AN INVESTIGATION INTO EVIDENCE-BASED PRACTICE IN EDUCATIONAL PSYCHOLOGY IN A DIVERSE SOCIETY

by

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DECLARATION

STUDENT NO: 3228576

I declare that ‘An investigation into evidence-based practices in educational psychology in a diverse society’ is my own work and that all sources I have used or quoted have been indicated and acknowledged by means of complete references.

17.11.2011

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Signed Date

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God Bless Africa, guide her leaders, guard her children and give her peace.

ABSTRACT

Evidence-Based Practice (EBP), the philosophy underpinning professional service in the health care industry in the U.S.A. and U.K., has been accepted as a paradigm for psychological practice by the American Psychological Association (APA). The APA recommends that professionals base their clinical decisions on scientifically supported research and an understanding of their clients' specific ecological disposition. Clients are considered to have a right to efficacious interventions based on objective research findings, effective service and a high standard of care. Sub-divisions of EBP are Evidence-Based Treatments (EBT) and Evidence-Based Assessment (EBA).
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South African educational psychologists have a meagre assessment 'toolkit' - outdated, culturally insensitive, non-standardised tests for culturally and linguistically diverse clients. Children from diverse backgrounds would have higher standards of care and more efficacious interventions were psycho-educational assessments to be culturally-sensitive. Without such instruments, ethical management of interventions is questionable, although universally, psychologists have found innovative ways of adapting their praxis to the difficulty. However, all practices and/or interventions are not based on research evidence, nor can be necessarily considered good practice. In the U.S.A. with its abundance of assessment instruments, EBA is a means of ensuring the scientific foundation for professional practice, consequently reliable, valid, culturally-sensitive assessment instruments have been produced.

Findings in this study, derived from conversations with a sample of educational psychologists, revealed they were already accommodating cultural and linguistic diversity. Awareness of the value of EBA would support educational psychologists, bring them on par with worldwide praxis and enhance their professionalism. [247]

KEY TERMS

Evidence-based practice; evidence-based assessment; evidence-based therapies; outcomes measures; databases; cognition; educational psychology; cultural and linguistic diversity.

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LIST OF ACRONYMS

EBP Evidence Base Practice
EBPP Evidence Based Practice in psychology
EBA Evidence Based Assessment
EBT Evidence Based Therapies
DAS II Differential Abilities Scale
CAS Cognitive Assessment System
BICS Basic Interpersonal Communication Skills
CALP Cognitive Academic Language Proficiency.

CHAPTER 1: SOUTH AFRICAN EDUCATIONAL PSYCHOLOGY IN THE CONTEXT OF THE WORLD TREND OF EVIDENCE-BASED PRACTICE

1.1. INTRODUCTION

South Africa is rich in its cultural and linguistic diversity. As a developing country resources are prioritised to develop basic infrastructure in order to meet primary socio-economic needs of previously disadvantaged groups, so that many other important issues are not emphasised. The development of psychometric instruments is not seen as a key priority. This has resulted in one of the most pressing concerns for educational psychologists: most assessment instruments are still not culturally fair, culturally sensitive, or standardised for the specific population group for which they are often used. Some instruments are not appropriate for use within a linguistically, socially and culturally-diverse country like South Africa. Cultural differences between the practitioner and the client intensify the need for culturally sensitive assessment practices.

The trend currently making an impact on psychological practices, especially in the United States of America (USA), is that of Evidence-Based Practice in Psychology (EBPP). In the evidence-based movement the empirical foundations for interventions and assessments are considered paramount. It is advocated that clinical decision-making should be based on the best available research in combination with clinical judgment. In the past two decades, little has been done in the development of assessment instruments in South Africa and educational psychologists have started questioning the proficiency and ethical practice of using old assessment instruments in a multicultural environment. Although educational psychologists are creative in their interventions, much of what they do has no evidence-base to show whether those interventions are effective or not. The position of educational psychologists is exacerbated by the fact that the Health Professions Council of South Africa (HPCSA) has been disputing the scope of practice of the educational psychologists for a number of years. Consequently, further insecurity within the educational psychology fraternity has developed.

According to the HPCSA (2007) with which body the registration of psychologists is mandatory, the role of the educational psychologist is to:

> *… assess, diagnose and intervene in order to facilitate the psychological adjustment and development of children and adolescents within the contexts of family, school, social or peer groups and communities.*

Gaining a clear understanding of how educational psychologists can contribute towards the psychological, emotional and social well-being of school-going children is important as is having a scientific foundation for this support. Therefore, the problem to be examined in this study is how selected educational psychologists in private practice support their diverse clientele and to investigate whether the evidence-based movement has had any impact on their daily decision making processes and intervention strategies.

The evidence-based movement advocates critical thinking in daily practice decisions (Gambrill, 2005). Practitioners are advised to base their decisions on research evidence by integrating research findings with unique patient characteristics. These patient characteristics include demographic aspects such as age, gender and race and other characteristics such as level of education, personality and motivation to accept the intervention (APA Task Force on Evidence-Based Practice 2006). Educational psychological practice in South Africa could benefit from incorporating the principles of Evidence–Based Practice into the practices of practitioners. The diverse demographics of a South African client base as well as the diversity represented within the profession require a critical disposition backed by committed research evidence. This will enhance commitment to developing an appropriate range of effective and culturally sensitive assessment tools.

1.2 BACKGROUND

Post–Apartheid South Africa has created challenging opportunities for growth in many areas. The United Nations International Children's Emergency Fund (www.unicef.org) lauds South Africa for the enormous successes it has achieved in the political, social and economic realms. In the educational

realm, however, there is still much to be done. Graham Bloch, a respected educationalist, calls schooling in South Africa a 'national disaster' (Bloch, 2009:58). The South African Constitution (1996) guarantees liberty and freedom and this has helped to create the political and cultural background necessary for real progress in economic empowerment and the realisation of human rights. South Africa has accepted the United Nations Charter on the Rights of Children. One of these Children's Rights (Children's Rights Centre, 2008: n p.) is the right to education:

> *Every child has the right to education that aims to develop his/her personality, mental and physical abilities. Education should nurture respect for a child's parents, for the child's own cultural identity, language and values, as well as for the cultural background and values of others. Children have the right to an excellent education in any school.*

'Excellent education' should include the complementary services of educational psychologists. Assessment, diagnosis and intervention that facilitate the psychological adjustment and development of school going children support a child's right to education. The development of personality, mental and physical abilities is further enhanced through the contribution of educational psychologists.

In July 2007, children accounted for approximately 38% of the 48.7 million people living in South Africa (Institute of Statistics UNESCO, 2007). An estimated equivalent number of children (6 million) in each of the three traditionally demarcated age groups were identified: 0-5 year olds, 6-11 year olds and 12-17 year olds. According to the same statistical source, the enrolment of primary school children in schools has increased by nearly 40% from 1999 to 2007.

These figures indicate the need for educational psychologists to contribute towards education, since many children have special needs which must be addressed for the child's education process to be successful. Emotional and social problems are fuelled by poverty, the prevalence of HIV/ AIDS, violence and increasing food scarcity. The impact of these socio-economic challenges on successful education and healthy psychological adjustment necessitates

the services of educational psychologists. In America, it is estimated that approximately 20% of school going children will need additional assistance and psychological intervention during their school lives due to psychiatric disorders (Kazdin & Weisz, 2003:9). This figure does not include psychological problems or school-related difficulties that are sub-clinical and not classifiable within a system like the Diagnostic and Statistical Manual, (DSM-IV-TR; American Psychological Association, 2000). An approximation of 20% will probably be an underestimation in South Africa, because of many societal factors such as: the levels of violent crime, HIV/AIDS, child-headed households, poverty, teenage pregnancies, drug and alcohol abuse and unemployment of school leavers. The percentage of children needing assistance could therefore be much higher than that of any first world country. Therefore, the need for educational psychological services is of paramount importance. In a document by the South African National Department of Education (1999:91) it was stated that the vision of the department was to create a South Africa in which all people,

> *... have equal access to lifelong education and training opportunities which will contribute toward improving the quality of life and build a peaceful, prosperous and democratic society.*

To facilitate this vision, the democratic government set it as its goal to dismantle all apartheid-created structures and procedures. The Ministry of Education wanted to undo more than forty years of formal Apartheid education structures and procedures in a few years. One of these structures that was dismantled was the Departmental Auxiliary Services, amongst which are the services of educational psychologists. The South African Schools Act (SASA, 1996) expressed the aspiration that all learners have access to quality education without discrimination and it made schooling compulsory for learners aged 7-14. The entire school syllabus had to be re-shaped and revised for the democratic scenario, underpinned by the progressivist assumptions of Outcomes-Based Education (OBE) with its learner-based and critical teaching strategies as initially laid out in the Curriculum of 2005 (Bloch, 2009:126). This newly implemented curriculum (South African Department of Education Report, 2001c: s.p.) envisaged general education to be,

> *… a move away from a racist, apartheid, rote learning model of learning and teaching to a liberating, nation-building, and learner centred outcomes-based one*

The implementation of the Outcomes-Based Education (OBE) system demanded new skills from both the teacher and learner. The philosophy of inclusion in education, led to the expectations that teachers would intuitively know how to include or teach learners with barriers to learning. Unfortunately the reality of OBE was that there were still many learners who had difficulties with learning and teachers had less teaching time to assist them (Bloch, 2009:99). Teachers were overwhelmed with administrative tasks related to OBE and learners who came from previously disadvantaged backgrounds were more susceptible to having barriers to learning (Bloch, 2009:114, 126). Learners with barriers to learning often needed assistance from educational psychologists, but were frequently from linguistic and culturally diverse backgrounds, different to those of the practitioners. Practitioners who qualified under the Apartheid system and had been practising for a number of years may have been 'dogmatically wedded' (Rubin, 2008:12) to the approaches in which they had been trained, and consequently did not do justice to the child who was being assessed.

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This is, to a large extent, still the predicament today. To aggravate the problem further, the South African assessment instruments have not kept up with new societal demands and international research findings. Educational psychologists, who were serving a diverse client base, started feeling increasingly disempowered to address the needs of children from diverse backgrounds. In the new democratic dispensation, the main developer of psychological test material in South Africa during the Apartheid era, the Human Sciences Research Council (HSRC) was restructured and its research focus was changed to address other pressing problems like HIV/AIDS, poverty, conflict, violence, and broader educational problems. Unfortunately, the development of educational and psychological tests fell by the wayside, as noted by Foxcroft and Roodt, (2005:247). The lack of test development and adaptation was not in the best interest of the children who had been

educationally disadvantaged prior to 1994. The continued use of out-dated and biased assessment instruments doubly disadvantaged these learners and made fair assessments unattainable.

Social and political influences from the Apartheid years still impact on the way society functions. The first non-racial body to represent psychologists, namely, the Psychological Society of South Africa (PSYSSA) was only formed in 1994. The years of global isolation resulted in South African psychologists, especially private practitioners who were not part of academia, probably having missed the progress of research which occurred in the field of psychology and psychometrics.

International progress was specifically made in the field of research on intelligence. The assessment of intelligence and cognition was refined and most modern assessment instruments now have more than 20 years of research in the field to support the structures of these instruments. Some of the more modern instruments are based on specific theories. These theoretical underpinnings include the work of Sternberg (Triarchic Theory of Human Intelligence, 1989); Gardner (Theory of Multiple Intelligences, 1983); and Das and Kirby's PASS theory (1970-1994) as well as the work of Cattell, Horn and Carroll (CHC theory, 1997). Other advances in the field of psychological intervention, internationally, are the growing recognition of the needs of culturally and linguistically-diverse populations as reflected in the work of Ortiz (1995), Sue & Sue (2007) and the American Psychological Association (2002c). The move from a deficit-based approach to a more positive, strength-based approach was pioneered by Seligman (2001) and is also part of modern approaches to problem solving and intervention used by many psychologists.

In response to the effects of professional isolation, South African educational psychologists counteracted the assessment difficulties they experienced in different ways and a methodology of 'qualitative interpretations of assessment' originated. This is a valuable indication that educational psychologists were closely linked with the needs of their clients and that they

had creatively adapted to these needs. However, a purely qualitative interpretation of test results (often called 'ipsative measurement') implies a move towards increased subjectivity and a reduction in objectivity. 'Ipsative measurement is measuring the person against him/herself' - Plug, Meyer, Louw & Gouws, 198:364). This increased subjectivity implied that the educational psychologist had to rely more on acquired knowledge and experience than on test results. 'Subjective' interpretation requires a high level of clinical expertise and even with such expertise these interpretations can be flawed and considered unscientific.

One of the main features distinguishing a psychologist from a lay person is the scientific evidence of assessment media on which the psychologist can rely. If the psychologist cannot rely on the results of the instruments used, an assessment is a futile exercise and a waste of time and money. The lack of scientifically-endorsed assessment instruments in a diverse South African society is problematic for educational psychological praxis. Poor performance on psychological tests, such as intelligence assessment instruments, can be attributed to many factors, and does not indicate inferior ability *per se*. If a child has not been exposed to the culture for which the assessment instrument was originally developed, his/her scores may be distorted. In a similar manner, lack of exposure to the type of tasks contained in such an instrument and/or lack of quality educational opportunities can also produce misleading scores. When using old instruments with archaic vocabulary, even the child with a fair education, can be disadvantaged.

De Beer (2006:10), a South African developer of the multicultural Learning Potential Computerised Adaptive Test (LPCAT), says that the assumption when using intelligence tests is that 'all examinees have had comparable opportunities to acquire the skills and abilities being measured'. The majority of learners from linguistically and culturally-diverse backgrounds, who were assessed by the researcher, in her capacity as an educational psychologist have not had equivalent opportunities to acquire the skills measured and therefore produced skills that were incongruent with their abilities.

It became increasingly challenging to attribute poor results on intelligence tests to different factors such as: a specific language deficiency, possible cognitive impairment or environmental, social, or educational factors. Educational psychologists therefore had to be very vigilant when interpreting the results of any assessment instrument. When one has to continuously interpret all test results with caution, one finally begins to critically question the relevance of an educational psychological assessment. Test results that are continuously interpreted with caution result in doubt about the relevance of such educational psychological assessments.

In stark contrast to current South African conditions, culturally-sensitive assessments are a sine qua non for all American children who are from culturally or linguistically diverse backgrounds. According to the guidelines of the American Psychological Association (2002, n p.) for working with ethnically diverse, linguistically-different, and culturally-dissimilar populations, a culturally sensitive assessment has to show that there has been consideration of a number of factors.

These include:

- the number of generations or years in the country,
- fluency in English,
- the extent of family support (or disintegration of family), and
- the community resources, and the level of education of the parents.

In addition, American psychologists working with culturally-diverse populations have to document any cultural and socio-political factors that they consider relevant to possibly impact on the results of the assessment. In this way it is ensured that the child is always assessed within his/her specific ecological context.

American practices that involve culturally and linguistically-diverse populations led the researcher to conclude that South African educational psychologists were ill-prepared for the political, social and educational changes in Post-Apartheid South Africa. The adaptation to these rapid changes sparked what can be called a ‘professional identity crisis’, especially amongst psychologists

who were closely linked to education. Many educational psychologists chose to migrate to other registration categories in psychology, such as counselling psychology. Others qualified in specialisations to be able to work with adults. Those educational psychologists who remained within their original scope of practice and continued to work with children were 'identifying' children with barriers to learning on a daily basis, while instinctively knowing that the barriers could frequently be attributed to many other societal and educational factors. Consequently, educational psychologists had to, out of necessity; implement different methods to compensate for the lack of culturally sensitive assessment instruments. Two adaptations employed were those using the principles of Dynamic Assessment and that of 'qualitative interpretation' (as mentioned earlier).

Grigorenko and Sternberg (2009:308) describe Dynamic Assessment as an 'active teaching process with the aim of modifying the child's cognitive processing'. According to Sternberg (1994:327) Dynamic Assessment is a time consuming method and it lacks 'extensive evidence for the validity in predicting important external criteria'. 'Qualitative interpretation', as described earlier, concerns measuring the person against him or herself. The question still remains: How defensible were these 'adaptations' that educational psychologists had to make in their assessment praxis? In recent years, there has been a strong focus on accountability and transparency in all spheres of professional services. The movement that supports this accountability, transparency and ethical practice is called Evidence-Based Practice. The approach of Evidence–Based Practice, with its specific methodology and emphasis on critical thinking, disseminating research findings into practice, and ethical practice, may possibly contribute towards more scientifically-based assessments and interventions.

The Evidence-based movement started in medicine in the early 1980's (Reynolds, 2000:20-21). Evidence-based medicine gained acceptance, because doctors, opines Hargreaves (2007:13) could expect to, '… be constant masters of the complexities that perplex them every day, '

due to the dissemination and application of best research findings'. In a similar way, teachers are often perplexed by the difficulties of learners and their behaviour. Evidence-based psychological intervention and evidence-based education could be used by educational psychologists and teachers respectively, if they were *au fait* with accessing the latest research and were able to translate these findings into practice.

1.**3 ANALYSIS OF THE PROBLEM**

1.3.1 Awareness of the problem

The researcher became acutely aware of the dissonance in her own practice *about the assessment of culturally- and linguistically-diverse children. She* found that her initial training had not prepared her adequately for the complexities in an independent educational psychological practice within the changed South African milieu. She was confronted with a wide variety of difficulties when her client-base quickly changed from Afrikaans-and English-speaking clients to clients who had English as a second or even third language and an African language as their vernacular. Although she was not fully aware of the exact nature of culture-fair assessments at that time, she wanted to follow the principles of beneficence and do no harm in serving her clients. Some of the material she was trained in seemed totally inappropriate for use with her new clientele. In cognitive tests, children often produced scores that did not correlate with their school results or their behaviour in other social situations. In expressive tests, (for example story-telling tests) the children could not relate to the material and express themselves adequately in English, while the researcher was not proficient in indigenous languages. In addition, translators who met the criteria of knowing the test and the language of the client were not easily accessible. She subsequently became frustrated and also started doubting the scientific basis of her interventions. She started searching for more appropriate test materials or test procedures to find ways of breaking the impasse she perceived within her assessment practice.

As an expressive storytelling test, she found a test of which the plates reflected a multicultural society, the Children's Apperceptive Story Telling Test

(Schneider, 1989) and imported this. This instrument was standardised for the American society and its particular demographics at that time and had child friendly, coloured pictures that depicted people from all racial backgrounds in interaction with one another. The test required minimal verbal expression and could also be scored objectively with norms for White, Black, Hispanic and Asian children. It contained profiles for children with Attention Deficit Hyperactivity Disorder, Conduct Disorder, Anxiety Disorder, Oppositional Defiant Disorder and Depression. The test also had pro-social indicators, which reflected the latest research of that time. At that point the researcher finally decided that the 'clinical intuition' which was highly regarded in her training, was not compatible with her personality and aspirations to be transparent. She needed results that were objective and were based on research, not on her own opinion.

When the researcher started working in a private school setting, it was required by the Independent Examination Board (IEB) to use the Wechsler Intelligence Scale for Children IV (WISC-IV: Wechsler, 2004). This instrument was found to be more user-friendly and unambiguous in producing scores which could be interpreted in a fairer way than the South African Individual Scales Revised (SSAIS-R: Van Eeden, 1991). It was, for instance, simpler with the WISC-IV to distinguish between language problems and an information-processing problem. The test material was also modern and child-friendly with colour plates and content that was more appropriate to the experiences of children, although there were some pictures that the children could not readily identify. When assessing children who were still acquiring English as the language of teaching and learning (such as immigrant children), it was found that the verbal tests of the WISC-IV were too difficult for these non-English speakers and additional methods had to be implemented to determine the language proficiency of the child. In these cases it was impossible to get information by having an extensive interview with parents and collaterals, because these people, if they were available, could often not communicate in English at all. Additional assessment helped to speculate whether the children only had a language barrier or a learning,

personality or adaptation problem. In was at that time that the researcher started becoming sceptical about the validity of using assessment instruments for any child who was not representative of the norm group for which the test was originally standardised and also started questioning the validity of an assessment which was not conducted in the child's primary language of communication.

One of the main differences between a psychologist and a lay person is the scientific evidence of assessment media the psychologist can rely on. The foundation of psychology is science, as Goodheart (2004) and many others profess. If the psychologist cannot rely on the results of assessment media, the exercise is unproductive. This belief prompted the researcher to find more appropriate ways of dealing with the problem in an ethical and professional manner. The search led her to Evidence–Based Practice, which despite having its own limitations, led to more security in the planning and execution of interventions. The researcher could not help but to admit that she had very little understanding of what cultural-sensitive assessments entailed, especially for South African circumstances. She had to learn about the emotional and social challenges that the new democratic dispensation in South Africa posed for children and their families. Previously disadvantaged people relocated from townships into suburbs and subsequently enrolled their children in English or Afrikaans medium schools. This had an immense impact on the family and specifically on children. Children, who had never spoken English, now had to be educated with English as the medium of instruction. Families became more nuclear and depended less on traditional support structures of family and community. This led to many parenting challenges, such as having to balance home and work life, leaving children in aftercare facilities which they were not used to. Parents who continued to live in the townships had to use transport services, which is considered unsafe, for getting their children to school and back.

Educational, business and employment opportunities becoming within reach of more people and the challenges these opportunities brought, were reflected

in the emotional wellbeing of children. Children exhibited emotional and social problems as well as 'learning problems' that could often be ascribed to their difficulties with acculturation and the acquisition of the language of learning and teaching.

The researcher actively sought opportunities to learn about cultural diversity as it pertained to psychological intervention, by getting to know her clientele better. She started greeting them in the culturally correct manner and learnt some popular phrases and concepts from specific cultures. When Islamic parents then talked about the child's difficulty at Madrasa, she knew that they referred to the religious school where children have to study the Koran in Arabic. She realised what a strain this often placed on the child and the parent, especially in finding time for homework and extra-mural activities. Establishing the meaning of an African child's name and calling him/her by this name immediately established rapport with African parents and also gave insight into the hopes and dreams parents had when naming this specific child. Simultaneously, she wondered how her colleagues were coping with changes and challenges brought by a democratic and racially integrated society.

1.3.2 *Investigation of the problem*

The immense social changes which occurred in South Africa after 1994 need to be considered in the psychological assessment of a South African child or family. The child who is being assessed through the medium of English, more often than not, does not speak English as a first language.

The parents of the child who is assessed may experience stress due to the acculturation process within the new democratic dispensation and many other social influences may impact on the family. In this manner, the whole emotional, social and ecological foundation of the child is affected.

In America, an educational psychologist has access to assessment instruments for nearly every aspect of the client's life. Instruments for assessing levels of acculturation of the family, parental stress, parenting style,

and cognitive, emotional and educational tests abound. In South Africa, however, the current situation is different and assessment instruments used are either out-dated or not culturally-appropriate. Educational psychologists in South Africa have a very meagre 'assessment toolkit' and needed to find alternative ways to understand the child in context and to be sensitive to cultural factors that impact on behaviour and learning.

To find assessment instruments to suit the needs of the situation and the client is very difficult. The re-structuring of the HSRC resulted in test material previously developed by them, never being adapted for use in the Post-Apartheid era. All these adverse factors, led the researcher to question the integrity of many assessment outcomes. The researcher also questioned the evidence-base of the assessment instruments and assessment praxis *per se.* Questions of the ethical standard of praxis, began to surface in her mind and led her to investigate the impact of the Evidence-Based movement on the field of educational psychological practice in South Africa. Kagee (2006a 233-248) said that South African (clinical) psychology was running a risk of moving away from its scientific base to a pseudoscientific and even 'new age' psychology. Kagee (2006a; 236) also pointed out that many psychologists did not have a firm empirical base for their interventions and went on to say that many clinicians also relied on assessment instruments that had 'dubious predictive validity'. This led the researcher to search for an empirical base for educational psychology.

Evidence-Based Practice is founded on the integration of current research findings, the practitioner's professional judgment and the client's unique characteristics, needs, circumstances, and preferences. In Evidence-Based Practice, the educational psychologist becomes an honest broker of knowledge (Gambrill, 2005:67) and admits to the client if he/she does not have an answer. Evidence-based practitioners also actively empower clients to participate in the process of intervention. Central to the evidence-based orientation to clinical practice, is a scientifically-minded approach (American Psychological Association Task Force on Evidence-based Practice with

Children and Adolescents, 2008:38). An evidence-based practitioner will strive to deliver a service that has a sound empirical base, but is in accordance with the client's unique needs and preferences.

The lack of appropriate assessment instruments in South Africa results in neither the educational psychologist, nor the client being liberated to have 'preferences' in a similar manner as in the U.S.A. In this way, both the client's and the psychologist's free choice is restricted. This situation also contributes to the maintenance of discriminatory practices.

1.3.3 *Statement of the problem*

The problem for the educational psychologist in South Africa is that assessment instruments are not culture-fair. Practitioners are not trained in culturally sensitive intervention, nor are instruments standardised or linguistically appropriate for use with a large part of the current clientele-base. Therefore, the need to align educational psychological practice with the most up-to-date trends in the world becomes apparent. The consequences of the current situation, are that educational psychologists as professionals are questioning their role as practitioners who serve the clients of the educational system. The role of the educational psychologist is critical in the psychological well-being and facilitation of learning in school-going children.

Without criticism of other methods, or implying that other services are not ethical or professional, the evidence-based philosophy is based on moving away from authority-based practices, being honest agents of knowledge, involving clients as informed participants, promoting transparency and accountability and above all, honouring one's ethical commitments as a professional. Therefore, the question to be examined in this study is: *How has the philosophy and methodology of Evidenced-Based Practice influenced educational psychologists within a diverse South African society?*

Sub-questions were also formulated:

- -To what degree are educational psychologists aware of the paradigm and philosophy of Evidence-Based Practice? (EBP)

- - If educational psychologists are aware of EBP how have they adapted their praxis and specifically the assessment and intervention part of the practice to accommodate the principles of this paradigm?
- If the educational psychologists were not aware of the paradigm of EBP how have they adapted their praxis due to the demands of a changing society?

1.4 AIMS OF THE RESEARCH

The general aim of the research is to identify if the evidence–based movement has had any impact on educational psychological practices in a selection of South African educational psychological practices. The Task Force on EBP (2005:14) suggested many possibilities for further research that were urgently needed to enhance clinical expertise. (Who is this task force, context of its development, is it mentioned prior to this?) One of these recommendations was 'studying the practices of practice clinicians who obtain the best outcomes in the community, both general and with particular kinds of patients or problems'. This remark provided impetus to the aims of the research.

Therefore the specific aims of the research were:

- To conduct a literature survey to determine the nature of Evidence-Based practice.
- To conduct interviews with South African educational psychologists to determine if they were aware of the paradigm of evidence-based practice.
- To establish to what degree their praxis were evidence-based.

1.5 RESEARCH METHOD

1.5.1 Literature survey

A literature study was undertaken. Evidence-Based Practice (EPB), Evidence-Based Therapies (EBT), and Evidence-Based Assessment (EBA) were topics included in the study. Educational psychological practice in other countries, assessment, assessment instruments and assessment methods were researched. The literature survey endeavoured to capture the essence of intervention with linguistically- and culturally-diverse clients. Evidence-

Based Practice is well-documented in the United States of America and the researcher relied heavily on the literature from the U.S.A. A literature study on assessment, specifically intellectual assessment, was undertaken with the intention of establishing which cognitive assessment instruments were currently in use in educational psychological practices abroad and which are considered to be evidence-based. The researcher also tried to determine whether any of these instruments have been used in any environment within the South African context.

1.5.2. Empirical research

A qualitative research design supports the empirical research. An analysis of the field of educational psychological practice and the possible impact of the evidence-based movement on these practices was done by means of interviews with a purposive sample of educational psychologists in private practice. These practitioners were interviewed using qualitative interviews. The qualitative interview is an 'approach to in-depth interviewing' (Rubin & Rubin, 2005:29-42) which suits the relationship between interviewer and research participants well, since the research participants in this study will be considered to be 'conversational partners' (Rubin & Rubin, 2005 29-42). The research participants are professional colleagues and this method of interviewing was believed to be the least invasive, most ethical method of investigating their practices.

The researcher labels the study as predominantly phenomenological. In a phenomenological study past knowledge is 'suspended' so that the researcher is able to understand the 'phenomenon at a deeper level' (Creswell, 2007:267). This deeper level of understanding aims to unravel the intricacies of the efforts of other educational psychologists. The 'discursive qualitative approach' (Creswell 2007:248; Henning 2009:16) accentuates the fact that the researcher has the sole responsibility for the final interpretation of the data. The data that were derived from the qualitative interviews were transcribed and analysed for themes which pertain to the daily experiences of educational psychologists. The transcriptions were presented to the

conversational partners (participants) for verification of the content, to enhance the validity of the study.

Time and financial constraints restricted the sample to conversational partners living in the Gauteng area. Gauteng is one of the nine provinces of South Africa. It is a densely populated urban area and most of the language groups are represented in its demographics. Schools in this area therefore also reflect the many diverse cultural and language groups of learners. Educational psychologists working in this area see a diverse clientele, from people who have only one dominant home language such as Afrikaans or English, to children who are educated in English or Afrikaans, but have two or more indigenous languages as conversational media at home.

As far as the teaching environment is concerned, the clients of educational psychologists in Gauteng range from learners who attend private schools to those at government schools who are often exposed to English only at school. These learners are taught by an array of teachers ranging from those who have English as their first language to those who have Afrikaans, an indigenous African language like Sotho or Zulu, or even a foreign language as a first language. The different English accents and pronunciation that these learners are exposed to in the course of a school day are astonishing.

The data were collected from three distinct and different categories of educational psychologists. By trying to bring maximum variation into the selection of research participants at the onset of the study, the credibility of the research is enhanced (Creswell, 2007:214). The first group are practitioners who qualified as educational psychologists in the dispensation of political oppression (Apartheid). The second group are practitioners who are representative of persons from linguistic- and culturally-diverse backgrounds, and were mostly able to assess children in the vernacular. One of them qualified in 1992 and the rest were all from the Post- Apartheid era. The third group are practitioners qualified recently (within the last 10 years) and were

chosen because they had obtained their qualifications in a time period offering more exposure to modern theories, methodologies and assessment media.

This study is placed in a historical, social and political context and it is from this context that the findings were interpreted. Historically, before 1994, people from culturally and linguistically diverse backgrounds were not admitted to mainstream universities in South Africa and found it extremely difficult to obtain graduate and post-graduate qualifications. Socially, racial integration was not permitted, which led to the different racial groups not being familiar with each other's cultures. Politically, the different cultural groups developed completely opposite ideals and white supremacy was the order of the day. It is against this background that Post-Apartheid educational psychologists find themselves rendering services to children and their parents. Often this service is cross-cultural, with the psychologist being a member of the Apartheid era's advantaged group and the client being a member of one of the disadvantaged groups. This alone compels the educational psychologist to strive to be culturally-sensitive, ethical and scientifically informed.

1.6 ETHICAL CONSIDERATIONS

The research participants were treated as conversational partners. The researcher did not want to 'audit' the practices of her colleagues. Her intention was to learn from her colleagues and in this way contribute to the progress of South African educational psychological practices. The conversational partners represent different cultural and linguistic groups and this was respected. English was used as a medium of conversation but if a participant preferred to converse in Afrikaans, that was accommodated. The researcher's knowledge of African languages is unfortunately very limited and interviews could not be conducted in the vernacular of some of the conversational partners. Confidentiality was guaranteed. In the event of any conversational partner sharing information which could be detrimental to his/her personal or professional image, (or that of a colleague); such information was not disclosed. The conversational partners were all informed

of the research topic and offered written consent to participate. Their transcribed interviews were made available to them and they were free to indicate any discrepancies. A final ethical consideration was the issue of reciprocity. At the completion of the research project, all conversational partners received an abridged version of the report, or a full version if they so wished.

1.7 DEMARCATION OF THE RESEARCH

This research only focused on the effect of Evidence-Based Practice within the field of educational psychology, although to understand the concept, the presentation of Evidence-Base Practice in other disciplines had to be studied. Only South African educational psychologists, who were practising within the 'scope of practice' as defined by the HPCSA in 2009, were included in the study. Although the definition of the scope of practice changed in 2011, the research participants were chosen before that time. A purposive selection of educational psychologists within Gauteng was made for this research. The selection of participants was as representative as possible of the wider community of educational psychologists. This is demonstrated in Table 5.1

1.7.1. Clarification of concepts

Apartheid was an official policy of racial segregation practised in the Republic of South Africa. The word 'apartheid' is derived from the Afrikaans word for 'apartness.' Apartheid is a term that came into usage in 1948 and signified the political policy under which the races in South Africa were subject to 'separate development'. For the purpose of implementing the Apartheid policies, only four races were acknowledged: Bantu, or Black African; Coloured or mixed race; White (European), and Asian. Apartheid met with both international condemnation and spurred a resistance movement among black South Africans. It also led to the isolation of South Africa from the world. Apartheid was abolished in 1994 when a new democratic government came into being.

Assessment media are instruments used for the evaluation of ability, achievement, interests, personality, scholastic achievement, interpersonal-

and intrapersonal competence and adaptation. These include interviews, observational systems, checklists and self-report forms, projective techniques, standardised tests and response to intervention approaches (Braden, 2003), as well as peer-referenced techniques, parent and teacher rating scales, and structured diagnostic interviews (Frick, Barry & Kamphaus, 2010).

Cognitive assessment refers to the assessment of narrow cognitive abilities and cognitive processes, like reasoning, perception, judgment, memory (Vandenbos, 2007:38).

Cultural and linguistic diversity refers to all people who were not born in the mainstream language and culture of a country. In this study it refers specifically to all people who do not have English as their mother tongue.

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' (American Psychological Association Task Force on Evidence Based Practice, 2006:5).

Evidence–Based Assessment (EBA). Within the context of this research, evidence-based assessment is 'premised on both technical (e.g. comparability of assessment procedures) and socio-emotional perspectives (e.g. fairness in opportunity to learn and demonstrate abilities and equivalent expectancies regarding success' (Mpofu and Ortiz, 2009:43)

Evidence-Based Treatments (EBT) refer firstly to ensuring that psychotherapies offered to individuals have adequate evidence for their effectiveness (Steele, Roberts and Elkin, 2007: 5) and secondly specific treatment approaches for which 'substantial valid and reliable empirical research evidence' exists (Leffingwell and Collins, 2007:552). The ultimate goal of these treatments according Elkin, Roberts and Steele (2007:574) is to ensure 'beneficence and autonomy, which (....) 'is also the goal of ethical behaviour.'

Intellectual assessment is the administration of standardised tests to an individual in order to determine his or her ability to learn, reason, understand concepts and acquire knowledge (Vandenbos, 2007:76).

Practice guidelines typically include information on critical issues related to diagnosis, assessment, and intervention integrity and outcome evaluation. Such guidelines are often based on the latest and best available research (Vandenbos, 2007:719).

Praxis: due to the abundant use of the word **'practice'** in this dissertation, the word **praxis** is used to refer to' habitual and established practice' Universal dictionary (1987:1212) and therefore refer to the everyday actions of the educational psychologist.

1.8 OUTLINE OF THE CHAPTERS

Chapter 2: In this chapter the literature findings on Evidence- Based Practice, its origin and its applications in the field of psychology, are discussed.

Chapter 3: An overview of the literature findings on Evidence-based Assessment is given. Educational psychological assessment in other parts of the world, as well as in South Africa, is discussed.

Chapter 4 discusses the research methodology in detail and describes the phenomenological foundations of the study.

Chapter 5 is a deliberation on the findings of the empirical research. The themes that emerged are explained and discussed within the larger context of the study.

Chapter 6 concludes the study with a synopsis of the findings, the limitations and contribution of the study, recommendations and considerations for further research.

1.9 SUMMARY

This first chapter provided a background for the study. The historical background of the Apartheid era and its detrimental influence on education

was sketched. The lack of assessment instruments and the different challenges this presents, was highlighted. With a changing client-base and the educational psychologist having to assess more children from culturally and linguistically-diverse backgrounds, challenges have to be met in innovative ways. The research question stated is: How has the philosophy and methodology of Evidenced-Based Practice impacted on educational psychologists within a diverse South African society?

CHAPTER 2: EVIDENCE-BASED PRACTICE

2.1 INTRODUCTION

The concept of Evidence-Based Practice has become prominent in literature in the last decade. It originated in medicine but quickly spread to other health professions, the corporate world and also to education. Evidence-Based Practice strives to integrate research findings into practice to ensure that practitioners base their daily decisions on the most recent research findings. In this process, the evidence-based movement has developed methodologies to access information, to enhance clinical expertise and to meet the specific needs and preferences of the individual patient or client.

This chapter surveys Evidence-Based Practice from its origins in medicine, to its establishment in the mental health field and especially in psychological practice. The application of evidence-based practice in educational psychology is investigated and the reader is informed about strategies of becoming an evidence-based practitioner. The acceptance and acknowledgment of the evidence-based paradigm are highlighted and the emphasis on the outcomes of intervention is clarified.

2.2. THE DEVELOPMENT OF EVIDENCE-BASED PRACTICE

Evidence-Based Practice, previously also referred to as 'empirically supported treatments and empirically validated treatments' (Chambless & Ollendick, 2001:697) has its origins in medicine.

The pioneer, Dr Archie Cochrane (1972), argued that due to scarce resources, only 'health care services which could be proven as effective' should be delivered (Trinder, 2000:20-21). Cochrane was the first big influence on the establishment of evidence-based practice and promoted the use of randomised controlled trials. A randomised controlled trial is 'an experiment in which two or more interventions, possibly including a control intervention or no intervention, are compared by being randomly allocated to participants' (Cochrane collaboration, 2009:n.p.). This practice became

known as Evidence-Based Medicine (EBM) and was the first influence towards radical progress in primary health care. The second big influence on the development of Evidence-Based Medicine, originated in the training of medical doctors at McMaster's University in Canada, where Dr David Sackett (1996) initiated an innovative curriculum of 'problem-based self-directed learning' (Hamer & Collinson 2005; Sackett, Rosenberg, Gray, Haynes & Richardson, 1996). Prior to the evidence-based movement, decisions about patient care were mostly derived from the experience-base of the clinician and from the authoritative opinions of a few experts in the field, which led to practices which had very little scientific underpinning (Gambrill, 2005:256). Sackett et al., (1996:312) define Evidence-Based Practice in medicine as, '… integrating individual clinical expertise with the best available external clinical evidence from systematic research'. Increased clinical expertise can be reflected in many ways, but especially in diagnosis that is more effective and in which scientific research evidence, especially randomised controlled trials, have been used.

Another way in which clinical expertise was defined, was by the practitioner being intimately involved in the patient's life, by 'thoughtful identification and compassionate use of individual patient's predicaments, rights, and preferences in making clinical decisions about their care' (Sackett et al., 1996:312).

These developments were novel at that time and provided expectations of new standards of patient care. Clinical expertise was in the focus of training establishments. One of the ways to improve clinical expertise was to create guidelines for best practices. The assumption was that all research could be effectively implemented into routine everyday practice, provided that the results were available in a format that was accessible to the practitioner (Trinder, 2000:3). Bridging the research-practice gap consequently provided impetus for the emergence of the evidence-based movement. Evidence-based practice, however, entails more than just providing guidelines for best practices in an effort to get research findings into practice. It also placed a

premium on the development of the practitioner's clinical expertise and critical thinking skills. Therefore, Evidence-Based Practice was later defined as involving the 'conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients' (Sackett et al., 1996:312), but it has evolved to include many other aspects of practice in accordance with the need of the specific profession.

Figure 2.1 indicates a very recent representation of the different components that constitute Evidence-Based Practice. The different components will be discussed in detail under 2.4.2 - 2.4.4. When studying Figure 2.1, it needs to be pointed out that clinical decision-making always needs to be an integrated process and is cyclical in nature (Rubin, 2008:6-10). Even though there are separate divisions for explanatory purposes, the process takes into consideration the best available research, the specific ecological situation of the client (also referred to as client characteristics) and other resources such as the practitioner's expertise as well as the practitioner's and client's ecological situation. Decision-making also occurs against a background of societal and/or organisational influences.

Figure 2.1: Aspects of EBP (Spring & Hitchcock, 2009)

Figure 2.1 also highlights the fact that evidence-based practice is in interaction with the values within which both the practitioner and the client operate. It requires that the practitioner consciously reflects and evaluates all aspects within the particular ecological context. The decision-making process is central to all other aspects and reflects the practitioner's proficiency to utilise all the aspects involved in the decision-making process. Rubin (2008:6-10) describes this process as being cyclical in nature, indicating that the practitioner has to start the process all over again if the outcomes of the intervention are unsatisfactory. In making practice decisions, the most rigorous scientific evidence available must be used. Each case must be assessed individually to choose an intervention which will achieve the desired outcome. Rubin (2008:9) therefore states that there are at least five steps in the cyclical decision-making process. These are, (1) Question formulation (2) searching for the best evidence to answer the question, (3) critically appraising the evidence, (4) selecting an intervention based on the critical appraisal of the evidence and integrating the appraisal with the client's preferences, clinical state and circumstances, and (5) monitoring client progress. Clinical medicine was the focal point of the movement towards Evidence-Based Practice, and many other health professions like physiotherapy, nursing and occupational therapy and psychiatry could see the value of Evidence-Based Practice for their particular discipline and followed suit (Trinder, 2000:13).

Sackett et al. (1996: 71) explain that many questions arose during the course of a working day in a physician's office, but that most of these issues were left unresolved. One of the main reasons for physicians not being able to answer some questions is that no clinician ever has all the answers. Access to valid research results is the best way to ensure that practitioners use the results of clinical research in their practice decisions.

However, Sackett et al (1996:71) also state that

> ... without clinical expertise, practice risks becoming tyrannised by evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient. Without current best evidence, practice risks becoming *rapidly out of date, to the detriment of patients.*

Evidence-Based Practice is also founded on the perception that practitioners need to make rational decisions, but Hamer et al. (2005:9) are not convinced that practitioners actually do make rational decisions, and they further argue that no amount of evidence can replace the clinical judgment of the practitioner. Evidence-Based Practice was never intended to replace the practitioner's judgment, but rather to enhance it. Sackett et al (1996:72). Walker & London (2007:634) say that Evidence-Based practice strives to provide practitioners with a general framework to support them in in their decision-making processes and a premium value was placed on the results obtained from randomised controlled trials, which were labelled the 'gold standard' of research' (Barkham & Margison, 2007:446).

Practitioners were also provided with a 'skills set' to access research results. This included the proficiency to formulate a practice-related question and access the over-abundance of clinical research available (Reynolds, 2000:19). The evidence-based movement was furthermore a reaction to an 'authority-based' (Gambrill, 2006:257) way of dealing with realities of clients' real-life problems. The 'authority based' method of practice is grounded in the perception that only a few practitioners were 'experts or authorities' in a field, and that only these experts have the competence to treat a certain syndrome, condition or illness. The 'experienced-based' method on the other hand, results in clients being treated from the experience base of the practitioner (Gray, 2001:254). Both these methods, the authority-based method, as well as the experience-based method lack incorporation of the latest research findings, and can be challenged for their scientific foundation. It is also for this reason that Trinder (2000:12) considers Evidence-Based Practice as an empowering paradigm. It is considered to empower a novice practitioner to make an impact in the life of his/her client comparable to that of the seasoned practitioner if he/she knows how to access and use the latest research findings and is able to implement it in practice. The conviction developed that

Evidence-Based Practice should be based on the most recent, valid and reliable research findings (Gambrill 2005:258). The movement also supports the belief that the quality of treatment delivery can be improved by using scientific research results (Barkham & Margison, 2007:444).Another factor that supported the firm establishment of the evidence-based movement is the rapid rate at which knowledge becomes out-dated because of rapid technological advances. The practitioner has to consider the incredible rate at which knowledge becomes out-dated and obsolete.

Rae and Fournier (2008:505) quote Koocher (2005), who considers that 'the half-life of knowledge in psychology is estimated at about seven years,' which means that about half the knowledge-base in psychology will change every seven years. In this instance, basing one's praxis on research evidence also helps practitioners to stay current (Trinder, 2000:12). With the advent of the Internet, the evidence-based movement's use of technology made it possible to place the most recent information within easy reach of even the most geographically-remote practitioner (Trinder, 2000:12). Today, a practitioner is able to access information on any health-related research findings within seconds and clients and families are not excluded from this privilege. It is envisaged that this will change the whole nature of the professional's relationship with the client (Fox, 2003:95), because clients will become more knowledgeable about different syndromes and conditions and will not rely solely on the health professional. Evidence-Based Practice would not have been possible without this access to information and the easy dissemination of information on a world-wide scale.

The emergence of the evidence-based movement has also coincided with the new concept of 'managed care' in the United States. Managed health care implies that health services and especially health-funding have to be better managed. Concepts such as pre-authorisation, capitation, risk-sharing, risk pools, co-payments, deductibles, provider networks, provider contracts, withholds, and formularies became part of the health care professional's vocabulary in dealing with medical health insurance companies who became

more reluctant to pay for procedures (Rothberg, Magennis & Mynhardt, 1999:53-60). With the inception of managed health care, practitioners began to feel that their autonomy was being threatened, and the 'demand' to prove that their practices were evidence-based, added to the pressure. The patient now also becomes a 'consumer' of health services and the main question amongst 'consumers' including ,the patient's family, employers and above all the health-insurers - has been whether an intervention enhanced the quality of a person's life. An intervention would be measured (and paid for) if the person's quality of life was enhanced by the treatment (Parry, 2000:62). The pressure to prove that interventions would add to the quality of life of clients and patients became evident.

The acceptance of evidence-based practices by a variety of disciplines was the result of a very wide consensus amongst professionals that evidence-based reform had the potential to substantially revolutionise practice in four critical areas namely: (1) the reliance on practitioners' personal experiences and opinions, (2) emphasis on the importance of scientific enquiry, (3) the need to organise and systematise knowledge and to present it intelligibly and appropriately, and (4) to ensure that it is disseminated and used by the people who need it (Hamer & Collinson, 2005:6). Health professionals were now learning how to use research outcomes in their everyday practices and how to work within the managed health care environment. Managed health care, at contained costs, required different skills from the health professional, inter alia, rapid assessment, brief treatment and the ability to effectively document treatment outcomes (Sue & Sue, 2008:2).

The evidence-based movement was not accepted universally and many arguments against it prevail, with the main objection being that it is a threat to the autonomy of the practitioner (Trinder, 2000:220). However, since the inception of its use in medicine, it has become the cornerstone of the health policy in the United Kingdom, and has raised the standards of clinical practice and the accountability of practitioners (Leng, 2009:9).

2.2.1. Utilising research findings in health care settings

An important feature in using research findings means that a statement of intent must be considered. This means that one has to ask the question:

'What should happen?' and then devise practical steps to bridge the gap between research and clinical practice (Reynolds, 2000:19). Health professionals access research information, mostly electronically, via databases which were developed specifically for this purpose. The original databases were the Cochrane Reviews (www.cochrane.org) and the Campbell Collaboration (www.campbellcollaboration.org), but currently there are many other databases available to practitioners from different specialities. Practitioners are taught via information on different websites, how to access and evaluate research findings. To understand the process, it can be broken down into the following sizeable chunks:

2.2.2. Searching *databases*

The very first step in searching databases is to familiarise oneself with the databases available and accessible for one's own practice needs. The next step is to create a question which will be searchable on a database. Any person who has done some searches on databases knows that one need to include or exclude certain criteria, otherwise one is either totally overwhelmed by the data provided, or no results are found. The process then follows the steps provided by Walker and London (2007:635): (a) Search for the best research evidence; (b) Appraise the evidence; (c) Integrate the evidence with patient characteristics, and (d) Evaluate the outcome. To turn a practice question into a searchable question is often easier in the exact sciences such as medicine, physiotherapy and dentistry, but somewhat more challenging in psychology and social work. The different disciplines have therefore developed different methods of teaching the process. Different websites have interactive learning and teaching guides for doctors, dentists and other healthcare professionals, while other address the needs on an interdisciplinary level. For instance: the Centre for Evidence-Based Medicine (www.cebm.net) for medical practitioners, Critical Appraised Topics (www.otcats); for occupational therapists, and turning research into practice (www.tripdatabase.com); for different disciplines.

Healthcare practitioners are challenged on a weekly basis (www.medscape.com) to continually upgrade their competence, by devising

different research questions for different scenarios, and actively learn how to search databases and how to develop research questions.

One search method has initially been named the IOWA model, but is mostly known as the PICO method after the acronym for the different steps in the search method (Titler, 2001:n.p.). The acronym stands for: P = patient/patient group, I = Intervention, C = comparison group, O = Outcomes measures. The PICO model has become the lifeline in decision-making, especially for general practitioners. However, the first important dynamic is that practitioners have to admit that they do not have all the answers (Gambrill, 2006:224). An example of using this search method in psychological practice is given under section 2.5.1.

2.2.3 Appraising *evidence*

When a practitioner has found research evidence, it also needs to be appraised and to this end every decision-maker must have a set of criteria for appraising research papers, and research reviews (Muir Gray, 2000:101), but this method of accessing research will not be discussed here. What needs to be mentioned here is the correlation between appraising evidence and critical thinking skills. Gambrill (2005:10) explains this relationship:

Critical thinking and evidence-based practice are closely related; both reject authority as a guide (such as someone's status), both emphasize the importance of honouring ethical obligations, and both involve a spirit of inquiry. When the research has been critically appraised, the practitioner has the ethical obligation to disseminate these findings and to integrate the discovery of knowledge with the patient's ecological circumstances. This constant spirit of investigation will contest the assumptions of authority that some practitioners tend to acquire after some years in practice.

In the USA there is growing support for the consideration of individual client's characteristics, especially when it pertains to cultural diversity. Culture-sensitive therapy involves the specific modification of psychotherapy to take into consideration the cultural values of the client and the societal context in which a client lives (Sue & Sue, 2008: 12). Any intervention needs to be evaluated to complete the cycle of inquiry.

2.2.4. Integrating the evidence with patient characteristics or ecological circumstances

It was earlier indicated that the practitioner is expected to be intimately involved in the patient's life. Patients' issues such as age, race, health status and socio-economic situation and other personal issues need to be considered, and it is clear that research, which was for instance applicable to adults, cannot be transferred to children (Shirk & MacMakin, 2008:471-483). In the USA there is growing support for the consideration of individual client's characteristics, especially when it pertains to cultural diversity. Culture-sensitive therapy involves the specific modification of psychotherapy to take into consideration the cultural values of the client and the societal context in which a client lives (Sue & Sue, 2008: 12). Any intervention needs to be evaluated to complete the cycle of inquiry.

2.2.5. Evaluating the outcome

Many factors influence the outcomes of therapy and the need for the evaluation of treatment outcomes is evident. On an individual level the client-therapist relationship, the client's resources and ability to change are only a few indicators that have been proven to determine the success of therapy (Sue & Sue, 2008:24). On a systems level, the social system and its acceptance of an intervention (Higa & Chorpita, 2008:45-58) will determine the success. The outcome of the research application needs to be critically evaluated and every practitioner also needs to keep record of his/her own intervention outcomes when applying research to practice. Specific outcome measures have been developed to ensure the quality of interventions.

With the growing availability of information, words like 'pseudoscience' (Lilienfeld, Wood and & Garb, 2000:27-66), 'ineffective' (Parry, 2000:56-59) and statements like 'controversial and questionable' (Hunsley, Lee & Wood, 2003:87) started surfacing in literature referring to psychological practice and psychological therapies. Consequently, the need for a closer inspection of

professional psychology, as well as other helping professions like social work, became evident. The need for psychology to get its house in order was pressing. Ronald Levant, the then president of the American Psychological Association, was quoted by de Angelis (2005:26) as saying that,

> *... the public wanted to know that the health professions were practicing based on evidence available, and to achieve this goal, psychology had to face challenges similar to that faced by other professions, including the need to conduct trials on little-tested therapies.*

The paradigm shift towards Evidence-Based Practice in psychology was started by the work of Division 12 of the APA (Clinical Psychology). A preference was for 'empirically validated' therapies instead of clinical experience and intuition (Geddes, 2000:70). Gambrill (2005:257) stresses that Evidence-Based Practice involves a philosophy of ethics of professional practice, such as 'research and scholarly writing, a definite philosophy of science and a philosophy of technology'. Furthermore, Evidence-Based Practice encourages clinicians to develop critical appraisal skills. Gambrill (2005:253) and Dawes (1994:31) both advocate that 'responsible professionals should practice with a cautious, open, and questionable attitude.'

The idea that practice grounded in science was effective led to a different debate about the efficacy of psychological intervention (Charman & Barkham, 2005:10).

2.3. EVIDENCE-BASED PRACTICE IN PSYCHOLOGY

Psychological practice was increasingly scrutinised for its evidence base. In 1995, the American Psychological Association Task Force on Psychological Intervention, Division 12, which was also the division for Clinical Psychology, published criteria for identifying empirically validated treatments for particular disorders (APA Task Force, 2006:2). This Task Force initially identified 18 treatments which had been tested for a specific population group in randomised controlled trials, and which could be implemented using treatment manuals. These manuals were intended to be used with identified treatments that had been found in trials to have comparable efficacy to medication. The publication which documented these 'empirically validated therapies' of the

APA Division 12 ‘ignited a decade of controversy’ (APA Task Force, 2006:3), but also stirred up practitioners with the belief of having to prove that psychotherapy was indeed effective. In 1999, Division 29 of the APA (Psychotherapy) established a Task Force to identify and disseminate information on empirically supported therapeutic relationships. Division 17 of the APA (Counselling Psychology) investigated empirically supported treatments in this discipline (APA Task Force, 2006:4). Seligman (1995:965-974) established in the Consumer Reports that the public opinion on psychotherapy was that ‘it works’. Although Seligman admitted that his study (Consumer Reports, 1995) was flawed in many respects, it was a most innovative way of collecting the opinions of the wider public on an issue like the efficacy of psychotherapy. This sparked more debates about the usefulness of psychotherapy. Parry (2000:61) stated that psychotherapy was widely practiced, but that what different practices offered also varied widely, and that variation in practice leads to the possibility of inequality of service.

The American Psychological Association (Chambless & Ollendick, 2001) conducted intensive research on the effectiveness of psychotherapy and identified a number of treatments that were considered empirically supported treatments. Goodheart (2004:n.p.) urged professional psychotherapists to start a dialogue with scientists, since there were many ‘disparate voices about the needs for psychotherapy, its costs, worth, components, allowable interventions and effectiveness.’ The cost-benefit of the system (Chorpita, 2003:52) as well as the cost–benefit of the individual client (Parry, 2000:62), are important considerations when implementing a new system like Evidence-Based Practice. The fiscal impact on the system and the individual also had to be considered. Parry (2000:62) argued that patients who made huge investments in time and money had the right to know that therapies were safe. Further arguments such as those of Perry (2000:62) addressed the reality that psychotherapy was considered, ‘… relatively weak and marginal in the health care system, and therefore research to establish psychotherapy as a bona fide treatment within main stream health services, was crucial’.

The evidence-based movement in psychology was also, in part, a reaction to the growth in consumer and self-help groups. These led to intensive media scrutiny of professional practices and of lay people challenging the expertise of professionals in general (Trinder, 2000:6; Ferguson & Russell, 2000:31; Seligman, 1995:965-974). It was against this background that Ronald Levant, President of the American Psychological Association, appointed the Task Force on Evidence-Based Practice in 2006. The Task Force (APA Task Force on EPB, 2006) consisted of 18 prominent psychologists, academics and professionals from a wide range of perspectives and traditions. They addressed three specific issues:

- To consider how a broad range of evidence (including effectiveness research), public health research, health services research, and health care economics should be integrated in a consideration of evidence in the practice of psychology;
- To articulate and explicate the application and appropriate role of clinical expertise in treatment decision-making, including a consideration of multiple streams of evidence that must be integrated by clinicians, and the consideration of relevant research on expertise and decision-making; and
- To articulate and explicate the role of patient values in treatment and decision-making, including a consideration of the role of ethnicity, race, culture, language, gender, sexual orientation, religion, age, and disability status, and the issue of treatment acceptability and consumer choice (APA Task Force on EPB, 2006:4).

A definition of evidence-based practice in psychology (EBPP) was specified as 'the integration of the best available research with clinical expertise in the context of patient characteristics, culture and preferences' (APA Task Force on EPB, 2006:5). This definition still had three very distinct aspects, namely:

- the best available research,
- the clinical expertise of the psychologist, and
- the patient characteristics which place the patient (client) firmly within a specific age group, a specific culture and with a specific ability to participate in the decisions made about his/her mental health.

Goodheart (2004:n.p.) considers that 'most psychologists supported the broad scientific definition for psychotherapy,' and Seligman (1995:965-974) defined how one should go about determining whether psychotherapy was effective. Seligman (1995) said that treatments had to be manualised, with detailed scripting of therapy made clear. Patients needed to be randomly assigned and seen for a fixed number of sessions. Therapists needed to be videotaped and monitored for adherence to the manuals. The target outcomes ought to be clear and all the criteria for a double-blind study needed to be followed (Seligman, 1995:965-974). The outcomes of efficacy studies had led to 'empirically validated' and later 'evidence-based' treatments.

Seligman (1995:66) states that 'many investigators have come to think of efficacy studies as the 'gold standard' for measuring whether a treatment works'. However, effectiveness studies, meaning the actual use of this therapeutic intervention in the real world, have to take the three main aspects of evidence-based practice (best available research, clinical expertise and patient characteristics and preferences) into consideration. They should clearly define what the best available research would be what clinical expertise is required and in what way patients' ecological circumstances, individualities and preferences ought to be considered. According to Sue and Sue (2008:4) psychotherapy textbooks and training programmes do not address the need for new skills. There has also been a lack in bridging the gap between theory and dealing with the realities of managed care and diverse populations. This leads to a 'disconnect between what students learn from texts and the skills they are expected to apply under managed care accountability guidelines'. These accountability guidelines of managed care have at least two very important aspects according to Sue and Sue (2008:4):
The ability to diagnose using the DSM–IV-TR and to describe symptoms as defined to justify the diagnosis.

- The ability to develop an individual treatment plan for each client. This individual treatment plan should have a clear statement of the client's

problems, specific and concrete goals and measurable criteria for evaluation of goal attainment.

- The questions that subsequently became prominent were what the best available research was and how it could be effectively accessed.

2.3.1 The best available research

There was broad consensus amongst supporters of the evidence-based movement that practice needed to be based on evidence, and that research needed to balance internal and external validity (APA Task Force on EBP, 2006:5).The adherence to randomised controlled trials as the only research method (which was the hallmark of medical research) was revised, and in 2006 multiple research designs were considered to contribute to evidence-based practice (APA Task Force on EBP, 2006:7). These included: Clinical observation; Qualitative research; Systematic case studies; Single case designs; Ethnographic studies; Process-outcome studies; Effectiveness research; Randomized controlled trials and Meta-analysis. The best available research can therefore come from many different sources. Dijkers (2009: 000) argues that, 'Best' should be understood in the meaning of 'best available', not as 'best possible'. Depending on the level of scrutiny applied, a poorly executed randomized trial may be accepted over an exemplary case-control study. In the opinion of Dijkers (2009:n.p.), even a poorly executed randomised trial will still be superior to a practitioner's intuition. Therefore a 'lone' practitioner needs to do active practice research and outcomes of interventions need to be measurable.

2.3.2. Practice-based research and outcome measures

Practice-based research is another aspect of the evidence-based movement. Barkham and Margison (2007:443-447) explain that in comparison to evidence-based practice which is considered a top-down model (from research to practice), practice-based evidence is considered a bottom-up model. Practice will inform research, on the assumption that good outcome measures are established. As Frederickson (2002:100) explains, the single case design can contribute towards developing the evidence base in

educational psychology. Charman and Barkham (2005:10) clarify that, '... the hallmark of practice-based evidence is that it starts with practitioners and builds 'upwards' utilising the adoption of common outcome measures as explained by the CORE-OM in the UK and the OQ 45 in the US'. These outcome measures (OQ 45 in United States and Core-OM in the United Kingdom) were designed to obtain data from routine practice settings to bridge the scientist-practitioner gap (Freeman & Power, 2007:458). The OQ 45 is a brief 45 item self-report outcome/tracking instrument, which assesses functional level change over time. The way in which questions are set out, 'cuts across treatment models, diagnoses and disciplines' and therefore it could also be used as a risk assessment for potential violence, suicide and substance abuse' (www.oqmeasures.com). The United Kingdom initiative to improve practice and service delivery within the mental health field was the Core-Net system (Continuous Outcomes in Routine Evaluation Outcomes Measures 2005, www.corenet.gov.sg).

Determining the success of interventions has always been determined by practitioners, but always informally, through self-report, parents' reports or general improvement of functioning (Goodheart, 2004:2-4). The outcomes measures mentioned here (the OQ 45 and the Core-Net) are efforts to scientifically determine the exact variables that have contributed to the success of therapy. Goodheart (2004:4) states further that, '... outcomes measures are an excellent source of guidance for clinicians and a wonderful reinforcement for work well done. We can also use our outcomes to show the world that psychotherapy works, as we have known all along.'

Therapist engagement is a pre-requisite to change in therapy, but in line with the Consumer Reports (Seligman 1996), the relationship between doctor and patient and psychologist-client has fundamentally changed. It was viewed in terms of 'provider' and 'consumer' of health services. All the underlying principles of consumerism therefore became imperative, namely marketing strategies, the needs of the consumer, informed decision-making and cost-benefit (Hamer & Collinson, 2005). The clinician was no longer seen as the

expert professional, but as a service provider who had to compete with other service providers in the field of healthcare. Therefore clinical expertise had to be proven.

2.3.3. Clinical expertise as a pre-requisite for evidence-based practice

Clinical experts (APA Task Force on EBP, 2006:10).are described by the APA as people who are able to,

> *... recognize meaningful patterns and disregard irrelevant information, acquire extensive knowledge and organize it in ways that reflect a deep understanding of their domain, organize it in functional rather than descriptive features, retrieve knowledge relevant to the task at hand, fluidly and automatically adapt to new situations, self-monitor their knowledge and performance, know when their knowledge is inadequate, continue to learn and generally attain outcomes commensurate with their experience.*

This idealistic description of clinical expertise is what every clinician ought to aspire to. However, humans are imperfect. Idiosyncratic interpretations, over generalisation and confirmatory bias are only some ways in which expertise could be compromised (APA Task Force 510). The description of the clinician's expertise highlights the need for life-long learning, and specifically admitting to not having all the answers. Integral to clinical expertise is what the APA (APA Task Force on EBP, 2006: 10) calls 'an awareness of the limits of one's own knowledge and skills and attention to heuristics and biases, both cognitive and affective that can affect clinical judgment'. Heuristics refer to the study of mental processes involved in problem-solving. It also refers to learning by discovery and learning by trial and error. Heuristics would therefore not be the acceptable way to treat patients and charge them for the services rendered.

The Task Force on Evidence-Based Practice defined clinical expertise as a very 'deep, thought-provoking awareness' of what one was doing in practice all the time. Leffingwell and Collins (2008:559) considered that clinical expertise is 'a complicated construct which required the clinician to apply higher-order thinking skills'. Higher order thinking skills include analysing, synthesizing, reasoning, comprehending, application, and evaluation. These skills show an acute awareness of one's own thoughts and factors that can

influence one's thinking. Clinical expertise has different facets and these are indicated in Figure 2.2.

The design was created from the information of the Task Force on Evidence - Based Practice of the APA (2006:10-12):

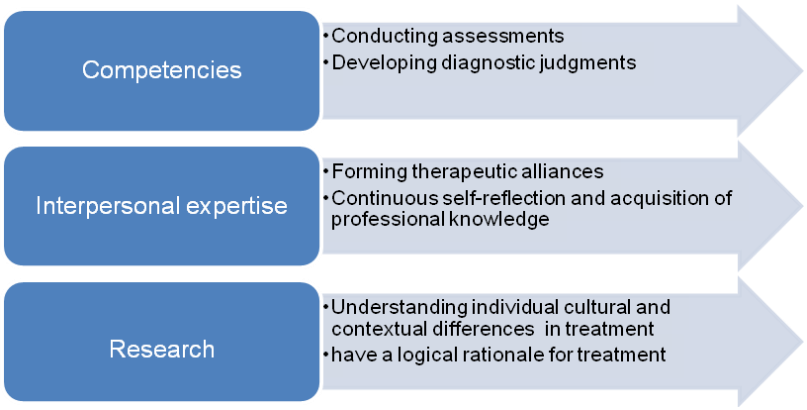

Figure 1.2 Clinical Expertise (adapted from APA Task Force on Evidence - Based Practice 2006)

Figure 2 is almost self-explanatory. The competencies included in the model are specifically directed at conducting assessments and developing diagnostic judgment. It is adequate to say that (educational) psychologists distinguish themselves by their ability to select, apply and interpret standardised tests and other media for diverse reasons. Assessment practices in educational psychology include intellectual assessment, multi-dimensional assessment of emotional and behavioural disorders, inquiry and assessment of adaptive behaviour and strengths, assessment of didactical skills, assessment to determine barriers to learning, personality assessment, assessment for career choice and training opportunities and environmental assessment. Developing diagnostic judgment requires experience, but there are ways in which the psychologist can enhance these skills in a continual way.

This includes acquiring supervision, implementing continuous professional development, and undertaking research (Kriegler, 2006). Practitioners need to continuously self-reflect and acquire new professional skills. The development of research and practice appraisal skills is pertinent. A well-

argued rationale for treatment forms part of research skills, while it is a *sine qua non* that psychologists must understand the individual, cultural and contextual differences in treatment. If living in a diverse society, it is important to ensure a good understanding of the circumstances of clients before concluding anything with certainty. According to numerous scholars (Kazdin & Weisz, 2003:439-449; Steele, Elkin & Roberts 2008:569–574; Parry 2000:59-68; Fisher & O'Donahue 2006:1-23), one of the important decisions a therapist has to make is to determine which intervention suits which client. This can only be achieved by taking into consideration the client's unique and distinctive ecological circumstances and individuality. Frederickson (2002:97) states that the emphasis of the evidence-based movement is not on replacing the expertise of the practitioner. In most of the evidence-based therapies, the therapist undergoes intensive training in delivering the specific treatment while also participating in supervision. Repeated practice, the viewing of sessions of others and simulated treatment (Kazdin, 2003:252) are some of the methods currently used in the training of aspirant evidence-based practitioners.

Evidence-based therapies are mostly manualised treatments, but part of the practitioner's expertise lies in the individualisation of the treatment (Weisz &Kazdin, 2003) and considering the patient's unique life situation. The manualised treatments for specific conditions are intended to enable professionals to be confident, systematic and able to learn from research findings or other people's best practices. Furthermore, they are an attempt to focus on quality assurance (Kratochwill, 2007:829). The manualised treatment method empowers junior therapists whose practices are in their infancy. It is 'potentially a radically democratising strategy, since junior members could deliver a similar service to seasoned professionals' (Trinder, 2000:11). In those cases where manualised treatments do not yet exist for a specific disorder, practice guidelines are provided.

2.3.4. Considering patient characteristics and preferences

The consideration of patient characteristics (ecological circumstances and individualities) and patient preferences implies that the client will be involved

in the decision-making about any intervention. Apart from probing for research findings that would match the characteristics of the client, these research findings need to be integrated with patient characteristics. This implies asking 'foreground questions' (Walker & London, 2007:636) about the specific client in a specific context, and not only background questions which would include general information about the condition or syndrome. There are a number of debates (Roberts 2007; Sue & Sue, 2008) about the relevance of a patient's ecological circumstances and individualities on psychological intervention. The most influential of these studies (APA Task Force on EBP, 2006:15) poses two questions:

- In what way do social factors and cultural differences necessitate different forms of treatment?
- Do interventions adequately attend to developmental considerations, both for adolescents and children?

In respect of the values of the client, Roberts and James (2007:13) state that,

> *… a patient's belief system and worldview, personal goals, perceptions of problems and treatment, personal situation, social and cultural characteristics, developmental consideration, and variations in the way disorders are manifested.*

Research on patient characteristics *per se* is scarce (Roberts et al., 2007:13). Most researchers referring to patient characteristics discuss specific issues of diversity (Sue & Sue, 2008:273-275), cross-cultural therapy (Sue & Zane 2009:3-14) and developmental questions (Phares & Curley, 2007:537-551; Kazdin & Weisz, 2003). Current research on patient characteristics therefore concentrates on the cultural needs of the client, and on developmental aspects such as addressing the needs of a specific group - children or adolescents. This focus on patient characteristics also emphasises professional competence. Professional competence does not only imply that the practitioner is able to formulate a case or integrate assessment data from different sources for diagnostic purposes (Leffingwell & Collins, 2008:553). It also implies that the practitioner will aspire to become culturally competent. Cultural competence includes a clear understanding of the client's cultural

background and will simultaneously alert the clinician to his/her own predisposition (Sue & Sue, 2008:273-275).

Balancing the three core components of evidence-based practice in psychology - the best available research, the clinical expertise of the practitioner and the patient characteristics - will all determine just how well a practitioner can serve his/her clients in an evidence-based style. Not all practitioners do accept this huge paradigm shift, especially within disciplines such as psychology and social work. However, to deliver an efficacious service - treatment efficacy and effectiveness- clinical utility, robustness of treatment and costs associated with treatment are some of the underlying dynamic forces that are distinctive of the evidence-based movement (APA Task Force on EBP, 2006:275). The modern practitioner has to take cognisance of evidence-based practice, especially in light of more clients talking legal action against professionals.

2.4. BECOMING AN EVIDENCE-BASED PRACTITIONER

A complete evidence-based practice is an optimistic goal, but a 'growing, dynamic profession always requires continual examination and reassessment of itself' (Steele, Roberts & Elkin, 2008:3). The main focus of evidence-based practice is to 'translate research into practice' (Higa & Chorpita, 2008:45), so the first steps forward are to engage in research.

Webster, Webster and Feiler (2002:54) quote Rutter (1994), a very influential psychiatrist in the United Kingdom, who suggests that a too simplistic view of evidence-based practice is dangerous. It is not enough to know from research which treatments will be effective at any given time. The essence of research lies in having creative means of moving forward and determining why certain methods work for certain problems, and in which circumstances. Rutter (1994) therefore defines research as 'the lifeblood of clinical practice.' If all practice decisions are based on research it will support professionals and in this case psychologists, to honour their ethical obligations.

Gambrill (2006:592) states that the client has the right to know if his/her time, effort and money have been well spent. Gambrill (2006: 594-600) also advocates the use of visual representations like graphs and eco-maps to track the progress of the client during intervention. The practitioner may keep copious notes, but may still not know whether the intervention is helping the client. Establishing this verbally may not be enough, as there are many other reasons why it may seem as if therapy is working. Some of the reasons why therapy seems to be 'working' are patient-related reasons. The following reasons are given by Gambrill (2006:595), and are also specifically applicable to educational psychological intervention:

> *The Hello-Goodbye effect, which refers to the client presenting themselves in the first session as much worse and therefore any intervention will be overestimated as successful. Parents (often mothers) tend to over-rate the intensity of their children's problems. The Hawthorne effect indicates that therapy has been successful, because the client is the centre of attention. The Rosenthal effect, in which the client gives the helper what is required (people-pleasing).*

To ensure that all interventions are not attributed to associated reasons, but to the effort of the therapist and the client, it is best to base interventions on research and therefore appropriate questions need to be formulated. Gambrill (2005:322), after discussing the precise ways in which a practitioner can become more evidence-based, poses the following questions every practitioner ought to ask him/herself:

- Will it help clients if I promote assessment measures of dubious or untested validity?
- Will it help clients if I hide the evidentiary status of service programs?
- Will it help clients if I use outcome measures that are not valid?
- Will it help clients if I attribute troubled or troubling behaviour to alleged pathological characteristics of clients ('mental disorders') and ignore environmental factors empirically shown to influence related behaviours?

A questioning attitude will also lead to posing the appropriate research questions.

2.4.1. Formulating research questions

The PICO method (Titler, 2001), which was earlier mentioned (section 2.3.), has been modified by the researcher to the CICO method to reflect educational psychological terminology. Here the acronym is explained as: CICO = Client, Intervention, Comparative Intervention and Outcome. The CICO method will help any psychologist to think about problems strategically.

By searching databases of evidence-based research, the educational psychologist will possibly find the best research evidence to answer his/her question. If no research evidence is found, then the psychologist can use the next level of available evidence, like speaking to a trusted colleague or admit to the client that no research evidence exists for this specific problem and that they will have to search for strategies together or use a trial and error technique. If research has been done on the topic, and the client agrees to accept the therapeutic intervention, then intervention will be focused, to the point, and probably effective, even if the effectiveness in this case was based on the expectations of the client.

Gambrill (2005:290) considers that different kinds of problems require different questions. To find out if a programme is effective, to determine if prevention is better than intervention and to question if an intervention may indeed not be harmful, are some of the questions posed. Questions relating to determining effectiveness, prevention and harm are presented in Table 2.1. For ease of clarity, the questions must be read as one sentence from left to right, but the sub-areas that need to be targeted, according to the CICO method, are indicated at the top.

Table 2.1 Formulating Research Questions (adapted from Gambrill, 2005)

Questions of	Client type and problem	What you might do	Alternative action	Hoped for outcomes
Effectiveness	If children who are bullied…	receive assertiveness training…	compared to direct intervention at school level.	which results will empower the child in the long-term?
Prevention	In sexually active high school students at high risk for pregnancy	who are exposed to a hands-on programme for pregnancy prevention	compared to only using didactic material on the proper use of birth-control methods	which group has fewer pregnancies during an academic year and more knowledge of birth control methods?
Harm	in adolescents…	who participate in a depression screening programme	compared to those who do not …	which results are the least harmful?

A psychologist in private practice will find it difficult to do intensive research on every case he/she encounters. One way of managing this dilemma is to find research evidence in a more time-efficient manner by reading systematic reviews and also giving attention to meta-analyses. Meta-analyses are types of systematic reviews that incorporate statistical methods to combine the results of several studies into a single estimate (MacMillan & Schumacher, 2010:96). Although many people use the term meta-analysis interchangeably with systematic review, strictly speaking, a meta-analysis is an optional component of a systematic review that summarises the results of primary studies (Higgens & Green, 2008: 270).

By researching and reading the results of clinical research studies, meta-analyses and systematic reviews, psychologists could find information to help them make informed practice decisions. Another very efficient way of collecting data is by searching databases.

2.4.2. Searching databases

When the practice questions have been formulated, a database search to find and critically appraise systematic reviews and other studies can begin. There are many studies available for the treatment of psychological disorders. (Kazdin & Weisz, 2003, Steele, Elkin & Roberts 2008). The educational psychologist, however, mostly works with clients who have sub-clinical conditions and these clients will therefore not necessarily have been included in randomised controlled trials. However, when an educational psychologist focuses on children as learners and the cognitive processes of children and their behaviour, many studies and systematic reviews can be found. (See the databases in Table 2.2 for examples of these studies.) The educational psychologist needs a wide field of expertise and the databases listed below have been found by the researcher to be helpful in addressing most practice needs.

Table 1.2 Searchable Databases

Database name	Relevance	Web address
PsychInfo	Main database of the American Psychological Association	www.apa.org.psychinfo
What works clearinghouse	Education	http://ies.ed.gov/ncee/wwc
Best evidence encyclopaedia	Educationally proven programmes	www.bestevidence.org
Social programs that work	Community	www.evidenceprograms.org
Campbell collaboration	Social sciences, education	www.campbellcollaboration.org
National Association of School Psychologists	Educational psychology, school setting	www.NASPonline.org
National Mental Health Association	Mental health	www.NMHA.org
Character education partnership	Character education	www.Character.org
Collaborative for academic, social and emotional learning	Academic, social and emotional learning	www.CASEL.org
International Reading Association	Reading, lifelong learning	http://www.reading.org.
Therapy Advisor	Advice on scientifically-based therapeutic interventions. Has links to publishers of major assessment media.	www.therapyadvisor.com
Practice guidelines	Free downloadable guidelines	http;//www.psychguides.com

As mentioned in section 2.4.4., the information on these databases cannot simply be transported to another client base. The client's individual ecological situation, as well as his/her preferences must be considered. Rubin (2008:30) reiterates that no matter how effective studies may be, they still need be to be adapted for practice use. The use of these databases can contribute towards creating a practice that is more evidence-based, but due to many reasons such as discussed in the next section, not all practitioners accept the evidence-based paradigm. (Roberts & James, 2008:18)

2.5 ACCEPTANCE OF EVIDENCE-BASED PRACTICE IN PSYCHOLOGY

The psychological fraternity, especially, did not easily accept the evidence-based philosophy. This is because many psychologists were (and still are) of the opinion that psychotherapy is first and foremost a 'human endeavour' (Goodheart, 2004) and the 'therapist's own personality and his/her ability to be empathetic, the client's personality, the nature of the problem, and the type of therapy offered, all have a role to play. Psychotherapy has always been perceived as an art as well as a science' (Goodheart, 2004:2-4). Glicken (2005:15) considers that the slow acceptance of evidence-based practice led to the psychological profession being under a growing suspicion amongst healthcare analysts and providers, who thought that what the helping professions did was expendable:

> *The health care analysts believed that what psychologists do should not be based on practice experience but on a body of research evidence. Further, they suggested that psychologists would lose their status as professionals and the future of psychotherapy in the United States would deny clients the luxury of therapy even if there was a need.*

With this remark Glicken (2005:15) pointed out that psychological therapy is considered to be very expensive (in monetary terms), but the benefit to a person's quality of life over the long-term is often not considered. Immediate relief of symptoms through pharmacotherapy is often chosen over psychotherapeutic therapy, despite research evidence which indicates the effectiveness of the latter (Steele, Mize Nelson & Nelson, 2008:25-40). Ethical behaviour is crucial in any professional service, and not doing what one is doing in the best interest of the client, or what research has indicated as efficacious, is unethical.

Within the evidence-based paradigm, ethical practice is one of the cornerstones of practice. The ethical practitioner needs to be able to inform his/her client of the most updated research findings, consider the client's preferences, and also acknowledge when he/she does not have an answer to the client's dilemma. In addition, professions have a body of knowledge that should not be based on practice wisdom or practice experience, but on the

evidence that we are collecting from empirical data that support interventions (Glicken, 2005:15).

Many arguments for and against manualisation of therapy are still heard and many professionals do not accept this aspect of Evidence-Based Practice. Marzellier (2004:392-395) criticises it strongly and argues that evidence-based psychotherapy is a 'myth'. He also criticises psychologists for having bought into a medicalised way of defining psychological experience, and argues that surveys have indicated that clinical experience was still rated as more useful than research studies by practitioners, and that the complexity of psychotherapy cannot be reduced to a manual.

Marzellier (2004:394) further argues that, '... the personal power of the healer, the beliefs of the therapist, the perceived credibility of the knowledge base, the ritual of the procedures, and the place of safety where psychotherapy takes place', were all psychological.' Additional criticisms such as evidence-based practice being a 'cook-book' method of intervention and complaints about the infringement of the practitioner's independence were also put on record. Goodheart (2004:2), points out that psychotherapy is a complex and rich process to 'find meaning within a trusting relationship'. Norcross (2002), as quoted by Roberts and James (2008: 19), has conducted extensive empirical research on the therapeutic relationship. Evidence has been presented on elements of the therapeutic relationship which include therapeutic alliance, empathy, congruence and positive regard in the therapeutic relationship. Norcross (2002:442) advises further that the 'concurrent use of empirically supported relationships and empirically supported treatments is likely to generate the best outcomes' in therapeutic intervention. Many treatment guidelines were developed for different mental disorders and conditions. Those most pertinent to the educational psychologist include according to Steele, Elkin and Robert (2008):

- Adolescent suicidal behaviour
- Attention-deficit /hyperactivity disorder
- Conduct problems like aggression and anti-social behaviour

- Social skills training
- Substance abuse in adolescents

Kratochwill (2007:829), a prominent educational psychologist, specifically lauds the use of manuals to safeguard quality assurance.

The American Psychological Association, the American Counselling Association, the American Psychiatric Association and the National Association of Social Workers, all support these treatment guidelines (Sue & Sue, 2008:2). Some individual states in the United States started endorsing only certain specific treatments, which are considered to have scientific support, such as Cognitive Behaviour Therapy (Cummings & Fristad, 2008:148-149). Medical insurance companies in the USA are also becoming reluctant to pay for interventions which do not have a research base, and Baker, Mc Fall and Shoham (2009:67) argue that the decision making responsibility is transferred from health care practitioners to health plans and health insurers.

Chorpita (2003:42-57) argues that psychological practice is not always clearly defined, and states that the use of treatment manuals is unpopular amongst practitioners. Chorpita (2003:53) further argues that evidence-based practice is a disorder-based approach and states that this approach is in 'contrast to psychopathology literature implicating the ecological nature of most child problems'. The individual strengths of a child, his/her social competence, and his/her inter-personal relationships, are all equally important, considering the number of symptoms of a given disorder the child has. With numerous arguments for and against evidence-based practice several questions come to mind:

- How does one become an evidence-based educational psychologist?
- Is it at all possible to become such a practitioner, especially outside of the USA where the infrastructure for this particular intervention method is in place and where the paradigm has been accepted by many professionals?

2.6. EVIDENCE-BASED PRACTICE IN EDUCATIONAL PSYCHOLOGY

To understand the position of the educational psychologist in South Africa, a brief background to educational psychological services is needed. The scope of practice of the educational psychologist in different parts of the world also needs some clarification. The titles 'school psychologist' and 'educational psychologist' are used in different countries. In Australia, Canada and France - to name a few countries - the term school psychologist is used, while for a person rendering a similar service in other countries such as the United Kingdom, New Zealand and South Africa, the term used is educational psychologist (Jimerson et al., 2007). In the United States the school psychologist's job description correlates with what the educational psychologist does in South Africa. Jimerson et al. (2007), in a study which incorporated forty three countries, described the roles of school psychologists as ranging from core services like direct counselling, assessment and assistance with academic work, to indirect consultation with teachers and parents, to a systems level intervention of developing and implementing intervention or prevention programmes.

In the United States the role of the school psychologist stretches over a wide array of services, namely individual psycho-educational evaluations, direct services to learners, research supervision, administration of pupils and personnel and prevention services. These professionals are expected to actively contribute towards science, and practitioners are expected to base their practice decisions upon such research (Jimerson et al., 2007:421). In Brazil, the school psychologist delivers the direct services, while the educational psychologist does the research and teaches undergraduates (Guzzo, Martinez & Campos, 2007:29). In Canada there has been a slow progression from direct services to learners, to a more indirect service where school psychologists have a consultative and preventative role - such as in-service workshops which are delivered to teachers and individual learning programs devised for individual learners (Saklofske, Schwean, Harrison & Mureika, 2007:39).

The science of psychology and education needs to enable the educational psychologist to find intervention strategies for all kinds of problems. As a science, psychology derives its body of knowledge from observation and experimentation in the study of all overt and covert behaviour (Plug, Meyer, Louw & Gouws, 1989:294). Educational psychological practice is the 'speciality in psychology devoted to the provision of services to children and youth, their teachers, and parents' (Jimerson et al., 2007:1). The UK Department of Education's description of what an educational psychologist does in England and Wales is (Frederickson, 2002:96),

> *... promoting child development and learning through the application of psychology by working with individuals and groups of children, teachers and other adults in schools, families and in health, social services and other agencies.*

Frederickson appropriately questions what the 'application of psychology' will entail.

The definition of the application of psychology is provided by the EuropsychT Report (2001:8), which clarifies the application of psychology by stating that,

> ... the psychologist adds a distinct perspective, asks particular types of questions, and using empirically validated interventions and tools. This perspective is grounded in scientific psychology on the one hand and commitment to evidence-based practice and scientific research methods on the other hand.

The exact nature of what a 'distinct perspective' is or what 'particular types of questions' related to the application of psychology would be, can be pedantically argued, because these terms are vague, but the rest of the definition suggests that the interventions of educational psychologists are evidence-based. In a further explanation of what educational psychologists do, Sternberg and Williams (2010:29) state that educational psychologists,

> ... *consult theories on cognitive development, learning and behaviour and take knowledge from the science of psychology, which is relevant to the discipline of education and apply this knowledge to improve the quality and outcome of the educational process*.

However, educational psychology has always been a marginalised field within the field of psychology, and the training of educational psychologists is often

relegated to schools of education (Sternberg, 1996:175). Given these circumstances, the question arises as to whether educational psychology has the potential to become evidence-based. In the United States where evidence-based practice originated, Division 16 of the APA (School Psychology) has already started with research to identify, review and code studies on psychological intervention for behavioural, emotional and academic problems of school-aged children and their families (Stoiber & Waas, 2000; Kratochwill & Shernoff, 2003; White & Kratochwill, 2005). The ultimate goal in school psychology is to disseminate evidence-based interventions to school settings. In this process a number of needs were identified: The need for practice guidelines, manuals and other procedural guidelines to facilitate the implementation of intervention in practice settings and the need for professional development were most pressing. The need for professional development was duly met by the creation of databases to provide training programs (Kratochwill & Shernoff, 2003:13). The importance of outcomes evaluation led to protocols being developed which concentrated on the planning, monitoring and evaluation of outcomes. The school system and service delivery of the school psychologist, and other support services, were also scrutinized for being evidence-based (Kratochwill & Shernoff, 2003:13).

Not all clients present with problems for which evidence-based treatments are available. Problems related to personal growth, adjustment, and general problems-in-living are some of the problems for which hardly any evidence exists. To overcome this obstacle supervisors of evidence-based training programmes have moved away from instructing students to use manuals, to helping them to formulate the clinical questions, probe the literature and address how information can be integrated with clinical expertise and patient values (Leffingwell & Collins, 2007:565). Hoagwood and Johnson (2003:3-5), writing from a school psychology perspective, define evidence-based psychology as follows:

> *The term 'evidence-based practice' refers to a body of scientific knowledge, usually by reference to research methods or designs about a range of service practices (e.g. referral, assessment, case management, therapies, or support services). The knowledge base is usually generated through application of particular inclusions criteria (e.g. type of*

> *design, types of outcome assessments) and it generally describes the impact of particular service practices on child, adolescent or family outcomes.*

This definition still contains the three basic tenets of the original definition (see section 2.2, 2.6), but now details specific aspects of the terrain of the school psychologist. From this definition it is clear that the following aspect needs to be addressed within the school environment - scientific research and the need for a scientific base for decision-making.

2.6.1. The need to base decisions on scientific research

The need to do research and find a research model that fits educational psychology in relation to the evaluation of assessments was provided by Roth and Fonagy, (2005) - 'What works for whom and under what circumstances?' These identified needs will now be elaborated.

Without a scientific base for their decisions, school psychologists cannot determine the exact nature of a child's problem. Stoiber and Waas (2002:8) refer to the scientist-practitioner model of training for school psychologists, to combat the non - scientific and 'clinical judgment' approaches.

Their (Stoiber & Waas, 2002:10) argument follows that,

> *... although there is little formal documentation on the basis of psychologist's clinical decisions, there are legitimate concerns of a breakdown in a practitioner's link to science. School psychologists lack the familiarity with procedures for determining interventions based on DSM criteria.*

There is a need for the psychologist to be linked to science by being au fait with the DSM criteria (House, 2002). However, many of the clients seen by the educational psychologist have sub-clinical conditions and many of the activities performed by the educational psychologist cannot be described by using the DSM criteria. These include prevention, intervention and activities pertaining to literacy, mathematical learning, risk-taking behaviour, health care behaviour, classroom and instructional strategies, as well as counselling for social and emotional behaviour. Although the educational psychologist establishes the current functioning and mental health of the child, it was not

traditionally in their scope of practice to give a differential diagnosis. Nonetheless, in communicating with different professionals in the mental health field, especially the psychiatrist, it has become more important to give a differential diagnosis. In the United States it is expected of the school psychologist, depending on the state in which they practice, to give a differential diagnosis by using the Diagnostic and Statistical Manual of Mental Disorder IV (DSM IV-TR) classification system (House, 2002:1). It does not fall within the scope of this study to discuss the acceptability of such a diagnosis by educational psychologists, but the researcher argues that every educational psychologist in private practice has to claim the expenses for service delivery from a medical aid, in SA or internationally. For this they have to use either a DSM classification or an International Classification of Disease (ICD10) code. Therefore, they have to come to some kind of diagnosis or risk using codes which do not accurately describe the reason why the patient consulted them, thereby placing themselves in a position of compromising professional ethics, and making the interpretation and understanding of their findings more comprehensible. When the psychologist assesses with the purpose of determining a differential diagnosis, data collected are used in two ways. The first is to find evidence that corroborates the presence of a particular disability (confirmation) or, secondly, to find evidence to disprove the presence of a particular disability (disconfirmation) (Braden, 2003:269).

Although the DSM IV-TR is an intricate system to learn, it would be best for educational psychologists to do so (House, 2002). The fact that the psychologist summarises the client's differential diagnosis also provides an at-a-glance overview of the client's whole situation. This will also enable the psychologist to monitor the efficacy of his/her intervention in a more time-efficient manner, and to document findings as part of practice-based research.

2.6.2. The need for research

Research models in the evidence-based practice paradigm originally only made use of randomised controlled trials. However, for educational

psychology, Frederickson (2002:100), who proposes the hourglass model of Salkovis (1995) for research. This model starts with a single case design, where innovation and initial ideas have to be tested through a single case design. Once this development is completed there will be a need for research which conforms to the most rigorous standards of enquiry. Using the hourglass as a metaphor, this research is represented in the top of the hourglass. The pinch of the hourglass represents the considerations of internal validity and will take priority in establishing the efficacy of the approach. After this process has been completed, questions about the generalizability and applicability across a range of practice contexts can be addressed (Frederickson, 2002:100).

With the inclusion of a wider spectrum of evidence, as mentioned under 2.6.2, it is more possible to do practice-based research. Practice research can also 'strengthen the connection between practice and research and create more contextual information on interventions to inform practitioners' decisions about the adoption of evidence-based interventions (Kratochwill & Shernoff, 2003:12). These authors also suggest that school psychologists develop a practice-research network, which will be involved in the 'evaluation of clinical replication outcome research' (Kratochwill & Shernoff, 2003:8).

The evidence-based approach can support the school psychologist in many ways. So far, it has been argued that research, the use of the CICO method of case management, and using a coding system like the Diagnostic and Statistical Manual will be most beneficial. There are an additional two methods requiring discussion.

The first is advocating for a model of response to intervention (RTI), and the second is taking into consideration the specifics of the client. It is for these reasons that the development of guidelines has been identified.

In response to the pressure from managed health care, guidelines were developed in the medical profession. There was increasing pressure to expand these guidelines to include mental health conditions as well. Due to the nature of school psychologists' training and the problems encountered in

schools, Division 12 of the APA (School Psychology) argued it needed to develop its own guidelines and procedures (Stoiber & Waas, 2002:10).

2.6.3. Practice guidelines

White and Kratochwill (2005:99-115) argue for the development of practice guidelines in school psychology. They contend that the guidelines used in school psychology will not necessarily be based on a step-by-step (algorithm) decision making process, like in medicine, but would rather focus on expert consensus. Although expert consensus guidelines are not necessarily based on empirical data or systematic literature reviews, it can be an 'important first step in providing practitioners with guidelines on providing interventions to special populations or under circumstances in which empirical evidence is unclear' (White & Kratochwill, 2005:105).

2.6.4 Intervention guidelines

The development of intervention guidelines in psychology has already progressed to include manualised treatments.

According to Leffingwell and Collins (2007: 556), one-hundred and sixty nine guidelines for the treatment of clinical psychological disorders have already been accepted by the National Guideline Clearinghouse. (The need for the evaluation of assessment instruments will be discussed in the next chapter.)

2.7 ACKNOWLEDGING THE SPECIFICITY OF THE CLIENT

One of the most critical issues facing school psychologists as professionals is to determine if their interventions are indeed working. The 'diverse and complex ecology' of schools (Stoiber & Waas, 2002:12) makes this a challenge. The educational psychologist cannot preclude any ecological factors when formulating a hypothesis about the client. The APA Division for School Psychology has developed a parallel process of reviewing the literature and finding evidence on specific clients and specific problems. (Division 12) has identified five domains in which the school psychologist can measure the effects of interventions. According to Stoiber and Waas (2012:12) they are:

- School and community based intervention programmes for social and behavioural problems

- Academic intervention programmes
- Family and parent intervention programmes
- School-wide and classroom-based intervention programmes
- Comprehensive and coordinated school health service interventions.

With these five domains as a starting point, educational psychology can start to benchmark its own unique interventions.

Furthermore, criticism on how problems are dealt with will diminish. Fox (2003: 97) quotes the work of Dutton (1995), who proposes that professionals often only use three ways of handling problems – 'pattern recognition', 'knowing-in-action' and 'naming and framing':

> *The professional could only listen to the story until they could recognise every time: (1) a familiar pattern of behaviour, or they could (2) become knowledgeable through the use of actions like psychometric or curriculum-based assessment, or (3) they could 'name and frame' the actions from their specific theoretical perspective, like concluding that the child was a 'typical underachiever' or 'a learning disabled child' or 'has distinct features of AD/HD.*

All these conclusions are prejudiced and not scientifically based, and do not serve the individual client. Moore (2005:107) raises concerns that educational psychologists 'have the duty to be fully aware of the ontological and epistemological basis for [their] practice' since this will influence the way they relate to clients and colleagues alike. Although there are myriads of aspects of the individual context of the client which need to be addressed, the two most common obstacles educational psychologists have to deal with, within the context of teaching and learning, are developmentally related concerns, and problems of language and cultural diversity.

2.7.1. Developmental concerns

The American Psychological Association Presidential Task Force on Evidence-Based Practice (2008) formulated 10 guidelines for the ethical treatment of children and adolescents using evidence-based treatments. These are summarised below:

- The case should be conceptualised by using a developmental and contextual framework. Not only the DSM-IV classification should be used, but also the context of the situation and behaviour across different situations needs to be considered.
- Consider evidence-based treatment as the 'gold standard of scientific research,' and consider the most valid research first.
- Be adequately trained in evidence-based therapies. Clinicians should be wary of always updating their skills and learning new techniques. This takes lots of time and practice to perform adequately.

- Use clinical expertise in judging the appropriateness of efficacious treatments.
- Modify treatments to unique circumstances or clinical situations. Clinicians need to be able to distinguish between theoretical approaches that work and others that should be disregarded
- Use non-specific effects of psychotherapy. Therapeutic relationship, positive outcome, and expectancy, are often not specifically described in the Evidence-Based Treatments but must be harnessed to affect the outcome.
- Inform patients about benefits and risks. The practitioner must be truthful about the therapy and what it entails, but must not deny the client hope.
- Motivate the client and family about evidence-based therapies.
- Evaluate effectiveness. Use symptom checklists or other forms of evaluations to determine if the therapeutic intervention is effective.

Children and adolescents are vulnerable and the standard of practice should be at the highest level. This is especially true for children who are socially disadvantaged or from culturally or linguistically diverse populations.

2.7.2. The client's specific culture

Culture can be defined to have at least four different components (Sternberg, 1994:338):

- Culture refers to the customary ways of behaviour such as making a living, expressing affection, raising children and getting ahead in society.

- There are underlying codes of assumption that support these customary ways of behaviour.
- Each culture has its own artefacts that are made by members of the population and give meaning to them.
- The institutions of economic, political, religious and social activities are imperatives of culture.

Psychological practice within a diverse or multicultural society requires psychologists to be deeply aware of the life experiences and cultural values of their clients. In New Zealand, for instance, all psychologists are legally obliged to recognise and honour the Treaty of Waitangi (1840). This document is the covenant between the Maori and the Crown. When working with Maori children, the psychologist has to collaborate with the extended family (Whanau) at every step of the intervention process, in accordance with the Treaty (Edwards, Annan & Ryba, 2007:273). This consideration aside, The Code of Ethics of psychologists in the USA, Australia, New Zealand and Canada, emphasises the psychologist's ability to work with clients from diverse backgrounds as illustrated by The Australian Psychological Society's Code of Ethics (2007:11). They (psychologists) have a high estimation of the diversity and uniqueness of people and their right to linguistically and culturally appropriate services. Psychologists acknowledge people's right to be treated fairly without discrimination or favouritism, and they endeavour to ensure that all people have fair access to psychological services and share in the benefits that the practice of psychology can offer. The American Psychological Society's Guidelines (2002a) represent general principles and provide suggestions to psychologists in working with ethnic, linguistic, and culturally-diverse populations. The document was developed over twenty two years and refers to interactions between 'individuals from minority ethnic and racial groups in the United States and the dominant European-American culture' (APA, 2002a:6). Although all the guidelines (consisting of 103 pages) could be taken into consideration, only two insightful guidelines are mentioned here:

- Psychologists need to educate their clients about the processes of psychological intervention.
- Psychologists should also be aware of how their own cultural background, attitudes, values, and biases influence psychological processes. They ought to make an effort to correct any prejudices and biases.

The awareness of cultural taboos and cultural practices will assist the educational psychologist to understand clients from different cultural backgrounds. Sue and Sue, (2008:23) state that, '… without awareness and knowledge of race, culture, and ethnicity, counsellors and other helping professionals could unwittingly engage in cultural oppression.' To combat the possibility of cultural oppression, there is an urgent need for educational psychologists to be culturally competent.

Cultural competence refers to the cultural sensitivity of the practitioner. Diller (2007:11) states that cultural competence has also been known as 'ethnic sensitive practice' and 'multicultural counselling'. Cultural competence, however, is more than just being sensitive to ethnicity, since ethnicity is only one component of a culture group. Cultural competence is a developmental process in which the persons involved want to deliver a service which is 'responsive to specific cultural needs and delivered in a way that would empower the client' (Diller, 2007:12).

Sue and Sue (2008:47) aptly state that behaviour patterns which would assist the culturally competent practitioner include 'doing soul-searching as a practitioner to access one's own feelings about working with a client of another culture or from another frame of reference'. Another crucial aspect is to determine the cultural identity of the client, and to interpret explanations within the culture of the person's condition or difficulties. Hays (2001:19) is of the opinion that the characteristics of humility, compassion and critical thinking will help the professional to continually question his/her assumptions and 'look for explanations that go beyond what appears to be self-evident.' Cultural differences exist in values and aspects like the perception of time, which is often an obstacle for the keeping of appointments. The meaning of

community and styles of communication are also aspects of cultural differences which impact on interventions. Culturally competent providers value their own ethnicity and culture. If one does not value one's own cultural background, it will be impossible to understand another person's respect for their culture.

Culturally competent providers realise and manage the dynamics of difference. They accept that there will be possible cultural miscommunication, misinterpretation and misjudgement. These professionals also anticipate the occurrence of misunderstandings and acquire the skills to set them right (Sue & Sue, 2008:40-48; Diller 2007:10-16). It is stated by Sue and Sue (2008:45) that 'it is ironic that equal treatment in therapy may be discriminatory treatment. In this case it is not one size fits all'.

The culturally competent therapist's role becomes that of a consultant, a change agent, a teacher, and an advocate to supplement the role of therapist (Cross, Bazron, Dennis & Isaacs, 1989:47). The educational psychologist has to be aware of the different expectations of clients. Sue and Sue (2008:45) mention that African parents prefer a more direct and active approach, an approach in which something is 'done for them'. In the South African context, however, where decades of oppression and boss-worker relationships have existed, an attempt by a White psychologist to be active and 'do something' for his/her clients may be considered patronising. South Africa, as a diverse society, has a long history of cultural oppression, and educational psychologists are not supposed to be contributing to the continuance of such practices. For instance, there are many misconceptions about African people and specifically their intellectual abilities. Kamin (2006:1-9) reports on the work of Lynn & Vanhanen (2002), who found the average IQ of Sub-Saharan Africans to be 70. However, Kamin (2006:1-9) points out all the 'flawed science' in these findings.

If a practitioner had made a judgment on only the first study, it could have led to completely wrong impressions of Africans as a whole. Other common biases are that Blacks are inferior and that their customs, values, traditions and language can be perceived as being uncivilized. Whites are seen as

superior and normative; the protestant work ethic, capitalism, standard English and control of emotions are regarded as the only criteria for success in life (Sue & Sue, 2008:86).

International literature on working with clients from other cultures (for instance African-Americans or Hispanics in the USA) can only be guidelines to finding a unique method in one's own cultural environment. Understanding the client is the result of actively educating oneself about a client's culture, in order to understand behaviour within its own cultural context. It also implies actively seeking consultation with indigenous experts when necessary (Cross et al., 1989:17). Rhodes, Ortiz and Ochoa (2005) give a number of specific areas of investigation with culturally different children, and make provision for investigation of levels of acculturation and specific cultural practices to accommodate the client.

2.7.3. The client's specific language development and barriers

Learners' language skills affect every aspect of their learning. In fifty seven studies in which instructional services were included, it was found that the appropriate use of the learners' native culture and language, adequate instruction in particular content areas, and an active learning environment, were the three components which contributed most to the success of the child with limited English proficiency (O'Donnell, Reeve & Smith, 2007:131). The same authors refer to the work of Thomas and Collier (2001), who state that the strongest predictor of achievement in a second language was the extent of formal schooling in the first language. Thomas and Collier (2001), as quoted by O'Donnell et al. (2007:131), also found that the best scenario for children with limited English proficiency is to have 50% of their academic time allocated to instruction in English and 50 % to instruction in their home language.

The educational psychologist is ideally placed to inform parents and teachers about the importance of language and mother tongue development. Opportunities should be created for children to speak in the vernacular and affirmation for doing so must be encouraged. Knowledge of the importance of

language proficiency in the mother tongue, before any exposure to English, needs to be disseminated by educational psychologists and speech and language pathologists. The British Psychological Society's professional guidelines for educational psychologists (2002:16), state that 'generalizations should be restricted if assessment is not carried out in the young person's first language or via a third party such as an interpreter', and therefore when assessing an English second language learner in English, the educational psychologist needs to be extremely vigilant not to reach conclusions too early. Although the educational psychologist is not a speech and language practitioner, when working with children who are culturally and linguistically different, one needs to have a basic understanding of the differences of the language structures of the child's vernacular and the different stages of second language development. Flanagan et al. (2009: n.p.) gives credit to the work of Cummins (1984) and distinguishes the following two important stages of second language acquisition:

Basic interpersonal communication skills (BICS). This person has the ability to communicate basic needs and wants and could carry on using basic interpersonal communications. These skills took 1-3 years to develop and were insufficient to facilitate academic success. The child is often silent and would only speak when needed to.

Cognitive academic language proficiency (CALP). This person has the ability to communicate his thoughts and ideas clearly and could carry on an advanced interpersonal conversation. These skills took at least 5-7 years to develop, and possibly even a longer time was required for academic success. (These concepts will be expanded upon in section 3.5.3.)

It is important to establish just how many 'years' children have been exposed to a second language, and whether the only English that they were exposed to was at school or perhaps on television. When looking at language acquisition of children from this perspective, an erroneous diagnosis can be avoided. One also needs to take into consideration that the concept of mother tongue is intricately linked to culture and heritage. The defencelessness of children and adolescents needs to be recognised, and

South African educational psychologists need to contribute actively to improve the situation of children in this country.

2.8. EVIDENCE-BASED PRACTICE IN SOUTH AFRICA

The earliest references to Evidence-Based Practice in South African psychology were made by Kagee (2006a:233-248) when he argued that South African psychology was risking a move away from its scientific base to a pseudoscientific and even 'new age' psychology. Kagee (2006a:236) said that many (clinical) psychologists did not have a firm empirical base for their interventions and went on to say that many clinicians also relied on assessment instruments that had 'dubious predictive validity'. Here he included assessment instruments like human figure drawings, the Rorschach Inkblot Test, sentence completion and anatomically correct dolls. An interesting debate between Swartz (2006:249-254) and Kagee (2006a:233-248) ensued. Kagee (2006b) rightfully pointed out the 'vast body of knowledge' which was available on the PsychInfo database, but stated that clinicians did not always take this knowledge into account. He questioned the epistemology of clinical psychology and the reliance on clinical experience and intuition. He concluded that the practice of clinical psychology had not utilised the 'rich body of research' which existed to keep practice relevant (Kagee, 2006b:233). Kagee (2006a:256) named a number of therapies used by the South African psychological fraternity, which, according to his view, had little or no demonstrated validity. These included dream interpretation, age regression, and Eye Movement Desensitisation and Reprocessing (EMDR). Kagee argued that information on the effectiveness of the last named therapy had been based on reports from clients and not on any controlled studies.

With the current turmoil in the South African school system, the educational psychologist has much to offer, especially in the prevention of child and adolescent learning, emotional and behavioural problems. Educational psychologists may be instrumental in accessing, evaluating and disseminating evidence-based research findings to teachers and learners. Frederickson (2002:101), a prominent educational psychologist, albeit not a South African,

remarks that since there is insufficient evidence from well-controlled research studies, 'broadening the defensible evidence base for practice in educational psychology must rest with the profession'. The information obtained by this researcher suggests that the evidence base of educational psychology has not been researched or addressed in South Africa.

The HSRC states that they are contributing toward 'evidence-based or evidence-informed research in education' on a macro level: Enhanced evidence-based policy decisions; creating greater dialogue and understanding between key decision makers in the system; increased use of relevant information for policy implementation and monitoring; synthesising state-of-the-art policy research pertaining to education quality and drawing up codes of practice/commitment or charters/action plans, were all included in the vision of the HSRC.

However, macro-level evidence-based policy decisions in education do not rapidly reach the levels in education where they are needed most, namely at learner and teacher level. One of the most significant studies undertaken by the HSRC that is very closely aligned to the evidence-base paradigm, is the valuable contribution by Dawes, Bray and van der Merwe (2007:n.p.) on the understanding of child development. Their approach is a Rights-Based and Applied Developmental Science approach that is explained by Dawes et al. (2007:n.p.) as 'the assembly of sound evidence with high internal and external validity, and cultural appropriateness'. The authors state that to understand variation in developmental outcomes, in a multi-cultural context, development needs to be understood by local (emic) standards for child development while examining commonality and variation across communities and using common standards as far as possible.

An evidence-based prevention programme has been implemented in the provincial schools of the Free State, one of the nine provinces of South Africa. The prevention programme on bullying (Olweus, 1993) which has been deemed to be the 'gold standard' implying that it is the best possible programme available in bullying prevention, has been researched and implemented by De Wet (2007:191-208).

The above information suggests that evidence based practice has not found inroads into South Africa as yet.

An interesting development in the development of evidence–based practice in South Africa, is that such practice is expected of clinical psychologists according to the Government Gazette (2011:3a) in which clinical psychologists are stated as expected to, 'apply evidenced-based psychological interventions to people with psychological, and psychiatric conditions'. The gap between research and practice will only be narrowed by implementing the steps of appraisal of evidence and developing strategies for its implementation on a wider scale.

2.9. SUMMARY

This chapter discussed the origins of evidence-based practice in medicine. The way in which practitioners integrated research findings into their daily practices was demonstrated. The evidence-based paradigm rests on three basic tenets, namely to access the best available research, consider the specific characteristics (or ecological circumstances) of the patient or client and use one's clinical expertise to integrate the research finding with the patients specific needs.

In psychology, the pertinent role of the American Psychological Association and all the different Task Forces designated by the APA, have given impetus to the movement. The importance of getting an empirical base for psychological intervention was discussed. Most of the development has been in clinical psychology and manualised treatments already exist for many disorders and conditions.

Arguments against evidence-based practices were also raised and it was found that empirical evidence is not supposed to be used in a cold, clinical or mechanical manner. The importance of the client-therapist relationship has actually been empirically researched and the value of the therapeutic relationship was proven. In evidence-based practice there is huge emphasis on critical thinking, which implies the ability to formulate a searchable question

about the client's problem. It was shown how these practice questions can be formulated and practical strategies for becoming an evidence-based practitioner were demonstrated. These included strategies for accessing and appraising clinical trials or meta-analyses or systematic reviews. A list of databases that may be useful to educational psychologists was provided. In educational psychology, the issues of specificity and diversity were reviewed. These issues refer to developmental, cultural and linguistic concerns.

In conclusion, the South African circumstances on evidence-based practice were discussed and it was found that the literature on evidence-based practice is very limited. The researcher's conclusion is that most of the evolvement in the evidence-based movement concentrated on practice and especially on different interventions in clinical psychology. The developments of guidelines and manuals for intervention have mostly been developed for use by clinical psychologists. Development has been apparent in school psychology due to the prominent role assessment plays in the educational psychological environment. One of the aspirations of the school psychology fraternity in the U.S.A. is to evaluate assessment instruments for their evidence-base.

No intervention would be targeting the referral question and initial hypothesis, without a comprehensive assessment. The importance of Evidence-Based Assessment is discussed in the next chapter.

CHAPTER 3: EVIDENCE-BASED ASSESSMENT

3.1 INTRODUCTION

This chapter discusses the concept of Evidence-based assessment (EBA) in detail to support the chapters preceding and following. It includes a general overview of the current assessment practices from three broad perspectives, namely Bio-Cultural Approach, Cross-Battery Assessment and School Neuropsychology. Of special importance is the idea of cognitive assessment in relation to culturally and linguistically diverse populations. EBA can be described as assessment performed with fidelity through the means of integrating research findings into its practice while at the same time taking note of specific linguistic and cultural needs of the client. Socio-cultural issues are given prominence in EBA. This chapter gives a background to psychological assessment in child psychology. Assessment and the criteria for EBA instruments are introduced. Different views on cognition and its assessment, especially within a diverse society, are discussed. The chapter concludes with a discussion of the specific realities of assessment practices in South Africa.

Assessment is an essential and integral part of the work of the educational psychologist. High levels of empirical investigation and reliability, in terms of dealing with the tasks of diagnosis, prediction and case formulation, are needed in everyday practice (Garb, Wood, Lilienfeld & Nezworski, 2005:97-118).

Only recently has there been an increased focus on empirically supported or EBA practices in psychology (Hunsley & Mash, 2005; Phares & Curley, 2007; Kazdin 2005; Frick, Barry & Kamphaus, 2010; Campbell et al., 2008). Just as in the developmental history of Evidence-Based interventions, the history of assessment indicates that assessment has been performed through a wide variety of techniques without these techniques having adequate scientific support (Phares & Curly, 2007:538). The most disputed of these assessment techniques is probably the Rorschach Inkblot Test, which was researched intensively by Hunsley, Lee and Wood (2003:50). They came to the

conclusion that there was insufficient evidence for the continued use of this instrument in clinical practice, both for children and adolescents

Campbell, Brown, Cavanagh, Vess and Segall, (2008) have reviewed a number of measures for the use of assessment in paediatric psychology. The motivation for EBA is the professional psychologist's need to know that 'assessment techniques at a minimum are reliable and valid' (Phares & Curley, 2007:539). Attempts have been made to categorise assessment instruments as Evidence-Based. Holmbeck, Thill, Bachanas, Garber, Miller, Bruno, Carter, David-Ferdon, Jandasek, Mennuti-Washburn, Mahar and Zukerman (2008:958-980) evaluated a number of measures used in paediatric psychology for externalising and internalising behaviour, and have classified these as meeting the criteria of EBA instruments.

The emergence of managed health care has led to critics questioning the utility of psychological assessment and they have emphasised the need to evaluate assessment from point of view of its cost–benefit. There has been 'declining use of time-intensive, clinician administered instruments that have historically defined professional practice' (Meyer, Finn, Eyde, Kay, Moreland, Dies, Eisman, Kubisczyn & Reed, 2001:128-155).

Although the task of the educational psychologist includes amongst others the assessment of cognitive functioning, behaviour, personality, socio-emotional functioning and learning ability, for the purposes of this study, only the field of cognitive assessment is discussed, although the researcher subscribes to the belief that every person is a person-in-totality.

Some of the reasons for this decision were inter-alia:

Oakland (2009: 5) states that the types of tests used in psycho-educational assessment with children are:

- measures of intelligence (39%)
- personality (24%)
- achievement (10%), and
- measures of perceptual-motor abilities, vocational interests and aptitude, school readiness and social development were less common (i.e.3% to 6%).

This indicates the need for educational psychologist to assess cognition in evidence based methods.

- Socio-emotional behaviour and personality assessment for children and adolescent as discussed by amongst others Frick, Barry and Kamphaus (2010) is a comprehensive field of study and cannot be discussed in conjunction with the topics covered in this research, although it is admittedly an extensive part of the intervention of the educational psychologist, especially in South Africa with its prevalent socio-economic concerns.
- Vocational or career assessment, which forms part of most educational psychologists' assessment portfolio, the lack of assessment instruments for culturally and linguistically diverse populations in South Africa and the current tendency to divert this service to counsellors and school-based staff.

Oakland (2009:17) says that there is an unwritten but generally accepted 'social contract' between professional and the societies in which they practice. It is Miller's (2010, location 10038) opinion that a psycho-educational assessment should focus on cognitive constructs such as verbal IQ, executive functioning, working memory, attention and reading and mathematical ability. These are constructs that are included in most modern cognitive assessment instruments and assessing these always lead to a better understanding of the holistic functioning of children.

3.2. BACKGROUND TO ASSESSMENT IN CHILD PSYCHOLOGY

This section offers a background to assessment of cognition in child psychology. The following concepts are described: three major conceptual frameworks in the understanding of intelligence or cognition - Lurian Theory, the Cattell-Horn-Carroll (CHC) Theory, and the Process Assessment Approach.

Psychologists base their opinions on three sets of standards - ethical, social and methodological. The validity of instruments in terms of the degree to which the instrument measures what it is supposed to measure is discussed,

as is the reliability of a test, which needs to consistently deliver the same results. Issues of test performance are raised as they pertain to different instruments.

Generally, assessment is an act of appraisal, and children and adolescents are routinely assessed within their educational contexts. Even in social contexts, as, for instance, when children and adolescent participate in sport, they are regularly assessed to determine their progress. Assessment in psychology is viewed as 'a problem solving process in which psychological tests, interviews and other sources of data, function as tools used to answer questions' (Bagby, Wild & Turner, 2003:213). The developers of the Cognitive Assessment System (Das, Naglieri & Kirby, 1994:6), view cognitive assessment as,

> *... measuring a set of intellectual characteristics at a point in time to predict how individuals will perform on other measures or at other points in time, or to predict the environmental conditions under which they will perform best.*

From this definition it is clear that psychometric assessment of intelligence does not give a complete picture of the child's capabilities. Some of the primary purposes of assessment are to 'describe current functioning, including cognitive abilities, to confirm, refute or modify the impressions formed by clinicians in less structured interactions, and to identify therapeutic needs' (Meyer et al., 2001:128-155). The nature of the referral question is always to determine the nature and process of the assessment (Elkonin, Foxcroft, Roodt & Astbury, 2005: 195) and in turn this determines the outcome of the assessment.

Professional psychologists have the responsibility to base their opinions on three sets of standards - ethical, social and methodological (De Bruyn, 2003:n.p.). Ethical and social standards are applicable to all fields of psychology, but methodological standards are usually prescribed by professional organisations and refer to the specific methods and procedures psychologists use to collect the information on which they base their findings and professional opinions (De Bruyn, 2003:n.p.). Ethical standards in assessment refer specifically to two aspects, namely the use of assessment instruments and the interpretation of results (Rule 9.9.) American

Psychological Association 2002b). Psychologists will only use assessment instruments of which the validity and reliability had been established with members of the population tested. A complete discussion of test validity and reliability warrants an independent study, but for the purposes of this study, the validity of instruments is important and this will be defined as the degree to which the instrument measures what it is supposed to measure. Reliability of a test refers to the test and re-test's capacity to consistently deliver the same results (Plug, Meyer, Louw & Gouws, 1989:42,116).

When such validity or reliability had not been established, psychologists will report the strengths and the limitations of test results and interpretation. Concerning the interpretation of assessment results the psychologist must take into account the purpose of the assessment, the person's test taking abilities, and any influences such as linguistic and cultural differences that may affect the accuracy of interpretations.

Validity of an assessment has many components, and in recent developments in psychometrics the concept of ecological validity (Miller, 2010:6907) has been accentuated. Ecological validity is a basic requirement of an evidence-based assessment, since evidence-based assessment advocates cultural and ecological assessment practices to counteract all the possibilities of bias that may exist within a test-taking environment. Furthermore, 'ecological validity refers to the degree to which particular findings in one environmental context may be considered relevant outside that context; the extent to which findings of laboratory studies are applicable to everyday settings' (Psychology Glossary, 2010:n.p.). Campbell et al. (2008:1007) also define ecological validity as the degree of 'similarity of a test to naturally occurring environmental demands and prediction of behaviour within *real-world* environments based on test performance'.

Test performance is enhanced or inhibited by the test-taking abilities of the child/ learner/ person. There are many specific factors that influence test-taking ability. These include: 'language inefficiency, cultural differences, and eco-social variables such as economics, politics, education, religion and means of mass-communication' (Georgas, Weiss, van de Vijver & Saklofske, 2003:27). Aspects of language inefficiency and cultural differences need to

be fundamentally considered when assessing children. In the same way Mpofu and Ortiz (2009:60-62) argue for equitable assessment practices, especially in cognitive assessment.

The task of the (educational) psychologist has become precarious. Baker, Mc Fall and Shoham (2009) say that psychologists are often bypassed as professionals in favour of other professionals, like social workers, who deliver a more cost effective service. A psychological assessment is expensive and Flanagan et al. (2009:n.p.) name - inter alia - the following problematic practices in assessment of culturally and linguistically diverse individuals:

- An over reliance on non-verbal measures,
- Use of translated tests,
- Modification of standardised methods and procedures, and
- Interpretation of assessment results 'with extreme caution'.

An evidence-based assessment requires 'empirical support' for any conclusions and recommendations (Bagby et al., 2003:214), but to obtain this is challenging.

Cognitive ability testing via standardised and norm-referenced tests has offered useful information to educational psychologists, and tests were developed along three major conceptual models that guide the decision-making processes of psychologists regarding cognitive functioning (Miller, 2010: location 2206). The three major conceptual models are: (1) Lurian theory, (2) the Cattell-Horn-Carroll or CHC methodology and (3) the process method. These models are discussed further under section 3.4.

Standardised intelligence testing has been described as one of 'psychology's greatest successes' (Benson, 2003:48), but the assessment of intelligence is a very complex task.

Lazear (2004:1) refers to the assessment of intelligence as a 'conundrum', implying that it is highly confusing and difficult to investigate. Early in the twentieth century the construct of intelligence was defined as 'what the intelligence test measures' (Boring, 1923:35-37), and some truth still exists in this definition, as every intelligence test taps into specific domains of intellectual functioning. The assessment of intelligence across cultures has also had its share of debate. There are three primary ways in which

intelligence across cultures has been understood. Sternberg (1994:318) describes these as:

- *Absolutism*: In this approach the test content is rarely adapted for the population tested and this is practised both internationally (across nations and states) and domestically (across ethno-cultural groups within one country).
- *Relativism*: This has been advocated to 'avoid harm to individuals and groups through mis-measurement and misinterpretation' (Sternberg, 1994:318). This approach specifically aims to combat the measurement of pure analytic and cognitive clusters of abilities which is dominant in Western academic psychology.
- *Universalism*: The third approach explained by Sternberg (1994:318) is that of universalism. Sternberg refers to the work of Ferguson who as early as 1956 referred to the fact that 'cultural factors prescribe what shall be learnt at what age and the consequences of this is that different cultural environments will lead to different patterns of ability'.

With this information in mind, the assessment of intelligence becomes much more complicated when one is not aware of the influence of culture or language on the outcomes of the assessment. Understanding of the concepts of intelligence and cognition is complicated and Sternberg (1994: 332) refers to the age old debate on the influence of nature and nurture. He defines inherited intelligence (nature) as 'genotype' intelligence and says that this type of intelligence cannot be directly measured, while 'phenotype intelligence' (nurture) is a product of both nature and nurture and is therefore culturally defined. This information strengthens the idea that psychological assessment instruments are not transportable between cultures without major adaptations. Against this background the three major conceptual frameworks in the understanding of intelligence or cognition, can be appreciated. The three major theories are Lurian Theory, the Cattell-Horn-Carroll (CHC) Theory, and the Process Assessment Approach that have been built into modern cognitive assessment tests such as the Wechsler IV (Wechsler, 2004) and the Cognitive Assessment System (CAS: Naglieri & Das, 1997). (The major conceptual frameworks are more fully discussed in section 3.4.). As far as

test use is concerned, the educational psychologist's training and epistemological stance, will determine the different instruments will be preferred. Some will argue that not just one instrument can be used, and will therefore only subscribe to an assessment style called Cross-Battery Assessment (Flanagan, Ortiz & Alfonso, 2007). Cross-Battery assessment is the selective use of different sub-tests or clusters of tests. The analysis of the results of cross-battery assessment, require quite complicated statistical methods to get the best possible information on broad and narrow abilities.

Other practitioners adjust the method of administration to accommodate the child (Flanagan et al., 2009). Accommodations of time and procedure are most common.

Researchers such as Armour-Thomas and Gopaul-McNicol (2002) have adapted test-taking protocol to accommodate cultural and linguistic diversity. Their approach is called the Bio-Cultural approach to assessment of cognition.

Although there is increasing evidence for the restrained usage of cognitive ability tests (Floyd, 2010:49), psychologists have access to many well-developed cognitive ability tests that produce reliable and well validated scores. The basic tenets of evidence-based assessment is, as in EPB, based on incorporating the latest research findings into assessment - using only instruments that have been proved to be valid and reliable, and which address the specific individual and contextual needs of the client.

3.3. EVIDENCE-BASED ASSESSMENT

In the Evidence-Based Movement, the prime focus was initially on Evidence-Based interventions, but the 'field-wide attention to Evidence-Based Assessments and the linking of Evidence-Based Assessment to Evidence-Based interventions, appear to be recent trends' (Phares & Curley, 2007:538).

Evidence-based assessment is described by Bagby et al. (2003:214) as 'systematically assessing the client's psychiatric symptoms in relation to the DSM IV (APA: 1994) criteria for particular disorders'.

Hunsley and Mash (2007:30) define evidence-based assessment as an 'approach to clinical evaluation that uses research and theory to guide the selection of constructs to be assessed for a specific assessment purpose'.

The assessment process is inherently a decision-making process, where the 'clinician must iteratively formulate and test hypotheses by integrating data that are often incomplete and inconsistent' (Hunsley & Mash, 2007:30). The clinician will use the assessment instruments as part of his/her decision-making process, and assessment needs to be iterative, implying that it is also individualised. Wood, Garb and Lilienfeld (2002:519) discuss three strategies that are important in the field. These are clinical relevance, cultural sensitivity and scientific soundness. Clinical relevance refers specifically to avoiding a battery of tests, and targeting only the specific areas that need to be assessed. Campbell, Brown, Cavanagh, Vess and Segall (2008:n.p.) stress that evidence-based 'psychological assessment represents a core domain of expertise, practice and research'. This implies that assessment should be pivotal in the expertise of the practitioner as well as in practice research.

3.3.1. The integration of research into practice

The practitioner needs to keep abreast of research in the field of assessment. Stoiber and DeSmet (2010:214) suggest that despite the pivotal role of the school psychologist, the field of school psychology continues to 'grapple with how to facilitate the application of research-based evidence to everyday practice with real students in real schools'. Hoover (2009) and Flanagan, Ortiz and Alfonso (2009) review several key elements of EBA that need to be integrated into everyday practice, and the term to describe these assessment practices is 'assessment fidelity' that is defined as 'consistently using research-based instructional interventions and associated assessments in a manner consistent with the way each was tested and researched' (Hoover, 2009:6).

3.3.2. Assessment with fidelity

To perform assessment with fidelity Hoover (2009) suggests a number of issues be taken into consideration. They are that the assessment devices (practices) are implemented according to whatever the validated procedures are discussed in the manual; that the instruments have high reliability and

validity. In respect of the obtained assessment scores, their purposes are always consistent with the way they were recommended to be used, especially in relation to validity studies. Lastly, to explain assessment results there should be due consideration of home, school, classroom and community (ecological factors) in relation to the child / learner being assessed. Hoover (2009) is also of the opinion that if assessment accommodations are made, care must be taken that only the assessment conditions are manipulated and that no manipulation takes place that can invalidate the constructs that are being assessed. The interpretation of results must lead to making well-informed instructional or diagnostic decisions. Assessment scores or results generated from an assessment process that lacks fidelity, yield assessment decisions that in turn lack integrity, credibility and value, to those students for which critical decisions are being made (Hoover, 2009:167). Critical decision making in this sense refers to referral to special education, the acceptance or non-acceptance into special programmes or even decisions in custody arguments. In describing EBA, it will have become clear that most recent developments in a scientific field are based on prior developments in that field, and therefore the field will contain elements of the historic development. Consequently EBA will inevitably contain strong elements of all previous assessment strategies.

3.3.3. Evidence-Based Assessment in clinical practice

There are several significant characteristics of EBA to consider. They are that it is systematic and not a single event, scientifically sound, requires clinical expertise and sound practice, sensitive to issues of diversity and will assess strengths and competencies as well as weaknesses and problem areas.

Evidence-Based Assessment is systematic and not a single event. Achenbach (2005:541-547) identifies the need for multiple stages of assessment which would include initial broad spectrum assessment, narrower spectrum assessment of targets for intervention and on-going assessment during intervention as well as outcomes assessment. The idea of a once-off assessment by ‘an expert’ is fast losing ground. The pre-treatment assessment, in which the goal is to

> '*describe current functioning, including cognitive abilities and to confirm, refute or modify the impressions formed by clinicians in less structured interactions, (…) and to identify therapeutic needs', is still the most likely to yield the greatest overall utility (Meyer et al., 2001:129).*

This is equivalent to 'broad-spectrum' (Achenbach, 2005:541) assessment, and helps to identify strengths and weaknesses. A narrower spectrum of assessment of targets for intervention should follow the initial broad assessment (Achenbach, 2005:541-547), and will be followed by assessments to determine the outcomes of the intervention. A narrower spectrum of assessment will target specific problems, to answer questions like: 'Why exactly can't Johnny read?'

- *Evidence-Based Assessment is scientifically sound*

To be scientifically sound, all assessment instruments have to be valid. Mash & Hunsley (2005:372) recommend that assessment instruments be evaluated according to several criteria - for example, norms, internal consistency, test-retest reliability, content validity, incremental validity, diagnostic and treatment utility. Instruments need to be rated and such a rating will be known as an EBA rating, and only those with a rating of well-established or promising assessment instruments ought to be used in practice (Kazdin, 2005,:548-558). (The criteria for EBA instruments were discussed in section 3.4).

- *Evidence-Based Assessment requires clinical expertise and sound*
- *practice*

To perform assessments, interpret the results, reach conclusions and give recommendations, the practitioner's clinical expertise is crucial. Clinical experience does not equal clinical expertise (Leffingwell & Collins, 2007:559), but technical expertise can be enhanced by following practice guidelines and adhering strictly to assessment protocol. Assessment instruments have standardised administration and scoring procedures, specifically so that legal and ethical problems can be reduced, because standardisation 'minimizes the prospect that unintended bias may adversely affect the patient' (Meyer et al.,

2001:144). Clinical assessment expertise will assist the practitioner to select the right instruments to answer the hypothesis which was formed by the referral question. Weiner (2003:4) advised that to conduct assessments with a 'fixed and unvarying battery of measures regardless of what questions need to be answered about the individual or using favourite instruments, is ill-advised practice.'

- *Evidence-Based Assessments are sensitive to issues of diversity*

Reynolds and Ramsay (2003:75) refer to the Cultural Test Bias Hypothesis, which postulates that 'differences in mean performance for members of different ethnic groups do not reflect real differences, but are artefacts of tests or of the measurement process'. Mercer (1979) as quoted by Reynolds and Ramsay (2007:76) argue that lower scores of ethnic minorities on aptitude tests, can be traced to 'anglocentrism,' or adherence to white middle class value systems. These value systems are often discriminatory towards people who are culturally or linguistically different. Phares and Curley (2007:544) point out that there is confounding evidence about the influence of race, ethnicity, socio-economic status and the use of standardised assessments, and therefore they advocate the sole use of instruments that have been 'validated for a variety of racial/ ethnic and socio-economic groups' (Phares & Curley, 2007:544).

- *Evidence-Based Assessment is sensitive to changes over time*

Over a period, especially before and after treatment, an assessment instrument needs to be able to measure change, so that change can indeed be attributed to changed behaviour and not to a measurement error (Mash & Hunsley, 2005:362-369).

- *Evidence-Based Assessment will assess strengths and competencies as well as weaknesses and problem areas*

In addressing the difficulties of assessment with children and adolescents, Cavell, Meehan and Fiala (2003:433-454) consider that the positive aspects of children's and adolescent's functioning also need to be assessed.

3.3.4. Assessment with multiple methodologies

Professionals use assessment instruments and techniques to assess their clients, about whom they are to give an 'expert' opinion. However, Hunsley, Lee and Wood (2003:41) argue that not all assessment instruments used necessarily have a solid scientific evidence basis. Not all assessment 'instruments' that educational psychologists use, are standardised, since some are procedural. Procedures to obtain information may include - inter alia - interviews, drawings and when working with children, liaison with significant 'others' in the child's life. Direct observation of a person and interaction with them in different settings, will confirm if behaviour was prominent across different settings and if a list of direct observational systems exists (Frick, Christopher & Kamphaus, 2010:200). Assessment interviews usually include questions pertaining to the history of the problem, family background, and personal history that will include areas such as developmental milestones, educational history and relationship history (Craig, 2003: 488-493). Being aware of developmental stages, like age-appropriate or inappropriate behaviour and taking cognisance of possible referral bias, the psychologist needs to be vigilant when interviewing children.

The development of additional assessment methods such as interviewing teachers and completing checklists, are a natural development of additional support in the interview process. When the child's behaviour is linked to academic performance or learning difficulties, more formal assessments of cognition are usually required, and standardised instruments to measure cognitive ability are implemented. Standardised instruments have a higher possibility of being valid and reliable (Allen et al., 1994:308). Many assessment instruments are valid and reliable, but do they meet the criteria for being classified as an EBA instrument?

3.3.5. Criteria for the classification of EBA instruments

When considering EBA instruments, the practitioner will ensure that the 'test developer has enough evidence of sound statistical analyses for bias' (Reynolds & Ramsay, 2003:88). Without discussing bias in detail, this scrutiny of the test developer will include all factors in test development, such

as availability of norms, validity studies and reliability studies (Oakland, 2009:6). The culturally sensitive practitioner (see section 2.10.2), will take into consideration the client's cultural identity, and will assess multiple abilities with multiple methods (Miller, 2010:177-189). This will include examining different assessment sources, such as caregivers and other community-based informants. Self-report, behaviour rating scales, and direct observation, are all part of this multi-method assessment process. Kazdin (2005:548-558) recommends that it should be determined which measures are useful and for which purposes, and that assessment instruments should provide answers to the hypotheses. The criteria for evidence-based assessment instruments (Campbell, Brown, Cavanagh, Vess & Segall, 2008: 1001) are summarised in Table 3.1.

Table 2.1 Criteria for Evidence-Based Assessment Instruments

Category	Criteria
Well-established	The measure must have been presented in at least two peer-reviewed articles by different investigators or investigatory teams. Sufficient detail about the measure to allow critical evaluation and replication (e.g. measure and manual provided or available upon request). Detailed (e.g. statistics presented) information indicating good validity and reliability in at least one peer-reviewed article.
Approaching well-established assessment	The measure must have been presented in at least two peer-reviewed articles by different investigators or investigatory teams. Sufficient detail about the measure to allow critical evaluation and replication (e.g. measure and manual provided or available upon request). Validity and reliability information either presented in vague terms (e.g. no statistics or only moderate values presented)
Promising assessment.	The measure must have been presented in at least one peer-reviewed article. Sufficient detail about the measure to allow critical evaluation and replication (e.g. Measure and manual provided or available upon request). Validity and reliability information either presented in vague terms (e.g. no statistics presented) or moderate values presented.

The main criteria for assessing the EBA instruments are the validity and reliability of instruments, replication of the research, and proper assessment protocol in the form of manuals. Another criterion is how well the instrument is presented in peer-reviewed articles.

3.3.6. Evidence-Based instruments for the assessment of cognition

The Cognitive Assessment Work Group of the APA, Division 54, Psychology (Campbell, Brown, Cavanagh, Vess & Segall, 2008), compared 47 measures of cognitive ability for their evidence-base. Twenty seven of these measures were rated 'well-established'. The criteria used for the comparison included internal consistency, test-re-test reliability, construct structure and factor analysis. This is the only reference to the classification of cognitive tests as Evidence-Based, and gives a valuable summary for the selection of specific instruments. Among the instruments classified in this process, the following that are of importance for this study, were rated 'well-established'.

- For general intelligence- the Wechsler scales.
- For non-verbal intelligence – the Leiter (Leiter, Roid & Miller, 1997) and the Raven's progressive matrices (RPM; Raven, 2003), and
- For Neuropsychology- the NEPSY 11 (Korkman, Kirk & Kemp, 1998).
- For academic achievement the Woodcock-Johnson-III, (McGrew& Woodcock, 2001), The Peabody Individual Achievement Test, revised (Markwardt, 1998), the Wechsler Individual Achievement Test (WIAT) (Wechsler 2002) were considered to provide a comprehensive assessment across academic skills.
- For attention and executive functioning: the Trail Making Test (TMT); Reitan & Woolfson 1993) and the Conners Continuous Performance Test (CPT II). The Conners Scales, were identified as 'approaching well-established assessment', but 'the CPT II has continually been criticized for lacking ecological validity' (Campbell et al., 2008:1007).
- For Memory and Learning, the California Verbal Learning Test – children's version (CVLT-C: Delis, Kramer, Kaplan & Ober, 1994) and the Wide Range Assessment of Memory and Learning (WRAML: Sheslow & Adams, 1990) were rated as 'well established' (Campbell et al., 2008: 999-1014).

Although the study by Campbell et al*,* (2008), has its limitations, especially in the selection of participants, and is focused on pediatric psychology for children with physical illnesses, it has provided some future direction for the development and validation of cognitive instruments. Campbell et al. (2008: 1006) provide a valuable reminder of the importance of a 'meaningful reference group': A guiding principle of psychological assessment within typically developing populations is norm-referenced measurement whereby an individual's performance may be compared against a meaningful reference group, such as a nationally representative sample of typical peers. Some instruments, like the Differential Abilities Scales, were not included in this study. Practitioners' views on intelligence and/or cognition, will also determine their choice of instrument.

3.4. DIFFERENT VIEWS ON INTELLIGENCE AND COGNITION

There are innumerable definitions of 'intelligence'. The three most significant ones are discussed in this section.

'Intelligence' is a very general term, often used to describe ‘within person’ constructs and an ‘individual difference variable underlying adaptive functioning’ (Floyd, 2010: 50). Cognitive ability, however, is defined as ‘any ability that concerns some class of tasks in which correct and appropriate processing of mental information is critical to successful performance’ (Carroll, 1993:10). Different conceptual models guide different approaches to the assessment of cognitive behaviour and cognitive processes. Determining either cognitive behaviour or cognitive processes, will also determine which assessment approach will be followed. Miller (2010: location 1256), a neuropsychologist, advocates that in future ‘school neuropsychologists’ will need to assess neuro-developmental processes such as memory, attention and executive functions, instead of general functioning. Neuro-developmental processes are supported by the Lurian Theory of Cognition.

3.4.1. Lurian theory of cognition

The theory as postulated by Luria (1973; 1980), proposes that there are three functional units in the brain (Luria, 1973:43). The first unit regulates cortical tone and focuses attention, the second unit receives, processes and retains information in two basic modes (simultaneous and successive), and the third unit involves the formation, execution and monitoring of behavioural planning. These processes are articulated in the PASS Theory, as formulated by Das, Naglieri and Kirby (1994:1-95). The acronym (PASS) stands for the information processing modes - Planning, Attention, Simultaneous and Successive. Visual stimuli are used for planning, simultaneous and attention tasks, whilst auditory stimuli are used for successive tasks. Planning helps to select and develop problem solving strategies. Attention is the mental process that helps to keep the learner vigilant and focused. Simultaneous processing has a strong visual-spatial dimension, while successive processing is the seriating of task. In the PASS theory attention and planning

are strongly related, because attention is often under the conscious control of planning (Naglieri & Das, 2005:122-124).

The Lurian Theory provides the foundation for various tests (Miller, 2010: location 1257) such as the Kaufman Assessment Battery for Children 2nd Edition (K-ABC-II): Kaufman & Kaufman 2004), the Cognitive Assessment System (CAS): Naglieri & Das 1997) and the NEPSY-II (Korkman, Kirk & Kemp, 2007). All these tests were included in the comparative study done by Campbell et al., (2008), and their reliability and validity are high.

3.4.2. Cattell-Horn-Carroll (CHC) theory of cognition

Another theory on human cognition is based on the combined work of three authors - Raymond Cattell, John Horn and John Carroll. Cattell conceptualised human cognitive ability as being a dichotomy of two distinct abilities - fluid and crystallised intelligence. Fluid intelligence (Gf) was purported to include inductive and deductive reasoning, while crystallised intelligence referred to 'accessible stores of knowledge'. It was purported that these abilities were influenced by biological and neurological factors and incidental learning through interaction with the environment. Cattell further postulated that crystallised intelligence (Gc) consisted primarily of knowledge typically acquired by the influences of acculturation (Wasserman & Tulsky, 2005:18).

Horn and Blankson (2005:41-64) expanded the model to include primary and secondary abilities. They also pointed out that 'most of what is known about the development of abilities and most theories about the nature of human intelligence pertain to the second-order abilities' (Horn & Blankson, 2005:41-64). These second order abilities are, briefly:

Acculturation knowledge (Gc) is measured by tests that will indicate the breadth and depth of language, concepts and information of the dominant culture.

Fluid reasoning (Gf) is measured by tests that identify the ability to draw inferences, find relationships, and comprehend implication.

Short-term apprehension and retrieval (SAR) also referred to as short term memory (Gsm) and working memory.
Fluency of retrieval from long-term storage, (TSR), also called long-term memory (Glm). This is measured in tasks that require retrieval through association of information stored.
Processing Speed (Gs) is involved in all tasks, but is measured by rapid scanning and comparisons in tasks.
Visual processing (Gv) is measured in tasks involving visual closure and consistency.
Auditory processing (Ga) is measured in tasks that require perception of sound patterns and comprehending elements of groups of sounds.
Quantitative knowledge (Gq) is measured in tasks that require the understanding of mathematical concepts.

Horn and Blankson (2005:56) concluded that measures currently used to measure human intelligence 'probably do not assess all the important abilities of human intelligence'. Carroll (2005:69-76) amplifies the basic theory, by adding his 'three stratums.' He distinguishes between broad and narrow abilities. Broad abilities are fluid intelligence, crystallised intelligence, general memory and learning, broad visual perception, broad auditory perception, broad retrieval ability, broad cognitive speediness and processing or decision speed. Broad ability assessment will give an indication of global cognitive abilities or 'g', but will not give an indication of the possible reasons for a child's under-achievement (Carroll, 1993:634). Narrow stratum abilities represent greater specialisation of abilities. These are expressed in quite specific ways that reflect the effects of experience and learning, or the adoption of particular strategies of performance (Carroll, 1993:643).
The Cattell-Horn-Carroll (CHC) Human Cognitive Abilities Project (2002:n.p.) is the most comprehensive project on human cognition, and so far over 460 human ability data sets have been identified. CHC theory is also the basis of Cross-Battery Assessment (Ortiz & Ochoa, 2005) and the development of the Culture-Language-Test-Classification and Interpretative Matrix (Ortiz, 2005). There is a growing body of research on the relationship between CHC abilities

and academic skill development and outcomes. Floyd (2009:49) gives the examples of Gc (lexical knowledge), Ga (phonetic coding), Glr (naming facility), Gsm (working memory) and Gs (perceptual speed), which have all been found to show a significant relationship with basic reading skills. The CHC theory has an expansive network of validity evidence, and has recently begun to have considerable influence on cognitive test development and interpretation (Miller, 2010 location 2607). The Cross-Battery Assessment (XBA) approach to measurement and interpretation of cognitive abilities and processes - that is based on CHC theory - is a development in assessment that centres the judgment about individual cognition on empirically supported theory (Flanagan et al., 2009:n.p.). The information processing view of cognition has withstood the test of time and 'has been validated by research in cognitive psychology, educational psychology, neuropsychology and neuroscience' (Dehn, 2006:6).

The processes of cognition and processing assessment are probably best conceptualised by Sternberg's Triarchic Theory of Cognition (Sternberg, 2003:103-119). In Sternberg's theory there are three different processing components, namely meta-components, performance components and knowledge acquisition components:

*Metacomponent*s - higher order or executive processes such as the planning, monitoring, and evaluation of the performance of a task.

Performance Components - execution of plans and strategies developed by the metacomponents, play a role in relating new information to novel situations through previously inferred concepts.

Knowledge Acquisition Components - these lower order processes consist of selective encoding when relevant information is separated from irrelevant, selective combination when new and old information is organised and selective comparison, when new information is compared to previous cognitive constructs.

In current practice, the process assessment approach (Miller, 2010: location 815) has been integrated into tests such as the Cognitive Assessment System (CAS) (Naglieri & Das, 1997), the Wechsler Intelligence Scale for Children, 4th Edition (Wechsler, 2004), the Kaufman Assessment Battery for Children

2nd Edition (Kaufman & Kaufman, 2004), and the NEPSY 11 (Korkman, Kirk & Kemp, 2007). All the above tests, as well as Cross-Battery Assessment, have one thing in common: the qualitative behaviour of the test-taker is noted during the administration (Miller, 2010: location 858).

Tests based on the Lurian Theory will be more useful to identify possible neuropsychological data, and tests based on CHC will give a precise statistical classification of the broad and narrow abilities. The interpretive mode of process assessment is an underlying method of analyses in all these tests (Miller, 2010: location 890). The question is: How do these 'exceptionally well-developed and substantiated tests' inform the educational psychologist? (Floyd, 2010: 62). What will an evidence-based assessment look for in the different problems that educational psychologists encounter?

3.5 DIFFERENT APPROACHES TO THE ASSESSMENT OF COGNITION

Armour-Thomas and Gopaul-McNicol (1998:95) are of the opinion that 'no single psychometric measure taps the three interrelated and dynamic dimensions of intelligence: biological cognitive processes, culturally coded experiences and cultural contexts'. The three aspects of cognition - biological, culturally coded experiences and cultural context - therefore need to be assessed. Not only is this important when working with diverse clientele, but in all situations it must be understood that cognition is culturally defined (Mpofu & Ortiz, 2009:55). Probably the most apt example of culturally defined constructs of cognition is that found amongst the Kokwet in Kenya. Harkness, Super, Barry, Zeitlin and Long (2009:140) found that the Kokwet had different words for intelligence and that the parents' concepts of intelligence 'highlighted aspects of competence combined with responsibility and helpfulness'. Children ought to be assessed for the competencies that are valued in their own culture (Harkness et al, 2009:153) and 'validity must be established within a particular cultural context (Tymms & Coe, 2009:469). It is only then that assessment will be considered equitable (Mpofu & Ortiz, 2009:41).

Psychologists have long been using cognitive and behavioural approaches to assess children's abilities. The cognitive approach to assessment usually

uses norm-referenced tests due to their efficiency, objectivity and interpretability, while behavioural approaches use criterion-referenced tests such as rate of reading or performance in number ability (Elliott, 2007:24). Although authors sometimes suggest that the approaches are mutually exclusive, a combination of the two is probably the best possible form of practice (Elliott, 2007:24).

3.5.1. Equitable assessment

The quality of conclusions derived from assessment data depend in part on the impartiality and equitability of assessment procedures rendered to the customer or consumer of the assessment (Mpofu & Ortiz, 2009:41). Flanagan et al. (2009:n.p.) supplies the following pre-assessment considerations in non-discriminatory (equitable) assessment. The main considerations are transactional, ecological, alternative, psychometric and interdisciplinary:

- The transactional approach considers the cultural knowledge base and culturally appropriate procedures.
- The ecological approach denotes an ecosystems approach and adaptive behaviour assessment.
- The alternative approach is skills and process focused, and makes provision for portfolio and criterion referenced procedures, as well as dynamic assessment and clinical observation.
- The psychometric approach makes provision for research regarding the underlying theory, test adaptations and test interpretation.
- An interdisciplinary approach allows for a professional team, with inclusion of the parent in the assessment process.

Given the challenges in the assessment process, three approaches that take these considerations into account are now discussed. The Bio-Cultural Approach (Armour-Thomas & Gopaul-McNicol, 1998) focuses on contextual factors, while Cross-Battery Assessment (Mc Grew & Flanagan, 1998) and the Implementation of the Cultural and Language Matrix (Ortiz, 2005) are examples of an assessment approach that includes all of the above considerations. The need for school psychologists to specialise in

neuropsychological assessment is a further development that will be discussed below.

3.5.2. The bio-cultural approach to assessment

Equal educational opportunity, and recognition of the bias in traditional assessment instruments, led to the development of the Bio-Cultural Approach, to accommodate children from linguistically and culturally-diverse backgrounds. From the test-taker's perspective, unfamiliar socio-linguistics and the impact of cross-cultural assessment became apparent. Although the Bio-Cultural Approach has many accommodations, it is a highly structured assessment method with the following sequential order of operations (Armour-Thomas & Gopaul-McNicol, 1998:94):

- A differential diagnosis - by first looking at school records and having a parent and teacher interview.
- Psychometric assessment of the child with two scores must be obtained - one for standardised questions and one for potential questions.
- Assess the child ecologically by observing the child at home and in the community.
- Conduct a parent interview for further ecological assessment.
- Conduct a teacher interview for further ecological assessment and observe the child in the classroom.

In this model, the 100% assessment information comes from four different sources. Psychometric assessment is allocated only 25%, psychometric potential another 25%, while the remaining 50% comes from ecological assessment and the assessment of other intelligences.

Psychometric assessment is the standard procedure with a standardised instrument. The procedures that are put in place to measure psychometric potential are:

The suspension of time is supported by the work of Sternberg who is quoted by Armour-Thomas and Gopaul-McNicol (1998:97) as saying that speed is not that important, but speed selection is: 'Knowing when to perform at what rate and being able to function rapidly or slowly, depending on the task or situational demands'.

Contextualisation versus decontextualisation. This measure refers specifically to the items of vocabulary. Children are allowed to say the word in sentences and in this manner embed the word in context. The examiner can request the child to say the word in a sentence and from this response, knows that the child understands the meaning of the word.

Paper and pencil with arithmetic sub-tests. The use of paper and pencil will counteract the measurement of skill, memory and attention, which are often measures in conventional assessment arithmetic sub-tests. By allowing the child to use a paper and pencil to calculate and work out solutions, the mathematical potential of the individual is measured.

Test, teach, and re-test. The child is tested, taught the correct procedure and then re-tested. The re-test will indicate the child's ability to learn from experience. This measure is, however, only to be used when the examiner becomes aware that the child had not been exposed to similar material like blocks and puzzles before (Armour-Thomas & Gopaul-McNicol, 1998:102).

The ecological taxonomy of the Bio-cultural assessment procedure is explained by Armour-Thomas and Gopaul-McNicol (1998:103)

> *… non-psychometric measures that are based on multiple assessment instruments in multiple contexts [that] have more ecological validity than psychometric measures that were based on a child's functioning in a controlled testing situation.*

A psychologist can derive substantial information from the way children communicate, their socialisation, the activities they engage in, their friendships, the different roles they play, and the degree of respect and support their family gives them (Armour-Thomas & Gopaul-McNicol, 1998:107).

The assessment of other intelligences relies heavily on the work of Gardner (1999b) who coined the idea of Multiple Intelligences, which is an alternative approach to the idea of being intelligent. Eight intelligences were originally defined. These were linguistic, logical, mathematical, musical, spatial, bodily-kinaesthetic, naturalistic, interpersonal and intrapersonal intelligence. The Bio-Cultural Approach 'calls for a broader menu of assessment options and an abandonment of the sophomoric mentality that relies on some type of rigid superficial conformity' (Armour-Thomas & Gopaul-McNicol, 1998:130). This approach seeks the solution in the interaction between test-taker, test and

environment, and to contextualise intelligence and to use sub-tests to refine an assessment.

3.5.3. Cross-Battery Assessment

Cross-Battery Assessment (XBA) is a practical method of assessment and interpretation that is grounded in CHC theory and research (McGrew & Flanagan, 1998). In general terms, XBA provides a set of principles and processes that allows practitioners to 'measure and interpret a wider range of abilities than that represented by most single cognitive or achievement batteries in a manner that is both psychometrically and theoretically defensible' (Miller, 2010: location 2615). The strength of XBA lies in the synthesis of factor analyses that have been conducted over decades by independent researchers using many different collections of tests (Alfonso, Flanagan & Radwan, 2005:192-200). The XBA approach uses the CHC theory, which has been referred to in section 3.3., to classify sub-tests into different broad and narrow abilities.

The broad abilities classifications assist practitioners to arrange tests in construct-irrelevant and construct-relevant clusters - thereby only concentrating on the construct relevant clusters. The narrow ability classifications assist practitioners with combining qualitatively different indicators of a given broad ability - to make correct inferences (Alfonso et al., 2005:193). Therefore, 'the better the construct representation in assessment, the more effective practitioners will be in interpreting the precise nature of a student's learning strengths and weaknesses (Miller, 2010: location 2650). The approach also guides practitioners to select cognitive assessment instruments or sub-tests of instruments that will allow for the measurement of abilities and processes, and which can answer the referral concerns. The XBA approach provides empirical data for understanding cognitive function and dysfunction (Miller, 2010: locations 2615-2621). When continuing with a non-discriminatory approach to assessment, practitioners will determine the cultural and linguistic loading of the test they use, by using an instrument like the Cultural and Linguistic Matrix (C-LIM). This matrix is introduced here without explanation of the theoretical background or the monumental work of Ortiz & Ochoa (2005) on this.

The central purpose of the C-LIM is to give any practitioner the ability to evaluate in a systematic way - the degree to which cultural and linguistic issues may affect the validity of their test results. Getting over this obstacle is a critical step in being able to carry out non-discriminatory assessment (Flanagan et al., 2009:n.p.). The C-LIM can be applied with the assessment instruments for which it is currently available to further validate the test results. For instance, if the educational psychologist wants to apply a test like the Wide Range Ability of Memory and Language Test (WRAML-2), he/she can consult the C-LIM for that instrument, and can establish the cultural loading and linguistic demand of the sub-tests.

Two concepts that Flanagan et al. (2009:n.p.) use in the explanation of the C-LIM, are BICS (Basic Interpersonal Communication Skills) and CALP (Cognitive Academic Language Proficiency). These concepts were derived from the work of Krashen (1982) as cited in Flanagan et al. 2009:n.p.) and are vital when working with culturally and linguistically different children. Acquisition of a second language, the extent that a person reaches Cognitive Academic Language Proficiency, is estimated at, at least five to seven years (Flanagan et al., 2009:n.p.).

The degree of linguistic demand is explained by Flanagan et al. (2009:n.p.) as follows:

Slightly Different: Includes individuals with high levels of English language proficiency (e.g., advanced BICS/emerging CALP) and high acculturation, but still not entirely comparable to mainstream U.S. English speakers. Examples include individuals who have resided in the U.S. for more than 7 years or who have parents with at least a high school education, and who demonstrate native-like proficiency in English language conversation and solid literacy skills.

Different: Includes individuals with moderate levels of English language proficiency (e.g., intermediate to advanced BICS) and moderate levels of acculturation. Examples include individuals who have resided in the U.S. for 3-7 years and who have learned English well enough to communicate, but whose parents are limited English speakers with only some formal schooling, and improving but below grade level literacy skills.

Markedly Different: Includes individuals with low to very low levels of English language proficiency (e.g. early BICS) and low or very low levels of acculturation. Examples include individuals who recently arrived in the U.S.A or who may have been in the U.S.A for 3 years or less, with little or no prior formal education, who are just beginning to develop conversational abilities and whose literacy skills are also just emerging.

The use of the C-LIM in conjunction with an instrument like the WISC – Table 3.2, indicates the sub-tests and the degree of linguistic demand each of them has. Ortiz (2008) supplies a scale on which the actual differences of the child's performance can be calculated. The results of this will give a clear indication of whether it is a true deficit, or merely a difference due to incompetence in language or lack of acculturation. The classification of tests according to their cultural loading and linguistic demand are still preliminary (Ortiz, 2008), but when used with the available tests in the United States the educational psychologist is much better equipped to give an informed opinion on the child's results of a test. As an example, the C-LIM for the WISC-IV is given in Table 3.2:

Table 3.2 Matrix of cultural loading and linguistic demand classifications of the WISC

	Degree of linguistic demand			
DEGREE OF CULTURAL LOADING		**Low**	**Moderate**	**High**
	Low		Block design Symbol search Digit span Coding	
	Moderate	Object assembly Mazes	Arithmetic	
	High	Picture completion		Information Similarities Vocabulary Comprehension.

The C-LIM was developed specifically to add to non-discriminatory assessment of culturally and linguistically diverse populations. It is now available for application with every major cognitive assessment instrument in the United States. This was a much needed development, since in a survey done by Ochoa (1997:n.p.) amongst school psychologists in the United States, 79% of them reported that they were inadequately trained to understand second language acquisition, while 82% reported that they were inadequately trained to do a bilingual evaluation. The development in non-discriminatory assessment has however brought practitioners into the arena of Evidence-Based Assessment.

In South Africa, cross- battery assessment will not be a viable option, because this method makes use of nearly every test developed in the U.S.A.

3.5.4. School neuropsychological assessment

According to Miller (2010: location 421) 'The best practice of school psychology is not complete without considering the biological bases of behaviour'. Miller says that the past 30 years of research into the causes of specific learning disabilities, have given ample support for his statement. A

specific learning disability is defined in the United States by Public Law 94-142 (National Dissemination Centre for Children with Disabilities, 2010) as:

> *A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. This term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. This term does not include a learning problem that is primarily the result of … emotional disturbance, or of environmental, cultural, or economic disadvantage.*

The last part of this definition, referring to the relationship between learning disabilities, environmental, cultural and economic disadvantage, is crucial. An assessment should be able to extricate factors in the environment that impact on the child's ability to learn from any biological, perceptual or processing (dis)abilities (Miller, 2010: location 3423). Miller (2010: location 3423) also considers that neuroscience has already proven that some types of learning disabilities have very 'specific neural signatures' that can be observed with modern neuro-imaging techniques such as FMRI (Functional Magnetic Resonance Imaging). Miller (2010: location 3436) furthermore states that,

'The more we learn from neuroscience about functional cortical organization and the complex interplay of neural networks in both normal and learning-disabled individuals, the less appropriate the word 'comorbid' appears'.

Comorbidity implies that two or more separate conditions or distinct disorders coexist, but according to Miller (2010) neuroscience informs us that the seemingly distinct disorders may be attributed to the same underlying neurological dysfunction. Without carefully selected assessment techniques, to determine the presence or absence of comorbid conditions, which are described as one of the 'major sources of heterogeneity in learning disabilities' the assessment will be less effective (Fletcher, Lyon, Barnes, Stuebing, Francis & Olson, 2007:266). Fletcher *et al.* (2007) term their assessment procedure Cognitive Hypotheses Testing. Cognitive Hypotheses Testing includes neuro-cognitive constructs such as auditory perception and discrimination, receptive language, sustained auditory attention, and executive functioning skills such as working memory. Their assessment procedure has four distinct data collection methods, listed in sequence below:

- Formal assessment of a particular construct with a test or sub-test or Cross-Battery Assessment.
- Gather qualitative information through observations that include observation in the classroom and specifically observation of the performance of the task.
- Collect data through teacher- and parent-completed checklists, rating scales, and observations. This is helpful in determining the frequency and types of classroom situations where learning problems and/or behaviours of concern occur most often ('and sometimes more importantly where they do not occur') (Miller, 2010: location 3790).
- Collect other data including teacher observations, work samples, grades, and analysis of actual classroom performance.

Each of the four data collection procedures needs to be in the same time frame as the methods are inter-dependent upon one another to form the hypotheses. Children's behaviour may vary too much for data to be collected over a long period. The testing of hypotheses requires specialised assessment measures. Using an ordinary measure such as the WISC-IV, may not give exact data, because the WISC-IV sub-tests simultaneously tap into several cognitive processes (Miller, 2010: location 3990), and therefore distinguishing the specific cognitive process that may be causing the deficit or disability with a test like the WISC-IV, is nearly impossible. In working with culturally and linguistically diverse populations, the distinction between what a difference is and what a deficit is (Hoover, 2009: 137) becomes all the more important. Miller (2010: location 11368) says that,

> *The differentiation between culture and language differences and actual disabilities is a multifaceted task that has been attempted for decades and one that has particular implication for school-based neuropsychological practice. One of the most documented indicators of difficulty in this area is the long-standing overrepresentation of diverse students across various special education categories.*

From the literature (Hoover, 2009; Flanagan et al., 2008; Dehn 2006; Gimpel et al., 2010; Miller, 2010), it becomes clear that the origins and remediation of learning problems are multifaceted. At least three causes can normally be identified - biological, hereditary factors; environmental factors; and a

combination of the first two, but with the addition of instructional and educational factors. Evidence-Based Assessment practices therefore need to take the long history of assessment practices into consideration, and then add ways and means to add fidelity to the assessment procedures.

3.6. ISSUES IN EDUCATIONAL PSYCHOLOGICAL ASSESSMENT

Educational psychologists in many different countries have comparable concerns about their assessment practices (Jimerson et al., 2007:508). Some of these concerns will be briefly discussed to highlight the arena of assessment in educational psychology practice.

3.6.1. Lack of suitable instruments

The lack of suitable standardised tests, especially in countries where there are local languages other than English, have been prominent. Costs associated with test development or translations have been a major concern. The cultural inappropriateness of tests, lack of applicable norms for the population group, and the general lack of scientific evidence were additional concerns raised by both educational psychologists and school psychologists alike (Oakland, 2009:1-16). Most educational psychologists who have adequate access to tests have similar test batteries, but the selection of tests will vary according to the presenting problem. In the United States, which has the most locally developed assessment instruments, (Oakland, 2009:4), assessment practices are highly regulated (Benson, 2003:48). The APA has published the Standards for Educational and Psychological Testing (Standards 1999). The purpose of the Standards is to provide criteria for the evaluation of tests, testing practices and the effects of test use. The Standards are currently being revised (APA, 2009). The Joint Committee on Testing Practices (2004) has also formulated a Code of Fair Testing Practices (2004). This code provides clear guidelines for test developers and test users alike. For instance, Code A9 refers to inclusion of diverse subgroups in test development. Test development falls outside the scope of this study, but the rights of the test-taker is an area of consideration.

3.6.2. The rights of the test-taker: Informed consent

Code D1-D3 of the APA Code of Fair Testing practices (2004) refers to information to test-takers and their parents. Test-takers must be informed in advance as to test administration, the types of questions, formats, directions and appropriate test-taking strategies. Test-takers and their parents must also be provided with enough information to help them evaluate whether a test should be taken. From these guidelines it can be concluded that the rights of the test-taker in the United States are becoming more prominent and that the ethical responsibility of the test developer and user have increased with consumer expectations. The fact that most psychologists take out insurance against malpractice also supports this conclusion.

3.6.3. To test or not to test?

Foxcroft and Roodt (2005:243) say that there have always been certain schools within psychology who for ideological, moral or political reasons, perceive that the use of psychological measures perpetuate social inequalities. The different paradigms for the use or non-use of tests are still in practice. Topping, Smith, Barrow, Hannah and Kerr (2007:348) describe the situation in Scotland where social constructivism now mostly informs assessment. Many psychologists in Scotland do not use any psychometric tests, but rather use assessment practices such as Dynamic Assessment and Curriculum Based Assessment to inform their decisions. Dynamic Assessment is the assessment of the child's learning in response to adult mediation, tutoring or enrichment of the information, while Curriculum Based Assessment refers to the specific competencies the learner acquired in school. According to Freeman and Power (2007:449), 'social constructionism leads to heuristic knowledge, while positivism focuses on knowledge that can be refuted by observations and experiment'. Heuristic knowledge is decision making knowledge and is more subjective of nature. With a social constructivist method of assessment, the educational psychologist will discover knowledge by using a process approach, while when a positivistic method is followed it refers to relying mostly on the results of psychometric tests. This line of argument is a study on its own, but from the limited information in this discussion, it is clear that educational psychological

assessment practices can differ widely across the globe. Most educational psychologists in South Africa are not school-based and do not have the indulgence of using a process approach. However, within one country, there can also be wide discrepancies between individual practitioners. If there are no clear guidelines as to what assessment should entail, or which assessment instruments are recommended by a regulating body, the process of psychological assessment can add to practices devoid of a scientific basis.

Benson (2003:48) states that practitioners want tests that can help them design interventions that will actually improve children's learning, to distinguish between children with different conditions, and accurately measure the abilities of children from different linguistic and cultural backgrounds. Is this also the need of South African educational psychologists?

3.7. EDUCATIONAL PSYCHOLOGICAL ASSESSMENT IN SOUTH AFRICA

The history of educational psychological assessment in South Africa dates back to 1912, when tests to determine the extent of mental retardation in schools were first implemented. The focus on testing and especially intelligence testing remained until the 1960s (Daniels, Collair, Moolla & Lazarus, 2007:364).and between 1960 and 1984 a number of psychological tests were produced, all mainly for the purposes of education. According to Claassen (1997:300), 'tests were developed along western models and target populations delineated along racial lines'. When Claassen applied the New South African Group Test in 1983 on different population groups then known as Blacks, Coloureds, Indians and Whites, the study proved that the verbal parts of the tests were unsuitable for Blacks, mainly because English was not their mother tongue. There was, however, also a correlation between NSAGT scores and Social Economic Status (SES), which indicated that the socio-economic status of the test-taker was highly relevant to the scores obtained.

Owen (1989:13) found that aspects of true test bias included language factors such as the use of concepts and words that were not understood in items where language was supposed to be irrelevant. He also found distractors that were too tempting and confused those test-takers who were less test-

sophisticated. Van de Vijver (2002: 548) is of the opinion that the most influential aspects of using tests across different cultural groups are bias and equivalence. Bias, can be found in all the stages of development and assessment like construct, item, method, and administration bias. In addition there is cultural test bias, (Reynolds & Ramsay, 2003:75) which refers to the fact that people from different cultural groups who should theoretically obtain similar score on a test, get unequal scores due to factors which include ethnicity and socio–economic levels. Psychological testing as an industry was placed in the public spotlight in South Africa with the promulgation of the Employment Equity Act 55 of 1998 (Section 8). In this Act (Government Gazette, 1998), it was stipulated that,

> *… psychological testing and other similar assessments were prohibited unless the test or assessment being used (a) has been scientifically shown to be valid and reliable (b) can be applied fairly to all employees, and (c) is not biased against any employer or group .*

Although assessment in this context referred exclusively to assessment within the corporate environment and involved adults, questions pertaining to the assessment of children soon came to the fore. The validity of assessment instruments was addressed when Foxcroft (2000:2), after a very wide study amongst psychologists, raised concerns about the validity of South African developed tests and suggested that foreign tests should be adapted for the South African context.

With the advent of inclusion in education, it was envisaged that learners would not need psychological testing for streaming purposes, but Knoetze, Bass and Steele (2005:176) state that contradictory to the principles of Outcomes-Based Education (OBE) in South Africa, it is still common practice for children to be referred to psychologists. This is with the request that 'assessment outcomes should inform scholastic planning and establish scholastic expectations through the assessment of cognitive functioning level' (Knoetze et al., 2005:176). Another concern that pertains to assessment within the Outcomes Based Education system is that there are no South African measures that are 'adequately aligned with the critical and specific outcomes at the various exit levels of the National Qualifications Framework' (Foxcroft & Rood, 2005:247). Jooste (2006:3), a prominent educator in the field of psychological assessment, provided a guide to psychological assessment in

South Africa. Jooste (2006:7) argues for metacognitive thinking, scientific reasoning and generalisation in test score interpretation. He also advocates the scientist-practitioner model of assessment. This model advocated that practitioners should also be researchers (Gelso, 2006:3). Jooste (2006:3) reminds the users of psychological tests of how important it is to adhere to the test manual and the standardised instructions as well as that 'triangulation and cross-validation with other test data are always important test practices to keep in mind'. He also discusses test bias at length, refers to the different types of bias – namely, language, culture, item content and educational or social deprivation (Jooste, 2006:215).

The bias inherent in most instruments currently in use in South Africa, or the administration bias by the person who administers the test, are not mentioned. He also does not refer to tests like the assessment instruments for determining the academic potential of individuals, the Senior South African Individual Scales (SSAIS-R: Van Eeden, 1991) and its counterpart for juniors, the Junior South African Individual Scales (JSSAIS: Madge, 1981) that are both out-dated and obsolete. These tests are, however, still in daily use in many practices.

The South African Government Gazette (2006 paragraph 55) clearly states that obsolete and out-dated tests may not be used by psychologists, but in practice many out-dated tests are still being used daily. The assessment reality in the South African circumstances has encouraged practitioners to find different ways of dealing with the real-world situation. Murphy and Maree (2009:421) quote several authors (Elliott 2000; Hessels & Hamers, 1993; Sewell, 1987; Van de Vijver, 1993; De Beer, 2006), who are all of the opinion that dynamic assessment was considered to be a method less biased towards the socially disenfranchised children. These children, in South Africa, have endured harsh barriers to learning, such as poor quality of education, poverty, schools very far from their homes and often having to share resources. Practitioners in South African are conscious of the need for assessment instruments that are 'modern', in the sense that they have a sound theoretical underpinning, are useful for most children, and sensitive to linguistic and cultural diversity and are ecologically valid in the sense that the test tasks are

'similar to naturally occurring environmental demands and prediction of behaviour' (Campbell et al, 2008:1007). To compensate for the lack of appropriate tests, South African psychologists have started to make adaptations to their practices and many use internationally used tests.

3.7.1. The use of international tests

Foxcroft and Roodt (2005:254) consider that international measures must be empirically researched in our multicultural society and local norms need to be established. Some international tests have been field-tested in South Africa, and mostly in previously disadvantaged communities.

The Cognitive Assessment System (CAS) of Naglieri and Das (1997) was standardised in the United States on 2200 children. The sample stratification included race, ethnicity, geographical region, community setting, parent educational attainment, classroom placement and educational classification (Wasserman, 2003:419). The CAS was field tested by Reid, Kok and Van der Merwe (2002:246-252) and was deemed a fair diagnostic instrument to use in the South African environment. In their study Reid et al. (2008:246-252) compared results of the Woodcock Diagnostic Reading Battery, the learners' school results and their scores on the CAS, and concluded that the correlation was highly significant. This study is a noteworthy contribution. Miller (2010, location 2008) quotes Naglieri and Rojahn(2001) who say that fewer African American children were identified as being mentally challenged when using the CAS, than the WISC. Miller (2010) also considers the CAS to be a beneficial instrument because of its emphasis on processing strengths and weaknesses and the intervention strategies which are unique to this test.

The Kaufman Assessment Battery for children was implemented in a longitudinal study by Jansen and Greenop (2008) in Soweto, a Black suburb outside Johannesburg. The achievement scales were omitted due to their cultural specificity. The results showed that employing the Kaufmann ABC with a South African population is feasible and useful.

3.7.2. The use of non-verbal instruments

Although a detailed explanation of the restrictions of non-verbal tests is beyond the scope of this chapter, it can be noted that non-language tests may

be even more culturally loaded than language-based tests. Geisinger (2003:105) quotes Anastasi and Urbina (1997:344), who argue that that 'non-verbal, spatial-perceptual tests frequently require relatively abstract thinking processes and analytic cognitive style characteristic of middle-class Western cultures.' If one considers non-verbal tests, according to the C-LIM (Ortiz, 2005), for their linguistic and cultural loading, one finds that non-verbal tests mostly have low linguistic demand, but can have moderate to high cultural loading, especially for subtests like object memory and analogical reasoning in the UNIT (Universal Non-verbal Intelligence Test) Bracken & McCallum, 2005) and the Leiter-R (Leiter et al., 1997).

3.7.3. Locally developed tests

The main developer of psychological tests in South Africa, the Human Sciences Research Council (HSRC), received government funding in the Apartheid era. Following the political changes after 1994, the HSRC was privatised and changed its research focus (Foxcroft & Roodt, 2005:255). In 1990 the Individual Scales for Northern-Sotho, Southern-Sotho, Tswana, Zulu and Xhosa (Landman& Viljoen, 1990) were developed by the HSRC. At that stage this was a very necessary development. However, most educational psychologists at that time could not use these test without a translator/ interpreter. One of the pre-requisites of using a translator / interpreter is that the person must have excellent knowledge of the language and the test material and finding people who fitted those criteria was almost impossible. These instruments made it easier to assess a learner in his/ her own home language, but the complexities of cross-cultural assessment were sometimes negated. Today, using these tests poses its own set of problems, due for instance, to the client's level of acculturation (Geisinger, 2003) and proficiency in the vernacular after years of being exposed to English influences and often incorporating English into the vernacular. Children still have high use of their vernacular and low use of English, yet the verbal test items in the vernacular tests are not always clear to them. Another problem with these vernacular tests is that they lack information on the development and standardization, because the task was never completed with the changes at the HSRC.

Other tests that have been locally developed, like the LPCAT (De Beer, 2006) but this test has a specific target group and theoretical underpinning and cannot be used to pinpoint deficits in the cognitive processes of children, since it is directed for use with adults. It has been established that Mindmuzik, a privately owned company that has taken over the test development and distribution of the previously developed HSRC tests, has now started the process of revising some of the old HSRC tests (Byleveld, 2010, personal communication). The revision of the Academic Aptitude Test (AAT) targets Grade 12 learners to enhance the choice of a study field.

The researcher agrees fully with the statement of Snow (1985) as quoted by Lezak, Howieson and Loring (2004:112) when he remarked that 'batteries do not render diagnostic opinions, clinicians do'. A counterargument would, however, be that 'the inclusion of test scores in the psychological database satisfies the need for objective, readily replicable data cast in a form that permits reliable interpretation and meaningful comparisons' Lezak, 2004:136). If the tests used are not culturally of linguistically fair, equitable and standardised for the population for which it is used, the assessment relies too heavily on the subjective interpretations of assessors.

3.7.4. Dissemination of information on psychological assessment

In Africa (and also in South Africa) people are often sceptical about psychology and psychological assessment. Nsamenang (2004: 58), one of the noticeable leaders in evolving an indigenous African psychology, criticises psychology as being 'more of an intellectual arm of Europe's civilizing mission and less of a universal science of human behaviour that it claims to be'. Educational psychology in South Africa has in fact an immense challenge to broaden its evidence-base, and in this process also to meet the challenges of an epistemology that would reflect the diversity of our society. Whether we choose to move toward the more socially constructed methodology, as the example of Scotland (Topping et al., 2007), which was mentioned in section 3.6.3, or whether we decide to become evidence-based, we must realise that we are in the 'throes of an epistemological revolution, in which it is probably

unreasonable to expect definitive answers to the many questions regarding practice' (Moore, 2005:113).

3.7.5. The researcher's adaptation in assessment praxis

After years of frustration and doubt, the researcher started using many of the accommodations described under section 3.5.2. The principles of dynamic assessment were followed. At a later stage other accommodations, like allowing children to use pencil and paper for calculations, were made. The researcher had an intake questionnaire professionally translated into Zulu, Northern-Sotho and Tswana, to accommodate parents. As an additional 'Apperceptive Story Telling' instrument, she used newspaper photographs which depicted African children, mixed race people and also interracial contact between people in different circumstances. This method often elicited deep conversations about school-related problems, violence in the townships, conflict with parents, inter-personal relationships, promiscuity, HIV/AIDS, racism and other social-emotional concerns of childhood and adolescence. The assessment of cognition, however, remained a struggle.

For some clients an instrument like the WISC IV was apt to use. These clients were normally from an advantaged background and often from private schools. For another group of clients, the researcher was troubled by the idea that even just assessing was perhaps discriminatory. They had very little knowledge 'being assessed' had little contact with white woman in authority positions and often had no exposure to materials which were similar to those used in tests. Listening to a paragraph about the zoo, made little sense to them and following a maze has never been part of their frame of reference.

In the past year the researcher became convinced that the instrument of choice for her diverse clientele was the Differential Abilities Scale (DAS) (Elliott, 2007). The features of the DAS that made it appealing to the researcher to use, specifically with linguistically and culturally-diverse children, were the reduced dependence on verbal instructions. Its provision of the special Non-Verbal and Spatial Composite scores and the information the researcher could obtain on working memory and speed of information processing. It further has diagnostic value with sub-tests on phonological processing, immediate and delayed memory. The extent use of the

Differential Abilities Scale in South Africa could not be established. The researcher has however, imported and used this test as an 'initial broad spectrum assessment' (Achenbach, 2005) instrument. The DAS II can be applied to children from 2 years and six months to 17 years and 11 months, which makes the acquisition of two different instruments for different age groups unnecessary. The assessor can also move forward and backward with items applicable for different ages, with little effort. The DAS II has 20 subtests and good clinical utility in the sense that it measures aspects of broad and narrow abilities. For instance, auditory processing as a broad ability will also include narrower functions such as phonetic coding, phonological processing and expressive language. These narrower functions assisted the researcher to determine, to a greater extent than any other prior test used, the causes of poor reading skills. The DAS II reports on knowledge of pre-numerical and numerical concepts, and short and long-term visual memory. Clustered scores proved information on working memory and processing speed which are aspects of the executive functioning.

The DAS II has broad theoretical underpinnings and 'because it comprises small interpretable units, the battery is relatively flexible and lends itself to interpretation from various theoretical perspectives' (Elliott, 2007:11). The researcher has found this instrument child-friendly, with many items on a requiring less language proficiency. True language difficulties are observed by making use of the diagnostic test on specific language processing constructs and the results of the test can lead to specific, targeted interventions. 'The DAS II is administered in a way that tries to have each child take only those items that are at the right level of difficulty for that child' (Sternberg, 1994:350).

To illustrate the difference between the cultural and linguistic loading of an instrument like the DAS II compared to a test like the WISC IV, which is also used in South Africa, the reader should compare the following tables, Table 3.2 section 3.5.2 and Table 3.3 below.

Table3.3: Matrix of cultural and linguistic loading DAS II

	DEGREE OF LINGUISTIC DEMAND			
DEGREE OF CULTURAL LOADING		**Low**	**Moderate**	**High**
	Low	Matrices Sequential &quantitative reasoning Pattern construction Matching letter-like forms Recall of designs Copying	Recall of digits forward Speed of information processing	Recall of digits backward
	Moderate	Picture similarities	Arithmetic	
	High	Picture completion		Information Similarities Vocabulary Comprehension

As can be seen in Table 3.3. the following subtest on the DAS 11 have low or average cultural loading

- Matrices
- Sequential &quantitative reasoning
- Pattern construction
- Matching letter-like forms
- Recall of designs
- Copying
- Recall of digits forward.
- Speed of information processing

The only subtests with high cultural and linguistic loading are

- Information
- Similarities
- Vocabulary
- Comprehension
- Recall of digits backward.

The Wechsler has only three tests which have lower cultural and linguistic loading.

- Object assembly

- Mazes
- Picture completion

The rest of the subtest have either moderate or high cultural and linguistic loading. These are

- Block design
- Symbol search
- Digit span
- Coding
- Arithmetic
- Information
- Similarities
- Vocabulary
- Comprehension.

Considering the criteria of an EBA instrument, the DAS II is compliant with being a well-established instrument, although it was not included in the specific study by Campbell et al., (2008).

It must be reiterated that the researcher does not consider the DAS II as answer to all the assessment woes in South African Educational psychology and aspects like transportability and standardization must be considered when using this test. As it was earlier quoted, it is the practitioner who makes the interpretation and no matter what test is used, the child cannot be equated to his/her test scores.

3.8. SUMMARY

This chapter gave a broad overview of assessment practices in psychology. Intellectual assessment is highlighted in terms of three contemporary views on assessment namely the Bio-Cultural Approach, Cross-Battery Assessment and School Neuropsychology. Specific attention was given to cognitive assessment of culturally and linguistically diverse populations. Information on Evidence-Based psycho-educational assessment and intervention is still meagre, but inroads have been made in terms of defining Evidence-Based Assessment and categorising assessment instruments for their evidence-base. Evidence-based assessment is essentially assessment with fidelity, integrating research findings into practice and accommodating the specific linguistic and cultural needs of the client.

Assessment in South Africa requires specific accommodations for the broad cultural and linguistic diversity that exist. Socio-cultural and political factors, such as South Africa being torn between having a distinct Euro-centric and

British history, as well as a new-found democratic and African history, will influence assessment practices. Part of the problem is therefore not only in the adaptation or development of assessment instruments, but also in the socio-cultural aspects of assessment practices. The researcher has come to the conclusion that Educational Psychology in South Africa needs to scrutinize its epistemology. She also suggests the DAS II (Elliott, 2007) for possible standardization and use in South Africa, specifically because of its low cultural and linguistic loading as presented in Table 3.3.

In the next chapter the research design is presented. The research design has to fit the research question and be applied in a manner that will not be to the detriment of the conversational partners who are colleagues. Their clinical expertise and long-standing experience is accommodated in the research design and the implementation thereof.

CHAPTER 4: RESEARCH DESIGN

4.1 INTRODUCTION

In social research, three main research paradigms exist, namely, quantitative, qualitative and mixed methods research. Each of these paradigms has a definite place in the research world (McMillan & Schumacher, 2010:20). In its most simplistic form, quantitative research refers to a method of obtaining data which are quantifiable and exist in numerical form (Rosnow & Rosenthal, 1993:412). Surveys and questionnaires are some of the popular methods to obtain quantifiable data. Qualitative research, is essentially about obtaining data in other formats such as case studies, narratives, artefacts and interviews and all other methods of obtaining research data that is not quantifiable (Creswell, 2007: 11, 412). Mixed methods research, offers an option that actually tries to take advantage of the similarities and differences in qualitative and quantitative methods and is a pragmatic alternative (Yin, 2011: 290). Many research questions require the use of the mixed method design. Often the first part of an enquiry will be quantitative, while the second part will be qualitative. The relevance and applicability of any particular procedure will depend on the data to be analysed and the 'particular purposes and predilection of the individual researcher' (Dey, 1993:2).

This chapter explains the researcher's choice of design and method, how the research participants were selected and how data were collected. The ethical issues relating to the research are highlighted and the core assumptions which might have had an impact on the research outcome are discussed. It is, however, important to get a clear understanding of research trends to understand the researcher's choice of design.

4.2 QUANTITATIVE VERSUS QUALITATIVE RESEARCH

All research, whether it has a quantitative, qualitative or mixed-methods design begins with a hypothesis research question or problem statement. These different research paradigms have developed from different basic philosophies, for example 'a positivist/post positivist framework will most likely assume a quantitative methodological approach, while an

interpretivist/constructivist framework will presuppose a discursive qualitative approach' (Henning, 2004:16). In qualitative research the research question has real individuals and the 'lived circumstances' of these individuals in mind (Denzin, 2003:210). The nature of the research question will determine the research strategy and according to Marshall and Rossman (1989:78) the nature of the research question can be either exploratory, explanatory descriptive or predictive.

If the study is exploratory, as this research study is, it is directed at investigating a phenomenon with the purpose of understanding the most prominent themes, patterns, as well as the categories which become evident in the participants' contributions. According to Weber (2004:10) there are deep similarities between research traditions, and the real world has both subjective and objective characteristics, but for the purposes of this study the most important differences between quantitative and qualitative research designs are highlighted in Table 4.1. (De Montfort University, n.d.). Only the qualitative research aspects of this table will be discussed to explain the rationale for the design chosen by the researcher.

Table 4.1: Qualitative and quantitative research

Quantitative Research	Qualitative Research
'Simple' numeric data	'Complex' rich data
Measurement	Meaning
Explanation	Understanding
Prediction	Interpretation
Generalizable account	Contextual account
Representative population sample	Purposive/representative perspective sample
Hypothesis-testing	Exploratory
Claims objectivity	Accepts subjectivity
Closed system (experimental control)	Open system (ecological validity)

Only the qualitative side of the comparative table will now be discussed according to its headings.

4.2.1. Complex, rich data

In qualitative research, the data obtained are usually complex, meaning that the researcher not only collects data through different methods, but also that verbal and non-verbal data could be collected through in-depth interviews, also known as qualitative interviews. The researcher could for instance, have an interview with somebody, but at the same time observe their non-verbal behaviour, their living arrangements and their interpersonal behaviour with others (Marshall & Rossman, 1989:107).

4.2.2. Meaning

Qualitative researchers collect data in natural settings - where the phenomenon is experienced (Creswell, 2007:37). Right through the entire qualitative research process, the qualitative researcher keeps his/her focus on ‘learning the meaning that the participants hold about the problem or issue,

not the meaning the researcher brings to the research or writers from the literature' (Creswell, 2007:39). In deriving meaning, the researcher will, when analysing the data, develop a list of significant statements (Creswell, 2007:159) and from this the meaning that the phenomenon has in the lives of the participants will be understood.

4.2.3. Understanding/ Interpretation and contextual account

The qualitative researcher does not explain the phenomenon, but tries to understand it. This is also called 'interpretive inquiry' and Creswell (2007:39) explains it as understanding on three different levels. First, the researchers interpret what they see, hear and understand. Then they interpret it again from the understanding of their own unique background, their history and their prior understanding, and finally when the research report is issued, the readers and the participants have an understanding of the phenomenon. Understanding also comes from writing what Creswell (2007:159) refers to as textural and structural descriptions, implying the 'what' of the experience as well as the 'how' of the experience.

4.2.4. Purposive/representative perspective sample

One of the research methods in qualitative research is the use of 'purposeful sampling'. Research participants are purposively chosen, because they can inform an understanding of the phenomenon which is being studied. The researcher often uses a strategy of maximum variation at the beginning of the selection of participants and Creswell (2007:126) says that if this approach of maximizing the differences in the beginning of the study is followed, it leads to the possibility that the study will reflect dissimilarities and different perspectives, which is an ideal of qualitative research. The selection of research participants may range in ample size, but is usually smaller than in quantitative or mixed- method research designs. Polkinghorne (1989) as quoted by Creswell (2007:61) suggests interviewing from 5-25 individuals in a phenomenological study, but participants must be cautiously chosen to be only individuals who have 'experienced the phenomenon, so that the researcher, in the end can forge a common understanding' (Creswell, 2007: 62).

4.2.5. Accepting subjectivity

Subjectivity in the sense of being focused on the subject, accepting one's own limitations and prejudices as a researcher and trying to proverbially 'walk in the moccasins' of the research participant, is probably the hallmark of qualitative research. Creswell (2007:40) says that 'qualitative research keeps good company with the most rigorous quantitative research and it should not be viewed as an easy substitute for a statistical or quantitative study.' To accept subjectivity also implies that the research does not have 'firm guidelines or specific procedures and is evolving and constantly changing' (Creswell 2007:41).and this makes it a very difficult method of research.

4.2.6. Open system (ecological validity)

Angen (2000) as quoted by Creswell (2007:205) promotes an on-going open dialogue on the topic of what makes interpretive research trustworthy. She says that 'considerations of validation are not definitive as the final word on the topic, nor should every study be required to address them'. Angen (2000) further advances two types of validation: ethical and substantive validation. Ethical validation implies that 'all research agendas must question their underlying moral assumptions, their political and ethical implications and the equitable treatment of diverse voices', while substantive validation implies that the researcher as a 'socio-historical interpreter interacts with the subject matter to co-create the interpretations derived'. The validation of findings in qualitative research is emphasized by the role of the researcher as an interpreter of data' (Creswell, 2007:248). Proponents of these persuasions share the goal of understanding the complex world of lived experience from the point of view of those who live it. This goal is variously spoken of as an abiding concern for the life world, for the emic point of view, for understanding meaning, for grasping the actor's definition of a situation, for 'Verstehen' the world of lived reality and situation-specific meanings that constitute the general object of investigation is thought to be constructed by social actors (Schwandt, 1994: 118). The term 'emic' refers to the views of the conversational partners, while the term etic refers to the views of the researcher (Cresswell, 2007:72) and the final ought- to- be product is a holistic presentation of these merged views. The 'Verstehen' of the life world

of the conversational partner should lead to ‘thick descriptions’ a term coined by Geertz (1973) as quoted by Marshall and Rossman 2011:43) that will give an accurate description of the daily lives of the research participants.

Qualitative research has by now become an acceptable, if not mainstream form of research (Yin, 2011:6). ‘Qualitative inquiry represents a legitimate mode of social and human science exploration, without apology or comparisons to quantitative research’ (Creswell, 2007:11) and qualitative and quantitative research designs are not to be seen as opposing points of view but rather as different ways on a continuum by which researchers make an effort to understand different phenomena. Yin (2011:287) refers to the ‘paradigm wars’ and says that the debate became so severe that it ‘obscured the fact that contrasting methods had always co-existed in social science and with no method consistently prevailing over the other’. Yin (2011:287) is further of the opinion that although the paradigm wars seemed to have ceased, not all contentiousness has ended. He refers directly to the supporters of a particular research method known as randomized controlled trials who monopolized major funding sources for educational research. The particular method calls for individuals to be randomly assigned to experimental conditions, a treatment and a control condition. The strength of the method had been demonstrated in conducting clinical trials in the health care field and researchers who support this method believe that advances in education research can result from using this method. The advocates of this method referred to it as the ‘gold standard’ of research Yin (2011: 288). Here Yin (2011) is directly referring to Evidence-Based Practice, but as has been pointed out, even this movement had to admit that not all research could be conducted by using randomised controlled trials (APA, 2008).

4.3. THE RESEARCH DESIGN

All research begins with a research question or problem statement and in qualitative research this question has real individuals in mind and the ‘lived circumstances’ of these individuals (Denzin, 2003:210). The qualitative

research design is not to be explained by one definition, but rather by a few distinct features. Qualitative research is encompassing research that is a vehicle for studying the 'meaning of people's lives under real-world conditions and strives to use multiple sources of evidence, rather than relying on a single source' (Yin 2011:7). Qualitative research is encompassing, implying that the researcher may need to employ different strategies to obtain data, and the researcher may digress from the research proposal if another, more significant focus, emerges in the process of data collection (Marshall & Rossman, 1989:108-112). Yin (2011:7) emphasises the real-world conditions of people's lives and the multiple sources of data collection. The raw data collected in a qualitative research design can be obtained from communication, such as interviews, music, newspapers, pictures and political speeches, to name but a few (Marshall& Rossman, 1989:98). The focus of all qualitative research needs to be on 'understanding the phenomenon being explored, rather than solely on the reader, the researcher or the participants being studied (Creswell, 2007:3).

It needs to be mentioned that research designs in the social sciences have been called many different names and when doing a literature search these different names often cause confusion. 'Research traditions, approaches, strategies of enquiry and methods' (Creswell, 2007:5) were all different names given to the 'research design', but Creswell (2007:5) defines the research design as,

> *… the entire process of research, from conceptualizing a problem to writing a research question, and on to data collection, analysis, interpretation, and report writing.*

Marshall and Rossman (2011:89) refer to the design as the 'conceptual framework' of a study. They also describe the research design as the plan to conduct the study, indicating that the researcher is capable of conducting the study and offer strategies to preserve the flexibility of the qualitative study. The research design should also include a 'reflection of the researcher's identity and one's sense of voice and perspectives, assumptions and sensitivities' (Marshall & Rossman, 2010:96).

At the beginning of this research project, the researcher was convinced that only a mixed-method approach would answer the research question: How has the philosophy and methodology of Evidenced-Based Practice impacted on educational psychologists within a diverse South African society? A questionnaire was designed and methods of implementing were designed. However, the exercise proved to be unpractical for an individual in terms of time and money. The researcher was therefore encouraged when she realised that a qualitative, phenomenological study would also fit the research question, because as Cresswell (2007:42) says,

> *The process of designing a qualitative study begins not with methods (….) but instead with the broad assumptions central to qualitative enquiry, a worldview consistent with it and, in many cases, a theoretical lens that shapes the study.*

The researcher realised, by listening to various conversations, that the question to be answered was ' close to people and practical' (Creswell, 2007; 43) The researcher chose a qualitative research design, as this design was thought to be the most appropriate; it enabled the researcher to conduct an in-depth study of the phenomenon. With the qualitative interview as the main data collection method, the researcher was able to understand the phenomenon in a wider and deeper sense. To spend quality time in the participants' practice, and listen attentively to them relating their stories, provided the opportunity to gather data that had meaning to them. As a research approach which is described by Creswell (2007: 1) as the 'lens' through which the world as it is, is observed, the phenomenological approach was chosen. The nature of the investigation into the practical day-to-day practice procedures of educational psychologists placed itself in the position for the use of a phenomenological approach. The qualitative interview was chosen as the best method of data collection and participants in this study are referred to as conversational partners (Rubin & Rubin, 2005:14), implying that they were recognised as colleagues and equals.

The exploratory research question of this study is: How has the philosophy and methodology of Evidenced-Based Practice impacted on educational psychologists within a diverse South African society? To investigate the phenomenon, the researcher had to engage with conversational partners and try to understand the phenomenon of their specific 'life experiences' as

educational psychologists. An interview schedule (Appendix B) guided the researcher's probing questions. The focus in the interview schedule is on the impact of societal changes within a new democratic political dispensation on individual educational psychological praxis, especially cognitive assessment. The reason for concentrating on cognitive assessment was two-fold: first, the results of cognitive test are used for important, often life changing decisions like alternative school placement that may have a life-long effect. The design also allowed the conversational partners to relate their experiences freely in the use of qualitative interviews (Kvale & Brinkmann, 2007:81-95).

4.4. THE RESEARCH APPROACH

In the discussion of the research approach, preference will be given to the term 'research genre'. (Piantanida & Garman, 2009:75). It is beneficial to use this literary term of metaphor, because literature encompasses many different genres like novels, poetry, plays and short stories. In the same manner qualitative research can have different genres or approaches of giving life to the research. The choice of a research genre will have to fit the research design as well as the topic.

Today, there are several qualitative research genres available and more are emerging. A literature survey (Henning, 2009:12-27, Holstein & Gubrium, 1994:262; Strauss & Corbin 1994:273; Denzin & Lincoln, 1994:508-513; Creswell, 2007:10; Genzuk, 2003:1-10) revealed: Narrative theory, Phenomenology, Grounded Theory, Case Study and Ethnography as the better known methods of the qualitative research tradition. Piantanida and Garman (2009:75-81) gave no fewer than twenty one different approaches, like Mythopoetic, Portraiture, Secondary Analysis and Social Cartography (Piantanida et al., 2009:85). These research genres have commonalities and distinct features, which makes them suitable for specific circumstances. The best-known genres are summarised to give a motivation of the researcher's choice:

Narrative research is an approach that is both a product and a method. It is the study of stories or narratives or descriptions of a series of events that account for human experiences (Pinnegar & Dayes, 2007:3).

Grounded theory. In this type of study, the researcher generates an 'abstract analytical schema of a phenomenon, a theory that explained some action, interaction or process' (Creswell, 2007:239). 'It is the systematic generation of theory from systematic research. It is a set of rigorous research procedures leading to the emergence of conceptual categories' (Grounded Theory Institute, 2010:1).

Ethnography permits the sociologist to observe the conduct of self and others by an attitude of detachment (Vidich & Lyman, 1994:23). An ethnographic study tries to capture the way of life within a certain group over a period of time (Henning, 2009:42-44).

Phenomenology is the study of 'lived experiences' of persons. It is the view that these experiences are conscious ones and the development of descriptions of the essences of these experiences' (Creswell, 2007:58).

4.4.1. Phenomenological genre

Seamon (2000:3) says that phenomenology was initially founded by Edmund Husserl (1913) as a practical or scientific philosophy that would allow for a method of enquiry into all aspects of lived experience and mental activity. Another phenomenological thinker, Maurice Merleau-Ponty (1945), adapted the original thinking to add 'sensory perception' to 'lived experiences and mental activity'. Merleau-Ponty (1945) 'sought to reinterpret the division between body and mind' (Seamon, 2000:4). This reinterpretation explained the difficulty of being objective. The researcher who chooses the phenomenological genre can never be truly objective, but within this theoretical framework, individuals and their world are always 'in dialogue' with one another. In fact they co-constitute one another (Seamon, 2000:3-5).

Phenomenology is the study of the exploration and the description of phenomena, where phenomena can be anything which can be experienced by a person. Any 'lived experience' can therefore be a phenomenon for research and the phenomenologist pays attention to specific instances of the phenomenon. It is hoped that these instance will point towards more general

qualities and originalities that describe the essential nature of the phenomenon, 'as it has presence and meaning in the concrete lives and experiences of human beings' (Seamon, 2000:4).

Phenomenology is a project of sober reflection on the lived experience of human existence – sober, in the sense that reflecting the experience has to be thoughtful, and as much as possible, free from theoretical, prejudicial and suppositional intoxications (Van Manen, 2007:1). The type of research question which is best served by the phenomenological genre is one where it is 'important to understand several individual's common or shared experiences of a phenomenon' (Creswell, 2007:60). The researcher interprets the data to the best of his/her ability, by the way he/she interacts with different aspects of the data. Greater detail not only provides a rich interpretation of events but also helps to reduce the researcher's selectivity and reflexive influences in reporting about the event (Yin, 2011:313).

The data are therefore not merely related superficially, but described in such a style that it makes complete sense to the reader. The researcher is consciously aware of the research process, which refers to the reflexivity of qualitative research. Reflexivity is the researcher's conscious understanding of the research process as it progresses. It refers to the self-reflection of qualitative researchers to understand the biases and assumptions they may have. 'Total reflexivity requires full and uncompromising self-reference' (Davies, 2008:7). Reflexivity also refers to the way the researcher's own frame of reference, and the ability to successfully bracket his/her own experiences to allow him/her to determine his/her interpretation and findings.

Wainwright (1997:7) states that reflexivity is not primarily a means of demonstrating the validity of research to an audience, but rather a 'personal strategy by which the researcher can manage the analytical oscillation between observation and theory in a way that is valid to him/herself'. This is precisely what the researcher strived to do: to be able to step out of her own frame of reference as an educational psychologist and observe and analyse the praxis of colleagues in an effective and just manner. Another reason for using the phenomenological genre lies in the number of conversational partners, because the phenomenological researcher works from the premise

that the best data can be obtained from long, reflective interviews while all the time observing the context in which the experiences have taken place (Henning, 2005:37). The phenomenological approach to qualitative research is seen as an 'interpretative process in which the researcher makes an interpretation (Creswell, 2007:59). Phenomenological studies attend to the events being studied, as well as to the political, historical and socio-cultural contexts of the phenomenon (Yin, 2011:14).

4.5. DATA COLLECTION

Data collection activities in qualitative research consist of at least seven distinct steps (Creswell, 2007:120-121). In phenomenological research, the first step is to determine what needs to be studied. What is the phenomenon to be studied? Clarity on the phenomenon will determine the second step in the process, which is to decide who may have experienced this phenomenon. The third step is to think what the best way would be to collect the data. The next important step is to bracket one's own experience and try to be as objective as possible. When the data has been collected by means of interviews, the content can be transcribed and organised.

4.5.1 Clarity regarding the phenomenon

In research pertaining to South African conditions in psychology and educational psychology, Bloch, 2009; Claassen, 1997; Dawes et al, 2007; De Beer 2006; De Bruyn, 2003; Foxcroft, 2002; Foxcroft & Roodt, 2005; Jooste, 2006; Kagee 2006; Owen, 1989, Swartz, 2006), the researcher came to the conclusion that the only way to formulate and identify the phenomenon was to call it: The influence of the philosophy of Evidence-Based Practice on the praxis of educational psychologists in a diverse society.' Next she asked herself a series of questions:

Who may have experienced this phenomenon?

This question was answered by concluding that educational psychologists practising in diverse society could be included. The participants were narrowed down to only persons practising within their scope of practice as

defined by the HPCSA in 2007. The researcher is aware that this scope of practice has been amended in 2011.

What would be the best way would be to collect the data?

Given the circumstances of having to relinquish the idea of a mixed-method design, the researcher decided to use qualitative interviews.

Bracketing one's own experience?

The researcher is an educational psychologist herself and has worked within a multicultural environment for the past seven years. Her practice was representative of the social demographics of South Africa. Even if she was tempted to connect the experiences of her colleagues to her own, she could not do so. She had to stay objective and was aware of her role as interviewer and not colleague all the time.

Transcribing and organisation of data

Initially the researcher tried to do her own transcriptions, but found that she not only did not have the knowledge and equipment to do so, but she was wary of the fact that this might have influenced her objectivity even more. Where she had to decipher the words of the participants, who often repeated themselves, she might have become less empathic. Therefore she outsourced this task to a firm who are known to do court procedures on a daily basis.

4.5.2. The choice of conversational partners

In line with the research question, a purposefully selected example of educational psychologists was chosen. As a precursor to this selection, many possible participants were contacted. Of these many were unable to participate, did not understand the research field or were reluctant to 'share' their expertise or did not fit the criteria for selection. The criteria used for participation in the research were: i) practice setting ii) their year of qualification and iii) their ability to conduct assessments in different languages.

In respect of the practice setting, the researcher wanted to include two school-based educational psychologists, two educational psychologists in private practice and two who worked in a multidisciplinary practice. The rationale for

this was that school-based psychologists have different challenges to private practitioners. Working within a multi-disciplinary team, might have brought additional views and exposure. Evidence-based practice started in medicine and having a general practitioner or auxiliary practitioners within the multi-disciplinary team, might have been beneficial for the educational psychologist to learn about the philosophy and method of praxis. Concerning the year of qualification, before or after 1994, the researcher's motivation was two-fold. The year of 1994 was a watershed year in the history of South Africa. Prior to 1994 it was also very difficult for 'people of colour' to have access to tertiary education and registration as a psychologist. The last criterion for selection was the ability to conduct assessments in another language apart from the two mainstream languages which were the official national languages, namely Afrikaans and English. Assessment instruments were also mainly in these languages and mostly used with English- or Afrikaans- speaking populations.

Including people who had qualified after 1994, would also imply possibly including people who qualified when South Africa was accepted by the international community and opportunities opened up for international exposure. In 1994, many people already had Internet access and this may have started an awareness of the philosophy of Evidence Based Practice. The researcher specifically wanted to include conversational partners who might have been exposed to more current knowledge, and hoped to include educational psychologists, who qualified after 1994, who were able to conduct assessments in indigenous languages. She wanted to establish what challenges these specific educational psychologists encountered. Only educational psychologists from the Gauteng Province were included in the sample. The method of obtaining the conversational partners was to a) approach colleagues known to fit the criteria, b) to use the directory of the HPCSA and find other psychologists and c) to ask those who were willing to participate to recommend a colleague who may have fitted the criteria.

4.5.3. The interviews

In qualitative research, interviews can be either structured or unstructured. The structured interview has a definite design and the interviewer follows a

formal script where every question is asked in every interview. Structured interviews also favour certain types of questions and the interviewee is often limited in the way he/she can answer, while preference is given to closed questions, since it is believed that these types of questions will yield more reliable answers (Yin, 2011:134). Qualitative interviewing establishes a relationship between the researcher and the participant and is not clearly scripted, but rather follows a conversational mode (Yin, 2011:135). As a result qualitative interviewing requires intense listening (Rubin & Rubin, 2005:17). In this type of interview the research participant is met on his/ her own terms and becomes a 'conversational partner.' The qualitative interview is meant to allow the researcher to gain insight into the frame of reference of the conversational partner's world. The latter is encouraged to tell about his or her perception and emotional understanding of the topic. To understand the conversational partners, the researcher has to be involved. In this sense, Van Manen (2007:21) refers to pathic understanding and states that it was in this type of understanding that the strength of 'a phenomenology of practice' lies. Pathic knowledge refers to not only knowing with your mind, but knowing with your heart. In modern technology there are many different ways to conduct interviews, but for this research the face-to-face interview was favoured. This type of qualitative interview has many advantages. Marshall and Rossman (2011: 168) state the following (inter alia) as strengths:

- The data are collected in a natural setting.
- One can immediately follow-up for clarification.
- Obtaining data on non-verbal communication.
- Provides information in context, and
- Large amounts of data can be obtained quickly.

Further, Marshall and Rossman (2011:170) suggest that there are however also a few challenges in face-to-face interviews, such as:

- Possible misinterpretations due to cultural differences.
- The cooperation of key individuals.
- The difficulty to replicate.
- The data being affected by the researcher's presence.

- It is dependent on the participant's honesty and openness, and
- It is dependent on the researcher's interpersonal skills.

Apart from the above strengths and challenges, Creswell (2007:133) notes that when a researcher decides on face-to-face interviews that would be audio-taped, transcribed, verified and interpreted, he/she needs conversational partners who would not be hesitant to speak and share ideas.

Qualitative interviewing also has its own conventions. The researcher approaches the interview with the aim of discussing a few topics, sometimes as few as one or two. Successive questions are formulated according to the interviewee's previous response. The intention is to gain a 'rich picture' of what was happening in a setting by talking at length and in detail to conversational partners involved (Fox, 2006:8), but Henning (2004:66) says that the 'ownership of the interview is primarily the privilege of the interviewer' and although the interview is not controlled, it needs to be managed. Kvale and Brinkmann (2009:28) describe the interview experience well when they refer to an INTER-view, and an INTER-action, pointing out that the interviewer also needs to be aware of possible ethical transgressions and personal boundaries. It is evident that interviewing is not only a conversation, but an intense experience.

To prepare for the actual interviews, in which data were going to be collected, the researcher conducted a simulated interview with a willing colleague. From this interaction, she learnt about herself as an interviewer and about the possible reactions of conversational partners. She also had an opportunity to practise using the audio-recorder without being apologetic about its use.

In this research, the interview started, first with confirmation of the appointment and place. All the conversational partners were interviewed at their places of practice, except for one who was interviewed at her home. For some the place of practice and home shared an address, but the practice was separated from the residence and there was adequate privacy. At the same time a telephonic briefing as to the possible structure of the interview was done. On the day of the interview, only one broad question was asked and the researcher tried to probe with questions on her interview schedule. The interview schedule had ample space to write notes, but the whole

conversation was audiotaped. After suggesting that most educational psychologists today face changes and challenges, the question was: 'Please tell me about your practice'. With the interview schedule in mind, the researcher will then try to elicit the information needed about their actual day-to-day praxis, adaptation (if any) they had to make, to what extent they had knowledge of the evidence-based paradigm and if they had knowledge that had influenced their interaction with clients.

The literature study on Evidence-Based practice, Evidence–Based Assessment, educational psychology, assessment media, diversity of language and culture, prepared the researcher for probing questions. Many possible questions were generated to prepare for what the researcher could feasibly encounter in interviews and having these questions in her mind helped her to clarify the research topic. Clarification of the topic came when the researcher decided to retain the encompassing topic she had chosen. She wanted the conversational partners to talk freely about practising educational psychology within a diverse society. She wanted to hear from them how they had adapted their methods and interventions. She wanted to hear how they dealt with the needs of culturally and linguistically diverse children. While Evidence-Based Practice is seemingly the most acceptable way of delivering an ethical educational psychological service, there could have been other solutions found by the conversational partners.

4.5.4. Capturing the data

Audio-taping instead of the more modern video-taping was chosen as a method of data collection, especially since anonymity was promised to the professionals who participated. The preference for audio-taping instead of note–taking eliminated the main source of interviewer prejudice, in the sense that the interviewer might have written down only what was important to him/her. Audio-taping eliminates the multi-tasking of the interviewer and makes it easier to concentrate and really actively participate.

4.6. DATA ANALYSIS

Henning (2004: 103) describes the data analysis process as the 'heartbeat' of the research. Marshall and Rossman (2011:207) are of the opinion that data analysis is 'messy, time-consuming, ambiguous, creative and fascinating' and further says that data analysis encompasses data organisation, theme development and interpretation as well as report writing. Creswell states that

> (*phenomenological) data analysis employs the reduction of data, the analysis of specific passages, individual elements of discourse, and patterns, as well as a search for all possible meanings. The investigator attempts to set aside all personal judgments and expectations by bracketing his or her experiences. Bracketing is equivalent to Husserl's notion of epoche, the suspension of "all judgments about what is real—the 'natural attitude'—until they are founded on a more certain basis"* (Creswell, 1998, p. 52).

Wolcott (2001:32) is of the opinion that one has to be vigilant in reporting observed behaviour, because there is a 'critical distinction' between observed and inferred behaviour.

A combination of the views and methods of different authors were used to analyse the data.

Giorgi (1994) offered a three step process which was a very good start for the researcher who undeniably had no prior knowledge of qualitative data analysis. The steps in this process are:

- Description: the phenomena have to be described exactly as they present themselves, not subtracting nor adding to what is given.
- The reduction: the researcher brackets his/her past experience, knowledge or theories about the phenomenon.
- Search for essences: the researcher uses free imaginary variation until the essential characteristics show themselves.

Creswell (2007:170) provides an excellent template for phenomenological data analysis. To code the data Creswell's (2007:170) model had five distinct aspects. These are presented in Table 4.2

Table 4.2: The processes of data analysis (adapted from Creswell, 2007)

THE PROCESSES OF FINDING THE PHENOMENON				
Personal bracketing	Search for significant statements	Finding of meaning units	Textural description	Structural description

The researcher found the aspects of textural and structural descriptions specifically useful in her data analysis, but for a comprehensive understanding of Creswell's model, al aspects of the process are discussed.

- *The personal bracketing of the researcher*: Bracketing of personal experience implies the setting aside of all pre-assumptions and knowledge of the phenomenon. It is nearly impossible to be totally objective therefore, ethical praxis 'summons us to start with the presumptions that default predispositions exist so one needs to commit to discovering, excavating and taking account of the ways in which they may hinder or enhance one's work in a given context' (Symonette, 2009:282). To this end ,the researcher first wrote out her own ideas about the topic in an effort to set aside her own ideas and bracket her own experiences, as it is advised by Marshall and Rossman (2011:96-97).
- *The search for significant statements*: The field notes were read and re-read many times, and compared with to the audio recordings. Notes were made and after this, the audio-tapes were transcribed by an independent company who daily does court procedure transcripts.

  When the transcripts returned, the researcher did corrections to the scripts by again listening to the recoding and comparing it to the transcript. Some words were inaudible to transcribe, but the researcher recognised them as the names of tests that were used, or

the names of places and people. The names of people and places were then removed and substituted with letters.

- *The finding of meaningful units*: From the transcriptions significant statements were sought. The researcher scrutinised the meaning units for enlightening the research question and discarded those considered as irrelevant.

Utterances, silences and sighs were also coded where the researcher thought these to be significant. All these possible significant information was then highlighted in different colours in the transcribed script. The highlight function enabled the researcher to physically see how many times a certain meaningful unit actually appeared in the transcript. The highlighted sections were then copied and arranged in a spread sheet, where they were counted.

- *Textural description*: The textural description (Creswell, 2007) is an account of *wha*t the conversational partners experienced. The researcher tried to step into the shoes of each participant and then wrote pages of what she thought from each person's specific perspective. This colleague perceived her daily praxis as a means of earning a living, while that colleague perceived it as an end-of-career way to keep herself occupied. The first colleague had to support a family, and had to see as many clients as possible for as many days as possible, while the other was taking her time to do assessments , often *pro bono*.
- *A structural description*: Creswell (2007:62) states that the structural description is an account of how the participants experienced the phenomenon in terms of the conditions, the situation and the context. For instance, how does it feel to be female, young, well-qualified, able to conduct assessments in people's vernacular, but not have assessment measures which were developed for one's own cultural group ?

According to this information, the most important themes which were relevant to the research question namely: How has the philosophy and methodology of Evidenced-Based Practice influenced educational psychologists within a diverse South African society?

4.6.1. The role of the researcher

In this research, the researcher, being the only person to collect the research data, had to become a responsive instrument (Symonette, 2009). Responsivity in research calls for ' ... on-going personal homework in expanding and enhancing one's portfolio of multicultural or intercultural resources and other boundary spanning competencies' (Symonette, 2009:282). Research responsivity also calls for the demystifying of data and making meaning by committing to discover, excavate and take into account the ways in which one's own 'default predispositions hinder or enhance one's work within a given context' (Symonette, 2009:282). Being an educational psychologist and having worked with clients from various backgrounds and in various settings, the researcher discovered her own default predisposition and had to bracket this to truly understand the life-world of her colleagues. There are, however, also some theoretical and meta-theoretical assumptions that may influence the research and the researcher had to take cognisance of these assumptions and her own situation which may subtly influence the outcomes of the research.

4.7. META-THEORETICAL ASSUMPTIONS

Qualitative research implies certain meta-theoretical and philosophical assumptions in the researcher (Creswell, 2007:17). These assumptions have far-reaching implications for any qualitative research study in the sense that they determine how the researcher 'embraces the idea of multiple realities' (Creswell, 2007:16). Some meta-theoretical assumptions are explained in Table 4.2. The basis is Creswell's (2007:17), but the perspectives of Piantanida and Garman (2009:46) are reflected. The implications for this research study are also discussed.

Table 4.3 Meta Theoretical assumptions (adapted from Creswell, 2007 and Piantanida & Garman, 2009)

Meta-theoretical assumption	Question	Characteristics
Ontology	What is the nature of reality?	There are multiple subjective realities and each participant's reality must be respected
Epistemological	How does the researcher know what she knows? What is the relationship between the researcher and the phenomenon being researched?	The researcher is the most important 'tool' in the research process.
Methodological	What is the process of research?	The researcher uses inductive logic, studies the topic within its context and uses an emerging design.
Rhetorical	What is the language of research?	The researcher writes in a literary, informal style.
Axiological (Piantanida & Garman 2009:46; Creswell, 2007:17)	This refers to what forms of knowledge are available and what modes of determining knowledge are valued.	The axiological knowledge shapes the ways of being in the world and relating to others. The researcher acknowledges that research is value laden and that biases are present.

4.7.1. Implications of meta-theoretical assumptions for this study

The assumptions are discussed as they refer to the researcher's stance.

- *Ontological assumption*

This study used the verbatim words of the conversational partners and supplied evidence of multiple perspectives from different educational psychological practitioners. In this way the ontological assumptions were addressed and being an educational psychologist herself, the researcher narrowed the distance between her and the conversational partners. The researcher respected the realities of the conversational partners.

- *The epistemological assumption*

The position of the researcher was that she has been an educational psychologist who has nearly twenty years' experience in different settings, ranging from schools for learners with barriers to learning, to being a school psychologist at a private school and in private practice. The literature survey also prepared the researcher for the field research. Time was spent in the field, to become familiar with the research participant's world. The epistemological influence came from the fact that although all the research participants are qualified educational psychologists, not all of them may have the same stance about the creation and dissemination of knowledge in particular areas of inquiry (Stanford Encyclopaedia of Philosophy, 2008:n.p.). The researcher knows that she was never be totally unbiased, but tried deliberately to use metacognitive processes to bracket her own experience. All details of the verbatim interviews were worked with before any generalisations were concluded. Everything was contextualized and was continually revised. The questions that were asked were generated from experiences in the interviews and were never worded exactly as they appear on the interview schedule. The researcher used the third person to report the research, but this does not in any way imply that she distances herself from the research.

- *Axiological knowledge*

According to Symonette (2009:279-293) culture and contexts are critical shapers of the research process. Axiological knowledge which pertains specifically to the value systems of all the participants within the research may enhance or hinder the collection and interpretation of data. Axiological assumptions can be thought of as primarily concerned with classifying what things are good and how they are good (but it may also encompass a value theory which included moral theory and meta-ethical theory) (The Stanford encyclopaedia of Philosophy, 2008: n.p.).

The question of honouring someone else's value system is succinctly defined by Symonette (2009:279-293) as a system of embodying the normative expectations of the conversational partners and becoming respectful, and trustworthy 'answer seekers and answer makers'. Cultural values and political-historical gender and racial bias all need to be consciously put aside to reveal the phenomenon as untainted as possible.

In this research, the researcher was aware of all the possible differences between herself and the research participants and this was taken into consideration in the analysis and interpretation of data.

4.8. ETHICAL ISSUES

Ethical considerations involve more than merely informed consent, but are closely aligned with the trustworthiness, the validity and the soundness of the research. Marshall and Rossman (2011:39-52) argue that research should be judged by how ethically the researcher is likely to be engaged in conducting the study. All research conversational partners were requested to give their written consent to participate in the research, (see Appendix A). Anonymity of all research conversational partners and confidentiality of all data were guaranteed. No names or any other method of identification were included in the study. If names needed to be given for clarity and explanation pseudonyms were used and data were described in such a way that it could not be tracked back to where it originated from. All research conversational partners were informed of the type of information that was collected and they

were free to decline participation or withdraw at any time. If data were in any way detrimental to the person's integrity or practice, that data remained confidential or were discarded. In the representation of the data, comments were quoted verbatim to support the arguments of the researcher.

The researcher supported the participants by being open about her own problems in daily practice. The collected data were transcribed and each conversational partner got an e-mailed copy of the transcription to verify whether the content was in agreement with what they had talked about. If any conversational partner disagreed or questioned anything, it was discussed with him/her and clarity was obtained to make the research findings trustworthy.

4.9 SUMMARY

In this chapter the research design was presented. A qualitative design within the phenomenological genre was used. The researcher chose the qualitative interview to collect the data. When the interviews had been transcribed, a combination of two methods, which included the method of Giorgi (1994) and a method by Creswell, (2007) were used to interpret them.

Eight conversational partners were purposively selected to represent a variety of different educational psychologists in practice. Variation at the onset of a study is an acceptable way of enhancing the trustworthiness of a study. The conversational partners were also as representative of the South African demographics, as possible. Where it was available, supporting material was collected to give an account of the 'lived experiences' of the conversational partners in an unbiased and trustworthy way. In the next chapter the data are presented and interpreted.

CHAPTER 5: RESEARCH FINDINGS

5.1. INTRODUCTION

The Task Force on Evidence-Based Practice (2006:14) suggested many possibilities for further research that were needed to enhance clinical expertise. One of the suggestions was 'studying the practices of clinicians who obtain the best outcomes in the community, both (in) general and with particular kinds of patients or problems.' It was this specific suggestion that gave impetus to the way in which this research was designed. The impact of the evidence-based movement on educational psychologists practising in a diverse society like South Africa, the context in which they practise and the challenges they face, were indeed essential to explore. The researcher, however, did not use only clinicians who obtained the best outcomes as a specific research criterion, but knew that the educational psychologists she involved in the research were all respected for the work they were doing and therefore could be expected to have particular clinical expertise.

The conversational partners were given a brief background on the paradigm of Evidence-based practice and what it demanded and they were informed that they most probably did meet many of the requirements without really knowing about it. Here the researcher was thinking more about their actual praxis, and not about the process that includes locating and appraising credible evidence as part of practice decisions, while delivering therapeutic interventions that have been designated as 'empirically supported' under specific conditions,(Rubin, 2008:6) that Evidence-Based Practice is renowned for.

In South Africa, the concept of Evidence-Based practice has only recently started surfacing. (See 3.7). Given that only South African educational psychologists participated in the research, the main aim of the research was to understand to what extent the Evidence-Based movement had impacted on the daily praxis of South African educational psychologists who now work within a diverse society. The subsequent aims were to establish how the research participants, here called conversational partners, had adapted their assessment and intervention practices to accommodate their clients in a diverse South African society.

The researcher has first-hand experiences of working with a diversity of clients and has also experienced the progressive acculturation of her clientele, for whom continuous adaptation was a necessity. The lack of research in Evidence-Based educational psychological practice in South Africa exists, yet educational psychologists realise that it will only be a matter of time before the pressures which faced colleagues in the U.S.A. will impact on their practices. Already managed health care constraints are limiting the services of the educational psychologist (Botha, 2011) and soon it may be expected of them to provide conclusive evidence of the positive outcomes, for their interventions to be reimbursed.

The research findings were discussed and the different themes that emerged were highlighted. The conversational partners were most sceptical about assessment issues and this appeared as a strong theme across the whole spectrum of assessment in the educational psychologist's practice, namely assessment of cognition, behaviour, socio-emotional situation, intra-and inter-personal well-being, Scholastic, study, learning styles, and career assessments were also problematic, but the assessment that perturbed educational psychologists most was that of cognition, and this manifested as a strong theme for all conversational partners.

After the discussion of the themes and the research findings, this chapter concludes with a reflection on the significance of the study.

5.2. EXPECTED OUTCOMES OF THE STUDY

The description of what Evidence-Based Practice in Psychology (EBPP), entails has altered and improved throughout the development of the movement. The researcher did not expect the conversational partners to be using only instruments with an EBA rating of 'well-established', because this information was only recently established. Neither did she expect them to centre their therapeutic interventions on the use of empirically-validated manualised interventions, because even in the U.S.A the use of manualised interventions is not an everyday practice yet. To expect this from South African educational psychologists would have been highly impracticable, since the dissemination of manualised evidence-based interventions was still a

problem, even in the U.S.A where the Evidence-based movement originated (Weisz & Kazdin, 2003:447). Pure evidence-based practice would also imply that psychologists would only use assessment instruments that have been proven to be valid and reliable and adapted for use with culturally and linguistically diverse populations.

Nevertheless, the researcher expected to find a high level of professionalism and clinical expertise amongst her colleagues. She also expected that the conversational partners would have found unique ways of dealing with their practice dilemmas as the research has shown. This has been discussed in section 3.5.2- 3.5.4. She predicted that she would find that the conversational partners were conducting research to address the problems they daily encountered.

5.3. DATA COLLECTION

5.3.1 The interview

The qualitative interview (Kvale & Brinkman, 2009; Rubin & Rubin, 2005) proved to be the medium to link the scientific and the ethical, as Marshall and Rossman (2011:44) suggest. To link the scientific with the ethical in this instance meant that in the face to face interview, the researcher could question, probe and verify any possible misconceptions, while fittingly giving her conversational partners the respect and dignity they deserve as her colleagues.

5.3.2. The conversational partners

Before the first conversational partner was visited, thorough preparation had to be done. Time and financial constraints forced the researcher to choose conversational partners from the Gauteng area, where she resides. The conversational partners were found as described in 4.4.1 and the practicalities such as how much time would be involved and what could be expected from them were explained to them. The purpose of the research was explained to them briefly and they were invited to participate. The researcher found that her colleagues, although they were not known to her, were obliging to participate. From all the people who met the criteria, only one person declined and one person's interview was not included due to concerns of

confidentiality. There were therefore eight useful interviews that could be used in the research. The research partners were then made up of the following persons as set out in Table 5.1.

Table 5.1: Demographics of conversational partners

	Sex	Age	PRIMARY Language	Clients language preference	Qualified	Qualifications
1	Male	+60	Sotho	All South African languages	Before 1994	Doctorate
2	Male	35-39	Sotho	All South African languages	After 1994	Doctorate
3	Female	30-40	Afrikaans	Afrikaans	After 1994	Masters
4	Female	40-49	Afrikaans	Afrikaans. English	Before 1994	Doctorate
5	Female	40-49	Afrikaans	Afrikaans	Before 1994	Masters
6	Female	50-60	Afrikaans	Afrikaans	Before 1994	Masters
7	Female	50-60	English	English	Before 1994	Masters
8	Female	35-39	Sotho	African languages English	After 1994	Masters

5.3.2 The research method

The empirical research consisted of interviewing eight educational psychologists, who were representative of the South African fraternity of educational psychologists. Educational psychologists in South Africa work primarily in private practice, in schools and in multi-professional practices. Most educational psychologists in South Africa, who qualified before 1994, are able to conduct assessments only in English and/or Afrikaans. Some that qualified after 1994 are able to conduct assessments in other indigenous languages, and these persons are also representative of previously disenfranchised cultural groups. The interviews were all conducted at the offices of the individual conversational partners. All interviews, except one, were conducted in English. One person felt more comfortable to do the interview in Afrikaans and her transcripts were translated when used in this report. After pleasantries were exchanged and the conversational partners had signed the consent form, the researcher then introduced the topic with the opener: 'Please tell me about your practice' and an audio recording was made

of each conversation. Probing questions as set out in the interview schedule (Appendix B) were asked when the natural flow of the conversation allowed for it. The researcher tried to understand the phenomenon as it was lived by the conversational partners.

5.4 DATA ANALYSIS

A combination of the data analysis methods of Giorgi (1994) as described in section 4.6, and Creswell (2007:159) was used to obtain the themes. In practice the analysis of the data occurred as follows:

Description: The researcher listened and re-listened to the audio recording after each interview and tried to describe the phenomenon as clearly as possible. She also wrote copious notes on the experience while trying to follow the conversational partner's viewpoint and remarks from his/her distinct perspective.

The reduction: The researcher specifically bracketed her own experience, and what she already knew from the research, and tried to see only the description of the conversational partners. In practice this meant summarising each audiotape.

When the researcher felt that she was familiar with the content on the audio-tapes, these were then transcribed. The researcher transcribed the trial interview herself, but realised that it was a very specialised and time-intensive task, and that she also did not have the right equipment to do the transcriptions. The task was therefore outsourced to a firm that specialises in the transcription of court proceedings. In her search for essences the researcher used a search and find function of her word processing program after the audio tapes were transcribed. In this way she could identify significant parts of conversations in each interview, which were later clustered to become themes in the research. From the data obtained only four themes could be generated in line with the research problem and its aims. These are tabulated in Table 5.2.

Table 5.2: Themes from the research

Theme	Sub-themes
Emotions of Conversational partners	Frustration Feelings of inadequacy Burn- out. Financial insecurity. Excitement
Assessment	Reliability and validity of tests The use of foreign tests. Ethical use of tests.
Language issues	Children's comprehension of English Instructions adapted, translated English as language of communication Use of translator

After identifying the themes, the researcher repeated the exercise using the transcripts alone with another 'search and find' function of the word processing programme. With the process followed in the analysis, the researcher tried to get a textural description of what was experienced as well as a structural description of how it was experienced (Creswell, 2007:235) and could start comprehending how the conversational partners experienced the phenomenon of being an educational psychologist in a diverse South African society.

5.5. THE RESEARCH FINDINGS

5.5.1. General

As was anticipated at the beginning of the research project, the impact of the Evidence-based movement on educational psychological practices in South Africa was minimal. Aspects of cultural, linguistic, historical and political importance and the impact of these aspects on educational psychological practices came to the fore. In this respect cultural aspects were observed in the specific way some conversational partners interacted with their clients – some had long conversations with clients and were not eager to use assessment instruments.

Historical and political aspects were noted in the way that some conversational partners still worked only with their own language and cultural group. Others were working cross-culturally, where the therapist was of the previously dominant Afrikaans or English culture and the parents and children were from the previously disenfranchised cultural groups.

An unexpected finding was that at least one conversational partner, a seasoned professional, from a previously disenfranchised cultural group, Sotho speaking, had worked with at least one Afrikaans-speaking, white child. To the researcher this was an enlightening finding; she had never expected democracy to have matured to this extent already.

5.5.2. Theme 1: Emotions of conversational partners

This study was intended to understand the phenomenon of the influence of the Evidence-Based movement on educational psychologists in private practice in a post-Apartheid South Africa and it was expected that educational psychologists would be emotionally involved in their work. The findings of reflected here answers the question of the educational psychologists awareness of the paradigm of EBP and how they had adapted their praxis due to the demands of a changing society. Not one of the conversation partners was cognizant of the philosophy of EBP and their greatest frustration was feeling ineffectual to provide assessment to the diversity of clients the encountered in their practices. The assessment process and instruments available, contributed to this in a large way, but this was discussed separately under the theme dealing with assessment. They conversational partners spoke with mixed emotions about their work. Their emotions ranged on a continuum of feeling stimulated by some aspects of their work, to feeling frustrated and experiencing burnout. Hardly any conversational partner was truly satisfied with their work circumstances. In a school milieu, where the educational psychologist had to work cross-culturally, they felt overwhelmed by quantity of learners the were responsible for, the depth and seriousness of problems reported by learners, and their own feelings of powerlessness to address some of the needs stemming from poverty, language difficulties,

continued racism and didactic voids. The issue of to whom the therapy should be directed, e.g. parents, extended family, educators or peers was an area of great concern.

The greatest enthusiasm was from those working only within their own cultural group, concentrated only on a very small area of expertise, like doing only career guidance, and who were somehow in a 'protective environment' like having a part–time practice with financial support from other sources.

The researcher had sincere compassion with the conversational partners who often felt exploited. Exploitation in this sense implied rendering a service and then not being reimbursed for it, either by medical aids or by clients. In South Africa there is generally a tradition that medical aids are there to pay for all health related costs, psychological services being one. Many clients find that what is covered by their medical aid does not allow for the 'luxury' of psychological services. When the clients' medical aid funds are depleted, they very seldom continue with the therapeutic intervention. When the therapist has been working on a longer term aim, he/she is often left with the dissatisfaction of incomplete interventions.

The conversational partners also voiced feelings of not being recognised as professionals within the health care industry. Many educational psychologists, some of whom participated in this research, had through extensive post-graduate studies, improved their expertise and felt comfortable that they were professional and able to work with children as well as adults. An impression was also formed, that 'solo private practice' as an educational psychologist, was not to be recommended because the isolation could more easily lead to burnout. This may be contributed to by the fact that supervision is not mandatory in educational psychological practice in South Africa and educational psychologists in private practice could easily become isolated and overwhelmed, especially if they already have feelings of inadequacy. The conversational partners had a need for more contact with other professionals. However, the financial implications of taking time off from practice to interact with others were such that it could only be done for reasons such as continuous professional development. The general feeling about continuous professional development (CPD) was that it was often very expensive and not

targeting their practice needs. Informal discussions with colleagues (which make up only a small part of accredited CPD activities) were often preferred by the conversational partners to formal training which did not address their specific concerns. What was interesting is that most of the continuous professional development activities the conversational partners attended, were not to enhance their specific skills as educational psychologists, but were about generic activities in general psychological practice, or focused on specific clinical problems, specific therapeutic interventions, and ethical matters. Ethics is a mandatory part of the continuous professional scenario.

Another form of frustration was related to financial burdens. Some of the conversational partners chose to work for far less than what is advised by the National Health Reference Price List (NHRPL).

Conversational partner 2 talked about getting involved with clients and doing work pro bono, because the clients were too impoverished to pay, yet needed the services:

> *… you know they're from poverty stricken (sic), this is how it affects me, and I think it affects all psychologists, unless if you have a thick skin. What happens, you know they're from poverty stricken (sic) they come in, you see them for two hours but you charge for an hour and people wonder … but aren't you a professional?*

Conversational partner 2 also commented on the psychotherapeutic situation:

> *They don't get it that we … we treat and we engage with that person, we don't treat the illness. We don't just take a pill. We talk to the person and relations start and you feel the pain, you sympathise with the person and you know taking this money it means creating another problem because of part of your engagement with this person is actually therapeutic itself, you see.*

Conversational partner 5 referred to the difficulty of being reimbursed for services rendered,

> *…Aag jong, dit (betaling) is 'n ander storie. Ek sukkel maar om my geld te kry. Ek vra maar wat 'n remediërende onderwyser vra.*

(Translation: ... Oh ... that (payment) is another story. I battle to get my money. I charge what a remedial teacher charges.)

A cause of frustration for Conversational partner 3 was the workload within a school environment and he/she indicated that it was sometimes difficult and that the workload was too overwhelming,

> *… sometimes it's difficult; the workload is I think my biggest frustration because I'm in a school context.*

Conversational partner 4 mentioned the frustration of differences between the training environment of assessment practices and the reality. To assess a child for six to ten hours as she as trained to do, is impossible:

> *[In my training] I was very frustrated as far as the assessment situation was concerned. When I trained, you trained and you were taught that you have to do virtually six to ten hours of testing. I never thought that that was particularly valid in terms of small children and I used to want to break it down into two morning which they (the academics) nearly had a fit about and everything had to be done in a day, so that was a huge frustration for me because I used to look at … these children were so tired at 1 o'clock because we used to start at eight and just think we're not going to get anything out of them.*

This specific conversational partner, as well as two others who attended a certain university, all felt that they were 'over trained' in psychometrics, but lacked training in therapeutic intervention. Two of the conversational partners felt inadequate to do what they were supposed to do. This was not only due to the fact that they did not have the assessment tools. Some indicated that educational psychology was inferior to the other registration categories of psychology, especially clinical psychologists. Conversational partner 4 indicated that clients often do not know what the educational psychologist is able to do,

> *… the moment they get to us they actually think we only do remedial because of our title. I think Educational Psychologist is not a great title. I probably would want to change it say child, adolescent (psychologist) or something like that, or just Psychologist because I find we do*

everything so I'm not supposed to diagnose pathology but yes I must recognise it and then send it on its way to a clinical (psychologist) ...

The need for the educational psychologist to be able to make a differential diagnosis was well described by House (2002:17) when he spoke about mental disorders in systems like the DSM IV-TR. Human relationship difficulties that upset adjustment and functioning are also considered Axis IV on the DSM IV-TR 'Other Conditions That May Be a Focus of Clinical Attention' as it is named in the DSM IV-TR system, are among the problems frequently seen by educational psychologists. Educational psychologists are, however, also expected to be able to at least recognise clinical disorders (Axis 1) and be able to code mental retardation (Axis II).

Because of the fact that the conversational partners did not know the exact field of study of the researcher, they talked about assessment of all aspects within their practices as they experienced it. They found emotional assessment very frustrating, because of the lack of reliable assessment instruments. Some had training in the assessment of emotional intelligence and used that with their adolescent clients. Personality assessment instruments available in South Africa were out-dated, with a questionnaire for children dating back to 1992, and one for adolescents dating back to 1980. Therefore many educational psychologists use informal assessment. For the purposes of this study, only their experiences in intellectual assessment were discussed. The reason for the focus is that educational psychologists use the outcomes of cognitive tests to make very vital decisions that may affect a child's entire future.

5.5.3 Theme 2: Assessment

The assessment of cognition forms a very large part of the work of educational psychologists. Assessment in general is viewed as 'a problem solving process in which psychological tests, interviews and other sources of data function as tools used to answer questions' (Bagby, Wild and Turner, 2003:213). It is also described as all the actions taken by an educational psychologist to obtain information about the current functioning of a child in his/her wider contextual situation. To the researcher, the definition of

Maloney and Ward (1976:5) still stands as one of the most descriptive of the assessment situation, when they say assessment is,

> *... an extremely complex process of solving problems (answering questions) in which psychological tests are often used as one of the methods of collecting relevant data. The implementation of psychological tests is only one of the methods of collecting data.*

The conversational partners mostly voiced their frustration with old, non-applicable assessment media. Conversational partner 4 indicated that she was frustrated by the tests that especially they (Universities) use because they were very old and obviously with the new political dispensation even worse, because no tests had been developed and obviously with the legal problems with in applying tests one had to be very careful. She indicated the chasm which exists between training institutions and the real world, and also complained about the 'careful' attitude the educational psychologist had to have in interpreting the results and voicing a professional opinion.

Conversational partner 7 pointed out that out-dated tests were still used on a daily basis and that no appropriate tests were developed in line with the new national curriculum,

> *… we still use a lot of tests that they have been developed in the old Onderwys Departement, (Education Department). I very often feel uncomfortable about the results, and the reason for that is, I don't … do not think they are to a great extent applicable in the current school situation, because of the OBE etc.*

Conversational partner 8 expressed concern about the legal implications of using tests that are out-dated and inappropriate,

> *... there's a lack of good sound research tests that can be used in South Africa. Ek dink ook wat in die hof kan staan.*

(Translation: I also think that tests should be able to be used as evidence in a court of law.)

Conversational partner 8 also commented about the cultural specificity of tests and that she sometimes feels frustrated,

> *… and sometimes what I will do is I will contact colleagues and ask them: Do you know about a test that I maybe can get hold of that can*

help me more with the emotional stuff ? It is frustrating to get … All tests are from overseas. … they it was developed overseas and you don't know really.

Conversational partner 8 referred to the pre-school assessment instrument that most educational psychologists use and said, that she has a problem with it,

… because I think some of the vocabulary is also out-dated. I think they need to just go and revise that and put in a few new words maybe or keep track with language development.

Conversational partner 3 indicated that the Aptitude Tests that are used, and on which learners' subject and career choices are often based, discriminated against learners with reading problems,

… I don't really like the DAT, especially if the child's got a reading problem because what I've seen here, a lot of children test very low on the DAT and their parents are all up in arms.

This conversational partner worked within a public school environment and was referring to the Differential Aptitude Test S-version. In the empirical investigation, it was found that educational psychologists use different instruments for different purposes. Cognitive ability testing via standardised and norm-referenced tests have offered useful information to educational psychologists (Miller, 2010: location 2206), but the research partners all found it difficult to derive enough useful information from the available tests due to various reasons, like tests not being standardised for the population group they assess, test not giving results on a certain construct, and the certainty of the conversational partners that out-dated test cannot be appropriate for the modern child and the adapted curriculum.

In line with the research findings (Armour-Thomas & Go-Paul-McNicol, 1998; Alfonso et al., Flanagan & Radwan, 2005; Flanagan et al., 2009) as discussed in Chapter 3, the conversational partners made adaptations to their assessment practices. One conversational partner combined the SSAIS-R with the WISC IV and did a few subtests from each instrument. Although she felt a bit uneasy about doing this, because of her training, she still believed

that she obtained better qualitative information in this way. Conversational partner 4 said,

> *I use a combination of that because I like both, but certain aspects of both. I do not like each test in its entirety. So I use bits and pieces and I use it more as a power-test as well to get a global picture of what they are doing, how they are featuring from an intellectual development point of view but I'm more interested in what their actual skills are in terms of the cognitive strengths and weaknesses and that I base … a lot of my feedback is based on that.*

Conversational partner 6 substituted words and translated words in sub-tests like 'verbal reasoning' and gave the rationale for this when she said,

> *The logical reasoning as well as the verbal reasoning, our black kids struggled seriously with that because the language that is been used in that test is very difficult. So, in most cases one would just try to substitute some difficult words with simple English or words from the child's mother tongue. so that the child can understand, but despite that the way they are structured we find that it's a challenge to our kids.*

The conversational partners also did impromptu translations of test instructions for English second language learners who were unable to understand the standardised instructions. Conversational partner 8 commented,

> *I often translate the instructions for them. You know they do not have the vocabulary. So if children do not understand, I quickly translate for them. It gives them courage.*

Conversational partner 6 also encouraged children by talking to them in their mother tongue,

> *You see that you then switch the child's mother tongue, African language, then the child opens up and talks; then you get a true reflection of this child's functionality, especially when it comes to the IQ.*

The use of non-verbal tests seems to be a way of overcoming the language difficulties of children. Conversational partner 7 uses the Leiter-R in

combination with the Wide Range Assessment of Memory and Learning (WRAML),

> *… I'm currently using the Leiter –R and the WRAML which are tests that we've imported from overseas.*

The Wide Range Assessment of Memory and Learning (WRAML: Sheslow & Adams, 1990) was rated as a well established' EBA instrument (Campbell et al., 2008: 999-1014).

These remarks answered the research question of to what degree the praxis of education psychologist were evidence-based.

Flanagan et al. (2007:364-378) investigated the cultural loading and linguistic demand of twenty different instruments. The Leiter-R was considered the least culturally loaded and linguistically demanding of all. Mpofu and Ortiz (2009:65) are of the opinion that the use of non-verbal tests for culturally and linguistically different children has been extensively researched, and the conclusion is that non-verbal tests may not solve all the problems of equity in assessment with diverse populations, but they remain a reasonable choice for managing language issues in assessment. For specific assessments, such as a psycho-legal or medico-legal, specific conversational partners used these assessments, the NEPSY 11 (Korkman et al., 2007). Conversational partner 1 used this test regularly and found it the best instrument to provide the detail he required for these specialised assessments. The NEPSY II is an encompassing assessment instrument that has takes 2 to 3 hours to complete with school aged children. Executive functioning can be established, the number and variety of subtests can be adapted according to the needs of the child. It is easier to link results to educational difficulties and to make recommendations for mental health interventions. The most prominent aspect of this assessment instrument for psycho-legal assessments is to obtain a comprehensive view of quantitative and qualitative patterns of neuropsychological performance. The Nepsy 11 was among the EBA instruments cited by Campbell et al. (2008) as a well-established assessment instrument.

The fact that these professionals also value the socio-cultural issues that are presented by their individual clients also qualify them as being evidence-base

in their approach. EBP places considerable emphasis on socio cultural issues and individual concerns. In the original model presented in Chapter Two, this is referred to as client's characteristics and implies the specific cultural, developmental states, his/her needs, ecological circumstances, values and preferences.

5.5.3. Theme 3: Language difficulties

Being in a country where eleven languages are spoken, language difficulties were not such a strong theme as the researcher had anticipated and conversational partners mostly commented on the unavailability of assessment instruments in the home languages of the children, specifically those from rural areas who could not understand English. Urban children from previously disenfranchised groups were mostly not fluent in their home language as an academic language, because they had been taught in English.

Conversational partner 1 indicated that children had to be tested in English, but that their English was very poor.

> *… finds among especially the majority of the black children, they are not fluent in English although they are at English medium schools and that is the real, difficulty and I find that they cannot cope because the parents speak their own vernacular at home and again the majority of the parents are not so educated that they've established a culture of speaking English.(….) It's learning problems, not that their IQ's are low, but because they're at English medium schools, one has to test them in English.*

Conversational partner 6 reiterated this by indicating that even if the test is available in an indigenous language, the child cannot understand it because he does not have a foundation in his own mother tongue.

> *So English to them tends to be sort of their first language. They understand it better as compared to JSAIS in Setswana, JSAIS in Sepedi, and JSAIS in Zulu. The JSAIS (Junior South African Individual*

Scales, 1992) is the test used for pre-school children. The fact that smaller children are now better versed in English is an indication of acculturation that has taken place.

Most conversational partners indicated that it was difficult to distinguish between language impairment and language barriers. Conversational partners who do not speak an indigenous language did not see clients who were unable to express themselves in English. The psychologists who could speak indigenous languages found that there were very few situations in which they had to use a translator to ensure that they had the correct information and this was also only in medico-legal cases. All the conversational partners who worked with any other official language, except English, complained about the limited resources they had for these children.
The lack of resources place conversational partners in difficult ethical dilemmas. As some have already indicated, they are doubtful that their assessment results will hold any value in a court of law.

5.5.4. Theme 4: Ethical practice

Integrity is one of the trademarks of a professional person. Conversational partner 2 talked about producing reports for institutions where integrity is of the highest importance, since the future of the person who is assessed often rests on the report of the psychologist. This conversational partner was in two minds about whether what he/she offered is truly unbiased and scientific.
Conversational partner 2 made an interesting comment about using literature as a means of backing up assessment findings,

… I've seen reports…. They do help, they do give … but they lie to the Court, do they give exactly what the Court wants, I don't know but I guess that's for the Court to decide, hence, I usually go and explain. Remember you have to use literature as well. So, it becomes a challenge, but one has ethics, stick to the ethics of work. One has to be authentic and true and honest to what's happening.

5.5.5. Summary of research findings

The aims of the research were to:

Conduct a literature survey to determine the nature of Evidence-Based practice,

To conduct interviews with South African educational psychologists to determine if they were aware of the paradigm of evidence-based practice. and

To establish to what degree their praxis were evidence-based.

The themes emerging from this research reflected some of the daily concerns of educational psychologists in an urban setting in South Africa, although this may be not be representative of all educational psychologists, which was considered as limitation of the study.

The findings of the four main themes can be summarised as:

Theme 1. The emotions the conversational partner: The conversational partners experienced a reduced degree of work satisfaction. This could mostly be contributed to their frustrations about assessment instruments, but also being affected by the socio-economic circumstances of their clients and the challenges in education.

Theme 2 Assessment:

In the assessment arena several issues emerged. Apart from those that lead to frustration, there were also specific concerns about local tests being out-dated and overseas tests being costly, without any assurance that the material being appropriate due to the fact that is was not standardised for South African circumstances. The conversational partners indicated that their assessment 'toolkit ' is meagre and they wanted more instruments for specific groups of children and thereby implying that they would have preferred working in an environment where assessment equity was the norm. A milieu where assessment instruments could be used with confidence was preferable and where a choice of instruments was reliable and valid. The conversational partners made adaptations to their assessment practices, like adjusting instruction and impromptu translating. They also used sub-tests from different instruments to obtain their assessment goals.

At least two respondents indicated that they followed a more indigenous knowledge system in which they tried to get a holistic picture of the child

without subjecting it to 'foreign circumstances' such as formal assessment. An indigenous knowledge system in this sense implied that the conversational partners would rather use informal assessment methods, such as doing a thorough intake interview, talking to the child, his/her parents, teacher and other role players. These methods also formed part of the other conversational partners' assessment, but they still verified and complemented the information obtained with the use of psychometric assessment.

Some used formal and impromptu translations while others still used non-verbal tests of intelligence. The conversational partners all indicated that psycho-educational assessment is challenging in a diverse South Africa. This situation correlated with the literature findings which indicated that assessment practices with all culturally and linguistically diverse populations was a field which still needed an almost insurmountable degree of research and experimentation.

The tests for use neuropsychological assessments were in line with those used in other parts of the world.

5.7. SUMMARY

Educational psychological practice in a diverse society, calls for assessment instruments that allow for both transparency and transportability (Mpofu & Ortiz, 2009:43). The realities of a diverse society, in which English is largely a second language, and in which there exists enormous cultural and linguistic diversity in relation to assessment instruments, implies that these assessment instruments will either have to be adapted or specifically developed for use in the South African society.

The conversational partners in this study used different methods of adapting their assessment praxis to follow the credo of beneficence. When accommodating the child and his/her linguistic challenges, they question their assessment results and their own integrity. In a climate where the scope of practice of the educational psychologist is contested by the Health Professions Council of South Africa, the need for an assessment approach that will have fidelity is of the utmost importance. The next chapter concludes the study with the synopsis of the findings and recommendations.

CHAPTER 6: SYNOPSIS OF FINDINGS, LIMITATIONS, CONTRIBUTION AND RECOMMENDATIONS

6.1 INTRODUCTION

This research was initiated by an awareness of the inability to deliver the 'right' intervention to culturally and linguistically diverse clients. The research path was challenging, but the discovery that many other educational psychologists (Armour-Thomas & Gopaul-McNicol, 1999, 1998; Ortiz; 2005/2008; Miller, 2010) had creatively turned the situation into an opportunity for learning and serving diverse population groups, was encouraging. In terms of the aims of the study which was to identify whether the evidence–based movement had had any impact on educational psychological practices in a selection of South African educational psychological practices, the researcher had to establish the exact nature of Evidence-Based Practice. The subsequent literature study addressed Evidence-Based Practice as well as Evidence-Based Assessment. The latter was found to be a very under-researched area. The empirical investigation, to support the aim of the research was the use of qualitative interviews, conducted with eight educational psychologists in private practice. This investigation led the researcher to interpretations of data and certain findings, amongst others, that assessment was a major concern for all practitioners. Most conversational partners had concerns about aspects of ethical practice. They felt that the tests they used would not stand in a court of law.

They also struggled with the ethical use of tests that were not intended for the clients they were assessing.

6.2. LIMITATIONS OF THE STUDY

The study was limited in its extent. Only eight conversational partners were part of the study and they all resided in Gauteng. This limited the study to an urban area in one province only. If educational psychologists from rural areas had been included in the study different views may have been observed and possibly valuable insights pertaining to cultural diversity would have been

established. The same holds true for involving educational psychologists from other provinces, where other language and cultural groups reside.

The study was also limited in that the researcher is of the opinion that she did not sufficiently explore elements such as equity in assessment, language barriers, and specific cultural and ethical issues in her enquiry. With more time and resources it would have been possible to have probed more to find out how the conversational partners secured equity in their assessments. How did they, for instance, assess an Afrikaans-speaking child for application for a concession, if the Independent Examination Board prescribes the WISC IV as the sole instrument for use? How did they ensure that their impromptu translations did not impact on the results they obtained?

A third limitation is that this study can be described as a one-sided view, because the views of the educators of educational psychologists like universities have not been sought, nor have the views of the clients been heard.

A final limitation is that this study only concentrated on one aspect of the praxis of educational psychologists, namely the assessment of cognition. The educational psychologist works with so much more than the assessment of cognition and many other areas of practice have been researched and have evidence-based information which could be disseminated. Some of the available themes from the research are listed below:

Parenting in the 21st century has become a speciality. Here the work of Brinkmeyer and Eyberg (2003) deserves further research.

Learning and the impact of recent brain-based research, (Miller, 2010) is another area of development that the educational psychologist should be prepared for.

Behavioural challenges and problems associated with childhood to adolescence. For this purpose the assessment instruments devised by Achenbach (2010) as well as by Reynolds and Kamphaus (2004) need to be mentioned as evidence-based instruments.

All these and possibly more could have been included in this study to present a comprehensive guide to the inclusion of Evidence-Based Practice in educational psychology.

6.3. FINDINGS FROM THE LITERATURE INVESTIGATION

In terms of the general findings from the literature, Kagee's (2006: 233-248) question, 'Where is the evidence in South African clinical psychology?' was the most telling about the topic. It was this specific question that initially set the researcher on the quest to answer the same question in terms of educational psychology. This led to a literature search that explained evidence-based practice. This was much more complex than first expected and required real tenacity. The discoveries in the research led to a specific question: How do different educational psychologists, within a section of the South African fraternity of educational psychologists deliver a professional, ethical service, despite the lack of culture-fair and linguistically appropriate assessment instruments and methodology? In essence, the literature investigation brought the researcher to the following conclusions:

Evidence-Based Practice is a paradigm with its origins in medicine striving to improve clinical effectiveness. Owing to its utility, the movement spread to most health professions (Trinder, 2000) but due to its origins in medicine, the Evidence-Based movement initially relied on the outcomes of randomised controlled designs to establish the efficacy of a treatment or intervention. This was not compatible with the interventions and methods used in the helping professions. The effectiveness of the interventions of helping professions in the U.S.A. was placed under scrutiny in the early 1990's (Seligman, 1994) and practitioners had to prove themselves and their interventions (Gambrill, 2005). Many psychological therapeutic interventions were tested in Randomised Controlled Trials (RCT) and were deemed 'well-established'. Manuals were compiled for those therapies to ensure that these interventions were delivered with fidelity to the populations for whom they were intended. In this manner, the quality of interventions could be assured (Kazdin, 2005). The Evidence-Based movement relies heavily on critical thinking and encourages practitioners to base their decisions on research evidence

(Gambrill, 2005). Practitioners are encouraged to do research via databases that were created specifically for that purpose.

In the helping professions (like any other profession) there is a need for the practitioners to believe in their own effectiveness and the effectiveness of the interventions they employ. Clients also respond differently to practitioners who believe in the effectiveness of their own interventions, than to one who is hesitant about the outcomes of an intervention (Rubin, 2008). Therefore, all professionals need a solid epistemology so that they can feel secure in what they are doing. The Internet–era has brought about a change in the attitude of clients. The practitioner is not seen as an 'authority' anymore because there is hardly any question a client cannot find an answer to online (Trinder, 2000).

The client, who invests time and money, wants return on investment. Managed Care companies (medical aids) are laying down the law on which interventions were reimbursed and how many sessions were needed to accomplish the therapeutic goals (Parry, 2000). The helping professions differ in nature from Primary Health Care, because what happens in helping relationships is often more subjective (Glicken, 2003), but decisions can still be based on the best research evidence available, because Evidence-Based Practice integrates clinical expertise with research outcomes and client preferences (APA, 2006.).

Where assessment instruments were lacking to meet the needs of the client, for instance, with culturally and linguistically diverse populations, practitioners found innovative ways of accommodating their clients.

Research led to new views on cognition (Gardner, 1999-2006), and to new ways of conducting assessments (Armour-Thomas & Gopaul-McNicol, 1999; Ortiz & Ochoa 2005; Ortiz 2005 & Flanagan et al., 2009). It also led to developments in cognitive theory and science as well as the use and interpretation of assessment instruments (Ortiz, 2005/2008; Flanagan, Ortiz, & Alfonso, 2007). There is a growing tendency to link learning difficulties (disabilities) with neural development and neural deficiency. Miller (2010)

therefore advises that School Psychologists should specialise in School Neuropsychology.

Evidence-Based Assessment (EBA) is an under-researched area (Phares & Curley, 2007). It is also an area that is more compatible with randomised controlled trials in the sense that it is empirical research. Therefore, to have scientifically under-girded assessment instruments for assessment fidelity (Hoover, 2009) is of paramount importance. The American Psychological Association, Division 54 (Paediatric Psychology), in the persons of Campbell et al. (2007), rated 47 instruments used in child psychology to determine cognitive functioning, and have found 27 of these to meet the criteria of 'well-established'. The criteria for Evidence-Based Assessment are very similar to those used for Evidence-Based Interventions. (See Section 3.3.4.)

The burgeoning literature on Evidence-Based Practice and Evidence-based Treatments has at first been met with resistance and fear of lack of therapist autonomy, but there are so many successes that the value cannot be negated.

Evidence-based treatments exist for most of the conditions that propel the largest number of youth into treatment (Weisz &Kazdin, 2003:440). The true goal of evidence-based interventions is not to have a manual for every possible psychological problem or diagnosis, but as Elkin et al. (2007: 574) say, to,

> *take known treatments and interventions and apply them in such a way that most people who receive them will benefit; in short, to have beneficence and autonomy together, which is , by the way, the goal of ethical behaviour.*

6.4. FINDINGS FROM THE EMPIRICAL RESEARCH

From the empirical research, it was established that the conversational partners were frustrated in their efforts to deliver an equitable service, mainly because the assessment instruments were out-dated, not normed for culturally and linguistically diverse populations, nor culturally appropriate for their client base. In line with the research the conversational partners also

found innovative ways to accommodate their clients. Some translated test instructions, some used principles of Dynamic Assessment, such as test-teach and re-test and some even used a method similar to 'cross-battery' assessment, by using some subtests from one test and some from another to verify their findings. However, Cross-battery assessment is a scientifically established method and with immense statistical calculations to determine the final result of sub-test use to determine different constructs. All these adaptations were not done as a consequence of some scientific research or theoretical convictions, but were initiated by the practitioners.

Some practitioners used imported tests, while others still used tests that had been developed during the Apartheid era. Some test used, were rated as well-established EBA instruments. The conversational partners were all aware of the problems that exist in the assessment area, but did not have suitable answers to the dilemma.

At the time of conducting the interviews there was a climate in which educational psychologists were under scrutiny from the HPCSA, as well as some medical insurance providers. These conditions were not conducive for the improved confidence in the professional service that educational psychologists render. The conversational partners all provided excellent service to the communities they served, but most of them had feelings of inadequacy, because they felt they should be able to do more. They wanted to have a greater impact on the lives of their clients and wanted to be considered as specialists by their colleagues.

6.5. CONTRIBUTION OF THE STUDY

6.5.1. The significance of the study

Educational psychology in South Africa is in the centre of one of the most challenging periods of education in history. For the first time racial integration, language diversity, cultural differences and the challenges these factors produce have to be provided for within the educational system.

This study, although looking only at the role of the educational psychologist can be considered to have made a contribution in the following ways:

- First, by studying the practices of South African educational psychologists, the researcher has concluded that educational psychologists are frustrated with their current situation. This frustration may be precisely what is needed to affect change.
- Second, by studying the world trend of Evidence-Based Practice, the researcher has offered a possible solution to future change in educational psychological practices in South Africa. By aligning South African educational psychological practices to fit in with first world trends, or developing a uniquely South African methodology, educational psychology can contribute to raise the standard of education. By recommending (see section 6.7) the Differential Ability Scales (Elliot, 2007) to be standardised for use in South Africa, as a broad-based initial assessment instrument, the researcher believes that she has contributed towards meeting the needs of culturally and linguistically diverse children in South Africa.

If these suggestions were to be implemented, the researcher has also contributed towards creating a platform for more uniform assessment praxis by educational psychologists.

The contribution of this study can be represented on many different levels. It has created an awareness of the current practices in educational psychology and has contrasted these with the first world idea of Evidence-Based Practice. To the researcher's best knowledge no such investigation has ever been done in South Africa. In this sense this work was ground-breaking. This study also gives an insight into what Evidence-Based Practice is and indicates what the South African educational psychologist fraternity needs to aspire to.

Although Evidence-Based Practice cannot be seen as a panacea for all the problems that educational psychologists encounter, the research which is available already can be of value for implementation in educational psychological practices. Much of this research could not be explored in detail, often because of the inability of the researcher to track down the original sources.

6.6. RECOMMENDATIONS

The urgent development of Expert Consensus Practice Guidelines for educational psychology cannot be emphasized enough.

Universities need to encourage the development, upgrading and standardization of assessment instruments as research topics at doctoral level.

Training of educational psychologists needs to include: a) Modules in Evidence-Based Practice in Psychology and Evidence-based Education, b) Specific modules in cultural and linguistic diversity assessment ought to be part of the prerequisites of becoming an educational psychologist. The ability to assess acculturation, acquisition of English and a basic assessment of language development in the child's vernacular are important aspects of serving diverse communities.

Newly qualified educational psychologists require supervision for at least a certain number of years. This ought to be made mandatory. Supervision will lead to improved accountability, which will improve practice and add to the evidence–base of educational psychology in South Africa. Supervisors could be trained at universities in a Post-Masters or Post- Doctoral programme.

Educational psychologists in South Africa need to contribute towards test development, translation, and test re-standardisation. If an online platform could be established by a university, individual practitioners would only need to feed their comments and recommendations into this 'blog' for test developers to use. Government funding could be obtained for the re-standardization of tests.

The Ministry of Basic Education and the HPCSA should be involved in discussions on the need to effect the changes necessary to improve the evidence-base of educational psychology in South Africa. Educational psychologists, who are willing to contribute towards test development, could be exempted by the HPCSA from obtaining Continuous Professional Development points for a period, as an incentive to participate in test development and standarisation.

Specific research activities (reading meta-analyses and systematic reviews) can become CPD undertakings. CPD activities for educational psychologists should include practical workshops like case discussions and evidence-based interventions that are available in particular problem areas.

The training path of psychologists should be amended so that all psychologists in South Africa receive the same basic training with specialisation only at doctoral level. In this way all general psychologists will have the same theoretical background, the same exposure to the DSM IV-TR diagnostic training, the same training in intervention or therapy. The categories for registration will then also be in line with that in medicine, namely general practitioners and specialists.

Professional societies such as PSYSSA should be instrumental in creating practice guidelines for Educational Psychology.

The Health Professions Council needs to review its list of tests approved on a regular basis to ensure that out-dated tests are removed from the list and educational psychologists need to be instrumental in providing the HPCSA with the relevant information.

It would be ideal if more cognitive and ability tests could be standardised for general use in South Africa. A cognitive test, such as the Differential Abilities Scale, (Elliott, 2007) could be standardised for initial, uniform broad–based assessment of South African children who are culturally and linguistically diverse. Other tests can be added to the list of approved tests (HPCSA) for more in-depth testing.

The WISC IV (Wechsler, 2004) could be standardised for use with English mother tongue speakers. Many other tests of achievement like the Wide Range Assessment of Memory and Language (WRAML; Sheslow & Adams) can be adapted to give the educational psychologist a wider range of assessment media to identify cognitive problems.

The development of a practice research network amongst educational psychologists would be to great advantage of all practitioners.

It is also advocated that doctoral students have, at a much reduced cost, career-long, access to the library resources of their alma mater to enable them to keep up to date with research and developments.

6.7. CLOSING REMARKS

South Africa's educational standards require the expertise and skills of educational psychologists. Evidence-based practice in psychology is not a panacea for the current difficulties in education or educational psychological

practices, as specifically experienced in South Africa, but it provides a format for the improvement of the profession to meet world standards. With its emphasis on professional competency and its focus on outcomes, it promotes practice research as well as bridging the gap between global research and current practice. Educational psychologists need assessment instruments which are valid and reliable, but they also need to harness technology to improve their practices. Evidence-Based Practice can provide a scientific basis for South African psychologists to develop guidelines for practice, obtain consensus amongst practitioners on the use of assessment instruments and determine the essence of what constitutes good practice. The diversity of South African society has many challenges, but it also provides ample opportunities for research and intervention.

It is hoped that the establishment of clear practice guidelines will become an integral part of the evidence-based practices of South African educational psychologists. The establishment of consensus amongst educational psychologists as to the use of assessment instruments will further enhance the evidence-base of educational psychology and eliminate the wide variations which currently exist in the profession. The researcher is optimistic that her research will contribute to enhance the standards of practice, training and research of educational psychologists and in this way contribute directly to raising the standards of education in South Africa.

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APPENDIX 1 INTERVIEW SCHEDULE

1. SECTION 1. BIOGRAPHICAL INFORMATION

1. Gender

Male	Female

2. Age

26-29	
30-34	
35-39	
40-49	
50--59	
60	

3. Language

What is your primary language

eng	A fr	N debele	l siXhosa	l sizulu	S epedi	S esotho	S etswana	S iswati	T shivenda	T songa

What is the primary language of your clientele?

eng	A fr	N debele	l siXhosa	l sizulu	S epedi	S esotho	S etswana	S iswati	T shivenda	T songa

2 SECTION B

Only *one* broad question is asked, but probing questions attempt to gather nformation in the following areas.

A. Perceptions regarding practice adjustment in the democratic South Africa

How has your practice evolved in terms of assessment and therapy since 1994.

How has your Client Base changed?

How have you adapted your assessment procedures?

B. What are your Perceptions regarding the knowledge base of educational psychologists in the broader society?

C. Epistemology.

View : What is your view of a person's problems?

Approach : What is you main approach in working with you clients ?

D Evidence Base for intervention.

Have you ever heard of or used a "packaged " (pre-designed) therapy for certain presenting problems?

Do you do research regarding your hypotheses of the person's presenting problem?

E.What do you do to keep abreast of developments in your field?

F Diversity

What is your opinion regarding the validity of current available psychological tests for people who do not have English or Afrikaans as their home language?

G. What method do you use to adapt test interpretations when you assess people from other language groups?

H What role do cultural influences play in some of the presenting problems of your clients?

APPENDIX 2 CONSENT TO PARTICIPATE IN RESEARCH

I …….. hereby grant consent to participate in the research project of Elizabeth Buys. The research in with the University of South Africa and is titled: **An investigation into evidence-based practices in educational psychology in a diverse society**.

I understand that :

- my verbatim words may be quoted in the report.
- I will be guaranteed anonymity.
- I may withdraw from the research at any time.
- my transcribed interview will be e-mailed to me for verification.

Signed on this…….day of ……..20

Signature .....