the current study to have a practical utility has been outlined in several Sections so far and so it was essential that whatever topic of study was selected it nested within the aims of the Educational Psychology Service and County Council more widely. During this phase of the research I met with various individuals and groups within the County Council to identify mutually beneficial topics for my doctoral research. These discussions led to a number of initial ideas both around the topic of the research but also in terms of a sustainable style that might provide a model for practitioner-based research within the Service. In order to align the research aims to the needs of the organisation a number of policy documents and service delivery plans were reviewed (see Appendix A for selected extracts). Following the completion of an initial research draft, the methodology and specific aims were honed through academic sessions at the University of Sheffield and discussions with the potential participants within the Service. Once the participants and host Local Authority were satisfied with the proposed research, ethical approval was sought and gained from the University of Sheffield (Appendix F).

### **3.4.2 Commencement of first stage of the research (Focus Groups)**

Based on the initial negotiation around the topic and refinements of the research design (i.e. through amendments made following the pilot study), practising Educational Psychologists from the Service were recruited for the

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Focus Group element of the research<sup>3</sup>. Following the Focus Groups participants were asked to support with the analysis of the data by validating the codes and themes and commenting on the proposed results.

### **3.4.3 Commencement of second stage of the research (Q-methodology)**

It is perhaps disingenuous to suggest that this stage commenced after the Focus Groups had finished as the process of concourse generation had begun informally as soon as the service related documentation was scrutinised. However it was only after the thematic analysis of the Focus Group that the concourse was formally developed from the transcripts, with other sources consulted to ensure the Q-Set drawn from it was representative and balanced. Following the statistical analysis of the Q-Sort participants were once again involved in the validation and interpretation of the results.

### **3.4.4 Write-up and dissemination**

A hallmark of a genuine action researcher approach is that the dissemination pathway and practical implications should be explicitly planned within the research design. This formed an integral part of the design and is evident in various stages throughout the research (see Sections 4.3, 4.4, 5.3, 5.6). Most significantly the research forms part (*'Understand'*) of a structured process of potential organisational change, with the expectation being that the results will

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<sup>3</sup> While there was the potential for at least three focus groups, it was felt that saturation in terms of the codes and themes that had emerged through the subsequent analysis had occurred after two sessions.

inform the next stages (*'Plan'*, *'Action'*, *'Review'*) of the 'Exploration Cycle' described in the Introduction (see Figure 1).

### **3.5 Methods**

#### **3.5.1 Focus Groups**

According to Millward (2001), Focus Groups appear to be a particularly suitable method to provide an answer to the question of how evidence-based practice is understood by a group of practising Educational Psychologists:

Used alone or in combination with other methods, the aim of focus groups is to get closer to participants' understandings of and perspectives on certain issues. (p. 305)

Barbour and Kitzinger (1999) described Focus Groups as,

Group discussions exploring a specific set of issues. The groups are 'focused' in that it involves some kind of collective activity- such as viewing a video, examining a single health promotion message, or simply debating a set of questions. (p. 4)

Focus Groups can thus be considered to work well with other methods and have been shown to provide a useful method of generating naturalistic statements for the Q-methodology element of the research (Valenta & Wigger, 1997; Eden, Bear & Walker, 2008).

Furthermore, Focus Groups provide a cost and time efficient method of generating a range of opinions around a certain topic (Krueger & Casey, 2000), which was an important consideration given that the initial negotiation around the research with the host Local Authority included a sensitivity to cost and a desire to develop a sustainable research *process*.

While a detailed description of the analysis and results from the Focus Groups is provided in the following Chapter (Section 4.3), an account of the preparation, participants and procedure follows below.

### **3.5.1.1 Preparation**

A distinguishing characteristic of Focus Group research is the ‘focussing stimulus’ (Millward 2001) which for the present study was a collection of ‘Participant Prompts’ (see Appendix G) aimed at eliciting a broad range of perspectives in relation to evidence-based practice among the group. The prompts were based on the salient themes that emerged from the Literature Review and were refined following a pilot Focus Group (Appendix H).

A further addition made to the Focus Group procedure following the pilot study (Appendix H) was the introduction of a Recording Sheet (Appendix I), which was printed on the reverse of the Participant Prompts (Appendix G), where participants were able to note down their thoughts and impressions relating to key strands of the discussion to support with the subsequent analysis.

A Facilitator Prompt Sheet (Appendix J) was also developed to provide an aide-memoir relating to different aspects of Focus Group management.



### **3.5.1.2 Participant recruitment and group organisation**

Participants for the Focus Groups were selected from the qualified Educational Psychologists who worked for the Local Authority as either main grade, senior or principal Educational Psychologists (n=21). The composition of the qualified staff included both full and part-time colleagues, of both genders, with post qualification experience ranging from less than one year to 36 ( $\bar{X} = 12.35$  years).

Participant recruitment and attendance at arranged venues are viewed to be significant challenges associated with Focus Group research, with some authors concluding that the final design is “a product of circumstance rather than planning” (Kitzinger & Barbour, 1999, p. 8).

Despite Kitzinger and Barbour’s (1999) warning, the Focus Groups that were arranged proceeded with little deviation from the planning process that informed the recruitment of participants and their subsequent allocation to a predetermined group (described below). The relative ease with which the participants were recruited and grouped provides additional support for Anderson’s (2006) identification of the advantages that ‘Complete Member Researcher’ status affords to practitioner-based action research designs (see Section 3.3.1.1).

Based on the advice from the literature (Kitzinger & Barbour, 1999; Millward, 2001), Focus Groups of 6-8 qualified Educational Psychologists (to a

maximum of 3 groups<sup>4</sup>) were felt to be small enough to ensure everyone had the opportunity to contribute while not being so large that smaller sub-groups would form (Kitzinger & Barbour, 1999).

The composition of groups is also an area in which the researcher has to exercise some judgement (Fern 2001). For example Kitzinger and Barbour (1999) claim that homogenous groups tend to lead to productive discussions, where as more heterogeneous configurations lead to illuminative discussions. As the participants were drawn from a distinct professional group from within a single organisation they may be considered to be more homogenous than a random sample from the general population. However the differing level of seniority among the sample was seen to have the possibility of influencing the range of perspectives that emerged and so those Educational Psychologists who formed the senior management team were grouped together.

Two groups of 7 were sent a recruitment email (Appendix K) and based on their reply were assigned to one of two groups. All of those contacted agreed to take part although one participant was forced to withdraw from one of the Focus Groups through ill health (they did however take part in the Q-procedure described in Section 4.4).

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<sup>4</sup> The Focus Group element of the research placed the greatest demands on resources, with each group costing approximately £2000 in terms of salaries, travel expenses and administrative costs and so while 3 focus groups were possible based on the participants available (n=21) it was decided that Kruger's (1994) advice regarding 'diminishing returns', particularly with homogenous groups, would be followed using perceived saturation as a guide as to whether 3 focus groups were necessary (Onwuegbuzie, Dickinson, Leech, & Zoran, 2009). Based on the analysis described in Chapter 4 it was not felt that a third group would add significantly to the codes and themes that emerged.

### **3.5.1.3 Procedure**

Participants were welcomed and the points noted in the Facilitator Prompt Sheet (Appendix J) were covered. Participants were given the Information Sheet (Appendix L), Consent Form (Appendix M), Participant Prompt Sheet (Appendix G) and Recording Sheet (Appendix I). Time was set aside in which the participants could ask questions relating to the research or procedure and to discuss the Q-methodological component of the research that would eventually follow.

Once participants were satisfied with what the research entailed they returned the signed consent forms and the audio recording devices were turned on (5<sup>th</sup> Generation Apple ipod Nano, Livescribe Echo Smartpen, Olympus Voice recorder VN-8500PC).

Although participants were alerted to the questions on the Participant Prompt Sheet (Appendix J), they were encouraged to engage in conversations that did not necessarily address the points in a sequential or exclusive manner.

### **3.5.1.4 Analysis and results**

While a comprehensive description of the analysis and results of the thematically analysed Focus Groups follows in the next Chapter, a brief summary of the procedure follows below for the reader's benefit.

Acknowledging advice from Kitzinger and Barbour (1999) the initial analysis and transcription of the Focus Group began immediately, and in an attempt to

establish if a third group would be necessary, transcripts were analysed and coded in the first few days after each group. The thematically analysed transcripts (Appendix OO and Appendix PP) and a collation of the exemplified codes and defined themes (Appendix QQ) were shared with the individual participants who were asked to comment on the appropriateness of the codes used in relation to their contributions as well as their feelings on how the codes were thematically grouped as a whole. Based on participants' feedback slight amendments were made (see Section 4.3.1.3) and it was felt that the codes and themes developed were comprehensive enough so that a third group would be unnecessary. Participants were then sent a copy of a narrative report of the Focus Groups in which the extracts from the transcripts that exemplified the codes and themes were interpreted as a whole. This not only facilitated a process of shared interpretation consistent with the practitioner-based action research orientation of the research, but also provided the opportunity to establish a "realist version of validity" (p2598) in relation to Focus Groups described by Hyde, Howlett, Brady and Drennan (2005).

The substantive analysis of the Focus Groups drew mainly on Braun and Clarke's (2006) widely cited stages of thematic analysis (see Table 6 below), although additional techniques were drawn upon in order to improve the overall quality of the analysis and to align the results to the action research ethic that underlies the research (Krueger & Casey, 2000).

**Table 6- Braun and Clarke’s (2006) Stages of Thematic Analysis (reproduced with permission (Appendix Z)**

Phase	Description of the process
1. Familiarizing yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic ‘map’ of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Based on the supplementary techniques used alongside Braun and Clarke’s (2006) established framework (Table 6 above), the following description of the analysis can be meaningfully spilt into 4 stages; Initial reflections and data preparation (Section 4.3.1.1), Initial formal analysis (Section 4.3.1.2), Validation (Section 4.3.1.3), and Final Analysis (Section 4.3.1.4). Numerous methodological decisions are made at each stage in order to best answer the research question within the theoretical parameters of the present study, which are described under each of the four headings below, consistent with Braun and Clarke’s (2006) advice that,

What is important is that the theoretical framework and methods match what the researcher wants to know, and that they acknowledge these decisions. (p. 80)

#### **4.3.1.1 Initial reflections and data preparation**

Krueger and Casey (2000) contend that the analysis process commences at the point when the Focus Group begins rather than starting with a formal analysis technique. The present study drew on a number of ‘early analysis’

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techniques described in the literature (i.e Boyatzis, 1998; Rabiee, 2004). A

brief summary of each follows below.

#### **4.3.1.1.1 'Notes' made during the Focus Group**

The degree to which the Focus Group moderator drives the discussion is based on a number of methodological decisions and the underlying research aims (Millward, 2001). Owing to the action research orientation of the present study the input of the moderator in the present study was more 'facilitative' than 'directive'. This observational role allowed a number of 'notes' to be taken; physical notes of potential themes within the discussion (Krueger & Casey, 2000), but also mental notes of the potential for perspectives to be missed (and therefore potentially omitted from the Q-concourse).

Based on the physical notes taken during the focus groups, participants were encouraged to clarify and elaborate on the moderators identification of potential themes, making links to potential future change clear<sup>5</sup>:

*There's a theme that's reoccurred in the stuff you've said [Rory (FGP 3)] and again thinking about what might change to facilitate that how do you think you could incorporate that into a practice an almost formalised way*  
*(Moderator (FG1\_MOD\_571-573))*

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<sup>5</sup> Shaded boxes are used to signal that the extracts used are taken from the Focus Groups transcripts (FGA, Appendix OO; FG1, Appendix PP). Pseudonyms are used for the readers convenience. Should the reader wish to explore the context from which the extracts are taken the citation that accompanies each extract corresponds to: The Focus Group Transcript (either FGA or FG1)\_The speaker\_The line numbers of the transcript.

Moreover the mental 'notings' allowed the moderator to be sensitive to ways in which elements of the discourse might fail to emerge:

*I'm conscious I have not heard from you in a while [Lee (FGP1)]*  
*(Moderator (FG1\_MOD\_758))*

*[Drew (FGP 6)] I'm conscious you've made some really great notes is there anything you would share want to share publically*  
*(Moderator (FGA\_MOD\_277-278))*

The physical and mental 'notings' from the Focus Groups provided the author with an opportunity to check out emerging 'real time' interpretations of the discussion that were then used to inform later aspects of the thematic analysis.

#### ***4.3.1.1.2 Initial feedback from participants***

As described in Section 3.5.1 of the previous Chapter, participants were supplied with a Prompt Sheet (Appendix G) containing the potential areas for the discussion as well as a Recording Sheet (Appendix I) which allowed them an opportunity to note their own reflections during the discussion. This form of immediate feedback allowed participants to inform the early identification of themes both during the Focus Group (see FGA\_MOD\_277-278, above) and also privately with the researcher following the Focus Group. This technique, described by Boyatzis (1998), allows the participants to express, "thoughtful impressions and reflections available for further reflection and analysis" (p. 52).

Given the 'complete member researcher' (Adler & Adler, 1987) status of the author (see Section 3.3.1.1), participants were also able to share their reflections on the salient points (potential codes and themes) that emerged through naturally existing communication channels within the Educational Psychology Service (e.g. Supervision, email and informal communication). These creative opportunities to refine the understandings of evidence-based practice are acknowledged by Anderson (2006) to be a unique methodological advantage of being "involved in the social world under study is that it gives the researcher an added vantage point for accessing certain kinds of data" (p. 389).

While the role of feedback from participants is not emphasised within Braun and Clarke's (2006) steps of thematic analysis (Table 6), the initial insights and perspectives shared by the participants are highly influential within an action research framework and were important in shaping the following aspects of the analysis.

#### ***4.3.1.1.3 Transcription***

Although some authors suggest that transcription of the Focus Groups is not always necessary (Lederman, 1990), or can be commissioned out to a transcription service given the significant time required to complete the process (Stewart, Shamdasani, & Rook, 2007), the current study adopts the



alternative view that transcription itself is an important element of the analysis of the Focus Group:

the time spent in transcription is not wasted, as it informs the early stages of analysis, and you will develop a far more thorough understanding of your data through having transcribed it. Furthermore, the close attention needed to transcribe the data may facilitate the close reading and interpretive skills needed to analyse the data. (Braun & Clarke, 2006, p. 88)

Consistent with converging advice from a number of authors around good practice within qualitative analysis in terms of transparency (Breakwell Hammond & Fife-Schaw, 2001), both Focus Group transcripts are included in their entirety (rather than in an extract form) (FGA, Appendix 00; FG1, Appendix PP).

#### **4.3.1.2 Initial formal analysis**

Building on the sources of potential codes and themes outlined above, the transcripts were then subjected to a more formalised analysis whereby the entire transcripts were first coded then themed in line with the advice of Braun and Clarke (2006) and others (Boyatzis, 1998). A brief description of the different stages of the formal analysis follows below.

##### ***4.3.1.2.1 Initial Coding***

The initial coding of the transcripts began immediately after the transcription process, as advocated by Boyatzis (1998). According to Boyatzis (1998) codes can be considered to be the elementary feature of formal thematic analysis and should capture, “the most basic segment, or element, of the raw

data or information that can be assessed in a meaningful way regarding the phenomenon” (p. 63)

As noted in the pilot study (Appendix H), Nvivo was trialed as an electronic means of coding the data, however, although more time consuming, it was felt that manual coding would allow the researcher to be more sensitive to the subtleties of the discourse. The process of manual coding involves identifying the salient meanings from the text and identifying a code to capture that meaning. The system used in the present study is an adaptation of the method used by Clarke, Burns and Burgoyne (2006, as cited in Braun & Clarke, 2006) and the process can be viewed in its entirety for both Focus Groups in Appendix OO and Appendix QQ.

#### ***4.3.1.2.2 Theme generation***

It is worth re-emphasising at this point that although the phases of analysis have been presented sequentially thus far, there is an ongoing process of re-evaluation that occurs throughout the analysis process in order to identify themes and codes that best summarise the discourse within the Focus Groups. As such some of the potential themes and codes identified at the earlier stages of analysis (described above) are superseded or refined in light of the ongoing re-engagement with the transcripts. It is important to understand this context when considering the final themes that emerged as it would be unfaithful to represent the process of analysis as linear and without the contradictions and inconsistencies that necessitated the evolution and revision of the thematic analysis.

The generation of themes from codes best embodies this process of reformulation and refinement:

Some initial codes may go on to form main themes, whereas others may form sub-themes, and others still may be discarded. At this stage you may also have a set of codes that do not seem to belong anywhere, and it is perfectly acceptable to create a 'theme' called 'miscellaneous' to house the codes- possibly temporarily- that do not fit into your main theme. (Braun & Clarke, 2006, p. 90)

### **3.5.2 Q-Methodology**

While a well-designed Focus Group may reveal a range and depth of perspectives that would not arise through the application of other research methods (Krueger & Casey, 2000), their use is limited when questions about the relative strength of feeling or agreement about particular concepts are asked (Sim, 1998). Based on this limitation, Q-Methodology was employed here as a complementary research tool to both explore how the diversity of views that exist around evidence-based practice are understood by individuals as a whole and also the degree to which these 'Gestalt' understandings of evidence-based practice may be shared across the Educational Psychology Service.

The following Section explores how Q-methodology has been applied in the current study, beginning with a brief theoretical orientation, followed by a description of the different phases of Q-methodology as described by Brown (1980), leaving a fuller discussion of the analysis and interpretation for the following Chapter (Section 4.4).

### **3.5.2.1 Theoretical orientation**

Q-methodology was selected in part to overcome some of the limitations associated with Focus Group designs (Sim, 1998; Krueger & Casey, 2000), yet it also fulfilled the desire to draw on the strengths of a mixed-method approach above (Creswell & Plano Clark, 2007). Although McKeown and Thomas (1988) described it in quantitative terms earlier, it “combines the strength of both qualitative and quantitative research traditions” (Dennis & Goldberg, 1996, p. 104), and as such it is occasionally referred to as a ‘Qualiquantological approach’ (Stenner & Stainton Rogers, 2004).

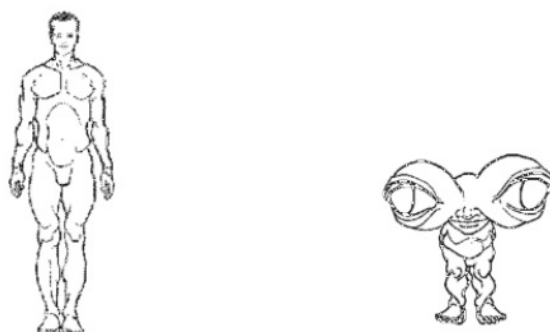
However advocates of Q-Methodology argue that more than simply combining qualitative and quantitative methods, the approach seeks to explore subjective understanding in a unique way that cannot be accomplished through any other method (Watts, 2011). An important distinction is often made between the notions of R-methodology and Q-methodology (McKeown & Thomas, 1988; Brown, 1980). This theoretical distinction will be fundamental when considering the results of this study. In assisting the reader in understanding the importance of this distinction, two forms of ‘contrast’ have been selected from the literature that highlight the difference between ‘Q’ and ‘R’ approaches. The first can be seen in Table 7 below, in which pertinent questions relating to the orientation of a research question are answered for both approaches.

Table 7- A comparison of ‘Q’ and ‘R’ approaches (Robbins & Krueger, 2000), reproduced with permission (

**Appendix O))**

	<b>Q Method</b>	<b>R Approaches</b>
What does the research design seek to accomplish?	To enable a respondent to articulate a specific realm of his or her own subjectivity. To compare the subject positions of whole individuals.	To query a representative sample of potential respondents as to their views on certain objective issues determined a priori by the researcher.
What questions are enabled?	How are X and Y related in the opinion and subjectivity of an individual, where X and Y are claims drawn from the language and ideas of the individual?	What proportion of a population believes X, what proportion believes Y, where X and Y are a predefined claims or concepts?
What is the purpose of collecting data?	To query the categories respondents use to understand their world. To compare them in a controlled fashion.	To query the state of opinion in and between populations.
Relationships among individuals or various traits?	Across traits for a whole individual (Stephenson's [1953] intrapersonal correlation).	Across individuals for each trait (interpersonal correlation).
How will the validity be determined?	Validation through iterative interpretation of the results with subjects.	Validation by correlating other objective information to the findings (e.g., triangulation).
What might the research discover?	Surprise in Q comes from evidence of the association of ideas in individuals in ways that the researcher had not previously theorized or imagined.	Surprise in R comes from evidence of proportions or populations of agreement or disagreement that the researcher had not previously theorized or imagined.

A second example seen below (Illustration 1) attempts to provide a visual representation of the different outcomes Q and R methodological approaches produce. The illustration on the left was produced based on the averages of physical measurements whereas the one of the right was produced based on the subjective ordering of statements relating to the body (see Brown 1972, 1980, for a fuller description of this study).



**Illustration 1- A visual contrast of the data obtained using 'R' versus 'Q' techniques (Brown, 1972), reproduced with permission (Appendix P)**

Given this theoretical orientation towards subjective understanding, Q-methodology would appear to be a most appropriate method in addressing

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the paucity of research into practitioner perspectives revealed in the Literature Review. Moreover, according to Stainton Rogers (1995) Q-methodology also appears to be a very appropriate tool for the specific *topic* of enquiry given its applicability when examining issues that are “socially contested, argued about and debated” (p. 180).

At its simplest Q-methodology has two basic aspects (Watts & Stenner, 2005); the first is to enable participants to make operant their holistic viewpoint in relation to a concept through a Q-sort, with the second being the subsequent factor analysis of the inter-correlated Q-sorts which serves the purpose of preserving contextuality and configural information contained in the individuals’ sorts in the derivation of shared views. However both of these necessary aspects of Q-Methodology comprise of a number of interrelated phases which can be summarised in Table 8 below.

**Table 8- Phases of Q-methodology (adapted from Brown (1980))**

<b>Main phase</b>	<b>Sub-phases</b>	<b>Relevant section of the current thesis</b>
Q-Sort process	<i>Generating the concourse</i>	<i>Section 3.5.2.2</i>
	<i>Q-sampling (generating the Q-Set)</i>	<i>Section 3.5.2.3</i>
	<i>Sorting Procedure</i>	<i>Section 3.5.2.4</i>
Analysis and interpretation	<i>Initial Q-Sort correlation</i>	<i>Section 4.4.1.1.1</i>
	<i>Factor Analysis</i>	<i>Section 4.4.1.1.2</i>
	<i>Factor Rotation- Optional</i>	<i>Section 4.4.1.1.4</i>
	<i>Factor interpretation</i>	<i>Section 4.4.2</i>

The remainder of this Section focuses on those phases involved in the Q-Sort process, with the analysis and interpretation discussed in depth within the following Chapter.

### **3.5.2.2 Generating the Concourse**

Once a research question has been developed the first step within Q-methodology is to establish the concourse that surrounds the area of interest:

the flow of communicability surrounding any topic is referred to as a concourse...and it is from this concourse that a sample of statements is subsequently drawn for administration in a Q sort. (Brown, 1993, p. 94)

A number of potential sources are available to the researcher in terms of identifying the discourse that exists around a particular theme or topic.

McKeown and Thomas (1988) make a distinction between those 'naturalistic' sources of statements (drawn from participants' written or oral communications) and those 'ready made' statements which come from other sources (i.e. pre-existing scales, Q-Sorts and published literature). Within the current study a number of sources were used to generate both naturalistic and ready-made items resulting in a 'hybrid concourse'; Focus Groups, literature review and peer validated statements. A brief description of the method of concourse generation from each of the three sources follows below.

#### ***3.5.2.2.1 Focus Groups***

Given the participatory strand that runs through the present study, the primary source that contributed to the concourse was the perspectives of the

practising Educational Psychologists that emerged during the two Focus

Groups:

Q-methodology 'fits' those research questions which are concerned to hear 'many voices'- what makes it unique is how those voices are allowed expression. (Cross, 2005)

The example below illustrates how extracts from the Focus Group transcripts were selected and edited<sup>6</sup> into a Q-Statement:

### **Transcript extract**

*evidence based practice as a label seems to say is there is a right way out there. (FG1\_FGP2\_674-675)<sup>7</sup>*

### **Resulting Q-Statement**

Evidence-based practice suggests that there is one 'right' way.

While the Focus Group procedure is detailed above, it is worth noting those that took part provided a close fit to Brown's (1993) criteria of being "apt to having something to say about the issue in question" (p. 96), which was evident in the richness of the dialogue that occurred (see Section 4.3.1.5) and the desire of the participants to stay beyond the allotted time.

### **3.5.2.2.2 Literature review**

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<sup>6</sup> It should also be noted that the 'raw' extracts of the Focus Group and literature that made up the concourse were amended using the criteria of intelligibility, diversity, duplication and balance described by McParland, Hezsetine, Serpell, Eccleston and Stenner (2011).

<sup>7</sup> The convention used when citing extracts from the Focus Group transcripts is Focus Group\_Focus Group Participant\_Line number(s). Should the reader like to see the broader context from which the extract is taken, the entire transcript for Focus Group 1 (FG1) is available in Appendix PP and Focus Group A (FGA) is available in Appendix OO.



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Although the Focus Groups provided a wide range of relevant statements for the concourse, it was acknowledged that despite the apparent saturation that occurred from the thematic analysis, there might have been other aspects of the concourse that did not emerge. As such a review of the literature was also undertaken in order to identify any omissions from the concourse generated from the Focus Groups. The literature review included those sources already cited within the thesis, other published documents that were consulted as part of the research process and the 'site documents' reviewed from Educational Psychology Service and County Council (see Appendix A for a sample of relevant extracts).

#### ***3.5.2.2.3 Peer validated statements***

A final source of concourse generation was by means of peer input provided as part of the piloting process (Appendix Q) and expert validation described in the appendices (Appendix R). In short, when a subset of the statements in the concourse (the Q-Set) were shared, feedback indicated that no notable aspects of the discourse were omitted and the only suggestions were in relation to separating out statements that contained more than one idea and stylistic and grammatical changes. While this step provided no 'new' statements to the concourse already described, it is worth noting this to support the claim that the concourse used in the present study provides a comprehensive account of the wider sea of communicability around evidence-based practice.

#### **3.5.2.2.4 Summary**

Although care was taken to ensure the statements collected provided a representative 'sample' of the "population of statements about some topic" (Dryzek & Berejikian, 1993, p. 50), a claim supported in the expert validation process (see Appendix R), one must acknowledge that possible omissions exist. By way of response to this potential limitation some authors argue that an 'incomplete' concourse is overcome through the Gestalt process of the sorting procedure:

The perfect Q set is probably a thing of fantasy and fiction...but it isn't a methodological problem in the same way that it would be for a scale or questionnaire...the detail, quality and meaning of the items will get filled out as the study proceeds. (Watts & Stenner, 2012, pp. 63-65)

By way of a visual analogy, if we take the figures provided below (Figure 3) to be graphic representations of two different concourses we note how neither the fuzzy and degraded nature of the lines (akin to the ambiguity inherent in individual statements) nor the 'gaps' that exist (taken to represent the aspects of the concourse not captured) prevent us from effortlessly perceiving a meaningful whole.



**Figure 3- Graphic representation of an ill-defined concourse**

### **3.5.2.3 Q-sampling**

In an ideal world one may wish to present the entire concourse generated to the participants and have them sort all the items along an appropriate scale (i.e. “agree least to agree most” (Cross, 2005; Gallagher & Porock, 2010)), capturing their point of view in relation to all the statements about the topic in question. In reality however this would not be feasible as it would be impractical in terms of time and resource (i.e. creating legible cards that could be arranged in a ergonomic sorting grid). Furthermore it would be inconsistent with the desire for the items to be arranged as a meaningful whole as it would be unlikely that a participant could make the holistic relative judgements between statements required. As such the next stage is to sample the concourse in order to generate a selection of statements that can be meaningfully sorted by participants as a whole while retaining the breadth and balance contained in the concourse. This sample of the concourse is often referred to as the Q-Set which forms a vital component of Q-methodology given that “people can only tell a story if they have the appropriate statements with which to tell it.” (Stainton Rogers, Stenner, Gleeson & Stainton Rogers, 1995, p. 249)

Within the literature two principle means of achieving the necessary reduction in statements are followed: Structured sampling and Unstructured sampling (McKeown & Thomas, 1988). Atypically both methods were explored in the current study, with a brief summary of some of the theoretical dilemmas raised by this process described in Appendix U for interested readers.

Unstructured sampling was eventually selected and initially produced a 42 item Q-Set which was ultimately raised to 44 following the input from the pilot group (Appendix Q).

Regardless of the method of Q-Set sampling employed, judging the breadth and balance of a Q-Set as an individual presents a significant challenge, notwithstanding Curt's (1994) reassurance that "this is one place where q-methodology is noticeably a craft" (p. 128-129). To overcome this challenge an expert validation procedure recommended by Gallagher and Porock (2010) was used in the present study. While a fuller account of the procedure is provided in Appendix R, a brief summary of the experts' contribution follows below.

Of the four experts who viewed the proposed 44 item Q-Set none suggested that there were any omissions based on their familiarity with evidence-based practice within Educational Psychology. Comments were made regarding the wording of various statements and about the Q-Sort procedure that resulted in a number of amendments to item wording, the introductory video and the post-sort questionnaire.

### ***3.5.2.3.1 Summary***

The aim of the Q-sampling procedure is to arrive at a Q-set which demonstrates "balance, appropriateness and applicability to the issues, intelligibility, and simplicity and comprehensiveness" (Stainton Rogers, 1995, p. 185). In attempting to fulfil these aims two methods were explored.

Although structured sampling was initially favoured as a means of generating the Q-Set, this method appeared to contradict some of the underlying assumptions of Q-methodology without an increased conviction that the resulting Q-Set was necessarily broad and balanced. In exploring an alternative unstructured sample it was acknowledged that despite judgemental craft, the need for an objective evaluation of the Q-Set in terms of breadth and balance was necessary. As such a panel of experts were asked to evaluate the potential Q-Set, which revealed agreement that it represented both a comprehensive and balanced account of the wider discourse around evidence-based practice. The final Q-Set is provided in as a removable appendix (Appendix S).

#### **3.5.2.4 Sorting procedure**

Having generated a 44 item Q-Set (Appendix S) from the discourse that was felt to capture the breadth and balance of the discourse around evidence-based practice, the next phase of Q-methodology is to design a sorting procedure that will allow the participants to make operant their understanding of how the different statements relating to evidence-based practice come together in a coherent whole. There are a number of aspects worth commenting on in relation to the sorting procedure used in the present study which follow below.

Recalling the contextual factors that influenced the negotiation of the research topic and process with the Educational Psychology Service, two important aspects of the design brief were: the exploration of sustainable models of

practitioner research, and, a sensitivity to the financial implications of the research methods selected. Based on these considerations a number of alternatives to a traditional face to face Q-Sort procedure were explored including postal (i.e. Bryant, Green & Hewison, 2006) and online sorts (i.e. Davis & Michelle, 2011).

Of the options explored, the online method was preferred as it provided a more efficient sorting and analysis procedure. Of the different online options explored (WebQ<sup>8</sup>, FlashQ<sup>9</sup>), Q-Assessor<sup>10</sup> was felt to have the highest degree of useability as well as a published account of its suitability in relation to Q-methodological research (Reber, Kaufman, & Cropp, 2000).

In relation to the research brief, an advantage of Q-Assessor is that the various practical stages associated with Q-Methodology (i.e. recruitment, design, piloting, post-sort questioning, data collection and analysis) are all contained within a central interface. Obviously for the present study these were supplemented with additional procedures required as part of the University guidelines (i.e. Ethical Consent, Debriefing), however as a model of cost-effective sustainable practice it was felt to provide an adequate solution.

Once participants receive the recruitment email sent by Q-Assessor (Appendix V) they are able to watch a video that clarifies the condition of

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<sup>8</sup> <http://www.lrz.de/~schmolck/qmethod/webq/>

<sup>9</sup> <http://www.hackert.biz/flashq/home/>

<sup>10</sup> <http://q-assessor.com/>

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instruction<sup>11</sup>, procedure and advice on how to make the most of the interface Q-Assessor provides (Appendix W). If the potential participant is happy to proceed they are hyperlinked to the following online sort<sup>12</sup>:

Hello everyone,

Thanks again for agreeing to take part. Hopefully the YouTube video I in sent in the recruitment email made the q-sort process appear straightforward. **You are going to be asked to sort statements that relate to evidence-based practice. It is important that you sort them based on your own views of evidence-based practice in terms of how you feel it relates to your work as an educational psychologist.**

The whole procedure lasts no longer than 30 minutes and needs to be done in a single sitting, however you may spend longer if you wish. As part of the procedure you will initially be asked to sort the statements into three piles (Agree with most/ Agree with least/ and an unsure pile). **My advice is to not spend too long on this section, just sort them as quickly as possible based on your initial reaction to the statement.**

It is vital that as you sort the statements you hold in mind the following:

**There are no right answers. What I am interested in is the range of opinions that exist, rather than how closely your answers correspond to a 'correct way'.**

**That what I am interested in is your relative strength of feeling for all the statements. You may find you strongly agree (or disagree) with all the statements provided. That is OK as your final sort will show me your relative agreement.**

**That quite often you will find yourself wanting to clarify or explain why you have sorted certain statements. That tension is part of the process in Q-methodology and I would urge you to write down any comments that provide additional information about any items in the sort.**

Once you have sorted the statements there are a few short questions that will help me to analyse the way the statements have been sorted. I should emphasise that the your individual responses will be anonymised within the body of my research and no one will be identifiable.

Thank you once again.

Let's Get Started!

**Figure 4- Q-Sort landing page**

The first page the participants see is the 'landing page' (Figure 4) where the

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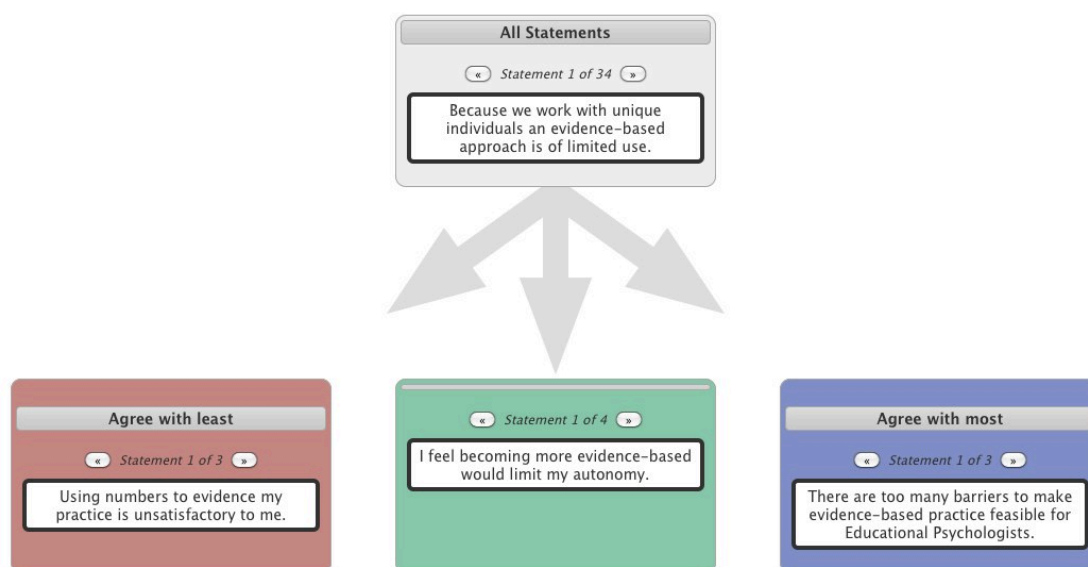
<sup>11</sup> The condition of instruction is the guidance provided to participants to provide a reference point that is used to evaluate where on the face-valid dimension (agree with most/agree with least) the item should be placed. The condition of instruction used in the present study is as follows: "You are going to be asked to sort statements that relate to evidence-based practice. It is important that you sort them based on your own views of evidence-based practice in terms of how you feel it relates to your work as an educational psychologist."

<sup>12</sup> There is the option for participants to decline(see Appendix V).

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condition of instruction is repeated, as are some of the key messages from the introductory video (see Appendix W).

**Instructions:** Read each statement, decide how you feel about it, and then drag it to the most appropriate box. You can scroll through the statements using the arrow buttons. When you drag a statement, the available destinations where you can drop it will highlight.



**Figure 5- Initial item sort**

If participants are happy to proceed they are then asked to sort the items into three broad categories (Figure 5) based on the face valid dimension that is used in the final sort. Q-Assessor allows participants to scroll through items before placing them as well as transfer items between the categories as the participants may wish. Once all the items are placed the participants are then given the option to review how they have sorted the items or proceed to the next phase (Figure 7).



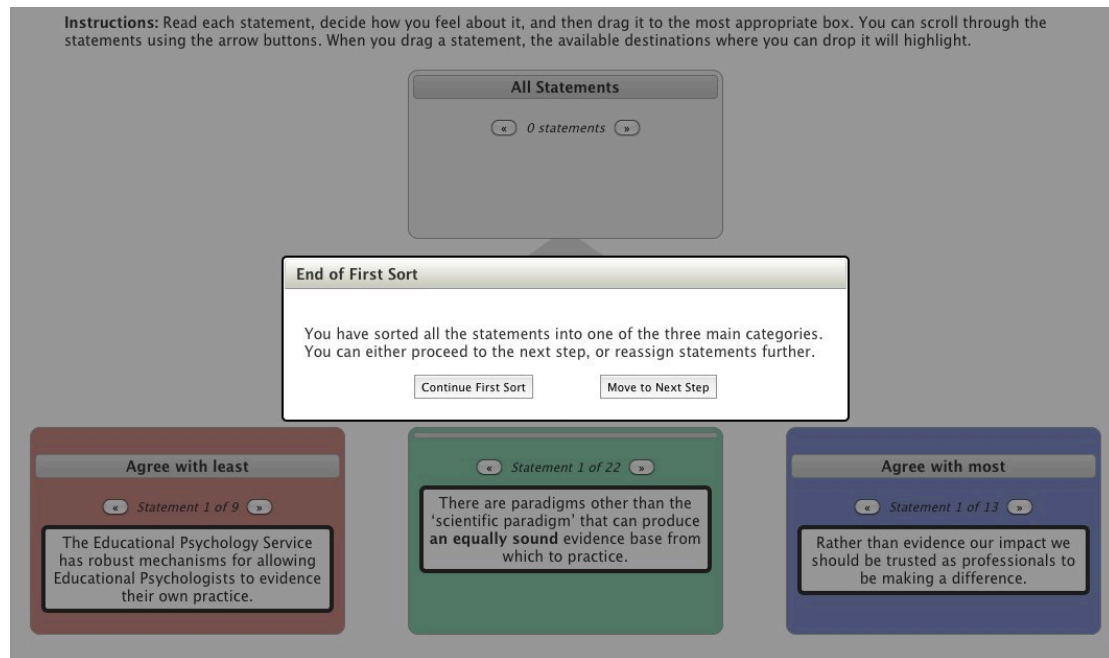


Figure 6- Prompt following the initial sort

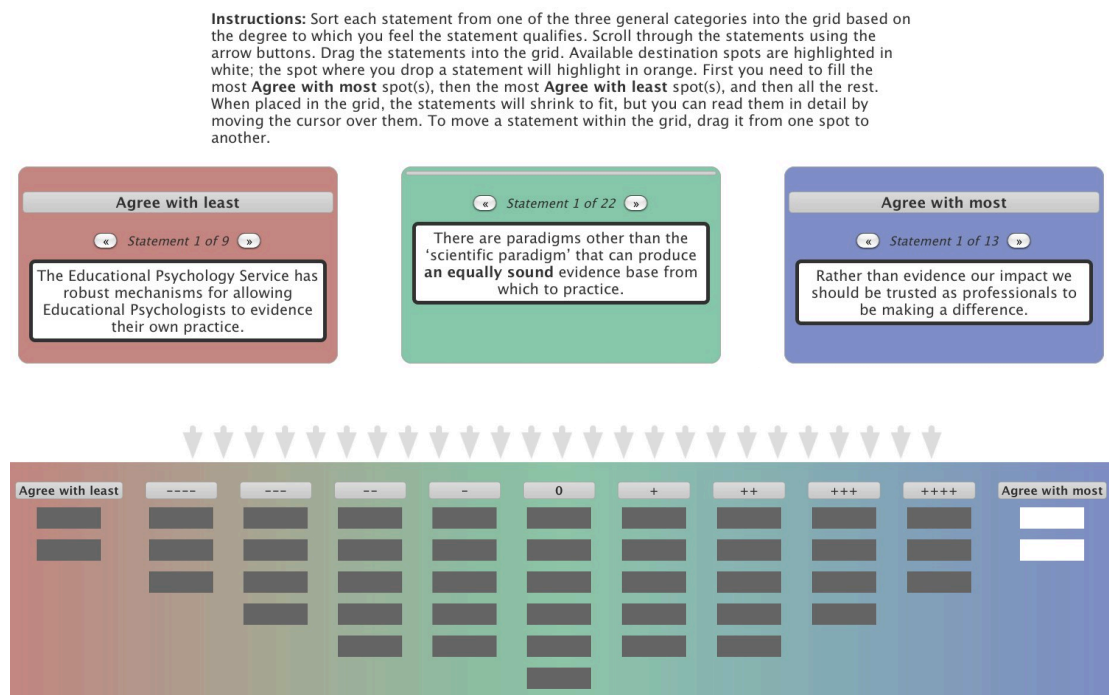


Figure 7- Whole sort based on the initial categories

Participants are then asked to sort the items into the quasi-normal distribution grid according to the degree to which they agree most or least with the statements (Figure 7). Participants are firstly required to identify the “agree with most” statements (+5) then “agree with least” (-5). Following that the participants are able to sort the items into any position in the grid. Q-Assessor’s interface allows participants to scroll through statements, drag and drop them into different sort positions, rearrange sorted items and hover over individual items to get an enlarged version of the statement (See Figure 8). Once the participants have sorted all the items they are given the option to review their completed sort or proceed to the post-sort questionnaire (Figure 9).

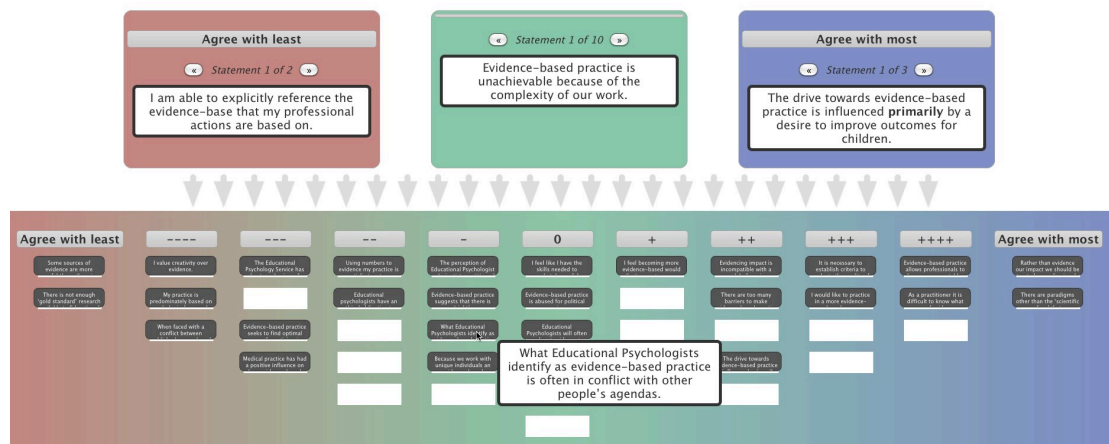
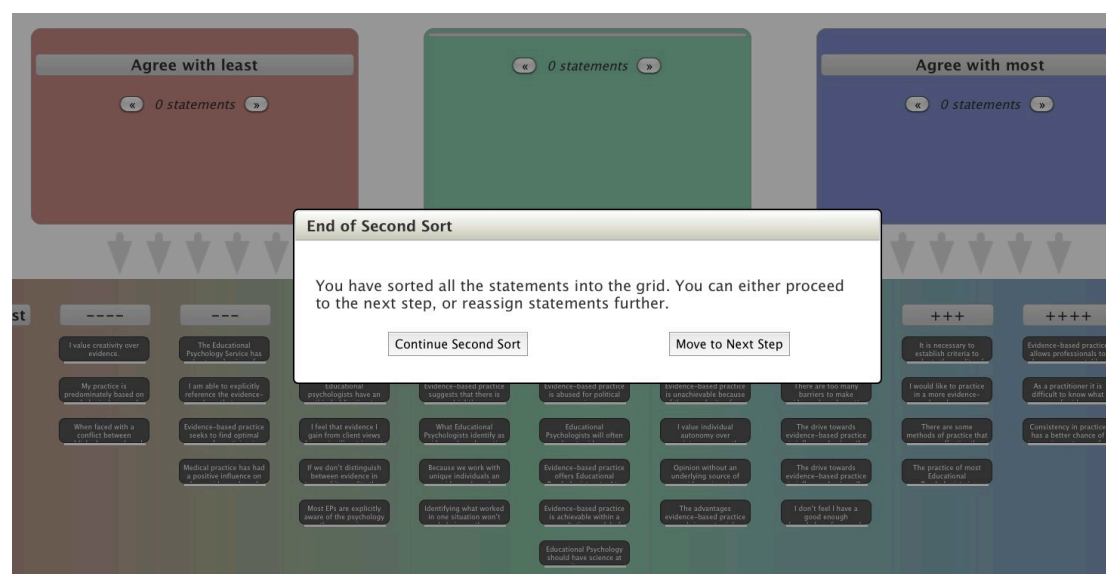


Figure 8- An example of the 'hover' feature in Q-Assessor

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**Figure 9- Prompt following the final Q-sort**

The final step in the procedure is for participants to complete a post-sort questionnaire (Figure 10). The post-sort questionnaire (see Appendix T for the entire post-sort questionnaire) fulfils a number of important functions. Firstly it allows the researcher to explore the validity of the claim that the Q-Set provided sufficient breadth and balance to allow individuals to appropriately express their views by asking questions such as:

“Did you feel that the range of statements used in the Q-sort allowed you to express the range of view points you had about evidence-based practice? If not what words or phrases would you have liked to have been added to the statements already provided in the Q-sort”

It also collects information that can be used to assist in the interpretation of the results (see Section 4.4.2), including demographic information and questions relating to the way in which certain items were sorted.

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Your Responses	Additional Questions
<p><i>Note: you cannot change your rankings at this point. Do not back up to try! Thanks!</i></p> <div style="background-color: #c8e6c9; padding: 5px; text-align: center;"><b>Agree with most</b></div> <p>Rather than evidence our impact we should be trusted as professionals to be making a difference.</p> <p>There are paradigms other than the 'scientific paradigm' that can produce an equally sound evidence base from which to practice.</p> <div style="background-color: #c8e6c9; padding: 5px; text-align: center;">++++</div> <p>Evidence-based practice allows professionals to be more accountable.</p> <p>As a practitioner it is difficult to know what sources of evidence can be trusted.</p> <p>Consistency in practice has a better chance of improving outcomes for children than inconsistency in practice.</p> <div style="background-color: #c8e6c9; padding: 5px; text-align: center;">+++</div> <p>It is necessary to establish criteria to evaluate the quality of evidence.</p> <p>I would like to practice in a more evidence-based way.</p> <p>There are some methods of practice that are more effective than others.</p> <p>The practice of most Educational Psychologists is determined by their interests and what they like rather than a reflection of the evidence available to them.</p> <div style="background-color: #c8e6c9; padding: 5px; text-align: center;">++</div>	<p>Thanks for performing this first phase of the "Attitudes towards evidence-based practice" study!</p> <p>We would like you to answer 9 questions to complete this study. Please refer to your ordering of the statements as needed. Responses to questions marked * are required.</p> <div style="background-color: #c8e6c9; padding: 10px;"> <p>1. How many years post-qualification experience do you have? *</p> <input style="width: 100%;" type="text"/> </div> <div style="background-color: #e8f5e9; padding: 10px;"> <p>2. Did you feel that the range of statements used in the Q-sort allowed you to express the range of view points you had about evidence-based practice? If not what words or phrases would you have liked to have been added to the statements already provided in the Q-sort: *</p> <div style="border: 1px solid #ccc; height: 50px; width: 100%;"></div> </div> <div style="background-color: #c8e6c9; padding: 10px;"> <p>3. You sorted two statements into the agree with most column. What was it about those two statements that you agreed so strongly with? *</p> <div style="border: 1px solid #ccc; height: 50px; width: 100%;"></div> </div>

**Figure 10- Post sort questionnaire (see Appendix T for all the questions used)**

### 3.5.2.5 Analysis and results

Once the participants complete the procedure described above the Q-Sorts are inter-correlated and then factor analysed. Unlike Focus Groups which provide the author with numerous disparate analysis techniques (Krueger, 1998), within Q-methodology the processes of data gathering (Q-Sort) and subsequent analysis (factor analysis) are inextricably bound and to do one without the other would constitute a significant aberration:

common error...involves a separation of the two fundamental aspects of Q-methodology: the Q-Sorting procedure (which is an original means of collecting data) and the Q pattern analysis (which is effected by means of by-person factor analysis)...Stephenson designed the former precisely in order to enable the legitimate application of the latter. Indeed, it was the effective combination of the two aspects ... that allowed Stephenson to make subjectivity his principle research focus. (Watts & Stenner, 2005, p. 68)

Q-methodology aims to identify communality between the viewpoints of different individuals (Watts, 2011), allowing a presentation of the differing groups of familiar viewpoints on a topic. Underlying this aim rest a number of theoretical assumptions that guide the analysis of the completed sorts. These theoretical assumptions range from technical debates around the factor analytic technique employed (typically between the more statically precise Principal Components Analysis (PCA) or the more indeterminate Centroid extraction method (Brown, 1980)), to equally relevant but more abstruse considerations regarding the precise location of subjectivity (i.e. as internal mental state or relational engagement with some object that manifests itself operantly (Watts, 2011) and the 'indeterminacy' of subjectivity, a notion bound with indeterminacy within quantum physics, a subject in which William Stephenson held a PhD (Brown, 1980)). While a full account of these theoretical debates lies out with the scope of the current study (and with respect to the subtleties of quantum theory, also the competency of the author), the main considerations in respect to the present study and analysis follow briefly below.

Q-methodology differs from the majority of statistical methods in psychology in that it is not a trait or performance on a subset of items purported to have some *a priori* psychological relevance that is of significance, but the holistic sorts made meaningful by the individuals. This subtle but enormously significant difference is why it is often referred to as inverted factor analysis (McKeown & Thomas, 1988). According to John and Montgomery (2011) this

inverted technique “correlates entire Q-sorts and thereby generates a holistic viewpoint by person and not by statement/item/trait” (p. 4). It does not seek to confirm an *a priori* theory as would Confirmatory Factor Analysis, nor does it seek to identify how aspects of a person influence their performance on a test or measure (Watts & Stenner, 2012). As such it should be emphasised that the use of Q-methodology in the current study is not as a ‘test’ of the thematic map that emerged from the Focus Group analysis but rather a complementary method that seeks to establish the range of shared subjective understandings that exist among the Educational Psychologists around evidence-based practice.

Although the results of the analysis will be discussed in detail in the Chapter that follows, a brief summary of the main stages follows in order to provide readers with a broad orientation to the process.

To achieve the theoretical aims outlined above, the sorts are initially intercorrelated ‘by person’ (Section 4.4.1.1.1) then factor analysed (see Section 4.4.1.1.2). Through a process of statistical manipulation factors that are taken to be the shared viewpoints of groups of individuals emerge. The factors which meet certain criteria are exemplified (i.e. described in terms of the sorts that they are most characterised by), and finally interpreted (Section 4.4.2).

### **3.5.2.6 Peer factor validation**

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A claim made by the present study is that the combination of methods used allows the understandings of evidence-based practice within a group of Educational Psychologists to be revealed. Specifically Q-methodology was selected as the literature claimed that it “really can capture people’s viewpoints” (Watts & Stenner, 2012, p. 52).

To go some way towards validating the claims the present study will make in relation to the research question, and out of respect for the participatory design, the results from the factor analysis were shared with eleven of the participants to produce a shared interpretation of the understandings of evidence-based practice that emerged from the analysis.

Selected participants<sup>13</sup> were contacted after the analysis to jointly make sense of the results as a whole as well as the specific factors they ‘loaded’ on.

Participants were initially sent an email and then called to explore a number of predefined questions relating to the analysis (Appendix Y) based on advice from Brown (1993) who suggested:

The Q sort provides focus to the interview by indicating which of the various topics in the Q sample are the most worth talking about: obviously those statements scored +3 and -3 should be addressed first since they are demonstrably the most salient, but those scored 0 can be revelatory by virtue of their lack of salience (p. 106)

Based on initial participant responses, the factor interpretation was developed and the literature was consulted to see if there was an appropriate theoretical

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<sup>13</sup> Section 4.4.2 clarifies which participants took part and the basis of their selection.

alignment to support in locating the findings of the study within a wider context. The factor interpretation is provided in Section 4.4.2 of the following Chapter.

### **3.5.2.7 P-Set selection**

Another important characteristic of Q-Methodology that should be noted is the selection of the participants themselves (the P-Set). A relevant consideration in Q-methodology is selecting participants that are identified purposefully because of their applicability to the research question:

We want to discover relevant view-points using Q-methodology and that means finding participants who have a defined viewpoint to express, and, even more importantly, participants whose viewpoint *matters* in relation to the subject at hand. (Watts & Stenner, 2012, pp. 70-71)

Correspondingly, given that the methods used in the present study were selected based on their suitability to examine understandings of evidence-based practice within a pre-defined group (a group of Educational Psychologists), selecting a P-Set that fulfilled Watts and Stenner's (2012) description above was quite straightforward.

Of the 21 fully qualified Educational Psychologists within the service all agreed to take part, however one did not complete the sort because of competing work demands. Of the 20 Educational Psychologists who took part,



post qualification varied between 6 months and 36 years with a mean of 12.35 years<sup>14</sup>.

### **3.6 Summary**

This Chapter discussed the methodology used to address:

*How evidence-based practice is understood within a group of practising Educational Psychologists?*

It began by outlining some of the philosophical assumptions that underlie the present study (Section 3.2), namely that the Educational Psychologists who took part had subjective understandings of evidence-based practice that existed in their own right (Brown et al., 1999), and that these subjective understandings of evidence-based practice could be captured through appropriate research methods (Stephenson, 1953). The two methods were selected for the present study (Focus Groups and Q-Methodology) were then presented in turn, acknowledging some of the theoretical insights that informed the application of each.

Based on this methodological orientation we turn to the next Chapter which explores how the data collected from each of the methods described was analysed and interpreted.

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<sup>14</sup> Sample size is discussed within the literature and although the numbers used in the present study are smaller than some of the guidelines given (Stainton-Rogers, 1995), based on the formula provided by Thompson, Fankiewicz and Ward (1983) (number of items in Q-Sample/2-1 to determine the optimal number of participants) the P-Set seems appropriate. More over while Stainton Rogers (1995) advocates a group of between 40 and 60 participants, Watts and Stenner (2005) suggest that “highly effective Q studies can be carried out with far fewer participants” (p. 79)

## **4. Analysis and Results**

### ***4.1 Introduction to Chapter***

The present Chapter describes the analysis and subsequent findings from the Focus Groups and Q-Sort activity. The Chapter begins by briefly revisiting the research question that has driven the data collection (Section 4.2), before outlining the analysis and results for the Focus Groups (Section 4.3) and Q-Sort (sections 4.4).

Often one of the limitations of mixed method research is said to be a lack of transparency (O'Cathain, Murphy & Nicholl, 2008). Within this Section of the current thesis care has therefore been taken to make clear both the qualitative and quantitative aspects of the analysis, limiting the dangers of a 'black box' approach (Evans, Coon & Ume, 2011).

### ***4.2 Progress towards the Research Question***

Two significant gaps have been noted within the literature in relation to the broad area of focus: firstly there was limited research that had explored evidence-based practice within the professional sphere of Educational Psychology (particularly in the United Kingdom), and secondly that the research methodologies typically employed failed to generate practitioner understandings of the term, instead focussing predominately on either qualitative investigations of pre-defined aspects of evidence-based practice

(i.e. Copley & Allen, 2009) or quantitative investigations of how it was being applied (i.e. Upton & Upton, 2005).

Based on the gaps identified in the literature the following research question was identified:

*How is evidence-based practice understood within a group of practising Educational Psychologists?*

This question is aligned to the practitioner-based action research orientation of the thesis in which the contributions of the present study can be seen as the *starting point* for a wider process of potential organisational change (see Figure 1). This Chapter is devoted to clarifying the analysis of both the Focus Groups and Q-Sorts in a way that contextualises the results that emerged but also ultimately leads to a complementary mixed method answer to the research question posed.

### **4.3 Focus Group**

Although qualitative techniques such Focus Groups are an established method of generating naturalistic statements for the Q-concourse (i.e. McParland et al., 2011; Valenta & Wigger, 1997; Eden et al., 2008), based on a review of the literature they are not typically reported on within the results Section of published work. However it was felt that an outline of the main findings would not only improve the transparency and credibility of the study as a whole (Silverman, 1997), but would also provide a 'thicker' context (Ponterotto, 2006) within which the more substantive findings from the Q-Sort can be interpreted.

A number of authors have identified that while clear guidance exists around how to conduct Focus Groups, there is much less published on how the outcomes of the Focus Groups can be analysed (Webb & Kevern, 2001). A number of choices exist in terms of the analysis and authors argue that the decisions made at the outset are often revised as the analysis proceeds:

beginning the analysis is like standing at the entrance of a maze. Several different paths are readily apparent at the beginning, and as you continue, additional paths and choices emerge. You don't know if a path will be productive until it has been explored, but the process of exploration requires an investment of effort even if it is just to peek around the corner. (Krueger, 1998, p. 4)

The following sections attempt to articulate clearly the chosen method of analysis (thematic analysis) and expand upon the adaptations made to the method in order to tailor it to the research question and theoretical underpinning of the present study.

#### **4.3.1. Analysis**

Based on the process of analysis described eleven themes were initially identified and defined (see Table 9).

**Table 9- Initial themes derived from the Focus Group analysis**

<b>Theme</b>	<b>Definition</b>
Sources of evidence	<i>References comprising of sources of evidence that Educational psychologists believe can inform practice</i>
Hierarchies of evidence	<i>References made to the notion of whether different levels exist and whether they can be organised depending on merit.</i>
Factors associated with EBP (+)	<i>References made to experienced or perceived positive factors associated with evidence-based practice.</i>
Factors associated with EBP (-)	<i>References made to experienced or perceived negative factors associated with evidence-based practice.</i>
Practical challenges	<i>References made to experienced or perceived practical challenges associated with evidence-based practice.</i>
Constructions of evidence-based practice	<i>References made in relation to how EBP is constructed either by the Focus Group participants or how they believe it is constructed by others.</i>
Opposite of EBP	<i>Reference made to what the Focus Group participants said was the opposite of practicing in an evidence-based way.</i>
Facilitate EBP	<i>References made by the Focus Group participants to features that may facilitate them practicing in a more evidence-based way.</i>
Influences	<i>References made by the Focus group participants in relation to what has influenced the evidence-based practice movement generally and what influences evidence-based practice within the Educational Psychology Service.</i>
Philosophical aspects	<i>References made by the Focus Group participants in relation to philosophical aspects of evidence-based practice.</i>
Other	<i>References made by Focus Group participants that did not fit into any other theme.</i>

#### **4.3.1.1 Validation**

The process of peer validation used in the current study represents a further adaption to Braun and Clarke’s (2006) fourth phase of ‘reviewing themes’ (p.

91) (see Table 6 above). A potential limitation of Braun and Clarke's (2006) process is the researcher-centric nature of the analysis. While this Section makes clear that the decisions the researcher makes permeate all aspects of the analysis, there are numerous opportunities throughout the process to involve participants thereby enhancing the validity of the themes and codes produced within an action research framework. In addition to the previous forms of participant engagement described above, the present study drew on the participants from the Focus Groups to assist in the process of level one and two reviewing described by Braun and Clarke (2006).

To achieve this aim the transcripts (Appendix OO and Appendix PP), including the identified codes and themes, were sent to each of the Focus Group participants (with their own identifiable code), along with a 'map' that collated each of the constituent codes under each theme along with an extract of the transcript to 'exemplify' the code and a definition for each theme (Appendix QQ).

Using the analysed transcripts, participants were asked to examine how each of their utterances had been coded to see if they felt they had been represented faithfully. No participants suggested any amendments to the codes used. They were then asked to refer to the map collating the codes into themes (Appendix QQ) and their transcript to review how the codes had been grouped into themes to see if the process thus far had achieved internal

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homogeneity and external heterogeneity<sup>15</sup> (Patton 1990). Based on this process of peer validation, an amendment was made to the themes: rather than representing an 'other' theme, the following codes were grouped together under a theme of 'mediating factors' (Appendix KK): 'Personal preferences of the EP', 'Role of the educational psychologist', 'EP awareness of the psychology that they use'<sup>16</sup>.

While this process of code and theme peer validation is not part of Braun and Clarke's (2006) identified steps of thematic analysis, it has been included in the present study to align the analysis more closely to the action research model identified in Section 3.3.1.1. Not only does this provide an indication of how congruent the analysis is with the views of those who took part but it also draws on the insights of the 'researched' in shaping the final analysis.

#### **4.3.1.2 Final Analysis**

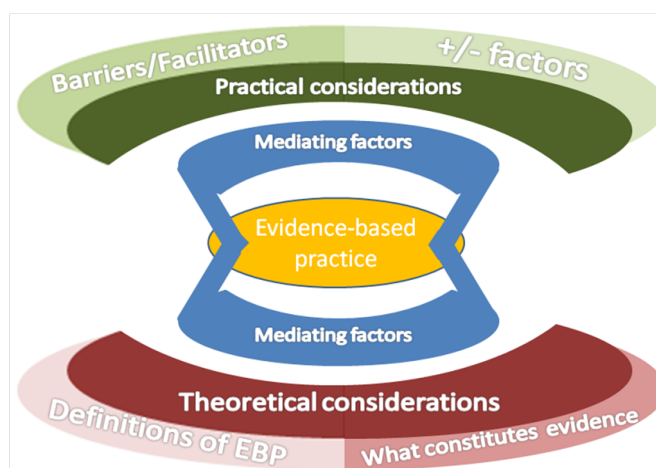
The final analysis drew on the cumulative analysis outlined in the previous three sections. Using the peer validated thematically analysed transcripts

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<sup>15</sup> In relation to thematic analysis Braun and Clarke (2006) claim of internal homogeneity and external heterogeneity: "Data within themes should cohere together meaningfully, while there should be clear and identifiable distinctions between themes." (p. 91)

<sup>16</sup> A visual illustration of the codes that make up each theme are available in the Appendices (Appendix AA, "*Sources of evidence*"; Appendix BB, "*Hierarchies of evidence*"; Appendix CC, "*Factors associated with EBP (+)*"; Appendix DD, "*Factors associated with EBP (-)*"; Appendix EE, "*Practical challenges*"; Appendix FF, "*Constructions of evidence-based practice*"; Appendix GG, "*Opposite of EBP*"; Appendix HH, "*Facilitate EBP*"; Appendix II, "*Influences*"; Appendix JJ, "*Philosophical aspects*"; Appendix KK, "*Mediating factors*")

(Appendix OO & Appendix PP) and collated themes and codes (Appendix QQ), a more nuanced thematic map was developed that not only provided a comprehensive account of the range of perspectives that existed but also provided an overview of how the themes related to each other in a meaningful way. Braun and Clarke (2006) advise that this is best achieved by creating main themes that capture the essence of the overall story in addition to sub themes (“themes within themes”, p. 92) which can provide structure to larger main themes. Figure 11 represents the final overarching thematic map representing the analysis described in this Section.



**Figure 11- The Overarching thematic map relating to the Focus Group analysis.**

We can see from Figure 11 that consistent with the research question<sup>17</sup>, ‘evidence-based practice’ forms the kernel of the analysis which all other themes relate to. While the majority of the codes and themes could be meaningfully ascribed to the main overarching themes of “practical consideration” and “theoretical considerations” a small number of codes form

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<sup>17</sup> “How do a group of Educational Psychologists understand evidence-based practice”



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a third overarching theme that appeared to be “mediating factors” in how the ‘practical’ and ‘theoretical considerations’ actually influenced the understanding of evidence-based practice within the group. The main overarching themes of ‘practical’ and ‘theoretical considerations’ are then subdivided further into meaningful collections of the 10 remaining themes<sup>18</sup> that emerged from the analysis previously shared with the participants.

The final step identified by Braun and Clarke (2006) is to produce a report (see Table 6 above), and may be considered to be the process of providing an analytic narrative account of the results of the thematic analysis. As part of the peer validation process, a narrative report was sent to the participants who were asked to comment on the interpretations given to the Focus Groups. Participants responded very positively to the report commenting on how closely they felt this had captured the salient points of the discussion. However one participant commented that while they could see the need to thematically organise the codes and themes to support the “analysis and intelligibility of the research” (FG1\_FGP1) they suggested that some of the key discussion points were diluted because they “straddled a number of themes and analytic divisions” (FG1\_FGP1).

The insightful comments and input provided by this participant forms a neat frame for the summary of the results from the Focus Groups that follows below.

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<sup>18</sup> without the theme ‘mediating factors’ which is already accounted for.

#### **4.3.1.3 Narrative account of the thematic analysis**

The following Section is structured using the framework provided in Figure 11 to provide a deeper insight into the collective understanding of evidence-based practice among the group of Educational Psychologists. The themes from the thematic analysis are presented in turn with pertinent extracts taken from the focus group presented in an analytic narrative form described by Braun and Clarke (2006).

**4.3.1.3.1 Themes relating to evidence-based ‘practice’**

Evidence-based practice was frequently couched in terms relating to the practice of Educational Psychologists. This Section explores the subtleties that emerged in relation to the practical component of how evidence-based practice was understood. Figure 12 shows how identified themes relate to positive/negative factors associated with evidence-based practice as well as the barriers and facilitators to evidence-based practice identified.

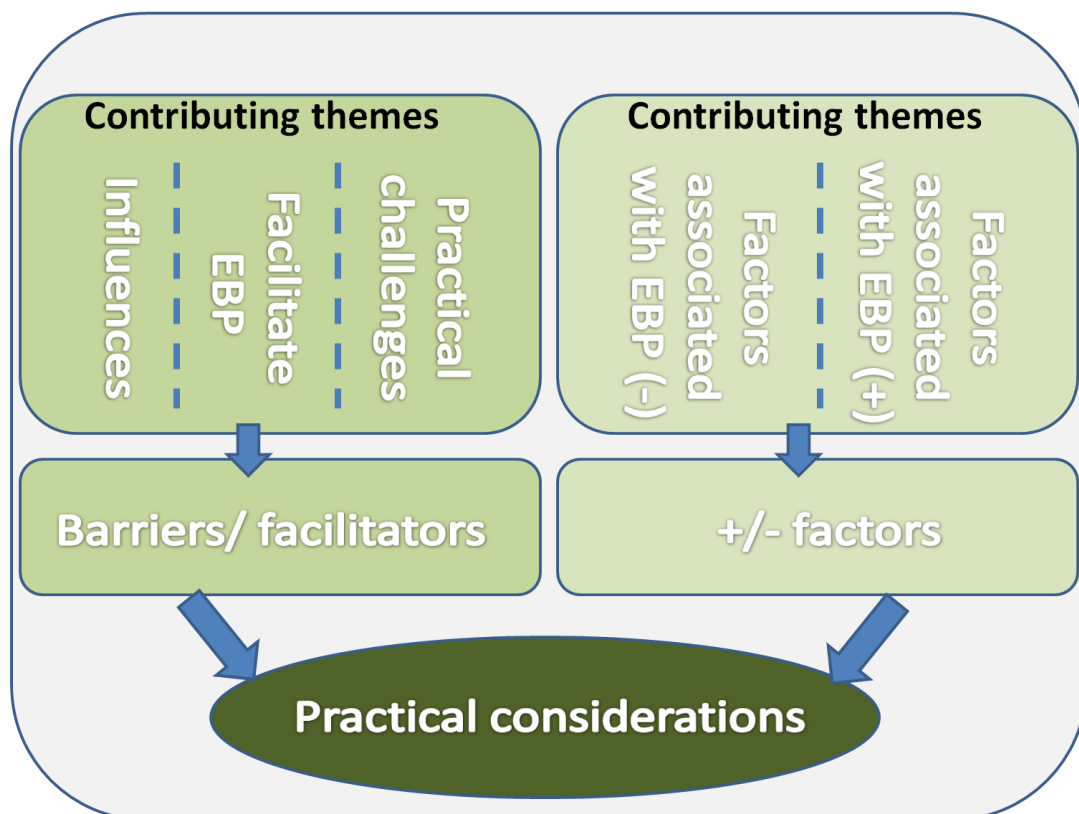


Figure 12 - Thematic map of the overarching theme 'Practical Considerations'

**4.3.1.3.1.1 +/- Factors associated with evidence-based ‘practice’**

As Figure 12 illustrates, two themes make up this Section. Given the inductive process used to analyse the data it is interesting to note the balance evident

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in the amount of codes that make up the positive and negative aspects of each theme (26 and 26).

#### **4.3.1.3.1.2 Positive factors**

In each of the focus groups participants identified many of the proposed positive factors associated with evidence-based practice that are apparent in the wider literature. For example codes emerged relating to 'Transparency', 'Accountable Practice' and 'Applying What Works' which appeared to engender a sense of confidence among some Educational Psychologists in describing their practice:

"actually we know what works in various areas and maybe it should be actually this is what all EPs are recommending." FGA\_FGPC\_561-563

However there were also a number of positive factors that emerged during the focus group discussions that were less frequently acknowledged in the wider literature and perhaps reflect the specific context in which the Educational Psychologists work:

#### **'Support with tribunals'**

"it's coming to tribunal or something like that really you could turn to that researcher and say what is the latest state of practice really in terms of what works as a home intervention programme" (FGA\_FGPF\_665-669)

#### **'Facilitate conversations with other psychologists'**

"in such a way that you could have conversations with other psychologists we're actually generating our own evidence base by virtue of our engagement with our clients"

#### **'Not having to reinvent the wheel'**

"You don't want teachers having to reinvent the wheel each time they go into a room so you would hope that we would be taking some evidence to them about how to support children's learning" (FG1\_FGP5\_543-545)

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#### 4.3.1.3.1.3 Negative factors

A similar pattern was also evident for the negative proposed factors of evidence-based practice, whereby some codes were clearly echoed in the literature ('Unique context', 'Unique Individual', 'Marginalised importance of the relationship') as well as those that were either less frequently identified in published work or not at all:

##### **'Having to do the same things over and over'**

"there is a real drive isn't there for us all to be very accountable for us all to be able to show that um you know that we're making a difference by using x y and z which has got a really good track record which you as you said [FGA\_FGE]

if you chased that one down to number 3 really is that what we also know is that if we stick to that literally we would be doing very little (FGA\_FGPF)

you're right we would be doing the same things over and over again (FGA\_FGPD)"(FGA\_212-220)

##### **'Too much data adding to complexity'**

"actually too much data sometimes gets in the way" (FG1\_FGP2\_645)

##### **'Abuse of evidence-based practice'**

"that's the fact that evidence-based practice its abused and its use can be twisted" (FG1\_FGP6\_459)

#### 4.3.1.3.1.4 Barriers and facilitators of evidence-based 'practice'

What was interesting in the three themes that follow is that the Focus Group participants make explicit reference to the wider influences of the evidence-based practice movement that were largely absent from the practitioner studies currently available in the wider literature. It is unlikely that Educational Psychologists have a unique political or economic insight, compared to the range of professionals who took part in studies where these factors failed to

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appear, and so the emergence of these factors may be taken to be a positive reflection of the method used. This is a pleasing speculation as it was suggested that a limitation of many of the earlier studies, in terms of their contribution to practitioner understandings of evidence-based practice, was that the research methods they employed were not sensitive to the subtle discourses that exist within professional groups.

#### **4.3.1.3.1.5 What influences evidence-based ‘practice’**

The focus groups appeared to identify numerous influences in terms of where evidence-based practice had come from, including its historical roots:

##### **‘Medical influence’**

“My understanding is that evidence-based practice came from the medical field originally” (FGA\_FGPA\_6-7)

But also in terms of the economic and organisational influences, i.e.:

##### **‘Economic imperative’**

“we’re now in a political and financial climate where the the impact of not being able to demonstrate em what we do do and the impact we have has led to you know many services being slashed” (FGA\_FGPE\_359-362)

#### **4.3.1.3.1.6 Facilitators of evidence-based ‘practice’**

In terms of the relative importance of the themes that emerged, within an action research framework, this theme perhaps has the most practical significance as it points to local beliefs on how to improve evidence-based practice. In total 24 codes relating to practical changes that may facilitate evidence-based practice were identified.

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Some of these included a recognition of recent changes that participants felt had brought about improved evidence-based practice. For example a number of Educational Psychologists identified the positive impact that Doctoral training had on the service:

**‘Disseminate doctoral/internal research’**

“the research that people have done for their doctorate that is a wealth of information” (FGA\_FGPE\_736-737)

Others felt that quite minor changes to what already existed would bring about improved evidence-based practice, i.e.:

**‘Shared understanding of EBP’**

“what would facilitate it its around really us having a shared understanding of evidence based practice.” (FG1\_FGP5\_626)

**‘Seeking views around our own impact’**

“if we get some feedback from a parent saying something we suggested worked then we should capture that as evidence if we get you know schools actually saying we really value the educational psychologist in terms of this way of working then we need to capture that” (FGA\_FGPF\_642-646)

**‘Highlight that we are EBP practitioners to others’**

“I think sometimes we don’t kind of highlight enough the evidence-based practice we are giving away to school” (FGA\_FGPC\_577-579)

Consistent with previous research the areas of ‘Training’, ‘Access to articles’ and ‘Greater research skills’ were also identified as potential facilitators of evidence-based practice. However there were a number of perspectives that were offered that appeared to be more specific to Educational Psychologists and their context, and would require a more significant change of service than the previous suggestion themes:

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#### **'EPs employed as researchers'**

"[other Local Authority] EPS have two psychologists that they employ as researchers and they I mean [Principal Educational Psychologist] you know badged them up as [Local Authority] Psychology Research Unit...essentially it was some people who were actually acting as researchers' (FGA\_FGPF\_660-664)

#### **4.3.1.3.1.7 Practical challenges of evidence-based 'practice'**

This theme contained the greatest number of codes (41) and made up a considerable element of the discourse in both groups. A pattern of both focus groups was the initial identification of general barriers to applying the principles of evidence-based practice:

#### **'Limitations of theory'**

"You're coming from theory and so on but when you get to the point of practice other things come into play" (FGA\_FGPB\_66-67)

#### **'Time constraints'**

"There are time constraints to um to perhaps in evidence based practice." (FG1\_FGP6\_662-663)

This was followed by the more specific practical barriers that Educational Psychologists faced in their specific role and contexts:

#### **'Challenge for EPs'**

"Yet we are not a sort of neat system that can be easily you can't control the variables out there so we have well it is a challenge for us and perhaps the challenges are even greater in an education field where you go into each classroom is different again." (FG1\_FGP5\_540-543)

With some identifying these challenges as stemming from service or organisational constraints:

#### **'Service protocols'**



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“I agree with [FGP 6] the recent protocols are an example of a a a an inability or even an unwillingness to write an evidence-based approach to the very heart of the protocol” (FG1\_FGP1\_494-495)

**‘Some evidence as taboo’**

“so if we start stripping things away to purely specifically evidence-based practice probably have about four or five things that we’d do (FGA\_FGPF)

And one of those we are not supposed to (FGA\_FGPG)

And as [FGP\_G] says some of them were not allowed to do you know we have the evidence base of how children learn to read (FGA\_FGPF)” (FGA\_224-231)

**4.3.1.3.2 - Themes relating to evidence-based ‘theory’**

While the previous Section identified many of the practical aspects of the understandings of evidence-based practice that emerged within the groups this Section picks up those themes concerned with the more theoretical components to the understandings. Figure 13 below shows a visual representation of the themes that make up this Section.

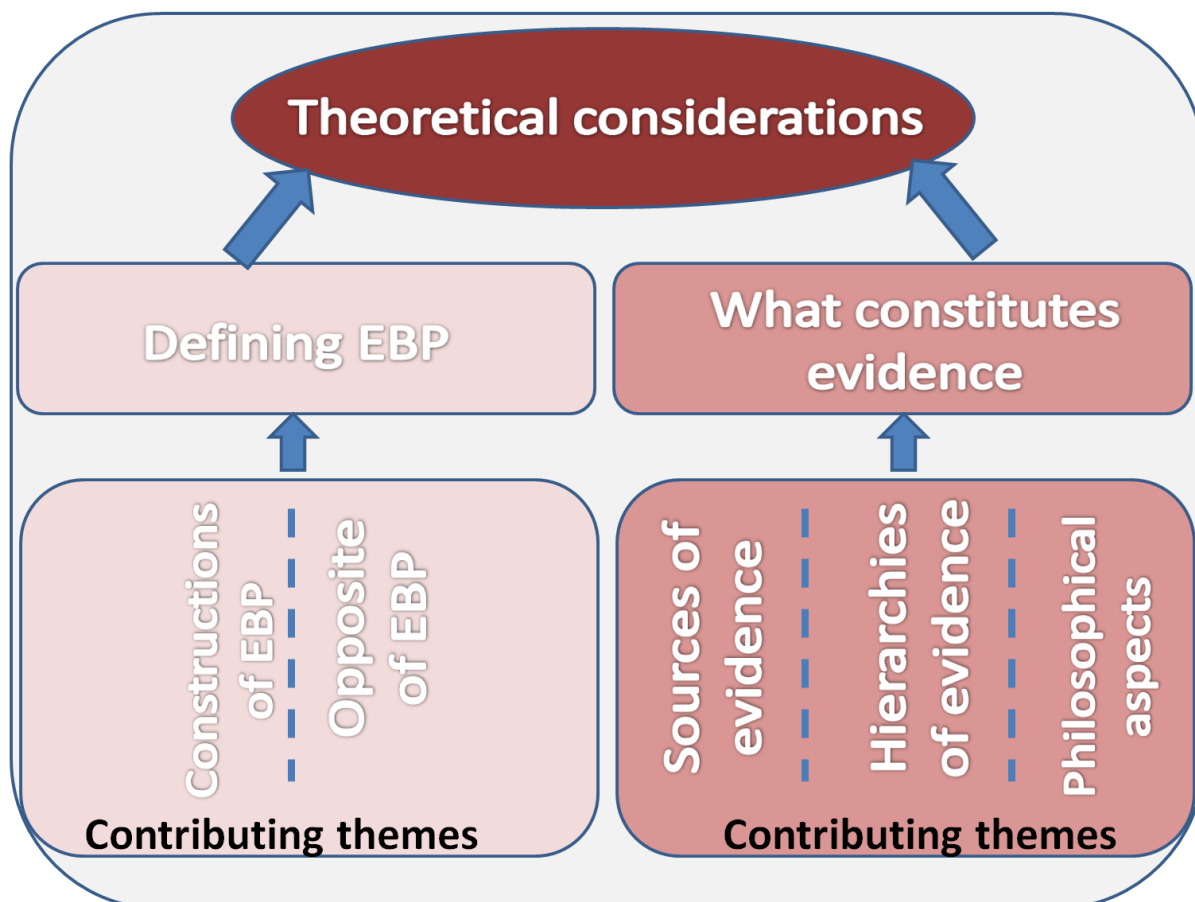


Figure 13 - Thematic map of themes relating to “Theoretical Considerations” related to Educational Psychologist’s understandings of evidence-based practice.

**4.3.1.3.2.1 Defining evidence-based practice**

Within this Section the definitions of what evidence-based practice draws on Personal Construct Psychology in the sense it encompasses both the participant’s views of what evidence based practice ‘is’ but also what the participants felt evidence-based practice ‘was not’.

**4.3.1.3.2.2 Constructions of evidence-based practice**

As one might expect a number of different constructions of evidence-based practice emerged during the focus groups. Predominately the participants adopted a multifaceted view of evidence-based practice:

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### **'Evidence-based practice as multifaceted'**

"I think it incorporates not just evidence from research studies some of which are randomized control trials and so on particularly from medicine so it's not just the research it's also a kind of theoretical background where you kind of own up to the theory and also an element is around I suppose you could call it clinical expertise or clinical knowledge an awareness um so I think it I understand it being a whole host of things and originally I just thought it was really about the research base but my understanding more recently has been that it is a wider understanding" (FGA\_FGPA\_7-15)

While a number of participants identified positive constructions of evidence-based practice:

### **'EBP as an aspiration'**

"there is this aspiration to be able to say as a professional that any advice you give has some evidence backing it" (FG1\_FGP2\_31-32)

### **'Optimal solutions to problems'**

"I mean practice should be trained to provide optimal solutions to problems" (FG1\_FGP2\_695-696)

However there were a number of constructions of evidence-based practice that were not so positive:

### **'Power'/'Dogma'**

"it has achieved a power as a statement and I think that its quite dangerous as you say and even within our hallowed walls it gets used a lot as if to say it's going to make us better professionals if we say this a lot (FG1\_FGP2)

yes erm it's become almost fanatical (FG1\_FGP4)

Yes (FG1\_FGP2)

As a type of religion this is our holy grail which we must seek and if we reach it we will be pure er and erm it it just may be a mirage and we should be skeptical and we should be open and curious and testing (FG1\_FGP4)" (FG1-144-155)

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Allied to the notion of evidence-based practice as 'Power' was a construction of it as a commodity that can be used to Educational Psychologists' advantage:

#### **'Evidence-based practice as a commodity'**

"we have to remember that we have been sold to the directors sort of saying EPs can do research if we do evidence led research they can give you evidence in terms of how wonderful the authority is with all these initiatives uh and it has survival value for us" (FG1\_FGP3\_547-550)

While the opportunity for evidence-based practice to be abused was a concern (i.e. see FG1\_FGP6\_459, above), an alternative construction existed that picked up the 'enlightening' aspects of evidence-based practice identified in the literature:

#### **'Revolutionary'/'Anti-system'**

"I think we have been trying to make the case amongst us that actually have to be that construction of evidence based practice and it's perfectly possible to have a construction of that word that is pretty revolutionary really that is pretty anti-system um and can be quite disruptive to management." (FG1\_FGP2\_735-738)

#### **4.3.1.3.2.3 Opposites of evidence-based practice**

A number of perspectives emerged around what would not constitute evidence-based practice. The following extract captures a range of perspectives:

#### **'Opinions'/'Prejudices'/'Beliefs'**

"in my view it's it's not doing something completely lacking in evidence that is theory lite and it's got no sort of evidence it's got no you're just kind of making up an approach or making up an opinion based on your own prejudice or your own belief or your own experiences un but actually what you are doing as a psychologist is actually grounded in something that has been demonstrated by other researchers it's been published in a peer

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reviewed journal so that what you are doing is actually got some kind of fidelity to to something that works and the evidence is there yeah so your not just kind of making things up on the hoof.” (FGA\_FGPC\_31-41)

The view that ones own beliefs or experiences as not constituting evidence-based practice was contested within the group, as it evident in the previous Section.

Notions of what represented the opposite of evidence-based practice were also associated with a belief that the individual was not active enough in both seeking out research and also evidencing their own work:

#### **‘Cavalier approach’**

“you have to do research yourself and you have to be seeking research yourself for what you are doing you don’t cavalierly go off and do” (FG1\_FGP2\_358-359)

Others felt that even the use of evidence did not justify the term evidence-based practice if it resulted in practices that were unacceptable in the views of other Educational Psychologists:

#### **‘Unacceptable’**

“peer moderation if not top down moderation is also important to make sure that people’s er personal truths that they are working with aren’t so off beam as to be wild and er unacceptable (FG1\_FGP3)

and true (FG1\_FGP2)

and true...I’m just illustrating that we all have our own little theories our own ways in which we work but er and in some ways we are quite an inclusive permissive church er but the example I’ve just given you may well fall three standard deviation away and it may well be appropriate for either a colleague

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or manager to kind of say well ere r I don't want to see this kind of thing in your report again (FG1\_FGP3)" (FGA\_252-272)

#### 4.3.1.3.2.4 Sources of evidence

In discussing what may be taken as evidence within evidence-based practice, published research was the most commonly cited source, however a number of participants identified a much broader range of sources a perspective captured in the following exchange:

"what do you think evidence based practice is understood as how different is it to your own understanding [FGP1] (FG1\_MOD]

I would think it is commonly understood as published theory and research (FG1\_FGP1)

OK and how similar or different is that to your views (FG1\_MOD)

It is different to my usage of it I think that is just a small subset of what constitutes evidence for me (FG1\_FGP1)

Could you say a bit more about that (FG1\_MOD)

I look at evidence from my own life and personal life and from my own practice and professional life that's evidence I look at the evidence that people tell me that my clients tell me at the start when we work together and also what they tell me as we go through the work together that's evidence what's working in their opinion and I think the weight of these different definitions aspects of evidence alters the work progresses with clients depending on the situation so I have a much broader definition that works for me ((FG1\_FGP1)" (FG1\_5-22)

This 'broader definition' picks up on each of the different sources of evidence provided in the widely accepted definition of evidence-based practice proposed by Sackett et al (2002). Further sources of evidence were proposed, including a number that seemed to be quite particular to the work of Educational Psychologists:

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### **'Consultation'**

"information gathering as part of the consultation" (FG1\_FGP3\_399)

### **'Classroom observation'**

"well you observe and asked questions and you know that is good evidence-based practice" (FGA\_FGPB\_623-624)

#### **4.3.1.3.2.5 Hierarchies of evidence**

While both groups identified a large variety of evidence sources available to Educational Psychologists, there was also some debate around whether different forms of evidence provide a better or more relevant foundation upon which to base practice.

A number of references were made to randomised control trials ('RCT') in both focus groups in addition to comments about 'different levels' of research, which appear to pick up on the hierarchies present in the literature.

### **'Different levels'/'RCT'**

"There are different levels aren't there there's a gold standard is that right evidence base (FGA\_FGPB)

Which is that real medical one where you have got your randomised control which is something that is really hard for us to do (FGA\_FGPC)" (FGA\_19-23)

Notions of differing quality within the evidence sources available also featured within the discourse:

### **'Gold Standard'/'Criteria for quality'**

"something that [FGP B] said earlier that made me think actually about the lack of you know gold standard research in a lot of psychology really that's why the meta-analysis is actually quite powerful isn't it because if you do get a group of researchers who actually look across all the research and set out

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a format before hand of what constitutes decent evidence in their eyes and then look at all the studies in that area...it's hard for us to know the quality of it." (FGA\_FGPF\_261-271)

There was also the perspective that appeared to reflect the relativist position that notions of levels and quality were misleading:

#### **Equity of evidence sources**

"What [FGP A] is saying is that there are other levels of evidence which aren't necessarily inferior the sort of clinical judgement and evidence from experience and distilled own experience" (FGA\_FGP B\_ 25-29)

These philosophical aspects of evidence-based practice, according to the Educational Psychologists, are picked up in more detail in the next Section.

#### **4.3.1.3.2.6 Philosophical aspects of evidence-based practice**

Philosophical factors seem impossible to separate from understandings of evidence-based practice. This was clearly true for the focus group participants who identified a number of philosophical factors that influenced their understanding of evidence-based practice.

For some of the Educational Psychologists they did not see 'psychology as science':

"I don't consider psychology a science...I mean I make use of sciences in a our involvements with people because of the nature of our the phenomenological nature of our subject I I don't think it can be defined as a science but we may try and behave scientifically what occurs to me is one of the disadvantages might be uh we we if we if we were always looking for evidence we'd never try anything new." (FG1\_FGP1\_483-489)

Others made more explicit reference to notions such as 'epistemology' and concepts such as 'truth' when discussing how evidence-based practice may



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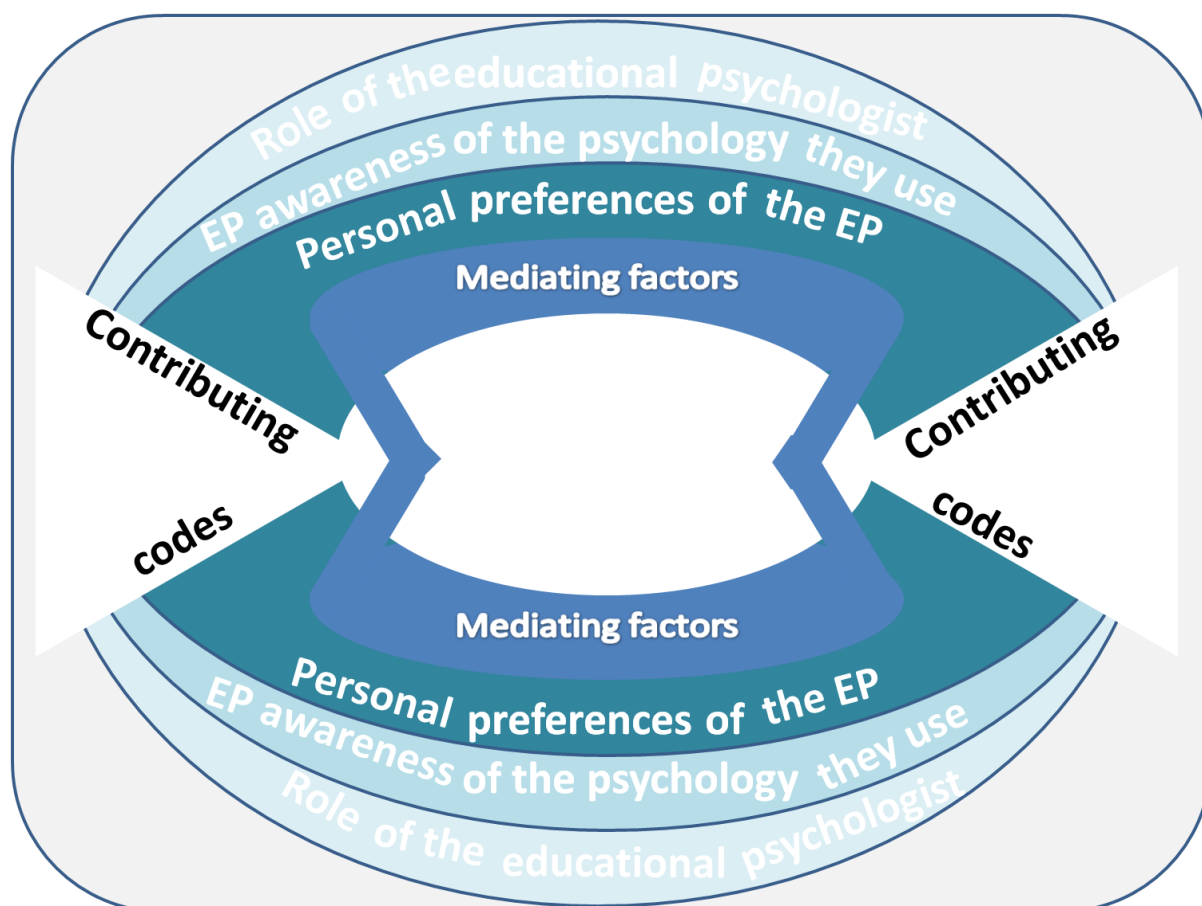
be understood and applied by Educational Psychologists, which appeared to separate out scientific paradigms from other forms of knowing:

“I think that the evidence that we look for and use is very much sort of influenced by um what our world view is really and um you know whether we you know we are quite scientific in our approach or whether you know our position is one of we socially construct this for example um we’re going to all have sort of preferences in the in the type information that we’re interested in that type of information that we use and gather to inform you know our practice and I think that one of the the things around in that educational psychology per se as as a distinct profession is that actually we’re in it you’ve got educational psychologists practising different ways based on on their particular world views values and belief systems their you know epist epistemological positions you know um and so the evidence that one person um uses which drives the collection of the information that their their getting that their gaining is going to be quite different you know to another person’s.” (FGA\_FGPE\_139-153)

As is clear in the literature there is no rational resolution to debates between theoretical forms of realist/relativist epistemological or ontological positions. However when the philosophical debate moves into applied settings it was claimed that the relativist position may be of little use to the practitioner:

“There’s also a slight problem again with my own practice really where if I employ that sort of curiosity that skeptical curiosity to everything I I you know I let go of the rope sometimes you know I lose sight of where I am you just disappear up your own backside in terms of relativism nothing matters nothing works and where is the ground anymore [FGP F] so there is that slight danger to it that sort of madscape danger with evidence based practice.” (FGA\_FGPF\_603-609)

#### ***4.3.1.3.3 Mediating Factors***



**Figure 14 - Thematic map of "Mediating Factors"**

Amid the practical and theoretical dimensions of the discourse were occasional references made to mediating factors may influence understandings of evidence-based practice.

The first element of the discourse that appeared to mediate how the Educational Psychologists reconciled the practical and theoretical aspects of evidence-based practice was their constriction of the 'role of the educational psychologist' which at times emphasised the role of research, at times on being a practitioner, and at times the lack of clarity that exists within other professional groups around what Educational Psychologists do.

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### **'Role of the educational psychologist'**

"I was thinking that one of the biggest challenges is what what something [FGP E] referred to sort of evidencing what we do to other people non psychologists particularly our paymasters..I think the easiest way is through is through numbers but that's deeply unsatisfactory to to most of us so how else can we do it it is constantly a question of how well you know what does the EP do what's what's it all mean um and I think we've got a challenge in [Local Authority] and nationally as well in terms of sort of demonstrating how we do things what difference we make in a variety of ways that it isn't just a list of IQ scores" (FGA\_FGPD\_340-354)

Others EPs wrestled with how factors such as their own preferences for certain styles of practice may influence how evidence impacts on practice:

### **'Personal preference of the EP'**

"I was really interested in question 5 [from the Focus Group schedule supplied, see Appendix J] is about you know barriers within your own work eh if I read an article that kind of points to it's useless to do such and such because we have found that and I've been doing the useless thing for kind of x years then I need to change my practice so (FGA\_FGPA)

you might be good at the useless thing [FGP A] (FGA\_FGPF)

I might be but what is that telling me how useful is it what are the outcomes or I might like doing it (FGA\_FGPA)" (FGA\_537-546)

## **4.3.1.4 Thematic synthesis**

Based on the iterative participant feedback in relation to the thematic analysis that summarised the thematic analysis of the Focus Groups, two prominent features of the discourse that were felt to synthesise the analysis were identified. A brief outline of these follows below.

### ***4.3.1.4.1 Reconciling theory with practice***

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The focus of this Section is perhaps not as broad as the heading might suggest, and focuses specifically on the apparent tension that existed within both Focus Groups around being (or being perceived to be) an evidence-based practitioner within a theory driven model of service delivery that works through others to affect change.

While some could see some potential benefits in terms of being able to model evidence-based practice to others:

*you actually model how what processes you are going through*

*Joey (FG1\_FGP5\_451-452)*

An alternative view was that giving away skills and knowledge presented a challenge:

*one of the things we do is give away psychology and our evidence and then people forget where it came from*

*Ashley (FGA\_FGPC\_572-573)*

In terms of unpicking the difficulties much of the tension seemed to be around how to reconcile the need to demonstrate impact with the theoretical desire to effect change through others:

*a lot of what we do is done indirectly isn't it the change to the child is indirect it is because of a conversation with an EP not necessarily because of something that we've directly done and it's hard to evidence that*

*Chris (FGA\_FGPD\_384-387)*

The perceptions of a model of service delivery that aimed to bring about change through others in the group of Educational Psychologists ranged from

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the notion that it was incompatible with evidence-based practice:

*I think there's a conflict in the way that EPs are being required to work now in terms of consultation I I don't like writing formulations in consultation records because I haven't tested out my own hypotheses I haven't applied a stringent evidence based formula to to the things that I'm writing and these things can effect child's futures if I write that a child has a slow developmental delay rather than or severe learning difficulties that that child could end up in a*

*special provision and I might not even seen that child so I have huge conflicts about using evidence using consultation and if and claiming that I'm actually an evidence based psychologist cos I'm not.*

*Drew (FG1\_FGP6\_385-392)*

A further view accepted that while evidence-based practice was possible, it was challenging demonstrating this to others:

*we do work a consultation model where we are actually saying to people that you're the direct agents of change around these people I can work with you but its you who are going to do the magic with the individual kids or whatever and really its actually sometimes quite I I guess potentially quite dangerous for the psychologist to take ownership for the success or failure or otherwise of what actually happens really you know a lot of the most successful interventions that folk have is actually by making other people think that they were the real the real solution to what was going on here so you change your attitude towards him how did he respond that must have been really good for you um and that's another conundrum another difficulty for psychologists to come away and to say this is what I did it worked because it is almost like you are taking ownership of the intervention really when a lot of the time what we're trying to do it that we are trying to empower others to take ownership of the situation ... coming back to you know your point [FGP E] of the people employing us sort of say well where's the evidence that that was you it's very hard for us to sort of say well that was mine you know*

*Bobby (FGA\_FGPF\_411-433)*

#### **4.3.1.4.2 Using evidence to challenge ourselves and others**

Another element of the discourse that appeared to pick up on a range of different themes was the perceived need (or not) for the practitioner to have access to an explicit evidence-base from which they could draw upon when

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faced with challenging issues. Allied to this debate were questions around how an evidence-base should then be applied; should it be used to confirm a practitioners perspective or to challenge their hypotheses ?:

It is very much taking each situation as an individual situation as well I means it's research basis of clinical basis but um when you are actually there on the spot each situation and each individual is different. (Max)

Hmmm ok. (Chris)

Because that's slightly at odds with what you were saying isn't it is it. (Alex)

It is a bit I suppose unless you've got kind of a script in your head or you've got kind of hypothesis formulation going on your sort of coming across a new case your think well this is sort of something I've dealt with in the past similar to this sort of issue so straight away when that sort of happens to me I'm kind of drawing on things I've done in the past things I've read so yeah I think each case can be different but you might have a repertoire in your head of what you. (Chris)

Hmm I suppose I'm I suppose I'm saying that you've got all that in your head somehow and you've built is up over years. (Max)

Hmmm. (Chris)

You're coming from theory and so on but when you get to the point of practice other things come into play. (Max)

Yeah yeah I think you need some kind of I don't know some kind of initial sort of guiding hypothesis don't you when you picking up a bit of casework where you need to sort of begin to test out and challenge things you get a kind of narrative in your head about what's going on and you that's what I do anyway I do things to challenge that or prove or disprove. (Chris)

I suppose that's that's coming very much from a kind of scientific paradigm (Alex)

FGA\_43-77

The discourse between Educational Psychologist as 'scientist' versus Educational Psychologist as 'practitioner' was evident throughout both Focus Groups, with some advocating very clear Popperian perspectives:

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*we don't go looking for information to support hypothesis we go looking for information to discredit our hypotheses and that is what the integrity of the psychologist is*

*Drew (FG1\_FGP6\_466-468)*

Where as others felt that personal preferences of the Educational Psychologist typically take priority:

*I mean we know from you know the work of people like Irvine Gersch and stuff at UEL is that psychologists come out of their training and often they have great aspirations about what they are going to do in terms of their practice is going to be evidence based that are going to do all these lovely great things like dynamic assessment and stuff but then most folk regress back to what is a fairly standard type of psychological practice what they know what they like what's easy*

*Bobby (FGA\_FGPF\_305-311)*

#### **4.3.2 Summary of Focus Group Results**

While the thematic synthesis described above provides an opportunity to widen our appreciation of the results of the thematic analysis available in Section 4.3.1.4, it is useful to briefly summarise the results of the Focus Group analysis in relation to how evidence-based practice is understood within the group of Educational Psychologists.

What is clear from the Focus Groups is that practitioners seem to understand evidence-based practice as the interplay between theoretical considerations (i.e. philosophical standpoint, what constitutes evidence and the range of ways in which evidence-based practice could be defined) and the practical considerations that characterise the applied settings in which they work (i.e. the barriers and facilitators of evidence-based practice). Based on these two multifaceted considerations, an individual's understanding appeared to be

mediated by a number of factors personal to the Educational Psychologist in question. The mediating factors included how the individuals defined their role as an Educational Psychologist (a topic that has generated much debate in the literature (Woods, Farrell, Lewis, Rooney, Squires & O'Connor (2006); Fox, 2011), their awareness of the psychology they use (i.e. whether it is implicit based on accumulated experience or explicit based on identifiable sources such as published research) and their own personal preferences in terms of the assessment and intervention practices they find most enjoyable.

While the Focus Groups provide a significant contribution to the research question in terms of how evidence-based practice is understood by a group of practising Educational Psychologists, an important limitation should be noted. Although the design and analysis provided a complete overview of the range of perspectives that existed among the Educational Psychologists, it is unclear how representative each code or theme was for the group as a whole.

Q-methodology provides a neat way of grasping at the range of subjective agreement that exists within a group of individuals (Brown, 1980) and its inclusion as a research method in the present study adds a fascinating insight into the research question that would not be permitted otherwise (Watts 2011). The following Section describes the analysis and results of the Q-Sort activity that followed the Focus Groups.

#### **4.4. Q-Sort**



#### 4.4.1 Analysis

In much the same way that no prescribed pattern of analysis exists for thematic analysis (Braun & Clarke, 2006), the analysis of Q-sort data also presents the researcher with many methodological decisions and choices (Watts & Stenner, 2005). As in the previous Section although the analysis presented in the current study draws heavily on the methods outlined by a single author (Brown, 1980), it has been supplemented with a number of other techniques in order to best answer the research question within an action research framework.

In a meta-analysis of Q-studies Dziopa and Ahern (2011) suggested that,

Omissions of rationale for factor analytical processes raise doubts over the extent to which the researcher understands the methodological processes of their study. This could put the validity of the findings into question. (p. 50)

As such the rationale for each stage of the analysis procedure is presented below in order to improve judgements about the validity of the research but to also make explicit the caveats and cautionary notes that exist in any research exercise.

As the discussion of the analysis progresses frequent reference will be made to the identifying number of the Q-sort items. **To assist the reader in interpreting these numbers a removable laminated sheet is included in the Appendices (Appendix S).**

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The starting point for the analysis that follows is the completed Q-Sorts from each of the participants. The calculations and tables presented result from software analysis of the completed sorts (PQMethod (Version 2.20) and Q-Assessor).

#### **4.4.1.1.1 Correlation Matrix**

The first step in the analysis is to determine which individual sorts are broadly similar to each other (their degree of correlation). While one may want to begin speculating about the relative agreement and disagreement between differing holistic views of evidence-based practice based on the original data matrix (20 columns, representing each of the Educational Psychologists, by 44 rows for the values they attached to each statement (between -5 to 5)), the total number of data points ( $20 \times 44 = 880$ ) would make this an unwieldy task. It is at this stage that the power of statistical analysis begins to support the researcher in terms of making sense of the way in which the individuals have sorted the items:

The reduction from ...data points... to coefficients, the latter incorporating all the relationships among the former, illustrates the subsumptive power of correlation and its harmony with the scientific principle of parsimony. (Brown 1980, p. 207)

The first step in calculating the correlation coefficients for each participant's individual sort is to firstly calculate the correlations for each item from the Q-Set (r-score) for each individual. This is repeated for each pair of participants until each participant's sort has been correlated with each of the other participants' sorts. Table 10 shows the correlation matrix from the completed Q-sorts, where by the relative agreement or disagreement between the

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Educational Psychologists for each item from the Q-Set is expressed by an r-score of between -1.00 to 1.00 (r-scores of -1.00 suggest a high level of disagreement between the sorts, r-scores of 1.00 represent a high degree of agreement).