CHAPTER ONE

Introduction

Over recent decades there have been philosophical and political movements as well as legislation to support the acceptance, integration, and inclusion of individuals with disabilities in mainstream society (Bain, Scott & Steinberg, 2004; Byrnes, Sigafos, Rickards & Brown, 2002; Higgins, 1992; Ling, 2003; Luckner & Muir, 2001; Stinson & Antia, 1999). However, recent research and anecdotal evidence shows that some deaf individuals\(^1\) find this process of inclusion difficult (Aguayo & Woodcock, 2000; Harvey, 1998). Some of these individuals identify as ‘Oral’ deaf (OD) while others identify as culturally Deaf (CD) (Aguayo & Woodcock, 2000; Golan, 1995; Harvey, 1998; Reisler, 2002). Spelling deafness with an upper case ‘D’ (i.e., Deaf) implies a theoretical and cultural construct, and the individual’s identification with a community of Deaf people who share a similar language in Sign Language (SL), as well as a common social, educational, and cultural history (Davis, 1995; Harvey, 1998; Ladd & Woll, 2003; Lane, 1997; Paul & Jackson, 1993; Rosen, 2003; Sacks, 1989). The overwhelming majority of the overall deaf population, however, do not self-identify as CD and have been described as ‘culturally hearing’ or OD (Harvey, 1998; Reisler, 2002).

Since the early 1980s there has been a pronounced increase in the number of deaf students educated in regular classrooms in Western nations such as Australia (Hyde & Power, 2003, 2004; Jacobs, 2004; Johnston, 2004; Johnston, Leigh & Foreman, 2002; Punch, Creed & Hyde, 2005), Canada (Bibby, Beattie & Bruce, 1996; Israeliite, Ower & Goldstein, 2002; Musselman, Mootilal & MacKay, 1996), Greece (Nikolaraizi & Hadjikakou, 2006), Israel (Weisel & Kamara, 2005), New Zealand (Bruce & Beattie, 2002; Kent, 2003), Turkey (Polat, 2003), the UK (Gulliver & Ghinea, 2003), and the USA (Kersting, 1997; Leigh, 1999; Stinson & Antia, 1999; Strickland, 2000; Thomas, 2000).

\(^1\) The author acknowledges that the disability should be mentioned after the person (i.e. people who are deaf), but will put “deaf” before “individuals”, “participants” or “students” thereafter for the sake of brevity and to assist reading fluency.
Stinson & Liu, 1999; Stinson, Liu, Saur & Long, 1996). In the USA and UK, there have been trends suggesting an increasing number of mainstreamed deaf students and a decreasing number of deaf students educated in non-integrated special schools (Hyde & Power, 2004; Ling, 2003). In Australia, an estimated 84% of deaf students attend regular schools, receive support from itinerant teachers of the deaf, communicate orally, and use assistive sensory devices (Bain et al., 2004; Hyde & Power, 2003; Punch et al., 2005).

In addition, the overwhelming majority of deaf individuals are born of hearing parents whose first language is spoken language (Aguayo & Woodcock, 2000; Johnston, 2004; Mitchell & Karchmer, 2004; Padden & Humphries, 1988). Authors have also reported that less than 10% of the overall deaf population self-identify as CD (Johnston, 2004; Mitchell & Karchmer, 2004). These educational and demographic trends suggest the large majority of deaf individuals use their voice, speech-reading, and auditory means of communication (Aguayo & Woodcock, 2000; Reisler, 2002). Numerous studies have shown that the severity of deafness does not determine the nature of deaf individuals’ social relationships (e.g., Hyde & Power, 2004; Israelite et al., 2002; Jambor & Elliot, 2005; Punch & Hyde, 2005; Stinson & Antia, 1999) or academic achievement (e.g., Saur, Coggiola, Long & Simonson, 1986). A question that remains to be answered is whether the individual’s maximisation of potential depends on their mastery and operationalisation (putting into practice) of psychosocial attributes and tactics. Maslow (1970, 1973) defined psychosocial attributes as an individual’s cognitive traits and processes. Sternberg (1985, 1988) further theorised that psychosocial tactics are externalised behaviour outcomes caused by cognitive attributes. Maslow’s and Sternberg’s works, and their relevance to the current study, will be analysed in Chapter Two.

Calderon and Greenberg (2000, 2003) highlighted two key aspects that contribute to the successful integration of deaf individuals with hearing peers. The first aspect was competence with speech and verbal communication; and the second was psychosocial competence. Authors have argued that while much instructional classroom time with deaf students has been focused
on academic subjects and the improvement of language and speech skills, the development of psychosocial attributes and tactics have remained mostly absent (Bowe, 2003; Calderon & Greenberg, 2000; Hogan, 2001; Punch & Hyde, 2005). Further, mental health professionals have anecdotally observed low levels of psychosocial competence in deaf adults (Bowe, 2003; Harvey, 1998). Many educators of the deaf and other deafness-related professionals may therefore be graduating from professional training programs unable to foster their deaf students’ or clients’ psychosocial attributes and tactics (Bowe, 2003; Calderon & Greenberg, 2003).

Calderon and Greenberg (2003) argued that positive psychosocial adjustment was vital to deaf children’s academic, social, and vocational outcomes. These authors also criticised the lack of comprehensive research undertaken either to facilitate or improve understandings of deaf children’s psychosocial development. Kluwin, Stinson, and Colarossi (2002) further specified that researchers in the field of deafness “need concepts that identify the important features of social integration, theories that integrate these concepts, and measures that effectively tap them” (p. 215). Numerous autobiographical accounts attest the integration and productivity of successful deaf individuals in their personal and professional milieus (see Golan, 1995; Harvey, 1998; Jacobs, 2007; Kisor, 1990; Reisler, 2002; Swiller, 2007; Wright, 1993; Zazove, 1993). However, authors have suggested that little empirical research focuses on the proactive psychosocial attributes and tactics deaf individuals can use to maximise their potential (Aguayo & Woodcock, 2000; Bain et al., 2004; Calderon & Greenberg, 2000). Bain et al. argued that research with successful deaf adults could guide and facilitate the development of deaf adolescents’ communication and coping strategies with hearing peers. Such research could also provide insight into how deaf individuals can transform “potential obstacles into strategies of resilience warranting self-pride” (Bain et al., 2004, p. 127).

Given these concerns and suggestions, the review of the literature (Chapter Two) will illustrate that studies with deaf participants have lacked a comprehensive and systematic framework of psychosocial attributes and tactics. The absence of such a framework may be
related to research paradigms underpinning deafness-related studies. According to science historian Kuhn (1962), a paradigm defines a framework containing specific methodological principles of how research is conducted. It was found that two paradigms are currently present in academic communities studying deafness – Positivism and Post-structuralism. Kuhn’s analysis of scientific revolutions further found that a process of conservation sets in when a paradigm becomes established within a specific academic community. The paradigm has a tendency to become the only ‘correct’ way to administer scientific/academic research, which can be problematic. Positivism features a research ideology known as the medical model and Post-structuralism a research ideology known as the social model (Paul & Jackson, 1993; Rosen, 2003; Scheetz, 2004). As will be argued, studies framed by the medical or social models seem to neglect or be unable to define comprehensively deaf individuals’ proactive psychosocial attributes and tactics (Furth, 1973; Jacobs, 2004, 2006; Muma & Teller, 2001).

The current study therefore features exploratory research that operates on the principle that a comprehensive and systematic framework is required to investigate deaf individuals’ psychosocial attributes and tactics. To achieve this, it was deemed necessary to investigate proactive as opposed to negative psychosocial attributes and tactics of deaf individuals. It was further considered necessary to study adult rather than child participants because of their greater experiential knowledge. The exploratory nature of this study also operated on the premise that conventional test instrumentation could not be used to investigate effectively the topic under consideration.

The observed shortcomings of the medical and social models in deafness studies necessitated looking beyond the field of deafness. Particular attention was therefore paid to the cognitive-behavioural perspective to determine whether this approach could be used in a deafness-related study. Humanistic Psychology was considered as providing a strong theoretical foundation to this research. The applicability of the Risk and Resilience (R&R) model used by researchers studying learning disabilities (LD) (Bryan, 2003; Hickey-Moody, 2003;
Reiff, 2004; Wong, 2003) was also investigated. A paradigm known as Pragmatism, a mixed-methods research approach with a vested interest in how proactive human behaviour is operationalised, was also considered (Bain et al., 2004; Creswell, 2003; Rallis & Rossman, 2003). Each of these approaches significantly influenced the current study.

The R&R model is inherently psychosocial and views the concept of disability through a positive or proactive, rather than a negative or reactive, lens (Reiff, 2004). This is demonstrated in Reiff, Ginsberg, and Gerber’s (1995) qualitative study that reported findings from in-depth interviews with 71 successful adults with LD. Reiff et al. defined their participants’ success as social and vocational integration. The deafness context provided by Leigh (1999) offered a similar definition: “success is contingent upon ‘making it with hearing peers’” (p. 237). Reiff et al.’s study was structured around a framework of eight psychosocial themes that combine to define how participants manage their LD and integrate into society. This comprehensive and systematic framework was used in the current study to investigate how deaf participants use psychosocial attributes and tactics to maximise their potential. Hearing participants were also included to observe whether the deaf participants’ skills were comparatively similar or different.

Research framed by the R&R model and Pragmatism typically aims to disseminate knowledge gleaned from participants with proactive psychosocial attributes and tactics. This study’s findings will hopefully facilitate or deepen understandings of deaf individuals’ proactive psychosocial attributes and tactics. It is also hoped that deaf individuals of all ages, professionals working with deaf clients and students, researchers of deafness, and parents of deaf children will be beneficiaries of this exploratory research.

**Aims**

This exploratory study had two major aims. The first aim was to use a modified version of Reiff et al.’s (1995) framework to identify the proactive psychosocial attributes and tactics deaf
individuals use to maximise their potential in mainstream society. The second aim was to compare these attributes and tactics in deaf and hearing participants.
CHAPTER TWO
Literature Review

2.1. Research paradigms in deafness studies

As outlined in Chapter One, this study was concerned with identifying the psychosocial attributes and tactics that ‘Oral’ deaf (OD) and Culturally Deaf (CD) individuals use to maximise their potential in life. Given that the context is a predominantly hearing world, the researcher was particularly interested in whether deaf and hearing individuals used similar proactive psychosocial attributes and tactics, and whether deaf individuals also used further attributes and tactics to circumvent deafness-related barriers. In light of these aims, it was necessary to review contemporary understandings of these psychosocial attributes and tactics.

This Literature Review is presented within a historical time frame that begins in the 1880s and ends in the early 21st century. Four main themes are presented in sequence: the medical model, Humanistic Psychology, the social model, and the Risk and Resilience (R&R) model. A brief historical account will initially describe how each research paradigm/movement became established in academia. Also analysed are the research methods (i.e., quantitative, qualitative, and mixed-methods) that each research paradigm mostly applies to disability and deafness studies.

This critique argues that the population- and context-specific nature of studies framed by the medical and social models are likely to have contributed to the dearth of knowledge related to deaf individuals' proactive psychosocial attributes and tactics. It is further argued that the R&R model used in Reiff et al.’s (1995) study is an effective model for the current study. Reiff et al.’s framework of eight psychosocial themes will therefore be used to define proactive psychosocial attributes and tactics, and will include a review of deafness-related empirical studies. Lastly, the chapter will conclude with a justification of this study’s aims and present a modified version of Reiff et al.’s framework for the purposes of this study.
2.1.1. The medical model and Positivism: 1880s to the present

The medical model is an ideology and Positivism is a research paradigm. According to The Penguin Dictionary of Sociology, the medical model is an ideology whereby the patient or research participant “is regarded as the passive target of medical intervention, since scientific medicine is concerned with the body as sort of a machine rather than the person in a complex social environment” (Abercrombie, Hill & Turner, 1994, p. 261). This may explain why the medical model has also been referred to as the deficit model (Reiff, 2004) and the pathological model (Jambor & Elliott, 2005). Since the human body is conceptualised as a machine with functional parts, the medical model also operates on the principle that the restoration of health requires the use of stringent scientific procedures (i.e., Positivist research) and/or medical mechanical intervention to address the anomaly (e.g., surgical intervention or technological assistance) (Abercrombie at al., 1994; Hogan, 2001).

The identification of human abnormalities evident in the medical model has been significantly assisted by a stringent research paradigm known as Positivism. Positivism is not a synonym of the medical model because the medical model is a specific ideology. Positivism has been defined as asserting that the only true knowledge of both physical and social phenomena is scientific knowledge that can be quantified (Coward & Royce, 1981; Giorgi, 1981; Hughes, 2001; Kuiken, 1981; McCurdy, 1981; Tageson, 1982). According to Baum (1995), Positivism has a reductionist world view in which relatively uncomplicated patterns of causality are established through quantitative research, or statistical procedures.

Although the empirical sciences have provided a dominant framework for Western thought in the past two centuries (Coward & Royce, 1981; Tarnas, 1996), the medical model may have originated in the 1880s with the works of Sir Francis Galton. According to Davis (1995), a significant legacy of Galton’s was using statistics, or Positivism, to define human behaviour or bodily characteristics. The creation of the normal distribution curve, or the bell curve, has been attributed to Galton. Each standard bell curve shows that the majority of a
select population falls within the arch, and that rarities or extremes constitute the slopes. Galton believed that both extremes on a bell curve were not equally deviant from the norm (Davis, 1995). He therefore created the use of ranked order which can ‘authenticate’ notions of human perfectibility, biological determinism or ‘progress’ by either eliminating or improving undesired characteristics (Davis, 1995; Galvin, 2003). Biological determinism defines a eugenicist concept that an individual’s quality of life is significantly, if not totally, determined by their biological makeup (Pfeiffer, 1994).

Authors have theorised that deaf people as a population and as individuals have traditionally been viewed from either the functional, medical, or audiological perspectives in academic studies (Aguayo & Woodcock, 2000; Davis, 1995; Hogan, 2001; Lane, 1993; Moores, 1996; Paul & Jackson, 1993; Polat, 2003; Scheetz, 2004). Three trends were found after reviewing deafness-related quantitative research. First, researchers have devoted much attention to describing deaf individuals’ audiological and cognitive characteristics (see Braden, 1994; Gulliver & Ghinea, 2003; Myklebust, 1964; Walker, Jeanes & Rickards, 1997). Secondly, researchers have compared hearing and deaf populations (see Andersson, Olson, Rydell & Larson, 2000; Gulliver & Ghinea, 2003). Thirdly, researchers have tended to measure the effectiveness of sensory aids or educational intervention/s to remedy anomalies that may be related to deafness (see Blamey et al., 2001; Suárez, 2000). These three trends may be explained by the notion that the medical model has also been known as epidemiology - the study of the causes of disease in individuals and the consequential behaviours (Baum, 1995; Paul & Jackson, 1993).

2.1.1.1. The medical model in deafness-related studies

Davis (1995) postulated that atypical behaviours of deaf individuals can and have been identified through the use of statistics (Positivistic research) with scores being measured against a norm. Authors (e.g., Muma & Teller, 2001; Paul & Jackson, 1993) have further argued that by
identifying deaf individuals’ atypical auditory characteristics or behaviours, the medical model can operate on the premise that deaf individuals can be ‘normalised’ or ‘improved’ through auditory technology, speech/auditory training, or/and educational intervention. For example, Suárez’s (2000) study featured a pre-test/post-test design of the effects of a training program relating to social skills and behaviour for mainstreamed deaf children from three elementary schools in the Canary Islands. The deaf participants were educated orally and occasionally used, but were not fluent, in Sign Language (SL). Of 18 participants, 16 (eight females, eight males) were bilaterally, prelingually, and profoundly deaf. Two females had severe deafness. The deaf participants were compared with 18 same aged hearing participants with no reportable social problems. The pre-test/post-test design used by Suárez yielded results indicating that intervention created a significant improvement for deaf students’ assertiveness as rated by themselves and by their teachers.

Suárez’s (2000) study can demonstrate the usefulness of Positivist research in assisting deaf people. It explained the effectiveness of a given educational program, which could be recommended to other deafness-related professionals. The focus on deaf participants’ atypical behaviours, however, can reinforce the belief that the study of deafness is nothing but epidemiology (Baum, 1995). Theorists have argued that epidemiology can lack a holistic understanding of deaf individuals (Davis, 1995; Rosen, 2003) and neglect prescriptive courses of action related to the maximisation of psychosocial potential (Reiff, 2004; Wong, 2003).

The aforementioned concepts are apparent in Gulliver and Ghinea’s (2003) quantitative study investigating the impact that the level of hearing has on quality of perception (QoP) of multimedia presentation quality, with and without captions. Thirty hearing participants and 20 deaf participants distinguished as two groups were involved in this study. One group consisted of pre-lingual profoundly deaf adults who used British Sign Language (BSL) as their preferred language. The second deaf group featured post-lingual deaf adults who had either mild or moderate deafness, and relied on spoken language as their preferred language. QoP was
measured using analysis of variance with captions and hearing as fixed factors, and five independent variables. These variables were 1) audio and captioned information, 2) physical dynamics of the actor, 3) peripheral visual information (e.g., props), 4) textual information other than any captions (e.g., number on rugby shirt), and 5) captioned information not related to audio (e.g., newsreader’s name). Hearing participants retained and absorbed more information from each of these four QoP information sources than did the deaf participants - with and without captions. In addition, the post-lingual deaf group performed better at QoP than the pre-lingual, profoundly deaf group. Degree and onset of deafness were thus interpreted as the strongest indicators of QoP.

Gulliver and Ghinea’s (2003) study can be interpreted as an example of researchers viewing deafness as pathologic. Critics have argued that studies framed by the medical model can reinforce negative stereotypes when a certain disability is a topic of investigation for measured performance (Campbell, 2001; Ferguson, Ferguson & Taylor, 1992; Hahn, 1997; Oliver, 1996). Some authors (e.g., Davis, 1995; Lane, 1993; Paul & Jackson, 1993) have theorised that findings in early studies with deaf participants strengthened two convictions central to the medical model of deafness: that deaf individuals share a common personality or psychosocial makeup that is flawed comparative to hearing individuals, and that deafness imposes limits on cognitive and psychosocial development. In these early studies, deafness was also viewed as determining atypical psychosocial attributes such as impulsivity, egocentricity, inferior cognitive-processing capacity, and social incompetence.

However, other studies (i.e., Jones, 2004; Punch et al., 2005; Schroedel & Geyer, 2000) have suggested that differences between hearing and deaf participants may not necessarily be significant. This may relate to how researchers conduct their investigations. Creswell (1998) argued that there are Positivist researchers who approach subject matters and participants in a manner that is not pathologic. For example, Jelinek-Lewis and Jackson’s (2001) quantitative study assessed the comprehension of media with and without captions in hearing (n = 50) and
deaf (n = 50) children/adolescent participants. Reading comprehension ability was the significant decider of the participants’ ability to comprehend captioned videos. The findings further found that the hearing sample had a higher reading grade score than the deaf sample. Instead of viewing deafness as pathologic, Jelinek-Lewis and Jackson’s study, unlike Gulliver and Ghinea’s (2003) study, suggested captioned media as having potential classroom benefits for deaf individuals. Viewing captioned media may advance literacy levels through exposure to English syntax and vocabulary. Although using Positivist research, Jelinek-Lewis and Jackson appeared not to view deafness through the medical model perspective. As Johnston and Onwuegbuzie (2004) argued, there is a definite distinction between the medical model, which is a research ideology, and Positivism, which is a research paradigm.

According to Baum (1995), Forthofer (2003), and Hintermair (2006), criticisms of the medical model may be due to the increasing recognition that health is more than the absence of sensory, physical, or intellectual impairment. The medical model continues to be used in academia, but the changing perception of health has likely caused a shift away from the medical model and towards models of a social or psychosocial nature (Bricher, 2000; Hogan, 2001; Muma & Teller, 2001; Paul & Jackson, 1993; Polat, 2003; Scheetz, 2004). Questions asked by researchers have therefore become more complex and incorporative of political, economic, social, and psychological factors (Baum, 1995; Forthofer, 2003). This shift has occurred in academic domains related to education (Freire, 1985; Giroux, 2001), disability (Anniston, Bethune, Jenkinson & Sparrow, 1996; Barnes, 2004; Bryan, 2003; Campbell, 2001; Donoghue, 2003; Ferguson et al., 1992; Oliver, 1992, 1993, 1996; Reiff, 2004; Tregaskis, 2002), social work (Applegate, 2000; Ife, 1997; Payne, 1997; Ungar, 2004), and deafness-related studies (Corker, 1998; Polat, 2003). The shift away from the medical model in the academic domain of Psychology appears to have caused the emergence of Humanistic Psychology.
2.1.2. Humanistic Psychology: 1940s to the 1980s

Authors have located Humanistic Psychology’s origins in literary humanism associated with the rediscovery of ancient Greek and Latin literature in the European Renaissance period (Blackman, 1968; Graumann, 1981). The term ‘scientific humanism’ has been used to distinguish Humanistic Psychology from the literary form of humanism (Blackman, 1968). Traces of ancient philosophy, such as that of Aristotle, Descartes, Copernicus, Plato, and Socrates, are evident in Humanistic Psychology’s fundamental principle that individuals are able to control their own destiny (Blackman, 1968).

Tageson (1982) theorised that Humanistic Psychology developed in opposition to Psychology inclined towards the medical model around the 1940s. Humanistic Psychologists believed that the study of positive human behaviours could offer a greater contribution to Psychology than the then-common study of neurotic behaviours. Humanistic Psychologists also argued that the overemphasis on controlled experiments (Positivism) by psychologists was too simplified to explain human experience comprehensively (Coward & Royce, 1981; Tageson, 1982). This may explain the presence of primarily descriptive and inductive research in Humanistic Psychology (Coward & Royce, 1981; Tageson, 1982).

Humanistic Psychology can be further defined as the scientific study of cognitive and social processes individuals use to interpret, influence, understand, and interact with others (Combs, 1977; Fromm, 1960, 1969; Maslow, 1973). Proactive psychosocial attributes and tactics are therefore a main focus. There also appears to be a theoretical evolution in Humanistic Psychology whereby the theories and research of Allport (1955, 1965), Rogers (1961), Maslow (1970, 1973), and Sternberg (1985, 1988) can be presented chronologically. These authors’ work will now be presented to depict the broader concepts of personality (Allport and Rogers) then the practical psychosocial attributes and tactics (Maslow and Sternberg).
2.1.2.1. The healthy personality: Gordon Allport

Allport (1955, 1965) believed that medical and psychological studies were mainly concerned with definitions and clarifications of the neurotic personality. Allport acknowledged that the identification of neurotic behaviour was important, but he operated on the premise that the investigation of positive behaviour could offer a richer understanding of human psychology. Allport’s pioneering research into healthy personalities consequently ignored research questions and hypotheses directed at understanding neurotic personalities or behavioural anomalies. Purposefully sampling participants considered to have healthy personalities, Allport also designed interviews and surveys in a manner that would yield data regarding healthy behaviour.

According to Allport (1965), the healthy personality is characterised by a mental outlook that sees the self as an extension to others, has the capacity for compassion and intimacy, is emotionally secure, has realistic perceptions of personal goals, skills and a strong work ethic, is insightful and adept with humour, and has a unifying philosophy of life. Allport theorised that individuals with a healthy psychology are also motivated by futuristic goals and progressive maximisation of psychosocial potential. Allport’s research also provided a theoretical and methodological framework that significantly influenced Humanistic Psychologists such as Rogers (1961) and Maslow (1970, 1973).

2.1.2.2. Self-actualisation: Carl Rogers

Using his experience as a psychotherapist, Rogers (1961) theorised that individuals are ultimately guided by their own conscious perceptions of themselves and social environments, rather than by social forces they cannot control. A central theme in Rogers’ work was self-actualisation. Expanding on Allport’s (1955) notion of the healthy personality, Rogers believed that self-actualising individuals are able to use thought processes to manage adversity. Many authors agree that the goal of self-actualisation is the deliberate cultivation of personal growth through psychological and social activity – an evolutionary and reflexive process that is never
Rogers (1961) suggested that self-actualisation and the quest for quality of life are reliant on a psychosocial rather than a biological or environmental impetus. This notion suggests a significant theoretical break that Humanistic Psychologists made from the ‘biological determinism’ evident in psychological studies using the medical model. Rogers acknowledged that childhood and past experiences have important influences on personality, but believed that too much focus on past experiences can lead to a dysfunctional personality that is detached from present realities and tasks. Further, the notion of an individual controlling his/her destiny has direct links with Rotter’s (1966) notion of Locus of Control. Rotter theorised that individuals who believe and behave in a manner whereby their fate is determined by external forces/chances have external locus of control, whereas individuals with internal locus of control believe and behave in a manner whereby their destinies are self-determined. This introduces Maslow’s (1970, 1973) cognitive and behavioural attributes of self-actualising individuals.

2.1.2.3. **Cognitive and behavioural attributes of self-actualising individuals:**

*Abraham Maslow*

On the basis of his empirical studies, Maslow (1970, 1973) theorised that self-actualising individuals are self-sufficient and perpetually maximise their psychosocial potential. Maslow (1970) identified self-actualising individuals as characterised by: “self-decision, self-government, being an active, responsible, self-disciplined, deciding agent rather than a pawn or helplessly ‘determined’ by others” (p. 161). Age appears to be a factor with self-actualisation. Age appears to be a factor in self-actualisation. Maslow compared the findings of his study of 3,000 college students with his prior study with older participants and found that the characteristics of self-actualisation was nearly absent in young participants. Bar-On (1997) supports Maslow’s finding
when suggesting that an individual’s Emotional Intelligence does not become fully developed until after the age of 25.

Maslow’s (1970) review of his empirical studies can be summarised by 15 themes that can be divided into eight cognitive attributes and seven behavioural attributes (see Table 1).

Table 1

**Maslow’s cognitive and behavioural attributes of self-actualising individuals**

<table>
<thead>
<tr>
<th>Cognitive attributes</th>
<th>Behavioural attributes</th>
</tr>
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<tbody>
<tr>
<td>Resistance to enculturation and questioning of conventional norms, values, and beliefs</td>
<td>Spontaneity, simplicity, and naturalness</td>
</tr>
<tr>
<td>Acceptance of self, others, and nature</td>
<td>Efficient perception of and more comfortable relations with reality</td>
</tr>
<tr>
<td>Distinct discrimination between good and evil, between means and ends</td>
<td>Autonomy, self-starters, and independence of environmental and cultural influences</td>
</tr>
<tr>
<td>Creativeness</td>
<td>Quality of detachment and the need for privacy</td>
</tr>
<tr>
<td>Continual freshness of appreciation</td>
<td>Quality of interpersonal relations</td>
</tr>
<tr>
<td>Problem centred, not ego centred</td>
<td>The demographic character structure</td>
</tr>
<tr>
<td>Gemeinschaftsgefühl</td>
<td>Unconventional, philosophical, and un-hostile sense of humour</td>
</tr>
<tr>
<td>The peak experience</td>
<td></td>
</tr>
</tbody>
</table>

2.1.2.3.1. **Proactive cognitive attributes of self-actualising individuals**

Maslow’s (1970) proactive cognitive attributes of self-actualising individuals outlined in Table 1 are defined as the following. Despite being competent socialisers, many self-actualising individuals appear to have an inner resistance to, and detachment from, enculturation (Maslow, 1970). Maslow used the word ‘encultured’ to define an individual who has not critically assessed his/her behaviour or that of others, and is largely determined by social or cultural forces - Rotter’s (1966) notion of external locus of control. Acceptance of the self, others, and
nature suggests the cognitive attribute of seeing reality more clearly. The concepts of good and evil for the self-actualising individual are therefore typically not culturally defined but shaped by the individual’s belief system, which is also focused on the process (means) and not the result (ends). Less enculturated, the self-actualising individual tends to be less inhibited than the average individual and better able to apply mental energies to given tasks with adaptability and inventiveness (creativity). Even when presented with repetitious experiences boredom is rarely experienced because self-actualising individuals tend to possess a child-like spontaneity and a continual freshness of appreciation. When dealing with difficult situations, self-actualising individuals appear to use problem-centred, not ego-centred cognitive attributes. These attributes appear to derive from Gemeinschaftsgefühl - a tendency to invest energies into a mission that is larger than the self and directed towards the common good of humankind. Lastly, the peak experience refers to an intense ecstatic moment whereby adversity has been transformed into a consistent flow of rewarding experience.

2.1.2.3.2. Proactive behavioural attributes of self-actualising individuals

Maslow (1970) outlined proactive behavioural attributes of self-actualising individuals in addition to their cognitive attributes (see Table 1). The behavioural attributes of spontaneity, simplicity and naturalness are concerned with the self-actualising individual’s ability to be in the present and imply an acute awareness of their own desires, impulses, and opinions. Efficient perceptions of, and more comfortable relations with, reality appear to be the result of the self-actualising individual perceiving events and emotions accurately, and the ability to deal with ambiguous circumstances. Self-actualising individuals tend to be self-starters who are not dependent on external factors, and draw strength from internal validation. Quality of detachment and the need for privacy may stem from the self-actualising individual’s strong sense of independence, and the tendency to remain relatively undisturbed by misfortunes that the average individual may find traumatic. Quality, not quantity, of interpersonal relations may
explain the tendency for self-actualising individuals commonly to have a small circle of friends. Maslow described the demographic character structure as the self-actualising individual’s ability to be friendly with anyone of suitable character regardless of race, religion, education, social status, or political views. The democratic character structure also suggests that the self-actualising individual is more likely to counterattack wrongdoing than not. He/she is also likely to employ unconventional, philosophical, and non-hostile humour that can be self-effacing, designed to educate, and can be mocking of non-self-actualising behaviours. Fromm (1960) theorised that hostile humour (intended to hurt), superiority humour (at the expense of another’s inferiority), and authority-rebellion humour (blatant disrespect) are conventional types of humour. In conclusion of this section, Maslow’s (1970) proactive cognitive and behavioural attributes of self-actualising individuals gained further credibility in the mid-1980s with Sternberg’s (1985, 1988) Triarchic Theory of Intelligence.

2.1.2.4. Robert Sternberg’s Triarchic Theory of Intelligence

Although Sternberg (1985, 1988) may not be classified as a Humanistic Psychologist, his empirical research investigated healthy personalities and, in particular, psychosocial attributes and tactics. Like Humanistic Psychologists, Sternberg argued that IQ, or ‘academic intelligence’ as assessed by psychometric tests, was inconsistently predictive of an individual’s psychosocial ability. For example, Sternberg (1985) cited Feldman’s longitudinal study of participants with an IQ above 140 in childhood. Participants in Feldman’s study who were satisfied with their lives had found careers and social environments that suited their strengths, and pursued them relentlessly, whereas the less satisfied participants struggled to find a niche for themselves.

Central to Sternberg’s (1985, 1988) Triarchic Theory of Intelligence is the concept of practical intelligence, which refers to the use of practical skills or tactics in psychosocial contexts. Practical intelligence is particularly dependent on acquired ‘tactic knowledge’. Tactic knowledge involves understanding and acting out appropriate or productive responses to
problems of a social, practical, or emotional nature (Sternberg, 1985). Sternberg's (1985) Triarchic Theory of Intelligence is a theoretical framework that explains how individuals maximise their psychosocial potential. There are three sub-theories: the Componential, Experimental, and Contextual (see Table 2).

Table 2

*Sternberg's Triarchic Theory of Intelligence*

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Psychosocial nature of tactics</strong></td>
<td>Intelligence and the internal world of the individual</td>
<td>Intelligence and experience</td>
<td>Intelligence and the external world of the individual</td>
</tr>
<tr>
<td>Cognitive tactics</td>
<td>Execution of cognitive tactics</td>
<td>Behavioural manifestations resulting from tactics</td>
<td></td>
</tr>
<tr>
<td>Components of the sub-theories</td>
<td>Meta-components</td>
<td>Ability to act on information processing</td>
<td>Adaptation to environment</td>
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<tr>
<td>Performance components</td>
<td>Ability to deal with novelty</td>
<td>Shaping of the environment</td>
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<tr>
<td>Knowledge-acquisition components</td>
<td></td>
<td>Selection of new environment</td>
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</table>

The Componential sub-theory is concerned with intelligence and the individual’s internal world, which includes cognitive tactics that enable purposeful adaptation, selection, and shaping of real-world environments relevant to an individual’s life. Meta-components involve recognising the existence of problem/s, selecting appropriate strategies to address the problem/s, monitoring solution processes after implementation of a strategy, and, finally, evaluation of the adequacy or effectiveness of the solution/s to the problem/s. Performance components explain the execution of various problem-solving strategies that are potentially infinite in number.
Knowledge-acquisition components relate to sifting purpose-irrelevant from purpose-relevant information, the cohesion of selected information into a plausible whole, and the incorporation of new knowledge with pre-existing knowledge (Sternberg, 1985). Sternberg (1988) further stated that knowledge acquisition and an extensive vocabulary are mutually influential.

The Experimental sub-theory involves intelligence and experience, including the individual’s aptitude in dealing with social exposure, and the execution of cognitive tactics (Sternberg, 1985). The notion of acting on information processing in the Experimental sub-theory is concerned with the effective completion of tasks. According to Sternberg, highly intelligent individuals have the capacity to acquire various skills with greater rapidity and coherence than do individuals with lower measured intelligence. Sternberg’s definition of intelligence is that of a psychosocial, not IQ, quality. The ability to deal with novelty (e.g., meeting new people, visiting a foreign country, mastering a new topic, or a new language) places a demand on an individual’s intelligence, which suggests the capacity of self-actualising individuals to be innovative and spontaneous.

The Contextual sub-theory involves intelligence and the external world of the individual whereby cognitive tactics result in behavioural manifestations (Sternberg, 1985). The component of adaptation to the environment involves an individual’s ability to process information in order to accommodate to the demands of a particular social setting/environment. When adaptation is not possible, intelligent behaviour is manifested in an individual’s attempt to shape and change an environment to suit her/his needs. In addition, unsuccessful individuals, regardless of their IQ, may remain in environments that are not conducive to success. Successful individuals, in contrast, tend to remove themselves from non-productive environments.

In conclusion of this section of the review, there appears to be little evidence of Humanistic Psychology in studies with deaf participants, especially with vocationally successful deaf adults. According to Scheetz (2004), the dearth of deafness studies using a psychosocial
framework may be because the medical model has been the dominant ideology. Another reason could be the recent popularity of the social model to frame deafness-related research.

2.1.3. The social model and Post-structuralism: 1960s to the present

If the medical model can be understood as an ideology that seeks to identify, replace, or repair a ‘deficient’ body part, the social model can be understood as seeking to rectify perceived social divisions (e.g., between hearing and deaf people) (Hogan, 2001). These repairs to social divisions are primarily achieved through the implementation of legislative policy designed to accommodate people from minority groups into mainstream society. Rotter’s (1966) notion of internal locus of control is not a main focus because the social model is mostly sociological theory (Bricher, 2000). According to Barnes (2004), the social model of disability has been in existence since the early 1980s, and has “become the new orthodoxy” (p. 50) in researching disability since the mid-1990s.

The social model is also an ideology common amongst Poststructuralists (Applegate, 2000; Bricher, 2000; Code, 2000; Corker, 1998; Hughes & Paterson, 1997; MacNaughton, 2005; Oliver, 2004; Payne, 1997; Thornham, 2005; Tregaskis, 2002). Central to Poststructuralist theory is the acceptance of, and advocacy for, minority groups. Poststructuralists have argued that social power is exercised through dominant discourses or grand narratives which can marginalise minority views of human experiences (Baum, 1995; Bryan, 2003; Corker, 1998; Thornham, 2005). An example of this may be researchers perceiving individuals with a disability as functionally limited because of their disability (Hahn, 1997). Since the 1980s, disability-related Poststructuralists have challenged the medical model’s concepts of epidemiology and biological determinism by arguing that the removal of societal or ‘structural’ barriers can solve disability-related problems (Corker, 1998; Finkelstein, 1980; Galvin, 2003; Hogan, 2001; Oliver, 1990, 1993, 1996, 2004).
Deafness-related Poststructuralists tend to focus mainly on the needs of the CD (Aguayo & Woodcock, 2000). Authors (e.g., Davis, 1995; Hogan, 2001; Ladd & Woll, 2003; Lane, 1997; Paul & Jackson, 1993; Sacks, 1989) have explained that the social model of deafness contests the medical model of deafness and operates on the premise that deafness is not a disability, but a salient feature that has cultural meaning and defines group membership. Deaf people are additionally perceived to be a social minority who require accommodations in order to be equal with the hearing majority (see Bauman, 2004; Corker, 1998, 2000; Hogan, 2001; Kormesaroff & McLean, 2006; Lane, 1993). According to Bain et al. (2004), recent trends in educational philosophy (e.g., Post-structuralism) have resulted in legislative outcomes for inclusion, such as Deaf students’ access to classroom information via SL interpreters. The provision of SL interpreters is an example of removing societal barriers to accommodate the needs of the CD.

Some interesting demographic trends in studies by Holt, Hotto, and Cole (1994), Johnston (2004), and Mitchell and Karchmer (2004) have appeared despite the growing presence of the social model in deafness studies. Holt et al.’s (1994) study found that 76.3% of 20 million deaf Americans acquired deafness after the age of 18. More than three-quarters of these deaf individuals therefore developed their identity as a hearing person. The age of onset of deafness was unknown for 4.1% of the deaf population, whereas 14.2% acquired deafness aged between three and 18. According to these statistics, a substantial 91.5% of the deaf population were therefore likely to have acquired spoken language skills before becoming deaf.

Johnston’s (2004) review of demographics concluded that Deaf communities in America, Australia, and Britain were in continual decline. These populations of Deaf communities are aging and Johnston found that there were fewer younger replacements because of the following reasons: 1) earlier infant screening for deafness has resulted in parents choosing to have a cochlear implant for their congenitally deaf child at an earlier age; 2) improved educational standards leading to greater mainstream inclusion of young deaf individuals, and; 3) increasing numbers of young deaf individuals having access to more powerful hearing aids in recent
decades. All three trends allow greater access to spoken language and mainstream participation. Johnston additionally reported that demographic statistics provided by Deaf societies were overestimated although this overestimation was not explained.

Mitchell and Karchmer’s (2004) review of American statistics relating to hearing status of 25,701 parents of deaf individuals found that an estimated 96% of deaf individuals were raised by two hearing parents. Mitchell and Karchmer’s finding was similar to the percentages of the same demographic type in five other studies dated from 1971. These statistics are interesting given that deaf individuals born to deaf parents were more likely to identify as CD and to use SL than are deaf individuals with hearing parents (Mitchell & Karchmer, 2004).

The findings of Holt et al. (1994), Johnston (2004), and Mitchell and Karchmer (2004) suggest that the overwhelming majority of deaf individuals have no association with Deaf culture, do not use SL, and are immersed in mainstream society. Despite the high likelihood of CD individuals representing a small minority of the overall deaf population, the social model has become a prevalent ideology in deafness-related research.

From a research perspective, authors (e.g., Applegate, 2000; Baum, 1995; Johnston & Onwueguzie, 2004) have defined Poststructuralists as generally rejecting Positivism by using two main research methods. The first method is Deconstruction theory using critical analysis of literature (Fischer, 1996; Scholes, 1996; Searle, 1996), which will be defined in section 2.1.3.1. The second method is Interpretive/qualitative research (Barnes, 2004), which will be defined in section 2.1.4. Although rare, there are Poststructuralists who have used quantitative research (see Leigh, Marcus, Dobosh & Allen, 1998; Musselman & Akamatsu, 1999). There are also researchers who do not ascribe to Post-structuralism but have used Interpretivist research methods (see Goldberg, Higgins, Raskind & Herman, 2003; Jacobs, 2004; McMahon, Showers, Rieder, Abramson & Hogan, 2003, Reiff et al., 1995; Reiff, 2004).
2.1.3.1. Deconstruction theory

Deconstruction theory has strong links with Behaviourism, a scientific movement in Psychology originating in the early 1900s (Smith & Mackie, 2000). According to Smith and Mackie, Behaviourism implies that the legitimate science of human behaviour can be based only on the study of observable environmental stimuli as influencing observable human behaviour. Said differently, Rotter’s (1966) notion of external locus of control appears to be Behaviourism’s main focus. Despite not being a synonym of Behaviourism, Deconstruction theory has a tendency to perceive environmental stimuli as the primary determinants of human behaviour.

Researchers using Deconstruction theory commonly analyse texts to reveal perceived discourses and conflicts (Abercrombie et al., 1994). The function of Deconstruction theory has been explained as first requiring the identification of a binary pair or opposites that have some relation to each other (e.g., able/disabled, male/female, us/them, we/they, white/coloured, good/evil, hearing/deaf) (Abercrombie et al., 1994; Jary & Jary, 1991; Sim, 2005). In a deafness context, Lane’s (1993) review of selected medical literature compared the perceived situation between hearing experts and deaf individuals with the history of European colonisers and colonised Africans. Deconstruction theory was evident in the identification of these binaries: hearing experts and deaf individuals, and European colonisers and colonised Africans.

Theorists have further explained that binary opposition used in Deconstruction theory is algebraic \(a = -b\), whereby one term is marked as positive and the other negative, suggesting that the first mentioned term is superior to the second (e.g., hearing over deaf, male over female) (Fischer, 1996; Searle, 1996; Sim, 2005; Thornham, 2005). Once a binary opposition is identified, the researcher then seeks to identify the power dynamics that are causing \(a\) to be superior to \(b\) (Fischer, 1996; Sim, 2005). For example, Lane (1993) argued that the spoken language bias (discourse) of hearing researchers and experts caused what he perceived as the hearing expert’s paternalism (power) over Deaf participants or clients. Lane and Jambor and Elliot (2005) reported that spoken English can be a second language for many
CD individuals whose first language is SL. By understanding the unequal power dynamics causing this polar opposition, however, the researcher may then suggest theoretical means to dismantle the power dynamics. This can be achieved through the ‘construction’ of alternative courses of action or policies that are designed to increase access for individuals of a minority group (Corker, 2000; Davis, 1995; Milner & Browitt, 2002). A practical example of Deconstruction theory is legislation to provide increased classroom access to SL interpreters for Deaf students. The communication barrier (which created a theoretical polemic separating hearing and Deaf people) can be considered as ‘de-structured’ by the ‘construction’ of access provided by SL interpreters.

In concluding this section on Deconstruction theory, attention will now be directed towards qualitative research and Interpretivism, approaches which are commonly used by Poststructuralists (MacNaughton, Rolfe & Siraj-Blatchford, 2001).

2.1.4. Qualitative research /Interpretivism

Qualitative research is a research methodology and Interpretivism is a research paradigm. According to Creswell (1998), quantitative research can be defined as working with many cases and a few variables, and qualitative research as researching with a few cases and many variables. Merriam (1997) explained that in qualitative research small sample populations, or case studies, are studied in order to generalise results across a larger group from which the sample was chosen. Authors have further defined qualitative research as based on the premise that personal and social realities are subjective, and thus interpretive (Creswell, 1998; Israelite et al., 2002; Merriam, 1997; Neuman, 2000).

According to Ezzy and Rice (1999), Interpretivists study how participants attempt to make sense of, or interpret, phenomena in terms of the meanings they attribute to their own life or extrinsic social factors in their life. Qualitative research is considered the best research methodology to acquire these data, which may explain why Poststructuralists generally have a
preference for Interpretivism rather than Positivism (MacNaughton, 2005). Interpretivists believe that the ‘voice’ of participants needs to be ‘heard’ in order for the phenomenon studied to be fully understood, which stands counter to Positivist methodology in which the researcher is a detached observer who mathematically validates the data (Ezzy & Rice, 1999; Ferguson et al., 1992; Johnston & Onwuegbuzie, 2004; Merriam, 1997). Interpretivist research could therefore be understood as interactive, inclusive, dialogic, and democratically esteemed rather than hierarchical, separative, and categorically validated (Ezzy & Rice, 1999).

Many Interpretivist studies conducted by Poststructuralists can be based on the premise that an individual’s history or social group are factors that best clarify a chosen area of human study (see Israelite et al., 2002; Leigh, 1999; Nikolaraizi & Hadjikakou, 2006). Rotter’s (1966) notion of internal locus of control is not a central area of focus. Poststructuralists may therefore overlook the proactive psychosocial attributes and tactics that deaf individuals can use to maximise their potential. This may explain criticisms by some disability theorists that Poststructuralist research can be too theoretical and unrelated to the daily experiences of individuals with a disability (Bricher, 2000; Galvin, 2003; Humphrey, 2000; Oliver, 1992, 2004; Shakespeare, 1997).

In concluding the review of the social model, Post-structuralism, Interpretivism, and qualitative research, the relevance of research perspectives to the current study can be evaluated.

2.1.5. Problems related to research perspectives in deafness studies

Studies of deafness can be generally defined as framed by either the medical or social models (Paul & Jackson, 1993; Rosen, 2003; Scheetz, 2004). Mahoney (2003) reasoned that this opposition has created the ‘science wars’ in the larger academic community. Some researchers (e.g., Marschark & Spencer, 2003; Marschark & Clark, 1993; Vernon & Andrews, 1990) of deafness, however, have sought to involve perspectives from both the medical and social
models. The implications of this will be analysed in the following three critiqued deafness-related texts. Each text was chosen on the basis of their relevance to this current study’s main topic of deaf adults’ psychosocial attributes and tactics.

Marschark and Spencer’s (2003) text relating to Deaf Studies, deaf education, and language featured two out of 34 chapters specifically addressing the needs of deaf adults. Closer inspection shows that these two chapters addressed CD adults and did not mention psychosocial attributes and tactics related to mainstream participation. Seventeen chapters were concerned with educational and epidemiological aspects. In addition, seven chapters addressed SL or Deaf culture, and eight chapters were related to children. Marschark and Clark’s (1993) text relating to psychological perspectives of deafness also allocated six of 16 chapters to children. Of the remaining 10 chapters, four chapters were concerned with SL; three chapters described the implications of reading and language; and three chapters related to research methods or paradigms. The social model appears to frame four of the 13 chapters in Vernon and Andrews’ (1990) text involving psychological aspects of deafness. Deaf identity, SL, discriminatory attitudes towards the Deaf, and the bilingual/bicultural approach were features of these chapters. The medical model appears to frame a further eight chapters. These chapters outlined genetics, causes and diagnoses of deafness, behavioural and psychological anomalies, psychological evaluation, and experimental research. Just one chapter outlined psychosocial factors impacting deaf individuals, but proactive psychosocial strategies were not analysed.

The three aforementioned texts were concerned with psychology and the education of deaf individuals, but offered little information on how deaf individuals can use proactive psychosocial attributes and tactics to maximise their potential with hearing peers. The three texts also revealed typical foci of the medical and social models in a deafness context. Chapters related to the medical model emphasised epidemiological perspectives of deafness using positivist research methods. Chapters related to the social model emphasised the importance of SL and Deaf identity using literary criticism and qualitative research.
Attempts to include both the medical and social models may offer a broader perspective of deafness, but the two models appear ill-suited to frame this current study. Pragmatism and a mixed-methods design - the combination of quantitative and qualitative research methods – may circumvent these research problems.

2.1.6. Mixed-methods/ Pragmatism

Mixed-methods research is a research methodology and Pragmatism is a research paradigm. Authors have stated that mixed-methods research has become increasingly common in academia since the 1990s, particularly in the social and behavioural sciences (e.g., Creswell, 2003; Forthofer, 2003; Maxwell & Loomis, 2003). The growing acceptance of mixed-methods could be attributed to two main factors. First, Maxwell and Loomis (2003) suggested that academics have increasingly accepted mixed-methods research after the ‘science wars’ ceased in the 1980s. Secondly, Forthofer (2003) stated that the growing acknowledgement that health has social and behavioural as well as biological origins has led to academics recognising the value of mixed-methods research. It is plausible that qualitative and quantitative ‘purists’ have recognised the limitations of the respective research methodologies, and further acknowledged the contribution that mixed-methods may offer (Baum, 1995; Johnston & Onwuegbuzie, 2004).

According to Rallis and Rossman (2003), the value of mixed-methods is that the data’s detail is likely to be greater than if only one method is used. Data from one method source can help illustrate, clarify, or interpret data present in another method. The analysis and evaluation can therefore provide a more comprehensive description of the phenomenon studied (Rallis & Rossman, 2003). Rallis and Rossman further explained that description, comparison, and prediction are Pragmatism’s three main activities when formulating the design of the research. These principles are interrelated and seldom performed in a linear manner. Understanding and description are necessary in order to compare and predict. The relative strength of emphasis on each of these activities varies during the research process (Rallis & Rossman, 2003). For
example, some Pragmatists begin from a theory base or with building upon an appropriate model; others may generate the theory or create the logical model as they learn more about the phenomenon studied. The analysis and design can therefore shape the theory or model during the learning process.

Maxwell and Loomis (2003) opined that paradigm issues are inescapable when research methods are ‘mixed’. For example, there may be Positivists who use qualitative research as an additional yet minor part of their studies; although using qualitative research, the studies remain essentially Positivist. In contrast, there are Interpretivists who may use quantitative research as an additional yet minor part of their studies; although using quantitative research, the studies remain essentially Interpretivist. According to Creswell (2003) and Morse (2003) much therefore depends on the theoretical drive, which refers to the overarching paradigm that guides the study. If the theoretical drive is deductive and aligned towards Positivism, the study will be primarily quantitative; if it is inductive, and aligned towards Interpretivism, the study will be primarily qualitative (Morse, 2003). Since paradigms have implicit theoretical underpinnings that can be contradictory, Morse stated that it is essential that the theoretical drive is made explicit in a mixed-methods study. The theoretical drive significantly determines the investigative topics, the research strategy, and how the data will be analysed and reported.

According to Creswell (2003) and Forthofer (2003) mixed-methods research can feature a ‘transtheoretical’ perspective, which defines Pragmatism. Pragmatists recognise multiple research methods (e.g., Positivist, Interpretivist, and Poststructuralist). Pragmatism differs from both Positivism and Post-structuralism because the “knowledge claims arise out of actions, situations, and consequences rather than antecedent conditions” (Creswell, 2003, p. 11). Antecedent conditions appear to be crucial components of both Positivism and Post-structuralism. According to Creswell, Pragmatists tend to ignore antecedents such as biological and environmental factors by focusing on solutions to problems of a psychosocial nature – how things work and not as they happen to be - and aim to disseminate the data in a prescriptive
manner. The investigation of successful deaf adults’ psychosocial attributes and tactics is an example. These data may thereafter be used to assist deaf individuals, parents of deaf children, and deafness-related professionals. Pragmatism’s prescriptive approach is also present in studies using the R&R model (see Reiff, 2004). Before discussing the R&R model, however, attention will be given to paradigm issues relevant to the current study.

2.1.7. The relevance of paradigm issues to the current study

Poststructuralists have criticised researchers who use the medical model and view deafness as a pathological barrier to what may be perceived as normal (see Corker, 1998; Davis, 1995; Hogan, 2001; Komesaroff & McLean, 2006; Lane, 1993, 1997). In contrast, Fischer (1996), Scholes (1996), and Searle (1996) have criticised Poststructuralists for being overly concerned with how individuals can be disadvantaged by societal barriers. In a deafness context, Muma and Teller (2001) were critical of Behaviourism that is central to Poststructuralist thought, in particular the “failure to appreciate the centrality of intent” (p. 34), or an individual’s internal locus of control.

Theories of Bloor (1976) and Kuhn (1962) may help explain the aforementioned paradigm issues. Bloor extensively documented studies of numerous scientific disciplines to argue that science was not strictly rational or linear but a complex, nonlinear, and non-progressive process. In addition, the selection of investigative topics, and acquisition and interpretation of data can be paradigmatically, politically, and personally influenced. Kuhn further argued that scientific agendas were largely determined by faculty demands such as financial incentives, political arguments, and peer consensus as much as by theoretical problems and experimental results. According to Bloor and Kuhn, these paradigmatic, political, and personal influences on research agendas can create negative outcomes. With respect to studies with deaf participants, it could be argued that the respective foci of the medical and social models
are, therefore, directed away from the investigation of proactive psychosocial attributes and tactics. As a consequence, there appears to be a dearth of knowledge.

In light of the analyses of the medical and social models, the empirical implications of Humanistic Psychology were carefully considered. Coward and Royce (1981) and Scheetz (2004) suggested that the flaws of Humanistic Psychology may be found in the discounting of antecedent influences on an individual’s identity such as childhood advantages or traumas, biological factors such as disability or gender, and social status like prestige or chronic unemployment. Coward and Royce also suggested that Humanistic Psychologists tend to lack rigor in their research methods and that the data are contaminated by observational biases of the researchers.

The search for a rigorous research methodology related to deaf adults’ psychosocial attributes and tactics required a review of existing instruments. First, Scheetz’s (2004) thorough review of deafness-related instruments lacked instruments specific to adults because an overwhelming majority were designed for children/adolescents. The instruments designed for adults in Scheetz’s review measured some but not a range of psychosocial skills. Secondly, Muma and Teller’s (2001) four level educational framework relating to cognitive socialisation in a deafness context was also reviewed. The four levels were: 1) general cognitive-social base, 2) substantive functions of language, 3) cognitive processes underlying messages, and 4) metacognitive and metalinguistic abilities. This framework is primarily concerned with the cognitive aspects of an individual’s socialisation and not behavioural outcomes. Hogan’s (2001) ‘Hearing Rehabilitation for Deafened Adults: A Psychosocial Approach’ was also reviewed. This text contained some prescriptive psychosocial strategies for adults with acquired deafness, but Hogan’s framework was developed using a non-experimental, qualitative, and inductive methodology. A review of Hogan’s references also revealed a considerable number of sociological texts comparative to empirical studies. Instruments used to measure a cohesive
range of proactive psychosocial attributes and tactics were therefore absent in Scheetz, Muma and Teller, and Hogan.

A review of studies outside of the deafness domain was therefore deemed necessary because of the scarcity of deafness-related research into vocationally successful deaf adults’ proactive psychosocial attributes and tactics. Of particular relevance were studies using the R&R model in the area of Learning Disabilities (LD) (Reiff, 2004; Reiff et al., 1995; Wehmeyer, 1999; Wong, 2003). Research into deafness shares many similarities with research into LD. For example, both academic domains have histories of academic inquiry that have the goal of integrating individuals with disabilities into mainstream society (Barnes, 2004). Furthermore, Reiff (2004) determined that LD research has been traditionally dominated by a medical model, which has also been reported to be prevalent in studies with deaf participants (Bauman, 2004; Lane, 1993; Paul & Jackson, 1993; Scheetz, 2004). The R&R model, however, is not concerned with the concept of a disability as pathology or how societal barriers may influence quality of life. The R&R model views the concept of disability as a workable or tangible psychosocial phenomenon (Reiff, 2004).

2.1.8. The Risk and Resilience Model: 1995 to the present

Hintermair (2006) reported that, in 1998, the then president of the American Psychological Association (APA), M. E. P. Seligman stressed the need for substantial research into psychosocial attributes and tactics for coping with day-to-day life. Seligman also argued that mental health professionals were ill-equipped to ensure a holistic understanding of their clients’ health because of the prevalence of the medical model used in research (Hintermair, 2006). According to Reiff (2004) and Wehmeyer (1999), the academic domain of LD has experienced a recent theoretical shift from a medical model towards the R&R model. The R&R model is also known as the “social-cognitive perspective” (Wong, 2003, p. 69). Wong explained that the R&R model is largely concerned with investigating how individuals manage their lifestyle through
active risk and resilience. As such, researchers using the R&R model appear to have followed the APA's direction and also to have incorporated themes evident in Humanistic Psychology.

Wong (2003) observed that studies framed by the R&R model feature the motivation of researcher/s to discover what individuals with LD can do rather than what they cannot do. For example, the choice of participants in Reiff et al. (1995) (successful adults with LD) and the subject matter (viewing the experience of disability as a workable and not a fixed experience) indicate that the experience of LD has been reframed (Bryan, 2003; Reiff, 2004; Reiff et al., 1995; Wong, 2003). This experience is neither pathologically nor culturally determined. Reiff (2004) and Wong further defined a positive educational quality within studies framed by the R&R model. Researchers not only seek to discover strengths in participants, but the strength-based findings are intended to be disseminated in a prescriptive manner similar to that of Pragmatists (Creswell, 2003). For example, relevant professionals can recommend psychosocial strategies gleaned from research to assist clients with LD to achieve better vocational and social outcomes.

The R&R model also appears to have avoided scientific flaws evident in Humanistic Psychology by employing a stringent qualitative methodology framed by Interpretivist research (Reiff, 2004; Wong, 2003). According to Reiff and Wong, researchers using the R&R model commonly use a within-group model of study (i.e., participants with LD are not compared to individuals without LD) typical of Interpretivist research (Creswell, 2003; Wong, 2003). An example is the following study by Reiff et al. (1995), whose framework had significant theoretical and methodological influences on the current study.

2.2. Reiff et al.'s (1995) eight themes
Research related to deafness appears to be lacking a comprehensive framework that conceptualises the psychosocial attributes and tactics that deaf individuals may use to maximise their potential in mainstream society. Reiff et al. (1995) proposed a framework of eight themes
that promote maximisation of psychosocial potential for individuals with LD (see Figure 1).

These themes are allocated to two thematic categories (Internal Decisions and External Manifestations) that are parts of a mutually influential whole. Internal Decisions are cognitive attributes, which consist of three thematic codes - Desire, Goal Orientation, and Reframing. Importantly, External Manifestations should not be mistaken for extrinsic factors that impact on an individual’s life because they are outwardly evidential behaviours and/or outcomes. Rather, External Manifestations can be understood as the affective dimension of an individual’s Internal Decisions (Reiff et al., 1995). Persistence, Goodness of Fit, Learned Creativity, and Social Ecologies are the subsets of External Manifestations. Reiff et al.’s eighth theme is Control. This is an overarching theme but importantly, also contributes to the seven other themes.

![Conceptual Model of Reiff et al.'s eight themes](image)

*Figure 1
Conceptual Model of Reiff et al.’s eight themes*
Figure 1 provides a conceptual model of Reiff et al.’s (1995) framework of psychosocial attributes and tactics that individuals use to maximise their potential. This is not a hierarchical framework because the thematic categories of Control, Internal Decisions, and External Manifestations have a reciprocal influence on each other. The eight themes are therefore not mutually exclusive. Some studies in the following review may therefore be mentioned in more than one theme. For example, language competence in deaf individuals has a significant role in the themes of Control, Goodness of Fit, and Learned Creativity.

The systematic and comprehensive nature of Reiff et al.’s (1995) psychosocial framework in a disability context was the principle reason for it being chosen to guide the current study. Three stringent criteria, however, were used to assess the suitability of Reiff et al.’s (1995) framework for the current study. First, given this study involved participants’ self-reflection on their psychosocial attributes and tactics, the review excluded studies involving child participants and focused primarily on studies with adult participants. Studies featuring deaf adolescent participants were, however, included when specifically related to a theme. Secondly, preference was given to studies focusing on proactive as opposed to negative deaf participants’ attributes and tactics, because the current study has adopted the ideology of the R&R model. Thirdly, preference was given to studies that specifically outlined the operationalisation of psychosocial attributes and tactics, which again relates to the objectives of the R&R model.

At the outset, it must be stated that Reiff et al.’s (1995) framework has been created in the context of Western thinking that emphasises individualism. Individualism places a premium on autonomy, and suggests that individuals are compelled to make lifestyle choices and are solely responsible for the maximisation of their psychosocial potential (Beck, 1992, Beck et al., 1997; Giddens, 1991, 1995). Non-Western cultures may not necessarily value these beliefs and characteristics. This cultural issue will be further explored in Social Ecologies (section 2.2.3.4).

Each of the following eight themes are presented in a manner that first links Reiff et al.’s (1995) theme with Sternberg’s (1985) Triarchic Theory of Intelligence to establish the link with
Humanistic Psychology; secondly, reports Reiff et al.’s findings of the theme; thirdly, analyses non-deafness studies related to the theme, and; finally, connects deafness-related empirical research with the theme. The theme of Control will be reviewed first because it overarches all the other themes.

2.2.1. Control

Despite being a stand alone theme, Reiff et al. (1995) also referred to Control as being the combined effect of all the other themes. Control as the outcome of the seven themes can be termed autonomy. Maslow (1970) stated “autonomy is self-decision, self-government, being an active, responsible, self-disciplined, deciding agent rather than a pawn, or helplessly ‘determined’ by others” (p.161). As such, Control could also be viewed as the combined effect of the three sub-theories of Sternberg’s (1985) Triarchic Theory of Intelligence. Psychosocial aspects of Control in the following review of studies include: proactive management of life circumstances, the gradual mastery of disability-related psychosocial challenges, the importance of maintaining a high degree of self-control, acceptance of deafness, the implications of individualism, language competence, and outcomes and processes assisting the maximisation of psychosocial potential.

By engaging in a purposeful process of self-actualisation, participants in Reiff et al.’s (1995) study believed they were able to determine outcomes rather than being passively resigned to disability-related extrinsic influences. Control was apparent in the participants’ proactive management of life circumstances and their viewing of disability-related challenges as alterable and not fixed. These findings were further supported by Reiff’s (2004) later qualitative study that used Reiff et al.’s framework with 21 college students with LD. Participants in Reiff’s study who demonstrated high internal locus of control reported a greater sense of academic and social mastery than did participants who saw their disability as unchangeable or environmentally/externally determined.
Aspects of Control in Reiff (2004) were also contributing factors to the vocational and social success in Goldberg et al.’s (2003) 20-year follow-up study with 41 adults with LD. This qualitative study found that successful participants reported emotional stability by exhibiting self-awareness, perseverance, goal setting, effective use of social support systems, and emotional coping strategies. These proactive attributes also appeared to improve with age because the stress of having a LD “greatly decreased from childhood to adolescence and again from adolescence to adulthood” (Goldberg et al., 2003, p. 232). Even though Control of disability-related difficulties may increase with maturity, many participants reported ongoing social difficulties. The reasons for this included unsatisfactory romantic, personal, and professional relationships due to their mistrust of others and lack of assertiveness. Almost all participants also believed their LD would never disappear or be ‘outgrown’ because the LD remains across the lifespan. The concept of ‘outgrowing’ a disability should not be mistaken as a qualification of Control. Goldberg et al.’s study highlighted that proactive attributes and tactics can be used to circumvent continual disability-related challenges. These findings also suggest that Control of disability-related experiences improves with the acquisition of Sternberg’s (1985) notion of tactic knowledge - the understanding and operationalisation of social, practical, or emotional issues.

Matthews, Zeidner, and Roberts’ (2004) text critiquing of empirical studies linked tactic knowledge with Emotional Intelligence. Matthews et al. (2004) reported that individuals with high Emotional Intelligence are frequently characterised as maintaining a higher degree of self-control than are individuals with low Emotional Intelligence. The ability to maintain consistently a high degree of self-control enables the individual to curtail disruptive impulses and emotions. Such Control appears evident in the individual’s ability to remain composed, positive, and focused in threatening or stressful encounters. Matthews et al. further elaborated that threatening or stressful situations can cause individuals with poor self-control to display behaviours that cause negative long-term consequences such as an unsuccessful career record and haphazard financial management.
Authors such as Leigh (1999), Scheetz (2004), Stinson et al. (1996), and Greenberg and Kuschè (1993) have commented on elements of Control with regard to identity development of deaf individuals and the psychosocial competencies required for vocational and social success. Leigh’s (1999) qualitative study of the educational experiences of 34 deaf adult participants from the Alexander Graham Bell Association of the Deaf in Washington DC found that the participants’ acceptance of their deafness, rather than their denial of it, assisted in their management of challenges raised by their deafness.

Acceptance of deafness can be interpreted in two ways. The first interpretation relates to Reiff et al. (1995) stressing the importance of individuals accepting that their LD poses psychosocial challenges. Psychosocial potential cannot be maximised without this awareness. An individual’s acknowledgement of difficulties involving their deafness is therefore required to master and execute Reiff et al.’s psychosocial themes. The second interpretation may be that deaf individuals who do not accept cultural Deafness are in denial of their deafness (see Hogan, 2001; Lane, 1993; Padden & Humphries, 1988; Wooley, 1993). Hence Hogan’s (2001) phrase ‘pretend deaf person’, which is “used in the Australian Deaf community to refer to people with acquired hearing loss … such people are not considered to be really deaf” (p. 51). In terms of accepting deafness, the first interpretation is more aligned with Rotter’s (1966) notion of internal locus of control. It also is in contrast with Hogan’s interpretation that a CD identity constitutes an acceptance of deafness.

According to Scheetz (2004), some deaf individuals’ tendency towards external locus of control may be a consequence of socialisation in residential schools for the Deaf and in Deaf communities whereby a ‘group mindset’ is valued over individualism. Irrespective of deafness, authors have suggested that this can be especially problematic in Western nations (see Beck, 1992; Beck et al., 1997; Fromm, 1960, 1969; Giddens, 1991, 1995; Seligman, 1993; Smith & Mackie, 2000; Tarnas, 1996). As Fromm (1960) argued, some individuals find self-responsibilities required for individualism, autonomy, or self-actualisation, too overwhelming.
These individuals may resort to mechanisms of ‘escape’ such as automation conformity – the uncritical acceptance of, and adherence to, an organisation or community’s norms, values, and beliefs (Fromm, 1960). An example of a group mindset is Kormesaroff and McLean’s (2006) anecdotal statement that Deaf people are oppressed by hearing people “with whom they do not identify and who do not identify with them” (p. 91). Similar beliefs are expressed by Bauman (2004), Corker (1999), and Wooley (1993) and imply that CD individuals are exempt of responsibility for initiating and sustaining relationships with hearing peers.

The aforementioned trend may be clarified by Stinson et al.‘s (1996) mixed-methods study reporting 50 NTID deaf students’ perceptions of communication and social relationships. Deaf participants who felt emotionally secure with hearing peers, and who were involved in mainstream activities, had strong feelings of social competence, self-confidence, and social connectedness with their hearing peers. In contrast, studies have reported that deaf participants who lack social competence, self-confidence, and social connectedness with hearing peers are more likely to socialise with deaf peers (e.g., Musselman et al., 1996; Stinson & Kluwin, 1996; Stinson et al., 1996; Stinson, Whitmire & Kluwin, 1996). As will be elaborated in sections relating to Goodness of Fit (section 2.2.3.2) and Learned Creativity (section 2.2.3.3), these distinctive socialisation trends may be significantly determined by a deaf individual’s language competence (i.e., with SL or spoken language, or both).

Greenberg and Kuschè (1993) defined outcomes and processes promoting the psychosocial development of deaf children. Their psychosocial competencies related to Control in mainstream settings included: good communication skills, the ability to think independently, an aptitude for self-control and self-direction, understanding the needs, feelings and motivations of others and oneself; flexibility in managing and adapting to multiple perspectives in any given situation, a capacity to rely on others and be reliable, appreciating and understanding the values of both one’s own and other cultures; and lastly, using these skilled attributes to achieve socially appropriate goals, and to maintain healthy relationships of varying degrees of intimacy.
Greenberg and Kuschè’s views are evident in studies reporting that deaf participants with internal locus of control achieve higher academic outcomes, act more independently, and feel less depressed than those with a tendency for external locus of control (e.g., Foster & Macleod, 2004; Stinson & Antia, 1999; Stinson et al., 1996).

2.2.2. Internal Decisions

The thematic category of Internal Decisions consists of Desire, Goal Orientation, and Reframing. These cognitive attributes have distinctive characteristics but co-ordinate as a combination which impact the thematic categories of External Manifestations and Control.

2.2.2.1. Desire

Desire is the cognitive drive that motivates individuals towards achieving productive psychosocial outcomes. Desire also involves the ability to act upon the notion of information processing in Sternberg’s (1985) Experimental sub-theory. Psychosocial aspects of Desire in the following review of studies included: overcoming disability-related stereotypes, industrious commitment, self-determinism, purposeful adaptation despite a disability, the need for encouragement and rewards, the self-initiative to be integrated without being viewed as ‘different’, the use of strategies to circumvent deafness-related difficulties, and a love of a lifestyle pursuit.

Many participants in Reiff et al.’s (1995) study reported that anger originating from incidents in childhood, particularly towards the school system, was a catalyst towards what would later become successful vocational and social outcomes. Other participants maintained their Desire into adulthood through rewards gained from particular endeavours, encouragement from significant others (e.g., family and teachers), or understanding that basic academic survival requires sustained determination for individuals with LD. Driven by a sense of internal locus of control, participants in Reiff et al.’s study seemed to have the resolve to prove the stereotypes
of their disability wrong (e.g., low expectations imposed by others), and that these external factors would not decide their fate.

In research unrelated to disability, aspects of Desire were investigated in Bloom’s (1982) retrospective study with 25 participants who achieved world class accomplishments before the age of 35. Reiff et al. (1995) cited Bloom’s work as a significantly influence on their framework. Participants included concert pianists, sculptors, mathematicians, neurologists, Olympic swimmers, and elite tennis players. All showed an extraordinary willingness to devote their time and effort to refining their skills through practice. They also demonstrated an inordinate competitiveness with other peers and a determination to do their best at all costs. Willingness to work to achieve a high standard was evident in the early years but became increasingly evident after several years of instruction. Bloom also suggested that industrious commitment was crucial if the participants were to continue to reap rewards and if their aspirations were to become a reality.

Desire appears closely linked with the concept of self-determinism. Johnson’s (1999) review of studies of self-determinism in participants with autism suggested that Desire characterises an orientation towards goals. Johnson defined strategies for self-determinism as “setting priorities, having and making choices, setting goals, developing a sense of self awareness, managing time, and working collaboratively with others” (p. 11). He also suggested that purposeful self-regulation is a crucial factor that directs individuals towards goal accomplishments. An anecdotal example was given by Kennedy (1996), a man with a severe physical disability who was wrongfully institutionalised for 17 years. Kennedy described how he eventually achieved his goal of living in the mainstream community, “I believe self-determination is a process … You keep learning how to be more self-determining” (p.38).

The concept of self-determinism was studied in Fullerton and Coyne’s (1999) study with 23 adolescents and young adults with autism or Asperger syndrome. The participants were provided with an educational program consisting of three stages in teaching skills in self-
determinism. The first stage focused on self-knowledge about the impact of autism that featured sessions conducted by people with autism and the participants writing about their own experiences. The second stage was designed to improve participants’ skills in facilitating communication. The third stage involved the participants creating ‘life maps’ of their current situation and where they would like to be in five years time. Fullerton and Coyne performed pre and post interviews with the participants and their parents. Some participants showed no improvement. The researchers reported that this was linked to the particular cognitive nature of autism. However, many parents of the participants reported improved skills in their child’s self-determinism. This suggests that self-determinism can be a learned trait.

Deafness studies by Luckner and Muir (2001) and Bain et al. (2004) have yielded similar findings to those of Reiff et al. (1995), Bloom (1982), and Fullerton and Coyne (1999) as well as providing deafness-specific examples of Desire. Luckner and Muir’s qualitative study sought to understand the attributes of 20 successful deaf students in mainstream settings. It also included interview data from 19 parents, 19 general education teachers, and 13 teachers of the deaf. The parents in Luckner and Muir’s study reported that their deaf children desired not to be treated differently to hearing peers. The students also desired recognition for scholarly efforts in the form of awards, certificates, or high marks. The educators further observed that their students lacked social inhibition relating to deafness and a sense of belonging with hearing peers. The students also demonstrated good self-advocacy skills and a strong internal drive to be independent.

Bain et al.’s (2004) mixed-methods study was of 38 oral deaf (OD) adults from Southeast Pennsylvania and New Jersey who were highly educated, socially connected, and vocationally successful. Bain et al.’s findings show that the majority of participants had developed psychosocial strategies to negotiate social difficulties resulting from their deafness. These strategies involved having the desire to educate, adapt, and accommodate by participating in activities and maintaining a lifestyle with hearing peers. Participants in Bain et
al.’s study also expressed self-confidence, little social anxiety, and pride in their strategic adaptive skills. Additional instances of Desire included the motivation to improve speech-reading skills, produce clearer speech, and initiate modifications of the environment to ensure communication ease. These characteristics were also evident in Reisler’s (2002) anecdotal text whereby 14 OD role models described aspects of Desire including: self-belief despite adversity, refusal to be labelled as inferior, being disciplined, and remaining optimistic.

The collective characteristics as described by Bain et al. (2004) and Reisler (2002) appear largely reliant on the individual’s self-initiative and desire to interact within mainstream society. CD individuals have been reported to resist interaction with hearing peers (Hardaway, 1988; Muma & Teller, 2001; Young, Green & Rogers, 2008). For instance, Hardaway’s quantitative study with 40 CD students and 40 deaf students with an additional disability at Gallaudet University found that participants in neither group desired to integrate with the other group. Rather, all participants from both groups desired to interact only with individuals within their group. Identification with a sub-group or sub-culture was therefore stronger than the desire to interact with non-members.

Toscano, McKee, and Lepoutre (2002) sought to identify characteristics and factors related to academic success in 30 deaf NTID students who exhibited exemplary writing and reading skills. This mixed-methods study reported that the participants had received intensive encouragement and tutoring from teachers and family, and believed watching captioned media and using text-based telecommunications had improved their reading and writing skills. A significant finding was the participants’ continued love for reading and writing from a young age. As also reported in Bloom’s (1982) aforementioned study, the continued enjoyment for a craft or life pursuit are aspects of Desire in high achievers. The role of enjoyment in maintaining lifestyle pursuits is also comprehensively covered by the works of Mihaly Csikszentmihalyi (see Csikszentmihalyi, 1992; Csikszentmihalyi, Rathunde & Walen, 1997). Closely aligned with
Humanistic Psychology, Csikszentmihalyi’s works primarily focus on intrinsic motivation but lack scientific rigour.

2.2.2.2. Goal Orientation

Goal Orientation involves an individual’s purposeful pursuit of vocational or social objectives. Goal Orientation also involves the meta-components and performance components in Sternberg’s (1985) Componential sub-theory as it includes the selecting, monitoring, and evaluating of appropriate strategies. It also includes the notion of acting on information processing, which is a component of the Experimental sub-theory (Sternberg, 1985). The following review of studies featured psychosocial aspects of Goal Orientation included: focusing on progressive steps towards a goal, purposefully regulating behaviour or diligence, the importance of acquiring a tertiary degree for long term goals, and goal oriented tactics for successful career outcomes.

Reiff et al. (1995) suggested that goals cannot be vague or unrealistic for individuals with LD. Unrealistic goals were correlated with a lack of career choice awareness that can lead to adverse outcomes. Successful Goal Orientation was defined as a planned series of progressive steps. As one participant in Reiff et al.’s study stated, “Successful people have a plan. You have to have a plan, goals, strategies; otherwise you are flying through the clouds and then you hit the mountains” (p. 33). Realistic aspirations and achievable short term goals were also reported as creating feelings of purposefulness and preventing helplessness (Reiff et al., 1995).

In research unrelated to disability, Martin, Mithaug, Cox, Peterson, van Dycke, and Cash’s (2003) longitudinal study revealed that eight male pre-adolescents with severe emotional/behavioural problems were able to plan, work, evaluate, and adjust after successful educational intervention. The nine- to ten-year-old participants had experienced severe sexual abuse and reported previous behaviours such as arson, pet killings, uncontrolled tantrums, and an inability to function in a normal school setting. Intervention consisted of three stages over 30
days in a residential treatment facility. It featured a reward system for regulating expectations, actions, choices, and results to meet desired goals. The analysis of the individual student pre and post scores showed a marked improvement in all students for academic performance in reading, maths, language, and general knowledge. Even though pre and post observational data were not collected for comparison, teacher and classroom observers anecdotally noted a marked improvement in the students’ appropriate social and physical behaviour. Martin et al.’s findings suggest that Goal Orientation is learned behaviour that can give “a ‘sense of personal control’ that acts as intrinsic motivation for independent learning” (p. 443).

Intrinsic motivation also appeared as a feature of successful deaf students in Luckner and Muir’s (2001) study. The parents in this study described their children as organised, self-motivated, responsible, goal directed, and a diligent worker. Similar attributes were reported in Menchel’s (1995) unpublished doctorate dissertation regarding interviews of 33 successful deaf student participants attending 18 mainstream American universities. The primary mode of communication for all but one participant was speech-reading and speech. Participants in Menchel’s study were highly goal orientated, socially and academically integrated, and demonstrated a strong orientation towards problem solving. Studies have suggested that gaining tertiary qualifications allows deaf individuals to achieve occupational success similar to that of hearing peers (e.g., Bullis & Bull, 1995; Jones, 2004; Schroedel & Geyer, 2000). Schroedel and Geyer (2001) also noted that tertiary qualifications significantly enhanced deaf individuals’ fiscal benefits and career mobility.

Deaf individuals’ attainment of educational qualifications to establish career outcomes is an example of goal orientated behaviour. In a review of American demographic statistics, Jones (2004) cross-referenced Schroedel and Geyer’s (2000) study with information about the general hearing population provided by the US Department of Commerce in 1999. Two-hundred-and-forty deaf and hard of hearing individuals who graduated from the NTID between 1983 and 1985 participated in Schroedel and Geyer’s study. In a time when 90% of people without disabilities
were employed, 85% of the deaf graduates were in the labour force at the time of Schroedel and Geyer’s study. Schroedel and Geyer further found that the median earnings were $US 35,880 for deaf male university graduates. Jones reported that $US 35,962 was the median wage for males overall. Although Schroedel and Geyer had a non-random sample of 110 males, the median wages were almost identical. In addition, deaf male graduates earned considerably more than females with similar qualifications, a finding evident in the overall hearing population (Jones, 2004). Jones suggested, however, that the average earnings for the overall deaf population with and without tertiary degrees may differ from the overall hearing population.

Schroedel and Geyer (2000) further outlined goal oriented tactics for successful career outcomes. They suggested that it is helpful for deaf individuals to have long term goals at an early age (i.e., ninth grade) and be guided by career counsellors before college entry. Deaf individuals were advised to think in terms of a career rather than a specific job, and work in a sequence of relevant jobs in order to become professionally diverse. The development of interpersonal competencies was also deemed important to facilitate on-the-job communication and, if necessary, to request deafness-related accommodations from employers. Schroedel and Geyer also emphasised the value of purposefully collaborating with professionals in schools, vocational programs and colleges as well as suitable deaf mentors. The purposeful enhancement of reading and writing skills plus work skills (e.g., technical expertise) relevant to careers were also important for enhancing career prospects.

Studies related to Goal Orientation suggest that hearing status is of little importance with regard to an individual maximising their psychosocial potential. In addition, degree of deafness was found not to be a limitation on academic achievement in a quantitative study with 225 NTID graduates by Saur et al. (1986). Deaf individuals can enhance the potential for positive career outcomes by purposefully developing interpersonal skills, careful career planning, and exploration (Bonds, 2003; Bullis & Bull, 1995; Punch et al., 2005; Schroedel & Geyer, 2000,
Goal Orientation alone, however, may not be enough. A deaf individual’s capacity for Reframing may also influence the maximisation of their psychosocial potential.

2.2.2.3. Reframing

Reframing can have two meanings. The first meaning relates to researchers’ interest in how individuals circumvent disability-related challenges rather than focusing on negative aspects of a disability (Reiff, 2004). The second definition refers to how an individual cognitively reframes dysfunctional or irrational beliefs in order to produce proactive psychosocial outcomes (Ellis & Harper, 1961, 1977; Namka, 1989). Reframing is therefore central to self-regulatory strategies (e.g., ‘self-talk’) (Jacobs, 2006; Lange, Richard, Gest, de Vries & Lodder, 1998; Reiff, 2004; Reiff et al., 1995; Seligman, 1993). Reframing involves the meta-components within Sternberg’s (1985) Componential sub-theory because it requires the recognition of a problem to select strategies to address the problem. The following review of studies related to Reframing have included psychosocial aspects such as: self-awareness, shifting thought processes from negative to positive, tolerance of ambiguity, the importance of evaluation, and choosing strength-based instead of negative pursuits.

Participants in Reiff et al.’s (1995) study provided many examples of Reframing by shifting attention away from weaknesses/negatives and towards personal strengths/positives. For example, one participant in Reiff et al.’s study explained that being ashamed of a LD can impede psychosocial competence. Acknowledging the disability and its psychosocial challenges are characteristic of some cognitive tactics central to Reframing (Cosden, Brown & Elliot, 2002; Reiff et al., 1995). As one of Reiff et al.’s participant explained, “I have learned to accept who I am, what I can do, what I cannot do, who I should not try to be, and who I should try to be” (p. 33). Reframing occurred when this participant shifted the focus from a ‘cannot do’ to a ‘can do’ mental outlook.
Studies unrelated to disability have shown that positive beliefs lead to effective behaviours and negative beliefs the contrary (e.g., Dugas, Hedayati, Karavidas, Buhr, Francis & Phillips, 2005; Lange et al., 1998; McGuire & McGuire, 1996; McMahon et al., 2003). Direct manipulations, or Reframing, of an individual's self-deprecatory cognitions (beliefs or attributions) have been found to enhance self-esteem (Lange et al., 1998; McGuire & McGuire, 1996). For example, McMahon et al.’s (2003) quantitative American study with 112 women with poor body image revealed that participants who were fixed in their thinking reported more negative moods, a greater sense of isolation, and/or were prone to non-integrative beliefs. In contrast, participants reporting the least negative moods and social isolation demonstrated flexible organisation of self-knowledge about specific negative body characteristics. McMahon et al. referred to this latter form of self-evaluation by participants as ‘integrative thinking’ - consciously Reframing negative beliefs in a manner that assists an individual’s integration into society.

Dugas et al.’s (2005) Canadian study with 101 non-disabled participants reported that inflexible thinking was closely linked with intolerance of uncertainty, which can generate dysfunctional cognitive functions such as excessive worry, anxiety, and depression. Participants who were unable to reframe negative beliefs or attributions also tended to make threatening interpretations of ambiguous situations (Dugas et al., 2005). Loewinger (1976) theorised that tolerance of ambiguity requires flexibility of thought, and incorporates a willingness and capacity to entertain several perspectives, not simply one’s own. Dugas et al.’s findings appear to support Loewinger’s theory. Participants in Dugas et al.’s study who reported flexibility of thought were less anxious and depressed than those with inflexible thinking or intolerance of uncertainty. Findings in studies by Dugas et al. and McMahon et al. (2003) suggest that poor self-esteem and social exclusion are not produced solely by societal barriers, or external locus of control. Rather, the individual’s own capacity for Reframing may significantly determine the maximisation of their psychosocial potential.
Evaluation is crucial for Reframing. For an evaluation to be made, an acknowledgement of the issue needs to occur before dysfunctional behaviour/s can be changed (Ellis & Harper, 1961, 1977; Namka, 1989). In a deafness context, McMahon et al.’s (2003) notion of ‘integrative thinking’ may involve Reframing negative expectations or stereotypes of deaf individuals that can result in them developing learned helplessness and limiting their personal goals (Calderon & Greenberg, 2000; Paul & Jackson, 1993). For example, one OD participant in Leigh’s (1999) study mentioned that dealing with ambiguous circumstances was a proactive coping strategy that reduces anxiety and enhances interdependence with hearing peers. Bibby et al.’s (1995) study further suggested that deaf individuals were better able to implement different coping strategies when consciously aware of deafness-related psychosocial difficulties.

According to Punch and Hyde (2005), reduced auditory access to incidental learning and less part-time work experience during high school years may lead to the expectation that young deaf individuals have lower levels of career making competencies and reduced career awareness than their hearing peers. Punch et al.’s (2005) Australian study, however, revealed that 65 OD student participants showed more realistic views and achievable career goals than 107 hearing student participants. The OD participants had clearly reframed possible negative career outcomes related to their deafness and focused on proactive outcomes. Punch et al.’s measures were of perceived career barriers, career indecision, and career maturity. The findings reported that the deaf participants’ parents had purposefully directed them towards occupations where their strengths would be optimised and weaknesses minimised. The understanding that deafness can cause limitations assisted Punch et al.’s deaf participants’ understanding of possible career barriers and potential career outcomes. Negative aspects of deafness were therefore cognitively reframed in a proactive manner. Finally, Punch et al.’s findings supported Lysons’ (1980) anecdotal notion that, when effectively managed, a disability can become a stimulus towards higher achievement.
2.2.3. External Manifestations

As previously mentioned, External Manifestations are the affective dimension of an individual’s Internal Decisions (Reiff et al., 1995). The subsets of External Manifestations are Persistence, Goodness of Fit, Learned Creativity, and Social Ecologies. Each has distinctive characteristics but co-ordinate as a combination which impact the thematic categories of Internal Decisions and Control.

2.2.3.1. Persistence

The affective tactic of Persistence requires an individual to take risks and demonstrate resilience. With regard to Sternberg’s (1985) Triarchic Theory of Intelligence, Persistence involves the ability to act upon the notion of information processing and the ability to deal with novelty (Experimental sub-theory) as well as adaptation to the environment (Contextual sub-theory). Psychosocial aspects of Persistence in the following reviewed studies were: effectively dealing with adversity, the psychological attachment to achieve mastery of psychosocial destiny, the notion of risk as a verb, risk-taking as generating experiential knowledge, assertiveness tactics, and the importance of deliberate practice to achieve social and vocational outcomes.

Working hard was not a temporary pursuit for many participants in Reiff et al.’s (1995) study, but reflected their capacity to deal with continual adversity and try regardless of setbacks. On reflection of living with LD, one participant wrote, “I have learned Persistence and am surprised by the number of people who lack Persistence” (p. 34). Another participant indicated that Persistence can lead to social and vocational success when stating: “There is always a place for someone who wants to work hard because most people in the world don’t want to work at all” (p. 34). This comment again reflects Lysons’ (1980) notion that the effective management of a disability can be a stimulus towards higher achievement.

In research unrelated to disability, the theme of Persistence appeared in Anshel’s (1995) comparative and descriptive investigation of elite (n=77) and non-elite (n=48) Australian competitive male swimmers aged between 17 and 24 years. Anshel reported that it was not only
the actual behaviour of Persistence that distinguished elite from non-elite competitors, but the athlete’s psychological attachment to his/her sport. These findings link with participants in Reiff et al.’s (1995) study viewing Persistence as integral to their lifestyle. The elite swimmers in Anshel’s study committed greater psychological investment towards self-improvement than did the non-elite, which suggests that Persistence combined with Desire increases the likelihood of achieving mastery or expertise in given areas. Anshel therefore opined that talent alone in a chosen field is not the guarantor of success, a point supported in Ericsson, Charness, Feltovich, and Hoffman’s (2006) review of studies relating to expertise and expert performance. Ericsson et al. suggested that deliberate practice, assisted by expert mentoring, tuition, or coaching is more valuable than innate talent. Deliberate practice is not aimless repetition but includes setting goals, executing action plans, and monitoring progress (Ericsson et al., 2006). Anshel, Bloom (1982), and Ericsson et al. all suggested that industry, self-discipline, time investment, deliberate practice, and performance evaluation are important aspects of Persistence. The combined effect of these tactics could also distinguish elite from non-elite practitioners in various fields of expertise.

With respect to deafness, Young et al. (2008) explicitly stated that resilience was “protection” and “the opposite of risk” (p. 42). In these contexts, the authors defined resilience as: 1) having protection against many adverse psychosocial outcomes (e.g., vulnerability to physical abuse) because deafness was a risk indicator; 2) the resistance to conformity by having a signing Deaf identity; and 3) a deaf individuals’ achievements by ‘overcoming’ the disability’s challenges. Young et al. dismissed the third interpretation on the basis of the “socially and culturally constructed nature of the outcome definitions of resilience (i.e., academic success as normative social good)” (p. 45). This emphasis on external factors suggests that Young et al.’s view of resilience is influenced by the social model. Furthermore, their interpretations of risk were inclined towards the noun and not the verb. According to the ‘Australian Concise Oxford Dictionary’, risk as a noun implies a chance or possibility of danger,
loss, injury, or other adverse outcomes (Hughes, Michell & Ramson, 1993). In contrast, risk as a
verb indicates an action or the effecting of an occurrence (Beck, 1992; Hughes et al., 1993).
The verb is therefore more aligned with the R&R model’s focus on the practical psychosocial
attributes and tactics individuals use to maximise their potential.

The social model perspective also appeared to frame Boutin’s (2008) review of studies
relating to deaf postsecondary students’ Persistence. Boutin stated that the “social divide
between deaf and hearing college students is a result of cultural misunderstandings and
communication barriers” (p. 30). This review notably lacked descriptions of practical attributes
and tactics of Persistence because the focus was mostly on how professionals can
accommodate deaf individuals rather than providing them with lifestyle skills. Danermark (1995),
however, reviewed 27 studies of postsecondary deaf students’ Persistence in the contexts of
social integration and academic achievement. Danermark concluded that there were other
factors contributing to Persistence of deaf individuals in gaining a tertiary degree. Danermark
stressed the importance of a holistic view but did not elaborate on how this can be
operationalised in academic research. This review, however, lends further credibility to the use
of Reiff et al.’s (1995) framework in which the eight different psychosocial factors influence each
other.

Examples of risk and resilience were present in the following four studies with deaf
individuals. Bibby et al. (1996) conducted a qualitative study with 58 adults with acquired
deafness from the Canadian Hard of Hearing Association and analysed the link between
language competence and coping strategies. Some of these 58 participants believed that taking
risks led to the eventual mastery of psychosocial skills. Examples of Persistence included
tactics such as refusing to withdraw, willingness to ‘rebuild’ one’s life, and asserting one’s needs
in conversation despite difficulties. Similar results were reported in Kersting’s (1997) qualitative
study with ten deaf NTID students who found that maintaining relationships with their hearing
peers was difficult. However, there were reports that persisting through experiences of
loneliness and rejection eventually produced intimate relationships (romantic partnership or best friend) and overall feelings of equality with hearing peers. Israelite et al.'s (2002) qualitative study with seven adolescent participants from Toronto further found that OD individuals were more adept at risk-taking than were CD individuals because of their greater experiential knowledge with hearing peers. In Scherer and Walter’s (1987) quantitative study, 117 adults who withdrew from the NTID between 1986 and 1987 were interviewed. Social (e.g., closeness to family) and communication (e.g., misunderstanding lecturers) reasons were not significant reasons for their withdrawal. Rather, dissatisfaction with the courses, a lack of commitment, and uncertainty of career goals were the major reasons. This indicates the close relationship that Persistence has with Goal Orientation.

Persistence in dealing with adversity was an aspect of Jacobs’ (2004) mixed-methods study that reported theoretical, political, and practical issues relating to the psychosocial potential maximisation of 16 deaf adult participants from Melbourne, Australia. The findings suggest a relationship between use of SL and the value of dealing with adversity. Fluent users of SL were reported to be non-committal or impartial towards the value of handling adversity. The number of participants in Jacobs’ study, however, were very small and these findings cannot be generalised to all individuals who use SL. Results from studies (e.g., Israelite et al., 2002; Jambor & Elliot, 2005; Leigh, 1999; Nikolaraizi & Hadjikakou, 2006) to be reviewed in the section on Goodness of Fit (section 2.2.3.2) have shown that deaf individuals who use SL often self-identify as CD. Jacobs did not specifically address participants’ identification with the Deaf community, but all participants with positive associations towards handling adversity were likely to be OD because they were not fluent with SL.

Israelite et al. (2002), Musselman et al. (1996), and Stinson et al. (1996) report that OD adults tend to be more assertive or persistent with hearing peers than are adults who use mixed (speech and signing) or sign-only communication modalities. Examples of assertiveness include asking hearing peers to speak more clearly (Stinson et al., 1996; Reisler, 2002), making them
feel comfortable with deafness (Bain et al., 2004; Jacobs, 2007; Reisler, 2002), and altering the physical environment to assist speech-reading (Bain et al., 2004; Hogan, 2001; Reisler, 2002). Assertive strategies are a form of self-advocacy because educating hearing peers requires facilitating communication and forestalling possible negative outcomes with strangers or friends (Stinson et al., 1996).

Anshel (1995) and Bloom (1982) noted that an individual’s psychological attachment towards their vocation distinguished the elite from the very good practitioners in various fields of expertise. The psychological attachment of successful deaf individuals to their social and vocational goals may therefore be more purpose driven and encouraged than that of less successful deaf individuals. In addition to mastering psychosocial skills that hearing individuals use to gain inclusion with others, specific skills to circumvent deafness-related difficulties are also likely to be used. Ericsson et al.’s (2006) notion of deliberate practice could explain the use of this combined range of psychosocial attributes and tactics by certain deaf individuals. This deliberate practice may distinguish the ‘elite’ deaf individuals from the less successful. The following theme of Goodness of Fit further explores the implications of these issues.

2.2.3.2. Goodness of Fit

Goodness of Fit is concerned with individuals purposefully placing themselves in social environments in which success is likely. It also relates to the purposeful avoidance of, or minimal entry into, social environments where success is unlikely. Goodness of Fit involves all three components of Sternberg’s (1985) Contextual sub-theory – adaptation to the environment, shaping of the environment, and, if required, selection of a new environment. Goodness of Fit also involves the ability to act on the notion of information processing, which is a component of the Experimental sub-theory (Sternberg, 1985). Psychosocial aspects of Goodness of Fit in the following review of studies included: the purposeful pursuit of social environments where success is likely, changing lifestyle direction when necessary, integrative versus non-integrative
behaviours, the importance of spoken language and social maturity in social settings with
hearing peers, and why some deaf individuals maximise their potential within the Deaf
community and not mainstream society.

Reiff et al.’s (1995) definition of Goodness of Fit is primarily concerned with career
orientation. Adults with LD who experienced little vocational success were found to be less
skilled with Goodness of Fit in an earlier study by Gerber and Reiff (cited in Reiff et al., 1995). In
this study, one participant with a weakness for mathematics was employed briefly as a bank
teller before being fired, and another participant with poor directional skills had serious
difficulties as a truck driver. Remaining in a relationship or circumstance that exposes the
individual’s weaknesses may therefore reduce the likelihood of potential maximisation (Reiff et
al., 1995; Sternberg, 1988). In contrast, Reiff et al.’s successful adults with LD chose careers
wisely, and pursued work environments wherein their strengths would be optimised and their
weaknesses rendered mostly ineffectual. Vocational success was additionally dependent on the
individual achieving a balance between adjustment skills (e.g., using spelling aids) and the
responsiveness of work/social environments to accommodate their needs.

Participants with LD in Reiff’s (2004) study made modifications to their career paths by
changing their university majors to achieve better outcomes. Dropping majors that exposed
weaknesses, participants in Reiff’s study chose other majors to suit their strengths. Even though
altering majors may be common in contemporary tertiary students without a disability, reasons
for these necessary switches may have been different for participants in Reiff’s study. Their
disability may have made them more vulnerable to adverse outcomes. Reiff’s participants
therefore appeared adept with the notions of flexibility of thought (Dugas et al., 2005) and
integrative thinking (McMahon et al., 2003) mentioned in Reframing (section 2.2.2.3). The
cognitive evaluation of their life circumstances enabled the participants to achieve a Goodness
of Fit whereby their strengths could be maximised and their weaknesses minimised.
In a deafness context, Brown and Foster (1991) received mixed responses in a qualitative study with 30 hearing NTID students’ views of successes and barriers for mainstreamed deaf students. The participants generally felt that deaf students had equal academic abilities, but were comparatively less socially adept. The participants’ observations included inconsiderateness, rudeness, and refusing to make an effort to communicate. These non-integrative behaviours may be caused by deaf individuals lacking Sternberg’s (1985) notion of tactic knowledge, to be elaborated further in Learned Creativity (section 2.2.3.3). Despite this, positive interactions were reported of ‘exceptional’ deaf individuals who “were like hearing people and didn’t call attention to themselves or make deafness salient” (Brown & Foster, 1991, p. 25). Hearing participants also reported friendships or acquaintances with deaf individuals as grounded in shared values, mutual interests, similar backgrounds, and the deaf individual’s positive outlook towards life (Brown & Foster, 1991).

Musselman et al. (1996) studied the social orientation and adjustment of 71 deaf adolescent participants in segregated (n=39), partially mainstreamed (n=17), and mainstream education (n=15) settings in Ontario, Canada. Eighty-eight hearing adolescents also participated in this study. Findings showed that segregated deaf participants had poorer spoken English and lower measures on scores of English language skills (i.e., simultaneous communication and Verbal IQ) than the other two deaf groups and hearing participants. Despite the segregated deaf participants’ good SL skills, poorer adjustment with hearing peers was consistent with their poorer spoken and English language skills. Partially mainstreamed deaf participants had similar measured levels of SL competence to segregated deaf participants, but better scores on the measures of spoken English skills. The mainstreamed deaf group had better spoken English skills than the other two deaf groups, but comparatively poorer SL skills. Overall, segregated and partially mainstreamed participants reported better adjustment and perceived social competence with deaf peers who shared their communication modality, and, presumably, cultural values (Davis, 1995). Other studies (e.g., Stinson et al., 1996; Stinson,
Whitmire & Kluwin, 1996) have also reported similar findings showing that signing deaf individuals find Goodness of Fit with other signing deaf individuals. Mainstreamed deaf participants in Musselman et al.’s study, however, reported better adjustment and perceived social competence with hearing peers than the other deaf groups. They also reported a level of social adjustment equal to that of the hearing participants.

There may be several psychosocial factors underpinning Musselman et al.’s (1996) findings. Stinson et al.’s (1996) study found that OD adult participants were better able to receive and impart a greater quantity and quality of information with hearing people than were users of mixed or sign-only communication. Mainstreamed deaf students were also more likely to have developed greater social maturity than deaf students in segregated classes (Kluwin & Stinson, 1993; Kluwin, Stinson & Colarossi, 2002) and to be better prepared for postsecondary education (Danermark, 1995). Studies have further shown OD participants’ reluctance or refusal to participate with deaf individuals using mixed modality or sign only. Reasons included slow instruction pace in Deaf-only classrooms (Stinson et al., 1996), a perceived lack of intelligence in Deaf-only settings (Bain et al., 2004; Jacobs, 2004), disliking the militancy of Deaf culture politics (Jacobs, 2004; Leigh, 1999), and a preference for pursuing relationships with hearing peers who shared their values and beliefs (Kersting, 1997; Leigh, 1999; Nikolaraizi & Hadjikakou, 2006; Reisler, 2002).

Self-esteem and coping strategies may also influence a deaf individual’s Goodness of Fit with either hearing or deaf peers, or both. Jambor and Elliot’s (2005) quantitative study with 78 deaf adults aged between 19 and 48 from the California State University investigated self-esteem and coping strategies. This study yielded three interesting findings. First, participants with profound deafness had higher ratings of self-esteem than did participants with less severe deafness. The authors suspected that profoundly deaf participants were more accepting of their deafness and were more knowledgeable of deafness-related coping strategies. Secondly, group identification with the Deaf and withdrawal into the Deaf community correlated with positive self-
esteem. The authors believed the protective factor of the Deaf community was a reason for this Goodness of Fit. Some authors (e.g., Muma & Teller, 2001; Scheetz, 2004) have described this as CD individuals ‘escaping’ the demands of individualism by remaining within the Deaf community and not venturing out of this ‘security base’. Thirdly, ‘bicultural’ participants who socialised in both hearing and Deaf communities tended to have higher self-esteem than either OD or CD participants. Jambor and Elliot perceived ‘bicultural’ participants as benefiting from both mainstream involvement and having a support network of similar others.

Jambor and Elliot (2005), Israelite et al. (2002), and Leigh (1999) additionally reported that participants educated in specialist schools for the Deaf and whose primary language was SL had a stronger identification with the Deaf than those who use spoken communication and were educated in mainstream schools. This notion was further supported in Nikolaraizi and Hadjikakou’s (2006) Greek qualitative study of educational influences on identity for 25 deaf adult participants aged between 22 and 47. There were three groups defined as either having a ‘hearing’ (OD) identity (n=7), a CD identity (n=12), and a bi-cultural identity (n=6). The study found that all OD participants were educated solely in mainstream schools. CD participants were educated mostly or only in schools for the deaf. Bi-cultural participants experienced education in both mainstream and segregated schools. These findings suggest that a deaf adult’s educational experience is a strong indicator of their self-identifying as either OD, CD, or ‘bi-cultural’.

The aforementioned studies related to educational experience are suggestive of deaf individuals’ participation with hearing or CD individuals or both. Some findings, however, were not supported by Polat’s (2003) study with 1,097 elementary and secondary deaf students from 34 Turkish schools. This study of psychosocial adjustment found seven common factors of statistically significant value. First, Polat found that an additional disability adversely impacts a deaf individual’s self-image, emotional, and social adjustment. A disability additional to deafness was also more likely to be found in individuals educated in segregated than in mainstream
settings (Bullis & Bull, 1995; Polat, 2003). Secondly, the more severe the deafness the greater difficulty the individual had adjusting, which contradicts findings in other studies (e.g., Hyde & Power, 2004; Israelite et al., 2002; Jambor & Elliot, 2005; Punch & Hyde, 2005; Saur et al., 1986; Stinson & Antia, 1999). Thirdly, Polat reported that the later the onset of deafness the poorer was the participant’s psychosocial adjustment. Fourthly, older students were rated as better adjusted by their teachers compared with younger students. This finding adds further to the notion that individuals can eventually master skills required to circumvent disability-related challenges (Goldberg et al., 2003). Fifthly, greater speech intelligibility was positively associated with greater psychosocial adjustment. Sixthly, students with deaf parents were better adjusted than were students with hearing parents. Polat speculated that hearing parents may have less realistic expectations than deaf parents of their child’s potential, and may exert “strong parental control which reinforces passivity rather than active exploration” (p. 331). Lastly, students who performed best academically were better adjusted than were students who performed poorly. In addition, hearing aid usage was positively associated with academic performance and social adjustment. There also were no significant gender differences in Polat’s sample population.

Overall, the literature suggests that a deaf individual’s spoken language competence and social maturity aligns with their Goodness of Fit with either the Deaf or the hearing community. These attributes may also be linked with Learned Creativity.

2.2.3.3. Learned Creativity

Learned Creativity involves the individual’s ability to use learned skills creatively to generate career and social outcomes. Learned Creativity consists of knowledge-acquisition components in Sternberg’s (1985) Componential sub-theory and adaptation to the environment in the Contextual sub-theory. The following review of studies contain psychosocial aspects of Learned Creativity including: the effects of direct and incidental learning, creative adaptation to social
environments, the use of prostheses, the importance of the elaborated versus restricted linguistic styles, and deaf individuals’ enlisting support of hearing peers.

Participants in Reiff et al.’s (1995) study acquired individualised and specialised coping strategies that enabled them to succeed in circumstances previously deemed overtaxing. Learning to cope can have two components: learning from others and purposeful self-learning. Creativity suggests skilfully using multiple techniques to deal effectively with challenges. Reiff et al. used the term ‘manipulation’ whereby individuals adapt to, shape, or choose environments that are aligned with their abilities and needs. According to Reiff et al., manipulation involves acting on a proactive analysis of circumstances that recognises that many events cannot be controlled because of the disability. This is similar to McMahon et al.’s (2003) notion of ‘integrative thinking’ whereby the individual purposely integrates themselves into society using proactive thinking strategies. Reiff (2004) further opined that competence with Learned Creativity was positively correlated with increased self esteem and a feeling of mastery. As one participant in Reiff et al.’s (1995) study, who was a high-ranking business executive despite his LD, explained: “I had to find another way. And in that process, I ended up going through parts of the maze that nobody had ever seen” (p. 35). This participant’s creative thinking not only assisted his inclusion, but also helped produce beneficial career outcomes.

Learned Creativity, however, is not exclusive to individuals with a disability. Participants with no reported disability in Bloom’s (1982) study also demonstrated the capacity to quickly assimilate new ideas, techniques, or processes in their chosen field. However, competence with Learned Creativity was perhaps more crucial for LD participants in Reiff et al.’s (1995) study than for non-disabled participants in Bloom’s study. Competence with Learned Creativity likely impacted the overall lifestyle, not just a chosen vocational pursuit, of participants with LD. The effective use of Learned Creativity to circumvent LD related difficulties may therefore significantly assist an individual’s maximisation of psychosocial potential.
The operationalisation of Learned Creativity consisted of using what Reiff et al. (1995) called ‘prostheses’ to circumvent disability-related difficulties. Prostheses used by participants included spelling aids to assist writing, maintenance logs to regulate living demands, and ‘book tapes’ to accelerate reading competence (Reiff et al., 1995). Prostheses used by deaf individuals to facilitate effective deaf-hearing social interactions include using text-based technologies such as email, the Short Message Service (SMS), National Relay Service (NRS), telephone type-writer (TTY), Instant Messaging (IM), and captioned television programmes/DVDs (Andrews, Leigh & Weiner, 2004; Bruce & Beattie, 2002; Bowe, 2002; Bruce & Beattie, 2002; Jacobs, 2004; Jelinek-Lewis & Jackson, 2001; Power & Power, 2004; Power, Power & Horstmanhof, 2006).

According to Bowe (2002) and Power and Power (2004), SMS, email, and IM usage is so widespread that there is now a ‘level playing field’ between deaf and hearing people. Both groups have a common medium of instant communication, which may explain reports of deaf individuals’ declining use of TTY and the NRS because of time delays (Bruce & Beattie, 2002; Harkins & Bakke, 2003). Regardless, a deaf individual’s active use of these text-based prostheses suggests that barriers to auditory content or communication can be by-passed (Jelinek-Lewis & Jackson, 2001). All devices also necessitate literacy competence for effective use by deaf individuals (Bowe, 2002; Jelinek-Lewis & Jackson, 2001; Power & Power, 2004).

Despite being exemplary readers and writers, most participants in Toscano et al.’s (2002) study reported limited mainstream socialisation and primarily socialised in the Deaf community. This study revealed interesting trends regarding the relationship between literacy competence and psychosocial potential maximisation. Twenty of the 30 participants reported that their families used SL with them as children. Seventeen of these 20 participants received SL using English word order, which may partially explain their exemplary literacy skills. According to Furth (1973), one reason for reported poor reading and writing skills in signing-only deaf individuals has been linked with some sign languages (e.g., AUSLAN, BSL, and ASL) not
being readily transferable to written language. Furthermore, Toscano et al.’s study featured only one participant whose primary means of communication was spoken, whereas 22 participants self-identified as bilingual in spoken English and SL, and six used SL only. Toscano et al.’s study suggests that a deaf individual’s exemplary literacy skills are not the sole guarantor of mainstream inclusion. What seems to matter is how literacy competence is operationalised in social contexts.

Studies (e.g., Luckner & Muir, 2001; Toscano et al., 2002) relating to successful deaf students indicate that participants can improve their own linguistic skills through watching captioned media. Jacobs (2004) further suggested that captioned TV/DVD may assist deaf individuals’ psychosocial skill development. Learned Creativity was apparent in participants using captioned TV/DVD for better understanding of the world and thereafter modifying behaviour to achieve better psychosocial outcomes in everyday contexts. One participant in Jacobs’ study stated “watching subtitled programs has improved my verbal and listening skills. For example, I am more aware of ‘informal’ spoken language that include colloquialisms, sayings etc. Prior to captions I was never able to work out what it was that people were saying while in a romantic clinch etc.” (p. 93-94). This statement suggests that a deaf individual’s literacy competence can be operationalised to create beneficial social outcomes with hearing peers.

Authors have opined that some deaf individuals’ levels of social knowledge correlate with their language-based experiences and the effects of these experiences tend to be cumulative (Andrews et al., 2004; Calderon & Greenberg, 2000; Jelinek-Lewis & Jackson, 2001). This is consistent with Sternberg’s (1988) notion that knowledge acquisition and an extensive vocabulary are mutually influential with regard to tactic knowledge.

Calderon and Greenberg (2000) suggested that reduced linguistic exposure can result in a limited vocabulary and has been associated with teachers and parents simplifying their language for fear of being misunderstood by deaf children. Calderon and Greenberg’s viewpoint
is reminiscent of Bernstein’s (1975) theory of linguistic codes. Bernstein described two distinct codes: the restricted and the elaborated. The restricted code involves a comparatively simplified speaking style that does not question or explain why and how things happen. For example, a parent may use the word ‘good’ instead of ‘proud’. According to Calderon and Greenberg, the deaf child can therefore miss out on the potential meanings of ‘proud’ as a new word. This could lead to the child having a restricted linguistic style, which, in turn, can limit their tactic knowledge or psychosocial experience.

The elaborated code reflects a linguistic style in which the meanings of words are specialised to suit the demands of abstract ideas, processes, or relationships (Bernstein, 1975). According to Bernstein, individuals with an elaborated linguistic code are more aware of their inner feelings and skilled with decision-making compared to individuals with a restricted code. This links with Calderon and Greenberg’s (2000) belief that greater linguistic exposure can enhance a deaf individual’s capacity for independent thinking and effective problem solving. As Bernstein stated, an elaborated linguistic style increases the individual’s potential for creativity, which, in turn, leads to more learning. The acquisition of tactic knowledge may be the outcome because an individual’s tactic knowledge is strongly dependent on an extensive vocabulary (Sternberg, 1988). Bernstein’s theory of linguistic codes may therefore help explain why some deaf individuals appear to be better psychosocially adjusted with hearing peers than are others.

Studies by Arnold (1997) and Harris and Moreno (2006) have further shown that deaf participants with good speech-reading ability have greater experience and social knowledge with hearing peers than individuals with poor speech-reading ability. In addition, Polat (2003) found that deaf participants with a high degree of speech intelligibility were better psychosocially adjusted than participants with poor speech intelligibility. The two linguistic factors of speech-reading ability and speech intelligibility could, again, be linked with Bernstein’s (1975) theory of linguistic codes. Not only may these two linguistic factors assist communication with hearing peers, they may also require Learned Creativity and an elaborated linguistic style in order for
potential to be maximised. Despite deaf individuals having limited auditory input, they may
master speech-reading and speech intelligibility by taking risks (e.g., being creative) and
experiencing exposure (e.g., learning from experiences). There therefore appears to be a
cumulative effect that influences the maximisation of psychosocial potential. In contrast,
neglecting to improve speech-reading or speech intelligibility may reinforce a restricted linguistic
code and result in limited potential maximisation with hearing peers. This notion could explain
why some CD individuals may remain within the Deaf community and experience difficulties
outside this realm without assistance (Muma & Teller, 2001; Scheetz, 2004).

In addition to the linguistic aspects of Learned Creativity, findings in studies by Bibby et
al. (1996), Jacobs (2004), and Punch and Hyde (2005) show that deaf participants learned more
about their social environments through a hearing ‘buddy’. The ‘buddy’, for example, can assist
the deaf individual in learning about peer interactions and ‘gossip’ in social networks. In these
studies, the deaf individual’s creative learning was apparent in their asking a hearing ‘buddy’
questions and then acting on this information in social engagement. It is therefore probable that
a deaf individual’s sufficient speech intelligibility, speech reading ability, and tactic knowledge
can maximise the potential of these deaf-hearing collaborations.

An elaborated linguistic style may be a crucial component of a deaf individual’s capacity
for Learned Creativity. Trends, however, suggest that maximisation of psychosocial potential is
not solely dependent on an elaborated linguistic style. Learned Creativity is perhaps best
defined by how deaf individuals operationalise their literacy and linguistic skills through text
based communications or media, and in face-to-face interaction. Learned Creativity helps to
produce interpersonal connectedness, which is explored in Social Ecologies.

2.2.3.4. Social Ecologies

Social Ecologies involves the individual’s purposeful pursuit, sustenance, and maintenance of
vocational and social opportunities. As with Goodness of Fit, Social Ecologies includes all three
components of Sternberg’s (1985) Contextual sub-theory. Studies related to Social Ecologies contained the following psychosocial aspects: the effective use of support systems, the family’s value system, reasons for deaf individuals’ alignment with hearing peers or the Deaf community, independence versus dependence, the importance of childhood deaf role models, strategies hearing peers can use to assist deaf individuals, and cultural and ethnic issues.

Many participants in Reiff et al.’s (1995) study emphasised the importance of emotional support and social connectedness that continued into adulthood from childhood. Participants reported that their parents persevered through external pressures such as educators’ discriminatory behaviours and low expectations. Parents helped instil a value system consisting of proactive lifestyle practices that led to their social and vocational success. Further, purposeful immersion in supportive social networks involved participants enlisting private supports as well as intentional situational placements where advantages outweighed disability-related disadvantages. Participants in Reiff et al.’s study were not overly dependent on their support systems, yet seemed to have achieved a balance by seeking help and guidance when required.

Most high achievers in Bloom’s (1982) study reported that their family’s value system instilled in them the attribute of doing their best as well as an unusual level of motivation to do work directly or indirectly related to their talent fields. When convinced of their child’s talents, progress, and commitment to his/her chosen talent area, the parents made accommodations to ensure that their talents were realised. These findings are indirectly supported by Matthews et al. (2004) who suggested that parental warmth, support, and encouragement were positively predictive of children’s psychosocial competence. On the other hand, neglectful or authoritarian parental styles were associated with children having lower psychosocial competence (Matthews et al., 2004).

The role of the family’s value system in generating successful psychosocial outcomes also appeared in studies with deaf children and their families by Luckner and Muir (2001), Luckner and Velaski (2004), and Toscano et al. (2002). Such attributes included goal setting,
constant motivation to achieve academically, acceptance of deafness, and not using deafness as an excuse for poor performance. The high expectations parents of academically successful deaf participants were, in turn, instilled in their child. Vocationally successful OD individuals in Reisler’s (2002) text also mentioned the significant contribution of their family’s value system. Marschark (2000) further reported that the opportunities to acquire incidentally the quality and quantity of language are greater for deaf individuals with parents from higher socioeconomic backgrounds. Marschark’s view was indirectly supported by Menchel’s (1995) findings that academically successful deaf participants typically come from families of high socioeconomic status and with high academic qualifications.

Weisel and Kamara’s (2005) Israeli study found that deaf participants (n=38) expressed more fear of attachment and individuation than did the hearing participants (n=42). All participants were from middle to upper-middle socioeconomic classes and aged between 18 and 35. Although not made explicit, Weisel and Kamara’s notions of attachment and individuation appear to be in the context of mainstream social involvement and exploration. Attachment could therefore be perceived as Goodness of Fit with hearing peers, and individuation involves an individual’s aptitude for autonomy as defined by Maslow (1970) (see Control; section 2.2.1). Weisel and Kamara’s findings show that higher fear of attachment correlated with lower levels of self-esteem and wellbeing. The authors stated that the participants’ secure attachment was related to greater environmental exploration during childhood, which led to more rewarding relationships with friends and spouses, better vocational adjustment, better coping resources, a better self-image, and a stronger sense of wellbeing in adulthood. As mentioned in the themes of Goodness of Fit (section 2.2.3.2) and Learned Creativity (section 2.2.3.3), spoken language competence and tactic knowledge can both increase a deaf individual’s attachment with hearing peers.

Leigh et al.’s (1998) American study with 87 hearing, 65 Hard-of-Hearing, and 91 Deaf participants found that the quality of social experience with hearing peers has a strong influence
on deaf individuals’ identity development. For those deaf since childhood, poor quality social experiences with hearing peers may create a dissociation from hearing peers and/or a greater attachment with the Deaf in adulthood (Leigh, 1999; Leigh et al., 1998; Stinson, Whitmire & Kluwin, 1996). Aguayo and Woodcock (2000) further proposed that CD individuals also have a tendency to devalue psychosocial attributes and tactics expected of individuals to integrate into mainstream society. CD individuals, particularly those who are solely reliant on SL, can therefore lack experiential and tactic knowledge with hearing peers (Aguayo & Woodcock, 2000; Bain et al., 2004; Golan, 1995; Harvey, 1998; Jacobs, 2007). In contrast, successful social integration with hearing peers may increase the likelihood of a deaf adult’s identity being linked with the hearing mainstream and dissociated from the Deaf (Aguayo & Woodcock, 2000; Golan, 1995; Harvey, 1998; Leigh et al., 1998).

Dependency on SL can impact the Social Ecologies of deaf individuals. Saur et al. (1986) noted that signing deaf individuals have to deal with a time delay when requesting interpretation via a SL interpreter. Johnston et al. (2002) also raised concerns about residential and partially mainstreamed deaf students’ reliance on the teacher’s communication competence with SL, and on SL interpreters’ ability to relay information. Teachers and interpreters with sub-standard signing skills may impede deaf individual’s access to spoken English and quality instructional content (Antia, Reed & Kreimeyer, 2005). The SL interpreter can impact on the free flowing discourse between deaf and hearing individuals, and create a sense of dependency whereby signing deaf individuals do not experience direct social interaction with hearing peers (Brown & Foster, 1991). The opposite of this notion appeared in Barnhart’s (1991) qualitative study with 13 first year students from Gallaudet University, where SL is the primary mode of educational instruction and social communication. All participants reported limited SL competence and were likely OD. Two participants had withdrawn and four considered withdrawing from the curriculum. Underdeveloped SL was cited as the primary reason for their lack of social integration.
Barnhart’s (1991) study highlights the notion that SL communication skills may significantly influence a deaf individual’s Social Ecologies with other deaf individuals. Given this, it is possible that deaf individuals with spoken language competence may more likely find Social Ecologies with hearing peers. The effect of communication modality on social relationships appeared in Franklin’s (1988) quantitative study with 246 deaf students attending seven mainstream universities in the USA. The deaf participants with high spoken language skills were less likely to withdraw from their university courses than were those with poorer spoken language skills. Franklin also found that deaf participants who were more likely to persist and acquire a degree in mainstream universities attended high schools offering minimal deafness-related support. A reasonable supposition to be made from studies by Barnhart (1991) and Johnston et al. (2002) is that over-dependency on deafness-related support and SL may prevent a deaf individual from acquiring Sternberg’s (1985) notion of tactic knowledge with hearing peers. This notion is further supported by Reiff et al.’s (1995) study in which the participants were not overly dependent on their support systems.

Even though some participants in Reiff et al.’s (1995) study modelled their careers on those of mentors, some deafness-related studies have lamented the lack of deaf role models for deaf individuals (e.g., Foster & Macleod, 2004; Bain et al., 2004). Twelve of 13 participants in Jacobs’ (2004) study who were deaf in childhood stated that they had no deaf role model during their developmental years. Hearing individuals had acted as adequate substitutes. A deaf role model, however, could assist the maximisation of an individual’s potential by providing proactive psychosocial strategies to circumvent deafness-related difficulties (Bain et al., 2004). Bonds (2003) further suggested that deaf role models can motivate and guide deaf adolescents with regard to their career orientation.

A qualitative analysis of interviews with 11 of 50 deaf postsecondary students in Stinson et al.’s (1996) study concluded that classroom inclusion was challenging for all deaf participants regardless of communication modality. Even though the deaf student’s psychosocial attributes
and tactics were determinants of inclusion, hearing individual’s sensitivity and actions were
deciding extrinsic factors. Studies have found that hearing individuals were more likely to
support participation of deaf individuals if they understood positive strategies for effective
communication and had a positive attitude towards deafness (e.g., Brown & Foster, 1991;
O’Connor & Jenkins, 1996; Stinson & Liu, 1999). Positive strategies include sensitivity towards
the deaf individual’s communication efforts, appropriately evoking attention, speaking in a
manner to facilitate speech-reading, and by sustaining eye-contact (Bain et al., 2004; Higgins,
1990). Studies have further highlighted the importance of employers providing specific
workplace accommodations for deaf workers (e.g., Geyer & Schroedel, 1999; Steinberg,
Sullivan & Montoya, 1999). Accommodations by hearing individuals may require a shift in values
- a Reframing of negative definitions of a deaf individual’s capabilities or of stereotypes. Optimal
deaf/hearing socialisation outcomes are therefore not solely dependent on the deaf individuals’
adaptations because accommodations made by hearing individuals are also required (Bain et
al., 2004; Bibby et al., 1996).

Hearing peers can further help nullify or demystify negative stereotypes associated with
defauness for people on the periphery of a deaf individual’s social network (e.g., acquaintances
with little or no previous exposure to deafness) (Jacobs, 2004). Additional benefits that hearing
peers can provide for deaf individuals include coping with stress, financial or employment
assistance, physical accommodations, feelings of solidarity, information, advice, and emotional
support (Bullis & Bull, 1995; Calderon & Greenberg, 2000). A combination of these benefits can
benefit a deaf individual’s quality of life, coping abilities, and overall mental health.

Ethnicity and cultural issues can also be considered as important factors relating to
participants’ perceptions of psychosocial attributes and tactics. For example, authors have
suggested that deaf and hearing individuals raised by parents whose second language is
English may experience psychosocial difficulties in English-speaking communities (Matthews et
al., 2004; Scheetz, 2004). According to Scheetz, there are also some differences between the
three major world ethnicities of Anglo-European, African, and Asian origins associated with psychosocial issues and perceptions of deafness.

Deaf individuals of Anglo-European heritage tend to value individualism (see Control; section 2.2.1), which includes a focus on values such as equality, self-directness, competition, freedom, self-reliance, and assertiveness (Scheetz, 2004). A child’s deafness is usually attributed to medical causes and parental familiarity with deafness usually determines the measures taken to ensure the child maximises their psychosocial potential. Familial acceptance of deafness can depend on factors such as attitudes and expectations projected by parents, extended family members, significant others, and, sometimes, religious beliefs.

Individuals of African heritage tend to come from highly varied backgrounds (e.g., central and West Africa, the Caribbean, and the USA), and can have a shared consciousness of historical racial and economic oppression by the dominant white culture (Scheetz, 2004). Religion, family relationships, the acquisition of life skills and education are highly valued in African cultures. According to Scheetz, misfortune, bad luck, and, sometimes, superstitious reasons can be attributed to a child’s deafness. The deaf child’s psychosocial development, however, is often considered a priority.

Asians constitute the world’s most populous race with approximately 30 distinct ethnic groups from diverse histories and national origins (Scheetz, 2004). Asian cultures tend to place an emphasis on status in social interaction. Hierarchical roles and rules are considered of utmost importance. In contrast to Western individualism, obligation, cooperation, reciprocity, interdependence, and subordination are valued. Deafness in Asian societies can also be viewed with considerable stigma. The mother can be blamed for her child’s deafness, which can have adverse effects on psychosocial development (Scheetz, 2004).

Furthermore, Reeve (2008) stated on the basis of five studies of ethnic diversity in academic research that the vast majority of survey respondents tended to be of Anglo heritage.
Care must therefore be given by the researcher when considering Social Ecologies in socioeconomic, ethnic, and cultural contexts.

2.3. The aims of the study

The review of the literature strongly suggests that Reiff et al.’s (1995) framework could be successfully applied to a study with deaf participants. The aim of this study was to therefore investigate and identify a comprehensive range of proactive psychosocial attributes and tactics that vocationally successful deaf adults may use to maximise their potential. Relatively little is known about this select population and of the topic under investigation.

There is evidence to suggest that, compared with OD individuals, CD individuals may have difficulty integrating with hearing individuals. This may be related to identity issues and communication modality. It is important to consider, however, that both OD and CD individuals are deaf and that psychosocial ability may be a valid topic of investigation. It also seemed pertinent to investigate a hearing sample in order to isolate particular psychosocial attributes and tactics that deaf participants may use to circumvent challenges specifically related to deafness. Authors have argued that selecting deaf adult rather than child participants may provide hereto unknown data that may assist other deaf individuals (Aguayo & Woodcock, 2000; Bain et al., 2004). As Maslow (1970) and Bar-On (1997) suggested, adults are likely to have comparatively greater psychosocial experience and expertise than are children.

On the basis of these considerations, this study sought to employ both between-group and within-group designs. The psychosocial attributes and tactics of three groups of adults over the age of 25 were therefore investigated, namely: OD adults (the OD group), Hearing adults (the H group), and CD adults (the CD group). The quest for rich data of proactive psychosocial attributes and tactics also involved choosing vocationally successful participants who self-regarded as maximising their potential. The selection of this demographic was made on the

In this review of the literature, most studies with deaf adults featured postsecondary students from the National Institute for the Deaf (NTID) in Rochester, New York, or Gallaudet University in Washington DC. According to Danermark (1995), participants from these two institutions commonly use SL and benefit from comprehensive deafness-related support services. Danermark also suggested that little is therefore known of deaf adult participants from outside university settings or from universities other than NTID or Gallaudet University. The current study therefore sought to recruit deaf participants from a variety of sources and from different countries to avoid possible issues related to homogeneity of the sample groups.

The current study was framed by the R&R model, which places a premium on proactive rather than negative views of disability (Reiff, 2004; Wong, 2003). Pragmatism was not mentioned by Reiff et al. (1995), or by Reiff (2004) who used the same framework, but this paradigm appears identical to the R&R model. Researchers using Pragmatism or the R&R model have a vested interest in ‘how things work’ and intend to disseminate their findings in a prescriptive manner. Pragmatism and the R&R model are therefore much closer aligned with each other than with either the medical or social models. The difference, however, is the R&R model is an ideology and Pragmatism is a paradigm consisting of a rigorous research methodology (mixed-methods).

According to Morse (2003), the primary principle of mixed-methods design is to establish the study’s theoretical drive. In order to establish the theoretical drive, the researcher noted Maxwell and Loomis’ (2003) warning that a mismatch between the conceptual framework and the research questions/methods used can cause serious problems. A study using variance theory cannot effectively inform or guide a process-orientated investigation, and vice versa. Quantitative measures were therefore considered beneficial for providing comparative analyses across-groups in this study. Qualitative measures were also included to provide in-depth
additional data to trends gleaned from quantitative data. As a mixed-methods study, the theoretical drive was therefore primarily deductive. Figure 2 provides a design map of research issues relating to this study.

<table>
<thead>
<tr>
<th><strong>Purposes:</strong></th>
<th><strong>Conceptual framework:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Create generalisable knowledge about the phenomenon studied</td>
<td>Reiff et al.’s (1995) eight themes (revised)</td>
</tr>
<tr>
<td>Test predictions of theory</td>
<td>Pragmatism</td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
<td><strong>Validity:</strong></td>
</tr>
<tr>
<td>Surveys</td>
<td>Rich description</td>
</tr>
<tr>
<td>Statistical analysis</td>
<td>Triangulation of methods and data</td>
</tr>
<tr>
<td>Case analyses of participants</td>
<td>Quasi-experimental controls</td>
</tr>
<tr>
<td>Composite pictures</td>
<td>Ruling out alternative explanations</td>
</tr>
<tr>
<td>Text analysis</td>
<td></td>
</tr>
<tr>
<td>Within- and between-group analyses</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2**

*Design map of the current study*

### 2.3.1. Further research issues and framework used in the current study

Given these issues, the current study’s aims were slightly different from those of Reiff et al.’s (1995) study (see Table 3). Interpretivism was the research paradigm for Reiff et al.’s study because it featured a solely qualitative research methodology. Pragmatism was the research paradigm of the current study because a mixed-methods research methodology was used. Reiff et al.’s study also featured a within-group analysis, whereas the current study featured both between- and within-group analyses. Despite these differences, both studies were framed by the R&R model.
Table 3  
*Model, paradigm, and research methodology comparison with Reiff et al.’s study*

<table>
<thead>
<tr>
<th></th>
<th>Reiff et al.’s (1995) study</th>
<th>Current study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>R&amp;R</td>
<td>R&amp;R</td>
</tr>
<tr>
<td><strong>Paradigm</strong></td>
<td>Interpretivism</td>
<td>Pragmatism</td>
</tr>
<tr>
<td><strong>Methodology</strong></td>
<td>Qualitative</td>
<td>Mixed-methods</td>
</tr>
<tr>
<td><strong>Group analysis</strong></td>
<td>Within</td>
<td>Between and within</td>
</tr>
</tbody>
</table>

Reiff et al.’s (1995) framework (Figure 1) was further scrutinised. Reiff et al. suggested that Control underpinned the seven other themes. In addition, Control was an outcome of the all the other seven themes operating collectively. This was ambiguous because the same label had two different meanings. The review of the literature also found that there were aspects of Control operating independently of the seven other themes (e.g., hearing individuals’ perceptions of deaf people’s social competence). Reiff et al.’s study further appeared to neglect the role that Rotter’s (1966) notion of external locus of control can have for some individuals. The current study’s use of an inductive research design also necessitated clarification of the theme.

For the purpose of the current study, Reiff et al.’s (1995) framework was modified so that the combined effect of the three thematic categories of Control, Internal Decisions, and External Manifestations equalled Potential Maximisation (see Figure 3). Potential Maximisation was therefore defined as the measure of an individual’s psychosocial attributes and tactics. As such, high Potential Maximisation would be indicative of social mobility, educational, and vocational achievement. Control has therefore been assigned to an independent thematic category. Such modification enabled the preservation of Reiff et al.’s framework, and the inclusion of Maslow’s (1970) and Sternberg’s (1985) theories. The modified framework further helped structure this study’s scoring system, which is detailed in Chapter Three.
Figure 3

Framework used for the current study
CHAPTER THREE

Method

This chapter begins with a description of the recruitment protocol and the demographic details of the participants. The materials used to assess psychosocial attributes and tactics will be then described and will include the justification for items used in the screening and follow-up surveys. The procedure including the data collection protocol (including survey requirements, development, administration, and scoring) are also described. The chapter concludes with a justification for the data analysis.

3.1. Participants

3.1.1. Recruitment of the participants

Following approval from the University of Melbourne Human Research Ethics Committee, prospective participants, both deaf and hearing, were made aware of the study in three ways. These were (1) in person to potential participants known by the researcher; (2) through deafness-related organisations; and (3) through introduction by a participant who had already participated.

Potential participants known to the researcher were informed of the study by face-to-face contact or by email. Deafness-related organisations were also approached by email regarding the possible participation of their members in the study. These deafness-related organisations were chosen for the relative ease with which desired participants could be located. In Australia, principals of mainstream schools with specialist deaf units in New South Wales, Queensland, Victoria, and Western Australia were asked whether they knew of former students who may be interested in participating. In addition, academics specialising in deafness from the University of Queensland, the University of Melbourne, Curtin University, and the University of Newcastle were notified and asked to make potential participants aware of the study. Internationally,
participants were recruited through the Deaf Education through Listening and Talking (DELTA) organisation in the UK, and the Self-Help for Hard of Hearing Organisation and the Alexander Graham Bell Association for the Deaf in the USA.

Individuals and organisations who expressed interest in the study were provided with an electronic invitational package, including a plain language statement about the study, consent form (see Appendix A), and a voluntary screening survey (see Appendices B and C). Deafness-related organisations thereafter notified their members of the study through means such as web forums and email. Potential participants emailed the researcher who then sent the screening survey by email or post if requested.

Each participant was required to complete two individually administered surveys (one screening survey and one follow-up survey). Participants completed the surveys on two separate occasions. The estimated length of time for completing the Screening Survey for deaf participants (DSS) was between 15 and 20 minutes. The phrase “deaf participants” will thenceforth be referring to both ‘Oral’ deaf (OD) and Culturally Deaf (CD) participants. The Screening Survey for Hearing (H) participants (HSS) took an estimated 10 to 15 minutes to complete. It was also estimated that the Follow-up Survey for deaf participants (DFS) took between 20 and 30 minutes, and the Follow-up Survey for H participants (HFS) between 15 and 25 minutes. Participants who returned an electronic copy of the screening survey were considered as giving their informed consent. In some cases, participants requested a hard copy be posted to them (all of whom were Australian) and this package included a consent form to be signed and returned with the survey in a stamped envelope.

In addition to the aforementioned recruitment procedures, deaf participants who completed their surveys were asked whether they knew of a hearing adult over the age of 25 who may be interested in participating in the study. This ‘snowball’ method of recruiting H participants proved effective and was conducted in the same manner as the recruitment of deaf participants outlined above.
Due to the ‘snowball’ approach used to recruit participants, the return rate of all four surveys could not be calculated. The return of screening surveys, however, revealed that 13 potential participants were ineligible for the study. Eight prospective deaf participants were deemed ineligible for the study because they either 1) were under the age of 25; 2) had an additional disability; 3) disagreed they were maximising their potential in society; or 4) did not return their DFS. Five prospective H participants were also deemed ineligible because they either disagreed that they were maximising their potential or did not return their HFS.

3.1.2. Demographic data of the participants
Demographic data were collected from the DSS (see Appendix B) and the HSS (see Appendix C). Forty-nine adults (17 males, 32 females) above the age of 25 years participated in this study. The participants were separated into three groups (Oral Deaf [OD], Hearing [H], and Culturally Deaf [CD]). Of these 49 participants, 19 were hearing and categorised as the H group, 22 deaf participants who did not identify as CD were categorised as the OD group, and eight participants who self-identified as CD were categorised as the CD group. All participants agreed or strongly agreed that they were maximising their potential in society. All H participants reported having had a close relationship with a deaf person for at least one year. The reason for this was because the surveys for hearing participants had items that required a degree of experience relating to deafness. All H participants also did not have a disability and no deaf participant reported an additional disability. These criteria were established so that the investigated psychosocial attributes and tactics were not affected by factors related to H participants having a disability and deaf participants having an additional disability.

3.1.3. Age and gender
The OD group consisted of eight males and 14 females, the H group six males and 13 females, and the CD group three males and five females. Details of the 49 participants according to age
bracket and gender are presented in Table 4. An age bracket of three years was used to group the participants.

Table 4

Details of the 49 participants according to age and gender

<table>
<thead>
<tr>
<th>OD Group</th>
<th>H Group</th>
<th>CD Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant</td>
<td>Gender</td>
<td>Age</td>
</tr>
<tr>
<td>OD1</td>
<td>F</td>
<td>38-41</td>
</tr>
<tr>
<td>OD2</td>
<td>F</td>
<td>34-37</td>
</tr>
<tr>
<td>OD3</td>
<td>F</td>
<td>26-29</td>
</tr>
<tr>
<td>OD4</td>
<td>F</td>
<td>26-29</td>
</tr>
<tr>
<td>OD5</td>
<td>F</td>
<td>50+</td>
</tr>
<tr>
<td>OD6</td>
<td>F</td>
<td>30-33</td>
</tr>
<tr>
<td>OD7</td>
<td>M</td>
<td>38-41</td>
</tr>
<tr>
<td>OD8</td>
<td>M</td>
<td>38-41</td>
</tr>
<tr>
<td>OD9</td>
<td>F</td>
<td>30-33</td>
</tr>
<tr>
<td>OD10</td>
<td>F</td>
<td>26-29</td>
</tr>
<tr>
<td>OD11</td>
<td>F</td>
<td>30-33</td>
</tr>
<tr>
<td>OD12</td>
<td>F</td>
<td>34-37</td>
</tr>
<tr>
<td>OD13</td>
<td>F</td>
<td>30-33</td>
</tr>
<tr>
<td>OD14</td>
<td>F</td>
<td>30-33</td>
</tr>
<tr>
<td>OD15</td>
<td>F</td>
<td>26-29</td>
</tr>
<tr>
<td>OD16</td>
<td>M</td>
<td>50+</td>
</tr>
<tr>
<td>OD17</td>
<td>M</td>
<td>26-29</td>
</tr>
<tr>
<td>OD18</td>
<td>M</td>
<td>42-45</td>
</tr>
<tr>
<td>OD19</td>
<td>F</td>
<td>50+</td>
</tr>
<tr>
<td>OD20</td>
<td>M</td>
<td>30-33</td>
</tr>
<tr>
<td>OD21</td>
<td>M</td>
<td>42-45</td>
</tr>
<tr>
<td>OD22</td>
<td>M</td>
<td>42-45</td>
</tr>
</tbody>
</table>

The mode of the age of the participants overall was in the bracket of 30 to 33 years. Twelve participants reported this age bracket. Eleven participants were aged between 26 and 29 years, and another eleven participants were over the age of 50. Thirty-six (74%) of the 49 participants were aged between 26 and 45 years (i.e., born between 1961 and 1981).

3.1.4. First language of the participants and their parents

Three participants (H11, CD7, CD8) stated that English was not their first language. The 46 other native English-speaking participants (94%) were also raised in families with at least one
native English speaking parent. No item clarified the first language of the participant if it was not English, but H11, a Malaysian living in Australia, reported that her parents were native Malay speakers. CD7, a Russian living in America, noted that both her parents’ first language was Russian Sign Language (RSL), and CD8’s parents’ first language was Irish Sign Language (ISL). It therefore seems plausible that H11’s native language was Malay, CD7’s was RSL, and CD8’s was ISL. CD7 and CD8 each further reported learning SL at “0 years”.

3.1.5. Nationality and ethnicity

The OD group (n=22) consisted of nine Australians, eight Americans, and five Britons. OD participants were either residing in Australia (10), the USA (9), or Britain (3) at the time of completing the DSS. The H group consisted of 13 Australians, four Americans, one Briton, and one Malaysian. The majority of the H group (n=19) were residing in Australia (13) at the time of HSS, while the remaining six participants resided in the USA. The CD group (n=8) consisted of four Australians, and one participant from each of the following countries: the USA, Britain, South Africa, and Russia. Six CD participants were residing in Australia, one in the USA, and another in South Africa at the time of completing the survey. Cross referencing nationality with current city of residence found that all but three participants lived in their country of birth. H11 was a Malaysian who lived Australia. OD18 was a Briton and CD7 was a Russian who both lived in the USA. The majority of participants (82 %) were Anglo-Saxon.

3.2. Materials

This study required the development of special instrumentation. There were two main reasons for this. First, the instrument used by Reiff et al. (1995) was specifically applicable to participants with LD and purely qualitative. Secondly, the researcher chose to explore themes not found in other deafness-related studies using mixed-methods research. It was therefore deemed necessary to create new survey instruments.
The survey instruments included one screening survey and one follow-up survey for both deaf and H participants, making four in all. In addition to being instrumental in selecting this study’s participants, the screening surveys provided demographic data. Statistical analyses were not performed on the screening surveys but on the follow-up surveys. The follow-up surveys were created using variables referred to in the literature review that were linked with Reiff et al.’s (1995) eight themes. All surveys consisted of intramethod mixing whereby open- and closed-ended items were used (Johnson & Turner, 2003).

3.2.1. Screening surveys
The DSS featured 43 items involving 32 nominal items and 11 open-ended items (including two items requiring elaborate written replies) (see Appendix B). The HSS featured 28 items involving 14 nominal items, and 14 open-ended items (including three items requiring elaborate written replies) (see Appendix C). The justification of survey items in the DSS and HSS will be presented first to outline identical items used in both screening surveys, secondly to outline survey items specific to deaf participants, and thirdly to outline survey items specific to H participants.

3.2.1.1. Identical items in the DSS and HSS
The screening surveys (DSS and HSS) featured 22 identical items allocated to four sections. The “Preliminary background information” section consisted of ten items, the “Education and Employment” section consisted of four items, the “Deaf community involvement” section consisted of seven items, and there was one item relating to “Potential Maximisation”.

3.2.1.1.1. Preliminary background information
Identical items in both the DSS and HSS regarding “Preliminary background information” included the participants’ details regarding their email contact, age group, gender, their parents’ first language, nationality, city of residence, ethnicity, and current profession.
Email addresses were requested so that the participants could be contacted for the purposes of completing the follow-up survey (the DFS for deaf participants and the HFS for H participants), and to provide a final report to the participant after the study was completed. Discerning the participant’s age group was necessary to establish the participant’s eligibility for the study. Items relating to the participants’ parents’ first language were included on the basis of research suggesting that deaf and hearing individuals raised by parents whose second language is English experience psychosocial difficulties in English-speaking communities (Matthews et al., 2004; Scheetz, 2004). The participants’ nationality was asked on the basis of the study being international. City of residence was included to verify whether the participant still lived in their country of origin. Items relating to ethnicity were included to determine ethnic characteristics of the sample populations. The current profession of the participant was also asked to provide additional demographic data.

3.2.1.1.2. Education and employment

Identical items in both the DSS and HSS regarding education and employment concerned the highest level of education achieved, their employment status, whether the participant had been unemployed, and if so, for how many years. These items were included on the basis of studies reporting that deaf individuals with a bachelor degree or above can achieve occupational success akin to that of hearing individuals with equivalent qualifications (e.g., Bullis & Bull, 1995; Jones, 2004; Schroedel & Geyer, 2000).

3.2.1.1.3. Deaf community involvement

Identical items in both DSS and HSS regarding “Deaf community involvement” aimed to discern the extent of the participants’ involvement with the Deaf community, as well as their use of Sign Language (SL). The decision to include items in the DSS that related to the Deaf community and use of SL was made on the basis of numerous studies in the literature on the subject (e.g., Musselman et al., 1996; Stinson & Kluwin, 1996; Stinson et al., 1996; Stinson, Whitmire &
Kluwin, 1996), and to discern whether SL or spoken English was the 'native' language of the deaf participants. Items in the HSS that related to the Deaf community and use of SL were also included to observe the involvement of H participants with these demographic aspects. Given that the CD group all reported sign fluency and self-identified as CD, the CD participants’ survey data relating to signing and the Deaf community were discarded, but were used for the OD and H groups.

3.2.1.4. Potential maximisation

Participants who nominated “Strongly agree” or “Agree” to the single four-point Likert scaled identical item relating to Potential Maximisation were chosen to participate in the study’s second stage. Those who nominated “Strongly Disagree” or “Disagree” were not. This was done to ensure that participants who agreed they were maximising their potential would be included in the study and those who did not were not included.

3.2.1.2. Items specific to deaf participants in the DSS

The DSS featured 22 items specific to deaf participants which were allocated to four sections. The “preliminary background information” section had one additional item, the “deafness-specific questions” section consisted of ten items, the “education and employment” section had eight items, and the “Deaf community” section contained three items. The items specific to deaf participants were included in order to glean data regarding audiological, educational, and identity characteristics not applicable to the H participants.

3.2.1.2.1. Preliminary background information

Participants who answered “yes” to item 1.11 in the DSS which asked whether they had an additional disability were not included in the remainder of the study. This was done to ensure that data relating to the psychosocial attributes and tactics of any of the groups were not affected by other disability-related factors as reported in Polat’s (2003) study. This strategy also
helped remove any ambiguity that may have been caused by additional disability. OD and CD participants therefore had no disability additional to their deafness.

3.2.1.2.2. Deafness-specific questions
This section in the DSS helped distinguish whether the participant had pre- or post-lingual deafness, and whether their deafness was of sudden or gradual onset. Participants were also required to provide a self-assessment of the severity of their deafness, the extent to which they used speech-reading and their voice to communicate, and their use of assistive hearing technology. Considerations of these characteristics were guided by research relating to social implications of the aforementioned audiological and communication factors (e.g., Arnold, 1997; Calderon & Greenberg, 2000; Harris & Moreno, 2006; Hyde & Power, 2004; Israelite et al. 2002; Jambor & Elliot, 2005; Johnston, 2004; Leigh, 1999; Musselman et al., 1996; Punch & Hyde, 2005; Scheetz, 2004; Stinson & Antia, 1999; Stinson et al., 1996).

3.2.1.2.3. Education and employment
This section in the DSS was designed to ascertain the educational characteristics specific to deaf participants. These items provided information on educational placement/s (i.e., School for the Deaf, partial mainstream, or mainstream) and, if applicable, the communication modality used in these institutions (i.e., oral, TC, or SL), and was guided by studies related to these issues (e.g., Israelite et al., 2002; Jacobs, 2004; Jambor & Elliot, 2005; Leigh, 1999; Musselman et al., 1996; Nikolaraizi & Hadjikakou, 2006; Polat, 2003; Stinson et al., 1996).

3.2.1.2.4. Deaf Community
This section in the DSS included two nominal yes/no items and one open-ended item specific to deaf participants. The nominal items related to whether the participant self-regarded as CD and, if applicable, asked whether they felt their life would be better if they had greater Deaf Community involvement (item 4.4). Answers to the nominal item 4.3 enabled the allocation of
OD and CD deaf participants to two focal groups. This was important because the review of the literature found research specifically related to deaf individual’s identity (i.e., OD or CD) throughout Reiff et al.’s (1995) eight themes (e.g., Aguayo & Woodcock, 2000; Bauman, 2004; Barnhart, 1991; Corker, 1998; Hardaway, 1988; Harvey, 1998; Hogan, 2001; Israeliite et al., 2002; Jacobs, 2004; Jambor & Elliot, 2005; Johnston, 2004; Johnston et al., 2002; Ladd & Woll, 2003; Lane, 1993; Leigh, 1999; Leigh et al., 1998; Komesaroff & McLean, 2006; Muma & Teller, 2001; Nikolaraizi & Hadjikakou, 2006; Padden & Humphries, 1988; Sacks, 1989; Scheetz, 2004; Stinson et al., 1996; Toscano et al., 2002; Wooley, 1993; Young et al., 2008). The open-ended item asked the participant to further elaborate on their answer to item 4.4.

3.2.1.3. Items specific to H participants in the HSS

The HSS featured a total of six items specific to H participants, which were allocated to two sections. The preliminary background information section consisted of two items, and the deafness-related questions section contained four items.

3.2.1.3.1. Preliminary background information

The preliminary background information section of the HSS featured a yes/no and a open-ended item that acted as a screening process. If a participant reported a severe disability, the submitted survey was discarded to ensure that psychosocial attributes and tactics were not affected by disability-related factors. The homogeneity of the H group was therefore achieved because no H participant had a disability.

3.2.1.3.2. Deafness-related questions

The deafness-related section of the HSS featured two nominal items that also acted as a screening process. Surveys were discarded if the participant reported not having a close relationship with a deaf person and/or had had a relationship with a deaf person for less than
one year. Two open-ended questions were also included to glean data regarding participants’ definitions of their experience with deafness and of the bond they had with a deaf person.

3.2.2. Follow-up surveys

The justification of survey items in the DFS (see Appendix D) and HFS (see Appendix E) will first be presented with the relevance of items in accordance to each of Reiff et al.’s (1995) eight themes; secondly, to outline identical survey items used in both follow-up surveys; thirdly, to outline survey items specific to deaf participants, and; fourthly, to outline survey items specific to H participants.

The DFS featured 98 items and the HFS 64 items. The DFS featured more items than the HFS because this study sought to find additional psychosocial attributes and tactics that were deafness-specific. There were three types of items in the DFS and HFS: 1) nominal items that were used for scoring purposes, 2) open-ended items that were used for qualitative data, and 3) non-scoring nominal items used for descriptive purposes. An example of a non-scoring nominal item is the item asking participants to nominate a family member who played a significant role in their life. Non-scoring nominal items were also present throughout the screening surveys, which provided demographic data.

The nominal scoring items and open-ended items were grouped according to Reiff et al.’s (1995) framework, but the non-scoring nominal items were not. The open-ended and non-scoring nominal items were used for exploratory purposes. In other words, these items were scrutinised to observe whether the data revealed insights into aspects of how deaf individuals maximise their potential as well as H participants’ perceptions of deafness. In all, the DFS featured 59 nominal scoring items, 21 open-ended items, and 18 non-scoring nominal items. The HFS consisted of 26 nominal scoring items, 18 open-ended items, and 20 non-scoring nominal items.
The DFS and HFS had identical 26 nominal scoring items and 11 open-ended items that were used for the comparison across the three groups. Inclusive of the 59 DFS nominal scoring items were 33 nominal scoring items that were used in the further comparison of the OD and CD groups. The DFS had an additional 10 open-ended items specific to deaf participants. In addition to 37 identical items used for the cross-group comparison, the HFS had a further 27 items that were used for exploratory purposes.

3.2.2.1. **Survey items relating to Reiff et al.’s (1995) modified framework**

The survey items in the DFS and HFS were grouped into three thematic categories within Reiff et al.’s (1995) modified framework (Figure 3). These were Control, Internal Decisions, and External Manifestations. The categorising of items was developed using the Pragmatist strategy of content-related validation whereby the researcher ensured that the items adequately represented the eight thematic codes within the three thematic categories on the basis of research in the literature (Johnson & Turner, 2003). The survey items were also randomised to prevent participants second-guessing the themes within the study’s framework, which in turn may have influenced the results.

3.2.2.2. **Identical items in the DFS and HFS**

The DFS and HFS featured 37 identical items, which were coded for administrative purposes and scoring for the between-group analyses of the OD, H, and CD groups (see Appendix F). Of these coded items, 26 were designed to perform a quantitative analysis of scores and 11 were open-ended items used for qualitative purposes. These identical coded items were allocated under the three thematic categories of Control, Internal Decisions, and External Manifestations (see Appendix F). The aggregate score of 26 scored coded items were allocated to the additional fourth category of Potential Maximisation. This method of scoring is consistent with Reiff et al.’s (1995) modified framework whereby Potential Maximisation overarches all the eight themes or the three thematic categories.
3.2.2.2.1. **Identical items in the DFS and HFS: Control**

The thematic category of Control consisted of seven identical items, including three scoring (all four-point Likert scales) and four open-ended items. All seven items related to theories of internal/external locus of control by Fromm (1960, 1969), Maslow (1970, 1973), Sternberg (1985, 1988), and Rotter (1966). The development of these three scoring items considered Reiff’s (2004) study relating to feelings of mastery and self awareness in social and work contexts and the findings reporting the tendency for participants with a disability to become better socially adjusted with age (e.g., Bibby et al., 1996; Goldberg et al., 2003; Polat, 2003; Reiff, 2004). The four open-ended items were included to investigate further participants’ perceptions of themselves, and of deaf people’s linguistic, social skills, and psychosocial capacities.

3.2.2.2.2. **Identical items in the DFS and HFS: Internal Decisions**

The thematic category of Internal Decisions consisted of 13 identical items, including 11 quantitative and two open-ended items. Internal Decisions included three subsets: Desire (six items), Goal Orientation (six items), and Reframing (one item).

All six coded items relating to Desire were scored according to a four-point Likert scale. These items were developed from research that identified psychosocial aspects of Desire such as aspiration, motivation, self-initiative, self-determinism, time commitment, and overcoming adversity to achieve optimum outcomes (e.g., Anshel, 1995; Bain et al., 2004; Bloom, 1982; Fullerton & Coyne, 1999; Johnson, 1999; Kennedy, 1996; Maslow, 1970; Reiff et al., 1995; Sternberg, 1985, 1988).

Four coded items relating to Goal Orientation were scored on a four-point Likert scale and a further two items were open-ended. These items were included because of research suggesting that proactive goal orientation requires risk-taking, purposeful regulation of expectations, adaptability, inventiveness, diligence, and the use of strategies to achieve
desirable social and career outcomes (Jacobs, 2004; Luckner & Muir, 2001; Maslow, 1970; Martin et al., 2003; Menchel, 1995; Punch et al., 2005; Reiff, 2004; Reiff et al., 1995; Sternberg, 1985, 1988).

The single item relating to Reframing was scored on a four-point Likert scale for the statement “Bad things that happen to deaf people are the result of society’s barriers”. This item echoes findings in research related to self-regulatory strategies to affect positive psychosocial outcomes (e.g., Dugas et al., 2005; Lange et al., 1998; McGuire & McGuire, 1996; McMahon et al., 2003). The Reframing item also related to Reiff’s (2004) explanation that researchers using the Risk and Resilience (R&R) model ‘reframe’ the concept of disability in a manner that is neither pathologically nor socially determined.

3.2.2.2.3. Identical items in the DFS and HFS: External Manifestations

The thematic category of External Manifestations featured 17 identical items, including 12 scoring and five open-ended items. This thematic category featured Persistence (four items), Goodness of Fit (four items), Learned Creativity (two items), and Social Ecologies (seven items).

The theme of Persistence included three items scored on a four-point Likert scale and one open-ended item. Coded items related to Persistence concerned adversity and self-determinism, and were developed out of research relating to psychological attachment to lifestyle choices to achieve optimum outcomes (Anshel, 1995; Bloom, 1982; Reiff et al., 1995), and Ericsson et al.’s (2006) concept of ‘deliberate practice’.

The items relating to Goodness of Fit included three scored on a four-point Likert scale and one open-ended item. These four coded items were developed on the basis of research showing purposeful adaptation, integrative thinking, and selection of social and vocational environments are conducive to success (Brown & Foster, 1991; Dugas et al., 2005; Leigh, 1999; McMahon et al., 2003; Punch et al., 2005; Reisler, 2002; Sternberg, 1985). Two Likert-scaled
items were developed in relation to the participants' hearing status. For instance, item 5.4 in the DFS stated “I have chosen employment whereby my deafness is not a problem” and item 5.22 in the DFS as “I chose friends who accommodate issues relating to my deafness”. In the HFS, the word “weaknesses” was used instead of “deafness” for the corresponding item. Importantly, interchanging the words “deafness” and “weakness” in the DFS and HFS respectively was done on the basis that Goodness of Fit relates to individuals’ use of strategies to circumvent undesirable social and vocational outcomes by maximising strengths while minimising weaknesses (Dugas et al., 2005; McMahon et al., 2003; Reiff et al., 1995; Reiff, 2004).

The two coded items relating to Learned Creativity were scored on a four-point Likert scale. These items related to the role that reading has in understanding the world, and the participant’s quality of life. These items were created because of research suggesting the link between enhanced literacy comprehension and psychosocial benefits (e.g., Arnold, 1997; Bernstein, 1975; Calderon & Greenberg, 2000, 2003; Harris & Moreno, 2006; Jelinek-Lewis & Jackson, 2001).

The seven coded items relating to Social Ecologies included two items scored according to a four-point Likert scale, two yes/no items, and three open-ended items. The two Likert-scaled items were written with relevance to the participants' hearing status. For example, item 5.25 in the DFS stated “I need to be liked by hearing people” and item 5.16 in the HFS “I need to be liked by other people”. Further, item 5.24 in the DFS stated “It is important for me to be a social person with hearing peers” and item 5.19 in the HFS “It is important for me to be a social person”. It was deemed necessary that the DFS items needed to be phrased to clarify the participants' involvement with hearing people. The three open-ended items were included to discern the roles and characteristics of family members and friends in the participants' lives. Research by Bain et al. (2004), Bloom (1982), Brown and Foster (1991), Bullis and Bull (1995), Calderon and Greenberg (2000, 2003), Jacobs (2004), Matthews et al. (2004), Nikolaraiizi and
Hadjikakou (2006), Scheetz (2004), and Weisel and Kamara (2005) guided the creation of all items relating to Social Ecologies.

3.2.2.3. DFS items specific to deaf participants

In addition to the 37 items used for the between-group analyses of the OD, H, and CD groups, 61 items in the DFS were specific to psychosocial attributes and tactics not applicable to H participants (see Appendix G). Thirty-three of these additional items were used for scoring and to perform a between-group analysis of the OD and CD groups. The deaf participants' scores for these items were added on to the scores of items used in the comparison between the three groups. A further ten deafness-specific items were open-ended and another 18 were nominal non-scoring items. These were used for exploratory purposes. As mentioned previously, the nominal non-scoring items were not grouped according to Reiff et al.'s (1995) framework unlike the open-ended items.

3.2.2.3.1. DFS items specific to deaf participants: Control

The seven DFS items specific to deaf participants in the thematic category of Control included five four-point Likert scales, a scored yes/no item, and one open-ended item. These items were concerned with participants' perceptions of whether or not their deafness affected their quality of life, and whether they felt they had superior linguistic and social skills compared with the average hearing person. These items were included on the basis of research suggesting that emotional security implies control and emotional insecurity a lack of control (Darcy et al., 2005; McMahon et al., 2003; Paul & Jackson, 1993), and that linguistic competence in deaf people assists social maturity (Kluwin & Stinson, 1993; Kluwin et al., 2002) and educational achievement (Danermark, 1995).
3.2.2.3.2. **DFS items specific to deaf participants: Internal Decisions**

The thematic category of Internal Decisions featured six items specific to deaf participants including five scored items and one open-ended item. The three subsets of Internal Decisions were Desire (two items), Goal Orientation (one item), and Reframing (three items).

The two items relating to Desire were four-point Likert scales. These items related to deaf people working hard to be accepted by hearing people and the importance of having hearing friends. These items were developed in reference to studies reporting aspects of deaf individuals' Desire towards initiating, sustaining, and maintaining relationships with hearing peers (e.g., Bain et al., 2004; Hardaway, 1988; Luckner & Muir, 2001; Stinson et al., 1996; Toscano et al., 2002).

Goal Orientation consisted of one four-point Likert scale item that asked participants to rate "My deafness severely affects my ability to achieve goals". This item was included because studies have found that participants with a disability can circumvent disability-related weaknesses by using numerous psychosocial strategies to achieve their goals (e.g., Bonds, 2003; Bullis & Bull, 1995; Reiff et al., 1995; Punch et al., 2005; Punch & Hyde, 2005; Reiff et al., 1995; Saur et al., 1986; Schroedel & Geyer, 2000).

Two items relating to Reframing were four-point Likert scales and another was open-ended. These items required participants to consider whether dealing with their deafness made them a better person, whether they were proud of the skills they used with hearing peers, and whether their life would be better or worse without deafness. These items were included on the basis of authors suggesting that dealing with deafness can act as a stimulant to personal growth (e.g., Bain et al., 2004; Jacobs, 2007; Lysons, 1980; Reisler, 2002; Wright, 1993), that dealing with negative stereotypes and ambiguity assists personal development (e.g., Bibby et al., 1995; Calderon & Greenberg, 2000; Leigh, 1999; Paul & Jackson, 1993; Punch et al., 2005), and that the R&R model focuses on what people with a disability can do rather than cannot do (Reiff, 2004; Reiff et al., 1995; Wong, 2003).
3.2.2.3.3. **DFS items specific to deaf participants: External Manifestations**

The thematic category of External Manifestations featured 30 items specific to deaf participants, including 22 scored and eight open-ended items. External Manifestations included four subsets: Persistence (four items), Goodness of Fit (two items), Learned Creativity (14 items), and Social Ecologies (ten items).

The four items relating to Persistence were four-point Likert scales. These items were concerned with issues relating to whether deaf people work harder than hearing people to be accepted by others, the importance of speech-reading and speech, and self-determinism through experiences of loneliness and rejection. These items were included on the basis of authors suggesting that deaf individual’s use assertiveness and communication strategies that are specific to dealing with deafness (e.g., Aguayo & Woodcock, 2000; Andrews et al., 2004; Arnold, 1997; Bain et al., 2004; Bibby et al., 1996; Hogan, 2001; Jacobs, 2007; Kersting, 1997; Reisler, 2002; Stinson et al., 1996).

The two Goodness of Fit items were four-point Likert scales. These related to the importance of having deaf friends, whether work colleagues accommodated to the participant’s deafness, and whether the participant made life choices that suited their strengths. These items were included because of three research themes: the characteristics of deaf participants’ friendships (e.g., Bain et al., 2004; Jacobs, 2004; Leigh, 1999; Musselman et al., 1996; Stinson et al., 1996), reports of deaf adults’ workplace socialisation experiences (e.g., Bain et al., 2004; Geyer & Schroedel, 1999; Steinberg et al., 1999), and hearing people’s proactive strategies to accommodate deaf people (e.g., Bain et al., 2004; Bibby et al., 1996; Bullis & Bull, 1995; Calderon & Greenberg, 2000; Higgins, 1990; Jacobs, 2004; O’Connor & Jenkins, 1996; Stinson & Liu, 1999).

The 14 items related to Learned Creativity featured 11 scored items (eight of these being four-point Likert scales and three yes/no items) and three open-ended items. All of these items related to the roles that reading, captioned visual media, and use of telecommunications have in
the participants’ lives. These items were specific to deaf participants because each relates to Reiff et al.’s (1995) concept of people with LD using a prosthesis to assist social integration. Items relating to reading were included because researchers have linked deaf people’s comprehension ability gained through text-based media with social knowledge with hearing peers (e.g., Andrews et al., 2004; Jelinek-Lewis & Jackson, 2001; Power & Power, 2004). Items relating to the role of watching captioned TV/DVD to improve linguistic and social skills were developed out of findings from studies related to these themes (e.g., Andrews et al., 2004; Arnold, 1997; Jacobs, 2004; Jelinek-Lewis & Jackson, 2001; Luckner & Muir, 2001; Power & Power, 2004; Toscano et al., 2002). Items relating to the use of email, the Short Message Service (SMS), the Instant Messaging (IM), the telephone type-writer (TTY), and the National Relay Service (NRS) were included on the basis of research suggesting the social value of these telecommunications for deaf people (e.g., Andrews et al., 2004; Bowe, 2002; Bruce & Beattie, 2002; Harkins & Bakke, 2003; Jacobs, 2004; Power & Power, 2004; Power et al., 2006).

The ten items relating to Social Ecologies included five scored items (including two four-point Likert scales and three yes/no items) and five open-ended items. These items were concerned with whether participants interacted socially with hearing peers, whether their childhood would have been easier if their parents knew more about deafness, whether they had a close hearing friend at school, and a deaf role model in childhood. The items were developed from research showing that quality of social experiences with hearing peers determines whether or not deaf participants interact with hearing or deaf peers (e.g., Israelite et al., 2002; Leigh, 1999; Leigh et al., 1998; Stinson, Whitmire & Kluwin, 1996), that deaf role models are important for deaf individual’s career and social orientation (e.g., Bonds, 2003; Bain et al., 2004; Foster & McLeod, 2004), and the family has a significant role in a deaf individual’s psychosocial development (e.g., Luckner & Muir, 2001; Luckner & Velaski, 2004; Marschark, 2000; Toscano et al., 2002).
3.3. Procedure

3.3.1. How the mixed-methods research was conducted

As a mixed-methods study, both quantitative and qualitative analyses were conducted on the data. As previously mentioned, this study was primarily deductive because it featured a dominance of quantitative measures while including qualitative methods for exploratory purposes.

Quantitative analysis was initially conducted on closed-ended items that were scored to identify statistical trends. As mentioned previously, quantitative analysis typically features between-group analyses (Positivism) and qualitative research within-group analyses (Interpretivism) (Creswell, 2003). This study’s use of both between- and within-group analyses is an example of a Pragmatist researcher recognising the value of and ‘mixing’ both Positivist and Interpretivist methods (Creswell, 2003; Forthofer, 2003). Between-group analyses, which solely featured quantitative measures, were conducted in succession between the OD, H, and CD groups; between the H group and combined deaf groups; and then between the OD and CD groups. This was followed by the administration of within-group analyses that featured both quantitative and qualitative analyses.

Trustworthiness throughout the data collection and analytical process was achieved through peer debriefing and the triangulation of the methods (Creswell, 1998; Ezzy & Rice, 1999; Johnson & Turner, 2003; Maxwell, 1996; Merriam, 1997; Neuman, 2000). Peer debriefing occurred by the researcher consulting with his supervisors who had expertise in the field of study (Reiff, 2004). More than one individual therefore reviewed the data. Regular meetings were held to discuss and to form a consensus with regard to the emerging data trends. Triangulation was achieved by cross checking individual participants’ responses with those of others, and with that of statistical trends (Creswell, 1998, 2003; Ezzy & Rice, 1999). The ‘mixing’
of qualitative with statistical data further assisted generalisability, external validity, and the
stability and the precision of the findings (Merriam, 1997).

3.3.2. Between-group analyses

There were three types of quantitative analyses. Each featured between-group analyses. The
first type of between-group analysis was between the three groups and conducted by
aggregating scores gleaned from 26 items in both the DFS and HFS. These items were
allocated to each of Reiff et al.’s (1995) eight themes. Twenty-four of the 26 identical items were
Likert-scaled, and two were yes/no items. The two yes/no items were scored whereby “Yes”
equalled 1 and “No” was 0. Twenty of these Likert scales were scored as “Strongly agree” (4),
‘Agree’ (3), “Disagree” (2), and “Strongly disagree” (1). Three Likert scales were ranked in
reverse order because the theme in the item could not be ranked by the scores allocated to the
aforementioned 20 Likert scales. One such example was the item that stated “Bad things that
happen to deaf people are result of society’s barriers”. In addition, the item that stated “I need to
be liked by hearing people” was scored as “Strongly agree” (1), ‘Agree’ (3), “Disagree” (3), and
“Strongly disagree” (1). This decision was made on the basis of reports in the literature that CD
individuals have a strong preference for socialising with deaf people. It was therefore
considered discriminatory to the CD participants to rank the item in the conventional manner.

The 26 coded identical scoring items were analysed using SPSS computer software to
conduct a series of one-way analyses of variances (ANOVAs) to discern whether there was a
significant difference between the mean scores of the three groups for: (1) Control, (2) Internal
Decisions, (3) External Manifestations, and (4) Potential Maximisation (Pallant, 2005). These
four variables reflected Reiff et al.’s (1995) modified framework. In accordance with Figure 3,
the variable of Potential Maximisation is the collective score of all the 26 scoring items in
Control, Internal Decisions, and External Manifestations. Furthermore, the review of the
literature found that Reiff et al.’s eight themes overlap. To avoid ambiguity, special attention was
given to specifically wording the items in a manner that was explicitly linked with the relevant theme. For example, “I feel in control of my social life” was an item linked to the theme of Control.

The robustness of the ANOVA was ensured using the $F$ values from the Brown-Forsythe Test, which has been reported in analyses that violated homogeneity of variance (Pallant, 2005). The robust and conservative Scheffé’s Test ($\alpha = 0.05$) was also used for post hoc comparisons following the ANOVA and $t$-tests because it was considered particularly sensitive to small samples and groups of unequal sizes (Tabachnick & Fidell, 2001). As an additional precaution, the more stringent alpha level of .01 on the Scheffé Test was used for data that violated homogeneity of variance (Tabachnick & Fidell, 2001).

The second type of between-group analysis followed the three-way ANOVA. The scores of the two deaf groups were combined then compared with the H group. This was done to investigate whether hearing status was associated with Control, Internal Decisions, External Manifestations, and Potential Maximisation. A series of $t$-tests (2-tailed) for independent samples were also conducted on the mean scores for the aforementioned four categories to observe whether hearing status and deaf identity were factors influencing the scores. Two-tailed $t$-tests were used because specific hypotheses were not tested.

The third type of between-group analysis was thereafter conducted by comparing the two deaf groups. The scoring for this between-group analysis was performed by aggregating scores gleaned from 26 scored items used in the analysis of the three groups plus an additional 33 deafness-specific scored items from the DFS. A series of $t$-tests for independent samples was then conducted using SPSS on the scores for: (1) Control, (2) Internal Decisions, (3) External Manifestations, and (4) Potential Maximisation.

Twenty-nine of the 33 scoring items specific to deaf participants were Likert-scaled and four were yes/no items. The four yes/no items were scored whereby ‘Yes’ equalled 1 and ‘No’ was 0. Twenty-two of the Likert-scaled items were ranked in a manner whereby “Strongly agree”
was scored as 4, “Agree” as 3, “Disagree” as 2, and “Strongly disagree” as 1. Seven Likert scales were ranked in reverse order because the theme in the item could not be ranked by the scores allocated to the aforementioned 22 Likert scale items. One example is the item that stated “My life would be better if I were not deaf”. Two additional items were scored as “Strongly agree” (1), “Agree” (3), “Disagree” (3), and “Strongly disagree” (1). The nature of these items suggested a strong preference for socialising with hearing people. It was therefore considered discriminatory towards CD participants to conventionally rank these items.

3.3.3. Qualitative analyses

After the statistical trends were verified, a text analysis of open-ended items was conducted to discern trends, consistencies, rarities, and inconsistencies across the thematic categories of Control, Internal Decisions, and External Manifestations (Creswell, 1998, 2003; Ezzy & Rice, 1999; Maxwell, 1996; Merriam, 1997; Neuman, 2000). Eleven open-ended items were used for the between-group analysis of the three groups, 18 open-ended items specific to deaf participants were used in the analyses of the OD and CD groups, and a further seven open-ended items from the HFS were used for exploratory purposes.

For returned hard copy surveys, reporting of this qualitative data involved the researcher manually transcribing written replies into a Microsoft Word document. With emailed follow-up surveys, a ‘cut and paste’ of relevant text was administered from the participants’ survey to a Microsoft Word document. Unsolicited comments were encountered throughout the analysis of the screening and follow-up surveys written in the margins or, in some cases, alongside statements with Likert scales. The researcher was tempted to conduct a text analysis of these comments, but discarded these data on the basis of them being unmethodical. According to Morse (2003) “these comments are not good data” (p.194).

Qualitative trends were reported in three ways. First, common or notable topics were reported and the participant’s identity label was placed in brackets to signify the original source
of the theme (e.g., wine tours [OD3]). Multiple sources were also reported when relevant (e.g.,
love for literature [OD3, OD11]). Some participants offered more than one concept in their
qualitative data. Their identity label therefore appeared more than once in reference to a specific
item. In addition, some participants did not answer specific qualitative items or did not properly
answer the item, and these instances were not reported. Secondly, a particular participants’
written passage was sometimes chosen to best summarise the group’s reply to the item, or on
the basis of the response being a rarity or inconsistency within the group’s responses to the
item. Finally, selected answers to open-ended items by two participants who were chosen as
case studies - to be defined in section 3.3.6 – were used to emphasise trends in that
participant’s data. Participants were quoted verbatim.

As mentioned previously, the open-ended items were allocated to Reiff et al.’s (1995)
modified framework. This method of grouping items assisted specifically the reporting of case
studies whereby these participants’ qualitative responses were reported to emphasise trends in
quantitative data. The transcripts were read several times to achieve intermethod triangulation
(Neuman, 2000). The researcher therefore sought to gain a general understanding of the
qualitative data in accordance with the identified statistical trends and/or multiple responses
provided by participants. In addition to providing data for the case studies, the qualitative data
also provided psychosocial attributes and tactics as defined by the three groups (section 4.6).

Section 4.6 consists mainly of data gleaned from qualitative items in both the DFS and
HFS. As mentioned previously, open-ended items were used for exploratory purposes. Many of
the open-ended items followed a nominal item related to an idea. For example, the nominal item
“Would you have benefited from having a role model who was deaf as a child” was followed by
the open-ended item “Could you provide some reasons for your answer?” Given this,
participants’ responses to the nominal item were first reported when applicable. This was then
followed by the qualitative data gleaned from the related open-ended item.
Scrutiny of the data found that the general answers to some open-ended items provided richer and more detailed qualitative data than others. General responses in some items were less detailed because participants either generally neglected to answer these items or their answers yielded little data relating to psychosocial attributes and tactics. These included six of the 21 open-ended items in the DFS, which were excluded from further analysis and not reported in section 4.6. The items were concerned with reasons for overcoming deafness (item 6.3a), telecommunication devices (item 7.10a), role of family members (item 8.1a), and the three items in the conclusion section (items 8.6, 8.6a, 8.7). These items were, however, used elsewhere in the case studies (section 4.4).

Another decision was made to exclude 13 of the 18 HFS open-ended items from further analysis for section 4.6 because this study's focus was on deaf individuals' potential maximisation in mainstream society. These excluded items included choice of employment whereby her/his weaknesses are not a problem (item 5.21a), lifestyle choices on the basis of personal strengths (item 5.22a), role of family members (items 7.1, 7.1a, 7.1b), close school friends (items 7.2a, 7.2b, 7.2c), friends in adulthood (items 7.3a, 7.3b), and the three items in the conclusion section (items 9.1, 9.1a, 9.2).

The remaining five open-ended items in the HFS were included. These items explained: whether or not they thought self-determinism was a process that assisted more self determinism, (item 5.6a), a deaf person maximising their potential with hearing peers (item 8.1), whether or not they thought deafness could assist personal development (item 8.3a), and whether or not deaf people could have superior social or linguistic skills compared with the average hearing person (items 8.4a, 8.5a). Findings from these items were reported because they related to the H participants' perception of deaf people and gave rich data when compared with answers given by deaf participants.
3.3.4. Composite pictures: Within- and between-group analyses

One part of the data analysis featured both within- and between-group analyses, involving the creation and subsequent comparison of composite pictures (section 4.5.1). The methodology used for creating a composite picture was sourced from Bibby et al.’s (1996) study. The overall quantitative data were used to create a composite picture of a typical participant from each group to provide a descriptive representation of the samples (Bibby et al., 1996). Composite pictures were created using the mode score of the responses to each survey item given by each group and thereafter writing a descriptive analysis. The median score was used when the mode was represented more than once. No qualitative data were used for the three composite pictures. As mentioned previously, non-scoring nominal items were included for exploratory purposes. Many were used in the creation of composite pictures and some were excluded because their data offered little insight into how deaf individuals maximise their potential (e.g., the item asking participants to nominate how many hours of television they watched per week).

First there was a within-group analysis consisting solely of demographic data for each of the three composite pictures. These data were sourced from the DSS for the composite pictures of the OD and CD participants, and from the HSS for the H participants. Three separate within-group analyses were thereafter conducted on the mode scores of each group for items in the DFS and HFS. The three composite pictures were then compared in accordance with Reiff et al.’s (1995) eight themes and were described in a descriptive manner.

There were two between-group analyses using composite pictures. The first compared a typical participant from each of the three groups (sections 4.5.1.4.). The second analysis compared a typical participant from both the OD and CD groups inclusive of their replies to additional deafness-specific items (section 4.5.1.5.). The purpose of these two between-group analyses was to investigate similarities or differences in these comparisons.
3.3.5. Within-group analyses

Three further separate within-group analyses were conducted using both the quantitative and qualitative data sets. In the first stage, the demographic trends within the three groups gleaned from the DSS and HSS were reported. These were presented in two separate sections – one in Chapter Three (section 3.1) and another in Chapter Four (sections 4.1 and 4.2).

In the second within-group analysis the responses from the three groups were scrutinised to identify the participants with the highest and the lowest overall score for Potential Maximisation as case studies (section 4.4). These case studies were reported by the ‘mixing’ of both quantitative and qualitative data, which were presented in accordance with Reiff et al.’s (1995) eight themes. The scores of the two participants were compared. Differences for items (e.g., “Agree” and “Disagree”, or “Yes” and “No”) were reported in a descriptive manner whereby the content of the item illustrated the differences between the participants. This provided a contrast effect. Answers to these participants’ open-ended items were also reported to explain trends.

The procedure for the third within-group analysis was outlined in section 3.3.4. This within-group analysis scrutinised the qualitative data from all participants’ responses to survey items relating to perceptions of deafness and psychosocial attributes and tactics (section 4.6). Interpretivist research methods were administered in this section because a cross-group comparison was not conducted. Even though the data were sometimes presented in accordance with a group’s responses to an item, there was no discrimination between groups in the reporting of these findings.
CHAPTER FOUR

Results

This chapter describes further demographic data pertaining to the three groups of participants. It then presents results regarding their psychosocial attributes and tactics. The chapter is divided into five main sections. The first section presents demographic data related to the groups’ educational and professional characteristics plus additional deafness-specific data relating to the ‘Oral’ deaf (OD) and culturally Deaf (CD) participants. The second section presents the results of the between-group analyses that are structured in accordance with Reiff et al.’s (1995) modified framework (Figure 3). The third section provides the results of the within-group analyses that included composite pictures and case studies of participants. The fourth section reports qualitative trends. Finally, a summary of the main findings concludes the chapter.

4.1. Profession and highest level of education of the sample groups

All participants had had paid employment and were employed when completing the surveys. Eight participants (OD5, OD14, H3, H6, H7, H9, H12, CD1) had also experienced more than one year of unemployment.

With regard to education qualifications, some American participants wrote “college degree”, which was noted as a Bachelors degree. Some participants neglected to state their highest education degree but instead stated the degree they were currently studying (e.g., “PhD candidate”). Some participants volunteered abbreviated versions of their degrees (e.g., “MEd” for Master of Education). When this occurred, the qualification, and not the title, of the degree were noted.

4.1.1. Profession and highest level of education of the OD group

Despite OD16 and OD21 neglecting to state their highest educational qualification, Figure 4 suggests that the OD group featured highly educated participants with 86% reporting a
minimum educational qualification of a Bachelors degree, and 52% of the 46 participants who stated their degree had a Masters or PhD.

Figure 4

Highest level of education achieved: OD group

Inspection of Table 5 reveals that the professions of the OD group were generally service-based careers that required high academic qualifications.

Table 5

Professions: OD group

<table>
<thead>
<tr>
<th>Participant</th>
<th>Profession</th>
<th>Participant</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>OD1</td>
<td>Accountant</td>
<td>OD12</td>
<td>Medical educator</td>
</tr>
<tr>
<td>OD2</td>
<td>Legal policy</td>
<td>OD13</td>
<td>University lecturer</td>
</tr>
<tr>
<td>OD3</td>
<td>Designer</td>
<td>OD14</td>
<td>Publishing</td>
</tr>
<tr>
<td>OD4</td>
<td>Journalist</td>
<td>OD15</td>
<td>PhD student</td>
</tr>
<tr>
<td>OD5</td>
<td>Website manager</td>
<td>OD16</td>
<td>Retired</td>
</tr>
<tr>
<td>OD6</td>
<td>Post Doc researcher</td>
<td>OD17</td>
<td>Planning officer</td>
</tr>
<tr>
<td>OD7</td>
<td>Accountant</td>
<td>OD18</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>OD8</td>
<td>Public servant</td>
<td>OD19</td>
<td>University lecturer</td>
</tr>
<tr>
<td>OD9</td>
<td>Student</td>
<td>OD20</td>
<td>Manager</td>
</tr>
<tr>
<td>OD10</td>
<td>Student</td>
<td>OD21</td>
<td>Dentist</td>
</tr>
<tr>
<td>OD11</td>
<td>Analyst</td>
<td>OD22</td>
<td>Teacher of the deaf</td>
</tr>
</tbody>
</table>
4.1.2. Profession and highest level of education of the H group

The H group generally featured highly educated participants with 73% reporting a minimum educational qualification of a Bachelors degree, and 42% a Masters or PhD (see Figure 5).

![Figure 5: Highest level of education achieved: H group](image)

Table 6 shows that all H participants had service-based professions. Most professions appeared to require academic qualifications.

Table 6

<table>
<thead>
<tr>
<th>Participant</th>
<th>Profession</th>
<th>Participant</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Teacher</td>
<td>H11</td>
<td>PhD student</td>
</tr>
<tr>
<td>H2</td>
<td>Product manager</td>
<td>H12</td>
<td>IT consultant</td>
</tr>
<tr>
<td>H3</td>
<td>Interpreter</td>
<td>H13</td>
<td>Psychologist</td>
</tr>
<tr>
<td>H4</td>
<td>Teacher of Deaf</td>
<td>H14</td>
<td>Audio-engineer</td>
</tr>
<tr>
<td>H5</td>
<td>Housewife</td>
<td>H15</td>
<td>TAFE Student</td>
</tr>
<tr>
<td>H6</td>
<td>Teacher</td>
<td>H16</td>
<td>Gardener</td>
</tr>
<tr>
<td>H7</td>
<td>Employment consultant</td>
<td>H17</td>
<td>Academic</td>
</tr>
<tr>
<td>H8</td>
<td>Teacher of Deaf</td>
<td>H18</td>
<td>Physician assistant</td>
</tr>
<tr>
<td>H9</td>
<td>Teacher of Deaf</td>
<td>H19</td>
<td>Academic</td>
</tr>
<tr>
<td>H10</td>
<td>Financial advisor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.1.3. Profession and highest level of education of the CD group

Figure 6 shows the CD group featured highly educated participants with 75% reporting a minimum educational qualification of a Bachelors degree, and 62% a Masters or PhD.

![Pie chart showing education levels of CD group]

The unclear career definitions in Table 7 of CD3, CD5, CD6, CD7, and CD8 made it difficult to judge the connection between the education and professional characteristics for the CD group. Their professions, however, all appear to be service-based.

Table 7

Professions: CD group

<table>
<thead>
<tr>
<th>Participant</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD1</td>
<td>Student</td>
</tr>
<tr>
<td>CD2</td>
<td>College composition manager</td>
</tr>
<tr>
<td>CD3</td>
<td>Case manager</td>
</tr>
<tr>
<td>CD4</td>
<td>Manager</td>
</tr>
<tr>
<td>CD5</td>
<td>Community worker</td>
</tr>
<tr>
<td>CD6</td>
<td>Program manager</td>
</tr>
<tr>
<td>CD7</td>
<td>Project assistant</td>
</tr>
<tr>
<td>CD8</td>
<td>TAFE teacher</td>
</tr>
</tbody>
</table>

Figure 6

Highest level of education achieved: CD group

The unclear career definitions in Table 7 of CD3, CD5, CD6, CD7, and CD8 made it difficult to judge the connection between the education and professional characteristics for the CD group. Their professions, however, all appear to be service-based.

Table 7

Professions: CD group

<table>
<thead>
<tr>
<th>Participant</th>
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<tr>
<td>CD1</td>
<td>Student</td>
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</tr>
<tr>
<td>CD3</td>
<td>Case manager</td>
</tr>
<tr>
<td>CD4</td>
<td>Manager</td>
</tr>
<tr>
<td>CD5</td>
<td>Community worker</td>
</tr>
<tr>
<td>CD6</td>
<td>Program manager</td>
</tr>
<tr>
<td>CD7</td>
<td>Project assistant</td>
</tr>
<tr>
<td>CD8</td>
<td>TAFE teacher</td>
</tr>
</tbody>
</table>

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4.2. The characteristics of deafness in the OD and CD groups

The majority of the deaf participants reported pre-lingual deafness (n=18). Seven OD and four CD participants reported post-lingual deafness (see Figure 7).

OD6 and OD8 did not state their age of onset of deafness, whether their deafness was sudden or gradual, and the age when hearing stopped deteriorating (see Table 8). OD8, however, provided qualitative data suggesting that he was late deafened because he was not deaf while at school. In addition, CD4 did not provide age of onset of deafness, yet stated her deafness stopped deteriorating when she was 25 years old. OD2 and OD19 also reported gradual deafness. OD11, OD22, CD1, CD3, and CD8 further reported a sudden deafness.
Table 8

Characteristics of deaf participants’ onset of post-lingual deafness

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age deaf</th>
<th>Sudden</th>
<th>Gradual</th>
<th>Hearing stopped deteriorating</th>
</tr>
</thead>
<tbody>
<tr>
<td>OD1</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>OD2</td>
<td>6 years</td>
<td>No</td>
<td>Yes</td>
<td>30 years</td>
</tr>
<tr>
<td>OD6</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>OD8</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>OD9</td>
<td>18 months</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>OD11</td>
<td>5 years</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OD19</td>
<td>44 years</td>
<td>No</td>
<td>Yes</td>
<td>Ongoing</td>
</tr>
<tr>
<td>OD22</td>
<td>5 years</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD1</td>
<td>18 months</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD3</td>
<td>10 years</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD4</td>
<td>NA</td>
<td>No</td>
<td>Yes</td>
<td>25 years</td>
</tr>
<tr>
<td>CD8</td>
<td>7 years</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. NA, no answer

All deaf participants except OD8 reported greater than severe-to-moderate bilateral deafness. Hearing aids were the most common sensory device used (see Figure 8). Nine OD participants and one CD participant (CD1) had a cochlear implant. OD19, who had severe-to-moderate deafness, and CD7, who had profound deafness, reported using no assistive sensory device.

Figure 8

Sensory devices used by deaf participants
4.2.1. Speech-reading and use of voice

The majority (83%) of deaf participants used speech-reading when communicating (see Figure 9). OD8, OD16, OD17, and CD8 did not use speech-reading. CD8 and CD7 did not respond to the related item.

Despite the small CD sample who self-rated their speech-reading ability (n=5), trends in Figure 10 suggest that the OD participants were more confident with their speech-reading ability than were the CD participants. Forty-seven percent of OD participants (n=9) and one CD participant (20%) regarded themselves as a Master speech-reader. Thirty-three percent of OD participants (n=6) and one CD participant (20%) regarded themselves as a Very Good speech-reader, whereas the majority of CD participants (60%) believed they were a Good speech-reader. Figure 10 shows the percentage distribution of participants according to their ranking of speech-reading skills. The number of participants is given above each bar.
Twenty-one (95%) OD participants and five (63%) CD participants always used their voice to communicate. OD8 “sometimes” used his voice but did not use speech-reading. There was no conclusive data to explain these trends. Of the CD group, CD1 “always” used his voice but did not use speech-reading, which may have been attributed to his cochlear implant allowing sufficient auditory input. CD5 “sometimes” used his voice, but was a fluent signer, indicating the use of Total Communication (TC). TC is the use of both signed communication and voice to communicate. CD7 was the only deaf participant who “rarely” used voice. Given that CD7 did not use speech-reading, have a sensory aid, and was a fluent signer, it is highly probable that she only communicated using SL. The data suggests that all deaf participants except CD7 were able to communicate through speech and auditory means.
4.2.2. Educational characteristics specific to deaf participants

Fourteen OD and five CD participants spent their entire schooling careers in a mainstream setting (63% of overall deaf participants). Only OD18, OD21, and CD7 were educated solely in a School for the Deaf. OD7, OD20, and CD3 experienced both mainstream and partial mainstream education. OD3, OD4, OD16, and CD8 experienced education in a mainstream school and a School for the Deaf. Only one (OD15) experienced all three educational settings. Additional data suggested that OD4, OD16, OD18, OD21, CD3, and CD7 reported receiving SL instruction at some time during their education.

4.2.3. OD group’s involvement and views of the Deaf community, and SL

Twelve (55%) OD participants reported Deaf community involvement at some point in their life (see Figure 11). Of these participants, eight agreed and four disagreed that the Deaf community was welcoming.

![Figure 11](image)

OD group’s involvement with the Deaf community

The majority (64%) of OD participants had not learned SL (see Figure 12). OD participants’ reasons for learning SL included: introduction to SL by an itinerant teacher of the deaf (OD2), frustration with speech at a young age (OD15), working and communication ease with signing deaf people (OD2, OD5, OD17, OD21, OD22), curiosity (OD4, OD5), becoming...
involved with the Deaf community (OD2, OD4), having a communication ‘back up’ in case their deafness worsened (OD9), and to increase career prospects (OD17).

Eight of the ten OD participants who reported no Deaf community involvement had also not learned SL. OD9 was 5 years old and OD17 was 26 when they learnt SL, but neither was fluent or continued using SL. Just three of the five OD participants who continued using SL reported fluency. OD15 was four years old when she learnt SL, OD21 was 19, and OD22 was 40.

Five (25%) of the 20 OD participants who answered the item expressed a desire to be CD, yet the majority (75%) did not (see Figure 13). The reasons for desiring to be CD included: a need to learn about social coping/support (OD1, OD4), the perceived benefit of meeting people who share similar life experiences (OD1, OD2, OD8), and the professional benefit of improving his SL fluency (OD22).
Reasons for 15 OD participants not desiring to be CD included: their parents wanting them to live a ‘normal’ life (OD3, OD12, OD20), the belief that mainstream participation will increase social and career opportunities (OD3, OD6), a perceived lack of intellectual stimulation and common interests (OD5, OD6, OD15, OD21), the perception that Deaf people are socially limited (OD6, OD11, OD15), the choice not to learn SL (OD10, OD12, OD13, OD14), identifying SL as a limiting mode of communication (OD11), receiving a cochlear implant that improved communication with hearing people (OD20), and harassment - OD12 stated that Deaf culture is “more of a cult than a culture”.

4.2.4. H participants’ experience of deafness

The H group’s experience of deafness included being a deaf individual’s father (H2, H13) or mother (H5, H10, H19), being the spouse of a deaf person (H3, H12), having other deaf family members (H7, H14, H17, H18), having a close deaf friend (H1, H4, H11, H15, H16), and being a teacher of the deaf (H4, H6, H8, H17, H19). The common bonds H participants shared with deaf people included: familial bonds; professional involvement; mutual interests, emotional support and appreciation of each other’s company; extracurricular activities; and love of literature, music, sport, television, gossip, and philosophy. H4 typified the sentiment of the qualitative data
in the Hearing Screening Survey (HSS) when stating “Really, we did the same things I did with my hearing friends”.

Five of the six H participants who had learnt SL continued using SL, but only H3 was a fluent signer. Reasons for learning SL included: meeting new people (H3), communication with a signing deaf friend (H4) and Deaf people (H8), their son being educated in a TC program (H9), to feel included when attending Deaf events (H11), and being a teacher of the deaf (H19).

All of the six H participants who had learnt SL - plus H2, H5, H7, and H10 - reported involvement with the Deaf community. H2, H5, and H7 felt welcomed by the Deaf community, yet had not learnt SL. Given these participants had not learned SL it was possible that involvement with OD people was mistaken as being involved with the Deaf community. Ongoing signers, despite not being fluent, H4, H8, H9, and H19 felt welcomed by the Deaf community. However, H3 – a fluent signer – felt unwelcome in the Deaf community, suggesting that something other than communication was an issue. H10 and H11 also felt unwelcome, and communication was a probable factor because their SL skills were either not fluent or were discontinued.

4.3. Between-group analyses

Before conducting the between-group analyses the researcher considered a demographic trend related to the formation of this study’s three groups. Mitchell and Karchmer (2004) inferred that deaf individuals with hearing parents are less likely to be CD. Authors (e.g., Jambor & Elliot, 2005; Israelite et al., 2002; Leigh, 1999; Nikolaraizi & Hadjikakou, 2006) have also reported that CD individuals are typically educated in specialist schools for the Deaf and communicate primarily with SL. Both CD7 and CD8 were native signers whose parents’ first language was SL, and also spent more than six years in a School for the Deaf. Five of the six other CD participants, however, were wholly educated in mainstream educational settings (CD3 spent no more than three years in a partially mainstream setting). All CD participants except CD1 also
reported fluency in SL. CD1 was 25 years old when he learnt SL, CD2 was 27, CD3 was 16, CD4 was 22, CD5 was 18, and CD6 was 23. Of these six CD participants, only CD1 did not use speech-reading and only CD6 did not use her voice to communicate.

Familial, communication, and educational characteristics therefore indicated that six CD participants (CD1, CD2, CD3, CD4, CD5, CD6) likely had an OD identity during their developmental years. CD7 and CD8 were likely to be this study’s only ‘purely’ CD participants. The other six CD participants were possibly ‘bi-cultural’ – mixing in both the hearing and Deaf ‘worlds’ (Nikolaraizi & Hadjikakou, 2006). Further inspection found that OD15, OD21, and OD22 may also be ‘bi-cultural’ because they reported SL fluency, used speech-reading, and their voices to communicate. These trends, however, were speculative because the extent to which these participants socialised with CD or hearing peers was indiscernible.

This section of the chapter, however, presents the analysis of the group data in accordance with Reiff et al.’s (1995) modified framework. Scores were obtained from the thematic categories of Control, Internal Decisions, External Manifestations, and the overall score of Potential Maximisation. Three types of between-group analyses were conducted for each of these four variables. The first analysis compared the three sample groups using scores gleaned from identical 26 items in the Deaf Follow-up Survey (DFS) and Hearing Follow-up Survey (HFS). The second analysis featured the combining of the OD and CD group’s scores of the aforementioned 26 items, which were then compared with the scores of the H group. This second analysis was included to observe whether hearing status was a factor influencing the scores. The third analysis compared the OD and CD groups’ scores gleaned from the aforementioned 26 items with an additional 33 deafness-specific items to observe whether identity affiliation of the deaf participants was a factor influencing the scores.
4.3.1. Control

The distribution of participants’ scores in Figure 14 shows both the OD and CD groups as appearing generally to score higher than the H group for the thematic category of Control. An ANOVA for independent samples was conducted on the three groups’ mean scores for this variable. The mean scores were 9.73 for the OD group ($SD = 1.609$), 9.21 for the H group ($SD = .918$), and 10.00 for the CD group ($SD = 1.309$). Results of the ANOVA found that there was no significant difference ($F = 1.264$, $df = 2$, $p = .292$, $M = 9.57$, $SD = 1.339$) between the three groups’ mean scores for Control. Figure 14 shows the percentage distribution of participants according to their scores for Control. The number of participants is given above each bar.

![Figure 14](image)

*Figure 14*

**Three groups’ scores: Control**

The deaf (OD and CD combined) and hearing groups were compared to investigate whether hearing status was a factor influencing scores for Control. The distribution of
participants’ scores in Figure 15 shows the combined deaf group as generally scoring higher, but with a wider distribution of scores, than the H group. A t-test (2-tailed) was conducted on these groups’ mean scores for this variable. The mean scores were 9.80 for the combined deaf group ($SD = 1.518$) and 9.21 for the H group ($SD = .918$). Results of the t-test found that there was no significant difference ($t = 1.523$, $p = .135$) between the combined deaf group’s and hearing group’s mean scores for Control. Figure 15 shows the percentage distribution of participants according to their scores for Control. The number of participants is given above each bar.

![Figure 15](image)

*H and combined deaf groups’ scores: Control*

The OD and CD groups were compared to investigate whether deaf identity affiliation was a factor influencing scores for Control. Scores for this comparison also included the deafness-specific items. The scores were grouped into breakdowns of three to illustrate the distribution in Figure 16. Figure 16 shows the two deaf groups as having a similar distribution of
scores but with the CD group scoring slightly higher. A $t$-test (2-tailed) was conducted on the scores for this variable. The mean scores were 25.68 for the OD group ($SD = 4.347$) and 26.13 for the CD group ($SD = 3.182$). Results of the $t$-test found that there was no significant difference ($t = -.263$, $p = .795$) between the OD and CD groups’ mean scores for Control. Figure 16 shows the percentage distribution of participants according to their scores for Control including the addition of deafness-specific items. The number of participants is given above each bar.

![Figure 16](image)

*Deaf groups’ scores with deafness-specific items: Control*

4.3.2. **Internal Decisions**

The scores were grouped into breakdowns of three in Figure 17 to illustrate the distribution of the three groups’ scores for the thematic category of Internal Decisions. Figure 17 shows the CD and OD groups as appearing to be generally scoring higher than the H group. An ANOVA was conducted on the three groups’ mean scores for this variable. The mean scores were 34.59
for the OD group ($SD = 3.018$), 33.21 for the H group ($SD = 3.409$), and 33.63 for the CD group ($SD = 3.889$). Results of the ANOVA showed that there was no significant difference ($F = .915$, $df = 2$, $p = .411$, $M = 33.90$, $SD = 3.312$) between the three groups’ mean scores for Internal Decisions. Figure 17 shows the percentage distribution of participants according to their scores for Internal Decisions. The number of participants is given above each bar.

Figure 17

*Three groups’ scores: Internal Decisions*

The deaf (OD and CD combined) and hearing groups were compared to investigate whether hearing status was a factor influencing scores for Internal Decisions. The scores were grouped into breakdowns of three to illustrate the distribution in Figure 18, which shows the combined deaf group as appearing to score slightly higher than the H group. A $t$-test (2-tailed) was conducted on these groups’ mean scores for this variable. The mean scores were 34.33 for the combined deaf group ($SD = 3.231$) and 33.21 for the H group ($SD = 3.409$). Results of the $t$-
test showed that there was no significant difference ($t = 1.160, p = .252$) between the combined deaf group’s and hearing group’s mean scores for Internal Decisions. Figure 18 shows the percentage distribution of participants according to their scores for Internal Decisions. The number of participants is given above each bar.

Figure 18

*H and combined deaf groups’ scores: Internal Decisions*

The OD and CD groups were compared to investigate whether deaf identity affiliation was a factor influencing scores for Internal Decisions. Scores for this comparison also included the deafness-specific items. The scores were grouped into breakdowns of three to illustrate the distribution in Figure 19. The CD group appears as scoring generally higher than the OD group according to percentages of participants. A $t$-test (2-tailed) was conducted on the scores for this variable. The mean scores were 49.91 for the OD group ($SD = 3.753$) and 49.38 for the CD group ($SD = 5.344$). Results of the $t$-test found that there was no significant difference ($t = .307, $
between the mean scores of the OD and CD groups. Figure 19 shows the percentage distribution of participants according to their scores for Internal Decisions including the addition of deafness-specific items. The number of participants is given above each bar.

Figure 19

*Deaf groups’ scores with deafness-specific items: Internal Decisions*

4.3.3. *External Manifestations*

The scores were grouped into breakdowns of three in Figure 20 to illustrate the distribution of the three groups’ scores for the thematic category of External Manifestations. Figure 20 shows the OD and CD groups appearing to be generally scoring higher than the H group. An ANOVA was conducted on the three groups’ mean scores for this variable. The mean scores were 34.64 for the OD group (SD = 3.048), 32.89 for the H group (SD = 2.726), and 33.75 for the CD group (SD = 4.200). Results of the ANOVA found that the there was no significant difference ($F = 1.574, df = 2, p = .218, M = 33.82, SD = 3.173$) between the three groups’ mean scores for
External Manifestations. Figure 20 shows the percentage distribution of participants according to their scores for External Manifestations. The number of participants is given above each bar.

Figure 20

Three groups’ scores: External Manifestations

The deaf (OD and CD combined) and hearing groups were compared to investigate whether hearing status was a factor influencing scores for External Manifestations. The scores were grouped into breakdowns of three to illustrate the distribution in Figure 21, which shows the combined deaf group as appearing to score slightly higher than the H group. A t-test (2-tailed) was conducted on these groups’ mean scores for this variable. The mean scores were 34.40 for the combined deaf group (SD = 3.338) and 32.89 for the H group (SD = 2.726). Results of the t-test showed that there was no significant difference (t = 1.646, p = .106) between the combined deaf group’s and hearing group’s mean scores for External
Manifestations. Figure 21 shows the percentage distribution of participants according to their scores for External Manifestations. The number of participants is given above each bar.

The OD and CD groups were compared to investigate whether deaf identity affiliation was a factor influencing scores for External Manifestations. Scores for this comparison also included the deafness-specific items. The scores were grouped into breakdowns of five to illustrate the distribution in Figure 22, which shows the OD group as appearing generally to score higher than the CD group. A \( t \)-test (2-tailed) was conducted on the scores for this variable. The mean scores were 86.91 for the OD group (\( SD = 7.104 \)) and 83.13 for the CD group (\( SD = 9.296 \)). Results of the \( t \)-test found that there was no significant difference (\( t = 1.189, p = .245 \)) between the mean scores of the OD and CD groups for External Manifestations. Figure 22 shows the percentage distribution of participants according to their scores for External
Manifestations including the addition of deafness-specific items. The number of participants is given above each bar.

Figure 22

Deaf groups’ scores with deafness-specific items: External Manifestations

4.3.4. Potential Maximisation

The scores for Potential Maximisation were calculated by aggregating the scores for the three thematic categories of Control, Internal Decisions, and External Manifestations. The scores were grouped into breakdowns of five in Figure 23 to illustrate the distribution of the three groups’ scores for Potential Maximisation. Figure 23 shows a similar distribution of scores between the three groups. An ANOVA was conducted on this variable. The mean scores were 78.95 for the OD group ($SD = 6.090$), 75.32 for the $H$ group ($SD = 5.292$), and 77.38 for the CD group ($SD = 6.744$). Results of the ANOVA showed that there was no significant difference ($F = 1.928$, $df = 2$, $p = .161$, $M = 77.29$, $SD = 6.031$) between the three groups’ mean scores for
Potential Maximisation. Figure 23 shows the percentage distribution of participants according to their scores for Potential Maximisation. The number of participants is given above each bar.

Three groups’ scores: Potential Maximisation

The deaf (OD and CD combined) and hearing groups were compared to investigate whether hearing status was a factor influencing scores for Potential Maximisation. The scores were grouped into breakdowns of five to illustrate the distribution in Figure 24, which shows the combined deaf group as generally scoring higher than the H group. A $t$-test (2-tailed) was conducted on these groups’ mean scores for this variable. The mean scores were 78.53 for the combined deaf group ($SD = 6.219$) and 75.32 for the H group ($SD = 5.292$). Results of the $t$-test found that there was no significant difference ($t = 1.866, p = .068$) between the combined deaf group’s and hearing group’s mean scores for Potential Maximisation. The $p$
value did, however, approach significance. Figure 24 shows the percentage distribution of participants according to their scores for Potential Maximisation. The number of participants is given above each bar.

![Percentage distribution of participants according to scores for Potential Maximisation](image)

**Figure 24**

*Deaf and hearing groups’ scores: Potential Maximisation*

The OD and CD groups were compared to investigate whether deaf identity affiliation was a factor influencing scores for Potential Maximisation. Scores for this comparison also included the deafness-specific items. The scores were grouped into breakdowns of 15 to illustrate the distribution in Figure 25, which shows the two deaf groups as having a similar distribution of scores. A t-test (2-tailed) was conducted on the scores for this variable. The mean scores were 162.50 for the OD group (SD = 13.045) and 158.63 for the CD group (SD = 12.939). Results of the t-test found that there was no significant difference ($t = .721$, $p = .477$)
between the mean scores of the OD and CD groups for Potential Maximisation. Figure 25 shows the percentage distribution of participants according to their scores for Potential Maximisation including the addition of deafness-specific items. The number of participants is given above each bar.

Figure 25

*Deaf groups’ scores with deafness-specific items: Potential Maximisation*

In all, the three types of between-group comparisons yielded no significant statistical differences for each of the three thematic categories and the overarching variable of Potential Maximisation. Table 9 summarises these statistical trends.
Table 9

Summary of the statistical data

<table>
<thead>
<tr>
<th>Scale</th>
<th>Type of group comparison and result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OD vs CD vs H</td>
</tr>
<tr>
<td>Control</td>
<td>ns</td>
</tr>
<tr>
<td>Internal Decisions</td>
<td>ns</td>
</tr>
<tr>
<td>External Manifestations</td>
<td>ns</td>
</tr>
<tr>
<td>Potential Maximisation</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note: ns = no significant difference

4.4. Case studies

The scores of the 49 participants (see Appendix H) were scrutinised and the highest and lowest scoring participants for Potential Maximisation were selected as case studies. These case studies were two Anglo-Saxon males – OD21, an American dentist from New York aged between 42 and 45 years, and OD8, an Australian public servant from Canberra aged between 38 and 41 years. Both participants stated that English was their parents’ and their own first language. Neither participant had experienced more than one year’s unemployment or reported an additional disability. For Potential Maximisation, OD21’s score was the highest of all 49 participants (89). When scrutinising the scores for the deaf participants including additional deafness-specific items OD21 again scored the highest (184) (see Appendix I). In contrast, OD8 scored the lowest scores for all three groups (66) and for the two deaf groups (129) for Potential Maximisation in both between-group analyses. Both OD21 and OD8 answered every item, so their scores were not modified.

Congenitally deafened, OD21 reported profound bilateral deafness, had a cochlear implant, and regarded himself as a “master” speech reader. He had attended a School for the Deaf in which the primary means of communication was spoken language, but did not specify his highest educational qualification. He learnt SL at the age of 19 years, and was a continued and fluent signer. He did not, however, nominate himself as CD or feel that his life would be
better with greater Deaf community involvement. His reason was: “I have greater stimulation and more interests in the hearing world … the Deaf community/culture limits me, narrows my interests”.

OD8 wore hearing aids and reported moderate bilateral deafness. All deaf participants reported a greater severity of deafness than he. He did not specify when his deafness occurred, or whether it was gradual or sudden. Qualitative data, however, suggested that he may have lost his hearing in adulthood (items relating to childhood were therefore not used to compare OD21 and OD8). OD8 also attended a mainstream school and had attained a Masters degree. He reported no Deaf community involvement and had not learnt SL. He did, however, agree his life would be better with greater Deaf community involvement. His reason was: “Interaction with individuals/group with the same difficulty/problem”.

For the thematic category of Control, OD21’s scores were equal highest of all participants (12) and equal second highest in the deaf group comparison (31). OD8’s scores were the lowest of all group scores (6) and lowest for the deaf group comparison (14) for Control.

Table 10

Comparison for OD21’s and OD8’s distinctive responses to items: Control

<table>
<thead>
<tr>
<th></th>
<th>OD21</th>
<th>OD8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control of work and social life</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>Adulthood is easier than childhood</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>Life is miserable because of deafness</td>
<td>Strongly disagree</td>
<td>Agree</td>
</tr>
<tr>
<td>Summary of deaf person who has maximised their potential</td>
<td>Numerous actual attributes and tactics</td>
<td>“John Howard”</td>
</tr>
<tr>
<td>Overcome the challenges of deafness?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Superior social skills than the average hearing person?</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
</tbody>
</table>
Table 10 shows that the two participants had different responses to items relating to Control. OD21 strongly agreed and OD8 disagreed that he felt in control of his work and social life, and that adulthood was easier than childhood. In addition, OD21 strongly disagreed that his life is miserable because of his deafness, but OD8 agreed. Interestingly, OD8 simply wrote former Australian Prime Minister “John Howard” when summarising a deaf person who is maximising their potential with hearing peers. OD21 elaborated that a deaf person maximising their potential has attributes such as acknowledging deafness-related challenges and the quickness “to formulate ways to get around the problem”, using tactics such as providing an email address or SMS number “instead of a voice phone number, and explaining it is the preferred way to contact the deaf person, etc.”.

Continuing the theme of Control, OD21 agreed that he had overcome the challenges of his deafness, whereas OD8 did not. OD8 cited “practical, technical and aesthetic difficulties with needing to use hearing aids” as his reasons. OD21, however, mentioned strategies: “I always let the other person know that I am deaf and lip-read, and need the other person to face me while speaking. I also ask for clarification, repetition, rephrasing when I do not understand a particular word.”

OD21 strongly agreed and OD8 strongly disagreed that he had superior social skills than the average hearing person. OD8’s reasoning was that deafness “is a severe limitation on social interaction”. OD21 mentioned having social courtesies including writing ‘thank you for the hospitality’ letters, and returning every call or each e-mail message as examples of superior social skills.

For the thematic category of Internal Decisions, OD21’s score was equal highest of all participants (40) and the highest in the deaf group comparison (57). OD8’s scores were equal third lowest of all group scores (31), and second lowest of the OD and CD groups (42) for Internal Decisions. Table 11 showed the two participants’ different answers to the items related to the thematic codes of Internal Decisions: Desire, Goal Orientation, and Reframing.
Table 11

Comparison for OD21’s and OD8’s distinctive responses to items: Internal Decisions

<table>
<thead>
<tr>
<th></th>
<th>OD21</th>
<th>OD8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Desire</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful people seem to be</td>
<td>Strongly disagree</td>
<td>Agree</td>
</tr>
<tr>
<td>lucky</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative childhood experiences</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>made me try harder</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Goal Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A risk taker</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
<tr>
<td><strong>Reframing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proud of the skills to maximise</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>potential with hearing peers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dealing with deafness has made</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>him a better person</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Both participants had different responses to items regarding Desire. OD21 strongly disagreed and OD8 agreed that successful people seem lucky. OD21 also strongly agreed and OD8 disagreed that negative childhood experiences made him try harder.

The difference in items regarding Goal Orientation saw OD21 strongly agree and OD8 disagree that he was a risk-taker. OD8 believed he would be in “the same place, vocationally, socially, physically” in five years time, and wrote “Nil” as strategies he would use. In contrast, OD21 stated “I want to finish off my 115 North East 4000’ mountains”. He also explained the importance of continuing a balanced life while working hard, and “not dwelling on failure” as strategies he will use.

Both participants had different responses to items regarding Reframing. OD21 strongly agreed and OD8 disagreed that he was proud of the skills he used to maximise his potential with hearing peers. OD8 also disagreed and OD21 agreed that dealing with deafness had made him a better person. OD8 wrote that he would be “more vocationally and socially successful” if not deaf. OD21 believed he would have been “more of a product of my parents’ influence ...
Mine was more on my own (in English oral boarding schools for the deaf)… I think I would have done just great no matter if I were deaf or hearing”.

OD21’s scores for the thematic category of External Manifestations were the equal third highest of all participants (37) and the highest in the deaf group comparison (96). OD8’s scores were equal fourth lowest of all group scores (29), and third lowest in the deaf group comparison (73) for External Manifestations. Table 12 shows the two participants’ different answers to the items related to the thematic codes of External Manifestations: Persistence, Goodness of Fit, Learned Creativity, and Social Ecologies.

Table 12

<table>
<thead>
<tr>
<th></th>
<th>OD21</th>
<th>OD8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Persistence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process of self-determinism helps him learn to be more self-determined</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>Mastering speech-reading requires practice</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
<tr>
<td><strong>Goodness of Fit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chosen employment where deafness is not a problem</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>Life choices that suit strengths</td>
<td>Focused on strengths from childhood; chose dentistry because less emphasis on hearing</td>
<td>Misunderstood concept</td>
</tr>
<tr>
<td><strong>Learned Creativity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecommunications = level playing field with hearing people</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>Captioned TV/DVD as improving his social skills</td>
<td>Can make out irony, sarcasm, jokes which helped him with social interaction</td>
<td>“No relationship between watching captions and socialising”</td>
</tr>
<tr>
<td><strong>Social Ecologies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close hearing friend throughout adulthood</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Sociable with hearing peers</td>
<td>Strongly agree</td>
<td>Disagree</td>
</tr>
</tbody>
</table>
The difference in items regarding Persistence saw OD21 strongly agree and OD8 disagree that the process of self-determination helped him learn to be more self determining, and that mastering speech-reading requires continual practice. OD8 believed that “self-determination is a trait developed in upbringing through good parenting, social interaction, and personal value. Difficult to develop later in life” (sic). OD21 gave three examples whereby learning to drive, doing taxes, and buying a house require proportionately greater degrees of self-determinism because each of the three skills are proportionately more complex processes: “the second time it happens, you have confidence and you know how to do it”.

The main difference in items regarding Goodness of Fit saw OD21 agree and OD8 disagree that he had chosen employment whereby deafness is not a problem. Both OD8 and OD21 agreed he had made lifestyle choices that suited his strengths. A difference, however, was in the participant’s understanding of the concept provided in the qualitative data relating to Goodness of Fit. OD8 justified with no more than eight words: “Academic and vocational choices and interests”. In contrast, OD21 provided a 152 word justification that began with “I analysed my strengths in early childhood and realized that I would have to capitalize on my strengths to be used in a career that did not require hearing skills”. OD21 thereafter mentioned that he ignored the advice of “well meaning teachers” who encouraged him to pursue a career in dentistry. Now a dentist of 20 years, OD21 concluded “I look back and think ‘what if I were more naïve and allowed my teachers to decide my future job for me?'”

There were differences in replies to items regarding Learned Creativity. OD21 strongly agreed and OD8 disagreed that telecommunications placed him on a ‘level playing field with hearing peers’ and that watching captioned DVDs and television programs had improved his social skills. OD8 did not perceive telecommunications as a prosthesis when stating “Hearing remains a critical element in vocational and social situations”. OD21, however, wrote “I have my choice of communication strategies … and it’s nice NOT to be limited to just the TTY like in the old days”. Furthermore, OD8 saw “No relationship between watching captions and socialising”,
whereas OD21 saw captioned TV/DVD as prosthesis that assisted his social development when explaining that he “was able to make out irony in spoken lines … and understand how a particular line was inflected and ‘read between the lines’ if a character was being sarcastic, flippant or joking, or merely making a statement, which I couldn’t hear in spoken language”.

There were differences in responses to items regarding Social Ecologies. OD21 had close hearing friends throughout his adulthood but OD8 had not. OD21 also strongly agreed and OD8 disagreed that he was sociable with hearing peers. OD21 mentioned that his friends helped him integrate by acting as a ‘sounding board’ for social situations and by using a hypothetical question whereby he would ask “what would you do if this happened to you?”

For the final question, participants were asked to provide three words to describe themselves. OD21 described himself as “Happy, self sufficient, independent”, whereas OD8 saw himself as “introverted, intelligent, deaf”. In summary, these two case studies illustrate differences between this study’s highest and lowest scoring participants. These differences were not only apparent in their responses to nominal items throughout Reiff et al.’s (1995) eight themes but also in their qualitative data.

4.5. Within-group analyses

4.5.1. Composite pictures

The individual participants’ responses were used to try to build a composite picture of a typical participant for each group. This was done by noting the most common response of the OD, H, and CD groups for each of the items given in the DSS and HSS to provide demographic data. These trends were reported in a descriptive manner to illustrate demographic data of the three groups.
4.5.1.1. **Composite picture of an OD participant**

A composite picture of the typical OD participant using model data would be an Australian Anglo-Saxon female aged between 30 and 33 years residing in Australia when completing the surveys. She would have congenital deafness, report a profound bilateral deafness, and wear hearing aids. English would be her parents’ and her own first language. She would have been educated wholly in a mainstream school. Having never learnt SL, she would always use her voice to communicate and self-identify as a “master” speech reader. She will have experienced Deaf community involvement and agree that they were welcoming of her. She would not, however, believe that her life would be better with a CD identity. Since completing a Bachelor degree, she will have had a service-based occupation, not experienced more than one year of unemployment, and strongly agree that she is maximising her potential in society.

4.5.1.2. **Composite picture of a H participant**

A composite picture of a H participant using model data would be an Australian Anglo-Saxon female above the age of 50 years residing in Australia when completing the surveys. She would have had a close relationship with a deaf person for more than three years but not used SL with this person. She would also report no Deaf community involvement. English would be her parents’ and her own first language. She would not have been unemployed for more than one year. Since completing a Masters degree, she will have had a service-based occupation and strongly agree that she is maximising her potential in society.

4.5.1.3. **Composite picture of a CD participant**

A composite picture of a CD participant using model data would be an Australian Anglo-Saxon female aged between 42 and 45 residing in Australia when completing the surveys. She will self-identify as CD and strongly agree that the Deaf community were welcoming towards her. She would have congenital deafness, report a profound bilateral deafness, and wear hearing aids. English would be her parents’ and her own first language. She would always use her voice
to communicate and regard herself as a “good” speech-reader. She likely uses TC because she would currently and fluently use SL that she learned in her 20s. Wholly educated in a mainstream school, she will have a Masters degree and not have experienced more than one year’s unemployment. She will have a service-based occupation and agree that she is maximising her potential in society.

4.5.1.4. Between-group analyses of three groups using composite pictures

The three composite pictures were then used to illustrate typical group responses across the thematic categories of Control, Internal Decisions, and External Manifestations. This was done by noting the mode score for each group in relation to the 26 identical nominal items in the DFS and HFS, and thereafter comparing typical responses from participants for each group. These trends were reported in a descriptive manner to illustrate the three groups’ opinions of deafness and psychosocial attributes and tactics.

4.5.1.4.1. Between-group analyses for the three groups using composite pictures: Control

There were three identical scoring items regarding the thematic category of Control. Typical OD and H participants would likely agree that she is in control of her social and work lives but a CD participant would more strongly agree with these two concepts. The CD participant would likely strongly agree that adulthood has been easier for her than childhood. In contrast, the OD participant would less strongly agree but the H participant would disagree that adulthood has been easier for her than childhood.

4.5.1.4.2. Between-group analyses for the three groups using composite pictures: Internal Decisions

There were 11 identical scoring items regarding the thematic category of Internal Decisions. The thematic code of Desire consisted of six scoring items. Typical participants from each of the three groups were each likely to disagree that successful people seem to be lucky. A typical OD
A typical participant would strongly agree that people could be more successful if they applied themselves and that negative childhood experiences made her try harder, whereas typical H and CD participants would each less strongly agree with these two notions. A typical OD participant would agree that she must make her own decisions and that full time employment is very important for her, whereas typical H and CD participants would each more strongly agree with these notions. A typical OD participant would agree that she could be more successful socially and career-wise if she tried harder, whereas typical H and CD participants would disagree with this notion.

The thematic code of Goal Orientation consisted of four scoring items. A typical participant from each of the three groups was likely to both agree she was a risk taker and disagree that her life successes have been the result of luck. Typical OD and CD participants were likely to agree that failure to plan can cause problems, whereas the H participant would strongly agree with this notion.

The thematic code of Reframing consisted of one scoring item. Typical OD and H participants were likely to disagree that bad things that happen to deaf people are a result of society’s barriers but a CD participant would agree with this concept.

4.5.1.4.3. Between-group analyses for the three groups using composite pictures: External Manifestations

There were 12 identical scoring items regarding the thematic category of External Manifestations. The thematic code of Persistence consisted of three scoring items. A typical participant from each of the three groups would each strongly agree that the process of self-determination makes her learn to be more self-determining. Typical H and CD participants would agree that she can handle adversity and an OD participant would agree with this item more strongly. Typical OD and CD participants would strongly agree that it is important for her to handle adversity, whereas a H participant would less strongly agree.
The thematic code of Goodness of Fit consisted of three scoring items. Typical participants from each of the three groups would agree that they have made life choices that suit their strengths and that their deafness or weaknesses are not a problem in their chosen employment. Typically, an OD participant would agree that she chooses friends who accommodate her deafness or weaknesses, a CD participant would strongly agree to this, but the H participant would disagree with this notion.

The thematic code of Learned Creativity consisted of two scoring items. All participants would typically strongly agree that reading has helped them better understand the world and has significantly improved their quality of life.

The thematic code of Social Ecologies consisted of four scoring items. Typically, all participants would have a family member who played an important role in their lives and have had a close hearing friend throughout their adulthood. Typical OD and H participants would agree that they need to be liked by hearing people and that it is important for them to be a social person in mainstream society, whereas a typical CD participant would disagree with both of these concepts.

4.5.1.5. Between-group analyses of the two deaf groups using composite pictures

The DFS included an additional 33 nominal items that were specific to deaf participants. It was therefore possible to further compare typical responses of the OD and CD groups across the thematic categories of Control, Internal Decisions, and External Manifestations. These trends are reported in a descriptive manner to illustrate the deaf groups’ typical opinions of deafness-specific psychosocial attributes and tactics.

4.5.1.5.1. Between-group analyses of the two deaf groups using composite pictures: Control

There were six deafness-specific scoring items regarding the thematic category of Control. Typical OD and CD participants would believe they have overcome the challenges of their
deafness and strongly disagree that their lives are miserable because of their deafness. Typical OD and CD participants would further strongly agree that they have superior linguistic skills compared with the average hearing person but disagree that they have superior social skills compared with the average hearing person. An OD participant would strongly disagree that life has been miserable in the past year because of deafness, whereas a CD participant would disagree less strongly. An OD participant would likely disagree that life would be better if not deaf but a CD participant would agree.

4.5.1.5.2. Between-group analyses of the two deaf groups using composite pictures: Internal Decisions

The thematic category of Internal Decisions consisted of five deafness-specific scoring items. The thematic code of Desire had two deafness-specific scoring items. Typical OD and CD participants would each agree that deaf people must work hard to be accepted by hearing people. A typical OD participant would further strongly agree that having hearing friends is important to her, whereas a CD participant would agree less strongly. The thematic code of Goal Orientation had one deafness-specific scoring item. A typical OD participant would disagree and a CD participant would strongly disagree that deafness severely affects their goal achieving ability. The thematic code of Reframing had two deafness-specific scoring items. Typical OD and CD participants would each strongly agree that they are proud of the skills they use to maximise their potential with hearing peers, and that dealing with deafness has made them a better person.

4.5.1.5.3. Between-group analyses of the two deaf groups using composite pictures: External Manifestations

There were 22 deafness-specific scoring items for the thematic category of External Manifestations. The thematic code of Persistence had four deafness-specific scoring items. Typical OD and CD participants would each agree that speech-reading requires continual
practice in order for it to be mastered and that their voice would get worse if not continually used. A typical OD participant would strongly agree and a CD participant would agree less strongly that deaf people work harder than hearing people to be accepted by others. An OD participant would likely agree that persisting through experiences of loneliness and rejection produces equality with hearing people but a CD participant would disagree with this concept.

The thematic code of Goodness of Fit had two deafness-specific scoring items. A typical OD participant would agree and a CD participant would strongly agree that it is important to have deaf friends and that work colleagues accommodate issues relating to their deafness.

The thematic code of Learned Creativity had 11 deafness-specific scoring items. Typical OD and CD participants would each watch captioned TV/DVD, strongly agree that reading has compensated for information they may miss because of their deafness, and that watching captioned TV/DVD has helped them better understand the world. Typical OD and CD participants would also use email and SMS, and strongly agree that these devices are very important to their social lives. A typical OD participant would agree and a CD participant would strongly agree that telecommunications create a ‘level playing field’ with hearing peers, and that watching captioned TV/DVD has improved their linguistic skills. An OD participant would likely disagree whereas a CD participant would strongly agree that watching subtitled programs has improved their reading skills. An OD participant would also likely disagree but a CD participant would agree that watching captioned TV/DVD has improved their social skills.

The thematic code of Social Ecologies had five deafness-specific scoring items. An OD participant would typically strongly agree and a CD participant would less strongly agree that they are sociable with hearing people. Typical OD and CD participants would each have had a close hearing friend throughout their school years, and believe a deaf role model would have been beneficial because they did not have one in childhood. An OD participant would likely disagree that childhood would have been easier if their parents knew more about deafness, whereas a CD participant would strongly agree with this notion.
4.6. Psychosocial attributes and tactics gleaned from qualitative data

4.6.1. Perceptions of a deaf person who is maximising their potential

OD and CD participants explained that a deaf person who was maximising their potential with hearing peers would: have adequate speech and speech-reading skills (OD22), need reasonable accommodations from hearing peers (OD1, OD2, OD6, OD15, OD19, OD22), not use deafness as an excuse (OD2, OD5, OD9, OD22), make the most of presented opportunities and avoid situations where deafness causes problems (OD15, OD16), have “self-motivation, confidence and articulation” (OD3), have a sense of humour (OD22), believe they are as capable as hearing peers (OD9), accept their deafness (OD15, CD5), pass on their experience of deafness to those who need it (e.g., parents of deaf children) (OD20), operate independently socially and vocationally with a variety of hearing people (OD12, OD13, OD14, CD1), and make others ‘forget’ his/her deafness (OD4, OD10). He/she would also use cognitive tactics to create desired social outcomes, such as: being assertive, which included informing others about speech-reading (OD9) or deafness (OD16), effectively using text-based telecommunications (OD1, OD7, OD21), have sufficient linguistic skills (CD3), and be operating within personal limitations in career and social situations “without or with minimal accommodations” (OD18).

There were some qualitative differences in the responses provided by OD and CD participants regarding a deaf person maximising their potential. OD5, OD9, and OD14 believed this person would additionally not be CD or use SL. OD5 believed that “such a person would be well versed in the culture of the society in which they reside” and have “good speech, listening, and lipreading skills” because “people are more comfortable among others whose mannerisms, interests, attitudes, and behavior mirror their own”. On the other hand, CD2 and CD5 emphasised the importance of the person being competent with SL or self-identifying as Deaf. CD2 reasoned that “Such a person also will clearly establish roles and responsibilities, and help the hearing peers do their part to make the relationship succeed, at the same time that person
will unfortunately have to take more responsibility in the long run simply by being a member of a minority trying to participate in a hegemony that is not conducive or inclusive”.

H participants gave as examples of the following deaf individuals who are maximising their potential: a young girl with a cochlear implant succeeding socially and academically with hearing peers (H1), a son who loves sport and conversation with hearing peers (H2), a friend from New York who works for a fashion company and has numerous hearing friends (H4), a university graduate daughter who participated in numerous team sports, travelled extensively, and acquired a network of friends (H5). Two participants mentioned attributes such as self-confidence and being personable (H6), and viewing people as equal (H8).

4.6.2. OD and CD participants’ perceptions of their own linguistic skills

Nineteen of the 21 OD participants who answered the relevant item agreed they had superior linguistic skills compared with the average hearing person. Seven (88%) CD participants also agreed with this concept. Reasons in the qualitative data for deaf participants believing they had superior linguistic skills than the average hearing person included: coming from a family background that was highly educated and/or strongly encouraged reading and verbal expression (OD5, OD8, OD14, OD16, OD22), having a command for a spoken/written language other than English (OD2, OD11, OD15, CD7), competence with public speaking to hearing audiences (OD2, OD13, OD16, OD22), educational achievements (e.g., high tertiary qualifications or high marks at school) (OD2, OD4, OD16, OD19, CD1, CD2), confidence in expressing themselves with a variety of people (OD2, OD11, CD1), stating they have read extensively (OD1, OD5, OD6, OD9, OD14, OD15, OD21, CD5), and having competence with “two languages” in English and SL (CD3).

In contrast, the two participants who believed they had inferior linguistic skills than the average hearing person gave the following reasons: having syntactic problems when it comes to writing reports (OD7) and only understanding “plain English” (CD8).
4.6.2.1. *H participants’ perceptions of deaf individuals’ linguistic skills*

Twelve of the 19 H participants agreed that deaf individuals can have superior linguistic skills than the average hearing person. Qualitative data showed that H10 believed it depended on the communication mode of the person and that if SL was the primary communication mode, “their skills … may well be deficient in grammar and writing”. H4 wrote “Acquiring superior language skills is more of a feat for a deaf person than a hearing person, but it is possible”. H14 made this interesting comment “there is as much chance of a deaf person being a literary genius as a hearing person. Reading and writing and comprehension are not linked with hearing”.

H1, H5, H7, H10, H11, and H14 disagreed that deaf people can have superior linguistic skills than the average hearing person. Only H1 and H5 provided explanations. H1 believed deaf people’s linguistic skills are usually not as developed as hearing people’s because language has to be taught and H5 reasoned there is acoustic distortion involved with using hearing aids.

4.6.3. *OD and CD participants’ perceptions of their own social skills*

Eleven OD participants (50%) agreed they had superior social skills compared with the average hearing person. Four (57%) of the seven CD participants who answered the relevant item also agreed with this concept. Qualitative data showed that the reasons for deaf participants believing they had superior social skills than the average hearing person included: an outgoing personality (OD19), interaction with a variety of people from different cultures, ages, and backgrounds (OD2), being well liked (CD1), competence with diplomacy (OD21), deafness providing her the ability to better “read people” (OD3), and parents or profession exposing them to numerous social scenarios that, in turn, enabled the acquisition of numerous social skills (OD4, OD5, OD12).

For participants who disagreed they had superior social skills than the average hearing person, the reasons included: being unable to keep up to speed with conversations (OD1, CD7), the tendency to nod and smile “and look for an escape route” (OD16), not having certain
experiential knowledge (e.g., listening to music or radio) for conversation (OD17), deafness being perceived as a severe limitation on social interaction (OD8), and finding socialising difficult with hearing people but not with Deaf people (CD3). OD15, who was the second highest scoring participant in the three group comparison for Potential Maximisation, also disagreed. She did, however, provide this interesting insight: “I think the average profoundly deaf person is always a few years behind their hearing peers with social skills, i.e. not interrupting conversations, etc. until they reach about 25-27 years old. I’m still learning”.

4.6.3.1. H participants’ perceptions of deaf individuals’ social skills
Ten (63%) of the 16 H participants who answered the item agreed that deaf individuals can have superior social skills compared with the average hearing person. Only H1, H5, and H14 provided explanations in their qualitative data for disagreeing with the concept. Their beliefs included difficulty/slowness with speech making conversation difficult (H1), difficulty in following group conversation, communicating on the phone, and dealing with discrimination when applying for employment (H5), and the onus on speech in the hearing community disadvantaging deaf people (H14). In addition, H3 seemed to have an issue with how the item was phrased: “I do not perceive social skills to be defined by deafness or hearing ability”.

4.6.4. Captioned TV/DVD as a prosthesis: linguistic skills
Twelve (57%) of the 21 OD participants who answered the item agreed that captioned TV/DVD has improved their linguistic skills. Seven (88%) CD participants also agreed with this concept. Their common response in the qualitative data was that captioned TV/DVD exposed them to a variety of linguistic characteristics (i.e., syntax, jargon, irony, spelling, pronunciation) to improve their command of English (OD3, OD14, OD17, OD21, OD22, CD2, CD7, CD8). Other reasons included: being able to better understand conversational dialogue in real life situations (OD3, OD14), improving their literacy and listening comprehension for languages other than English (OD11), improving their reading speed (OD12), and improved knowledge of extensive topics
(e.g., history, current affairs, other cultures, places) (OD14, OD15). OD9 provided a typical response that captioned TV/DVD helps with understanding “the nuances and slang that I might not otherwise get through normal verbal interaction. Or jokes or words to songs”.

Some deaf participants, however, disagreed that captioned TV/DVD improved their linguistic skills. OD5, OD6, OD13, CD4, and CD5 believed they had linguistic skills before captioned media was widely available and OD did not watch much TV/DVD.

4.6.4.1. Captioned TV/DVD as a prosthesis: social skills

Eleven (50%) OD participants agreed that watching captioned TV/DVD has improved their social skills. Three (43%) of the seven CD participants who answered the relevant item also agreed with the concept. Qualitative data showed there were conflicting views from OD and CD participants relating to the possible social benefits of watching captioned TV/DVD. Some saw no benefit. Their most common response was the perception that watching media is non-social (OD3, OD8, CD2). Other reasons included: not watching much TV or DVD (OD1), and believing they had social skills before captioned TV/DVD was widely available (OD2, OD5, CD4).

On the other hand, reasons for OD and CD participants believing watching captioned TV/DVD improved their social skills included: television programs or movies as a conversational topic (OD12, OD17, CD5), knowing appropriate and inappropriate social behaviour (OD11, CD7), appreciation of their own and other’s culture (OD2, OD14), being able to link body language with spoken language (OD9, OD14, OD15), being able to view films with friends (OD10, OD13, OD22), and improving wit and repartee (OD21). OD20 typified the responses: “Seeing and hearing social skills in context, you pick up social/language skills that you may had not picked up from more traditional sources.

4.6.4.2. TV/DVD as improving H participants’ social skills

H participants were asked whether watching TV/DVD improved their social skills. Fifteen (79%) disagreed with this concept. Qualitative data showed that their reasons included: the belief that
real-life interaction, not watching media, has improved their social skills (H1, H2, H7, H8), not
watching much TV/DVD (H10), the belief that watching media is antisocial (H4, H11), viewing
TV/DVD as separate from social life/social skills (H13). H9 typified the responses: “TV! There is
no social interaction required on my part when watching TV. How could that improve my social
skills?” On the other hand, reasons for H participants agreeing that watching media improved
their social skills included improved knowledge of extensive topics (H5) and providing
conversational topics with peers (H14, H15, H18).

4.6.5. Perceptions of self-determinism as a process
Twenty (95%) OD participants and 15 (83%) H participants who answered the relevant item
agreed that self-determination is a process that helps them to be more self-determining. Seven
(88%) CD participants also agreed with this concept. Qualitative data showed that their reasons
included: social barriers or life challenges making her/him strive harder to achieve goals (OD3,
OD15, OD18), learning to take control of their life outside their comfort zone (OD5, OD9, OD16),
becoming more self-aware with age (OD10, OD11, OD14, OD21, CD5, H1, H3, H5, H16),
ambition, focus, and application being important to success (OD17, H14, H15), adversity as
strengthening resolve and providing learning opportunities (OD18, OD20, H2, H9), and being
adaptive such as changing work/social environments for a better lifestyle (CD2, H4, H11).

H10 demonstrated that the importance of self-determinism is equally applicable to
hearing as well as deaf individuals: “My son had no benefit from hearing aids and the local
schools wanted him to use TC or sign. I refused because ‘the world doesn’t sign’ and it would
restrict his opportunities to fully communicate with everyone”. She took legal action because the
cochlear implant was not yet approved for children in 1990. She won. H13 provided a further
interesting statement: “Success breeds success. Experience of autonomy and self-determinism
are self-reinforcing – they make you feel good and therefore you are more likely to engage in
behaviours fostering self-determination”. OD22 provided a deafness context to self-determinism:
“how you approach the challenges created by the condition of deafness is the key. Accepting that there will be challenges and accepting that only you can overcome these challenges is the key to personal growth. The challenges are never ‘somebody else’s problem’. When this is understood, then the person has the insight to determine their own future pathways and goals”.

Some deaf and H participants disagreed that self-determination is a process that helps them to be more self-determining. OD8, H6, and H8 believed that self determinism was an innate rather than learned trait and H17 believed self-determinism was not a process.

4.6.6. Perceptions of making lifestyle choices to suit strengths

Twenty-one (96%) OD participants, 18 (95%) H participants, and all CD participants agreed that they had made choices in their life to suit their strengths. Their reasons in the qualitative data included: changing a school/university subject/course to choose an “easy route” whereby their skills would be better suited to the career they later chose (OD2, OD17), avoiding professions whereby deafness or personality factors can be problematic (OD1, OD4, OD5, OD6, OD16, H17, CD1) (e.g., OD16 chose an IT career to avoid intensive face-to-face communication, and OD5 was a website manager because she had “no patience with ‘human problems’”), refusing to accept lowered expectations (OD9, OD21), choosing professions on the basis of personality traits, interest, and specialised skills or expertise (OD1, OD3, OD10, OD11, OD12, OD14, OD22, H2, H8, H11, H13, H15, H16, H18, CD2), effective use of prostheses such as text-based telecommunications (OD20), choosing a workplace with reasonable deafness-related accommodations (OD7), choosing a lifestyle to assist family needs (H9), and working or socialising with Deaf people (CD3, CD8).

H14 was the only participant who provided qualitative data with regard to his not believing he had made lifestyle choices that suit his strengths. He wrote that he often takes “the easy option and coast rather than strive for a goal”.

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4.6.7. *OD and CD participants’ perceptions of life without deafness*

Deaf participants answered an open-ended item asking whether their lives would be better if they were not deaf. There were five common beliefs. First, life would be worse, with reasons including: deafness-related barriers/challenges have developed useful attributes (e.g., resilience, inventiveness, and motivation) and actually made them a better and/or more successful person (OD9, OD18, OD20, OD22, CD1, CD3). Secondly, they would possess negative attributes if they were a hearing person, such as being more selfish (OD2, OD13), vain (OD4), and materialistic/status oriented (OD13, CD1, CD2). Thirdly, life or their personality would be similar because of innate characteristics (OD6, OD12, OD21, CD2, CD6). Fourthly, they believed they would, as a hearing person, be: more independent (OD2, OD11), confident/secure (OD19), extroverted (OD1), less prone to harassment or rejection (OD2) or suspicion and frustration (OD11), and have more career and social opportunities (OD11, OD13, OD14, OD16). Lastly, OD7, OD5, OD15, OD17, and CD5 were unable to answer the question.

4.6.8. *H participants’ perceptions of deafness assisting personal development*

Eighteen (95%) H participants agreed that the experience of deafness can assist personal development. Qualitative data showed that they believed dealing with deafness can develop: inner strength, determination, and tenacity (H5, H4, H9, H15), sensitivity and kindness towards others (H5, H16), involvement with Deaf culture can assist personal development (H6), assertiveness strategies (H18), and appreciation of difference in society (H14). H1 and H2 believed personal growth occurs through dealing with the adversity a deaf person experiences. H10 believed that hearing people “may never grow” and take life “for granted because they don’t have to work at it”. H13 quoted Oscar Wilde: “What fire doesn’t destroy it hardens’ i.e., adversity can be character building providing it’s not too severe or too prolonged”. Lastly, H8 mentioned that working with deaf children helped her personal development: “It took me until I was 20 to begin to awaken spiritually whereas a lot of these children seem to have this
awareness already. Their hearing impairment appears to have made them look deeper into themselves from an early age”.

H11 disagreed that deafness can assist personal development. She wrote “The experience of deafness can either assist or hinder personal development, depending on how an individual with deafness copes with his/her experiences”.

4.6.9. The roles of family members in the lives of OD and CD participants
Twenty (91%) OD participants and seven (88%) CD participants reported family members who had played a significant role in their life. Qualitative data showed that the roles that parents played included instilling: values such as perseverance/determination, high educational standards, and a broad understanding of auditory language (OD2, OD3, OD5, OD6, OD10, OD12, CD5). Other roles included providing: continued counsel and guidance (OD2, OD10, OD13, OD21, CD1), exposing them to various social situations (OD5, OD17, CD6), continued faith in their potential (OD9, OD11, OD14, OD15, OD21, CD5), advocacy (OD9, CD3), acceptance of deafness but not as a barrier to social and career potential (OD22).

Some participants further reported the roles of siblings or grandparents. Siblings helped OD7 with his social life. Grandparents helped by providing parents with relief from child-minding duties (OD3) as well as further exposure to auditory language (OD10).

4.6.10. The roles of hearing school friends for OD and CD participants
Nineteen (81%) OD participants and six (75%) CD participants had a close hearing school friend. Qualitative data showed that these friends helped deaf participants integrate by: accepting her/him “for who I am” (OD2, OD5, OD12), allowing them to read their class notes (OD3), providing them with more auditory language skills (OD5), keeping them up-to-date with class duties or social happenings (OD7, OD9, OD14, OD22, CD5, CD6), relaying conversations (OD10, OD14), inclusion in social circles (OD11), and advocating for deafness-related issues with other hearing students (OD17).
OD16, OD18, OD21, CD7, and CD8 did not have a close hearing friend at school. OD16 “was shy and had not learned to cope with my deafness” and CD7 had close Deaf friends because hearing people “would never understand what it’s like being a Deaf person”. OD21 and CD8 cited attending boarding School for the Deaf as their reason.

4.6.10.1. OD and CD participants’ shared interests with their hearing school friends

Further qualitative data showed that the common interests that deaf participants shared with their hearing school friend included shared experiences such as: religion (OD2, OD11, OD20), youth group activities (OD2), similar socioeconomic backgrounds (OD5), sport (OD9, OD20, CD5), same classes (OD10, OD22, CD5), politics (OD11), love for literature (OD3, OD11), nature/outdoors (OD15), and a same sense of humour (OD3). OD6 also reported that her friend/s acted as a buffer for bullying.

4.6.10.2. Deaf role models in childhood for OD and CD participants

Only three (14%) OD participants and two (25%) CD participants had a childhood deaf role model. Three OD participants did not answer the item asking whether they believed they would have benefited from having a deaf role model, yet 11 (69%) believed they would have benefited. All CD participants who did not have a childhood deaf role model also agreed with this concept. Qualitative data showed their reasons included: feeling they would be challenged by the set standards (OD2, OD17, CD3, CD7), having specialised emotional support and tactics that would aid faster social progress (e.g., learning how to handle group conversations) (OD3, OD11, OD13, OD14, OD16, CD3), having a sense of reassurance (CD1), and career guidance (OD13). Some participants also believed that hearing role models acted as sufficient supplements (OD1, OD2, CD2). OD7, OD9, and OD12 also stated that they were discouraged by CD ‘role models’ and specifically desired an OD role model.

OD10, OD15, CD6, CD7, and CD8 had deaf role models as children. OD10’s deaf role model was two years older who “basically did everything I did before me” and was able to
provide counsel in stressful situations. OD15 had several role deaf models whose inspirations included “living a normal life” such as “marrying, having a family”. CD6 credited her deaf role model for teaching her Auslan. CD7 and CD8 cited their Deaf parents.

4.6.11. The roles of hearing adult friends for OD and CD participants

Twenty (91%) OD participants and six (75%) CD participants had a close hearing friend during adulthood. Qualitative data showed that these friends helped deaf participants integrate by providing: insight into possible social scenarios (OD21), communication accommodations such as speaking clearer, face-to-face communication, re-phrasing/repeating statements when requested (OD2, OD21, OD22, CD1), including them in group conversations (OD18), advice for dealing with “unaccommodating people” (OD13), by empathising with the social effects of deafness without being patronising (OD22, CD1, CD3), and learning SL (CD3). In addition, CD4 seemed to have an issue with how the item was phrased: “Integrate into society is a strange statement. Integrate means to become involved, to be accepted and to accept societies norms and values, ie, to become the same. I don’t particularly want to become the same as hearing people (sic)”.

4.6.11.1. OD and CD participants’ shared interests with their hearing adult friends

Further qualitative data showed that the common interests shared by participants and their adult friends included: recreational interests such as literature (OD21), movies (OD1, OD21), dining (OD1, OD7, OD11), travel (OD1), sport (OD3, OD7, OD22, CD1, CD3), work issues (OD22), intellectual conversations (OD2, OD11, CD2), religion (OD1, OD20), nature/outdoors (OD1, OD3, OD15, OD21), wine tours (OD3), sarcasm (OD10), cooking (OD14, OD21, CD2), home improvements (CD2), gossip (CD1), a shared history or mutual friends (CD1, CD5), and cultural events (OD11, OD13). OD14 provided this interesting comment “Having hearing friends means that I have a larger and more varied group of friends, from a large array of cultural and social backgrounds”.

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OD8, OD17, CD7, and CD8 did not have a close hearing friend throughout their adulthood. CD8 provided the only qualitative data of these participants. He also appeared to misunderstand the concept when stating: “if they can communicate or understand my deafness will help better” (sic).

4.7. Summary of the results
This study provides some important findings relating to the participants’ perceptions of attributes and tactics they use to maximise their psychosocial potential. In particular, statistical trends show that the three groups were remarkably similar in terms of their Control, Internal Decisions, External Manifestations, and Potential Maximisation. Although a few trends approached significance, there were no reported significant differences in the mean group scores for the four aforementioned variables.

The remarkable similarities between the three groups could also be observed in the composite pictures used to define a typical participant from each group. Differences, however, were observed in the two case studies of the highest (OD21) and lowest (OD8) scoring participants. Not only did OD21 and OD8 consistently vary in their responses to nominal scoring items, their qualitative data also helped explain why OD21 may be maximising his psychosocial potential more than OD8.

The similarities between the three groups could also be observed in answers to items providing qualitative data. Answers to deafness-specific qualitative items by OD and CD participants also appeared to show consistent similarities. Used for exploratory purposes, qualitative items also provided rich data relating to psychosocial attributes and tactics individuals use to maximise their potential. These aforementioned quantitative and qualitative findings will be further discussed in Chapter Five.
CHAPTER FIVE
Discussion

The two main aims of this exploratory study were achieved. The first aim was to use Reiff et al.’s (1995) modified framework (Figure 3) to identify the proactive psychosocial attributes and tactics deaf individuals use to maximise their potential in mainstream society. The second aim was to compare these attributes and tactics in deaf and hearing participants.

The Results yielded two important findings. First, both deaf and hearing participants used similar and sometimes identical psychosocial attributes and tactics to maximise their potential. Secondly, the deaf participants also used deafness-specific psychosocial attributes and tactics to circumvent deafness-related challenges. Such psychosocial expertise may be considered a deafness-specific version of Sternberg’s (1985, 1988) tactic knowledge (i.e., hearing individuals have no use for this because they are not deaf). These two important findings were emphasised by the lack of significant statistical differences when the mean scores were compared across the four main variables for three types of between-group analyses. Qualitative data further showed similarities between the groups and highlighted numerous proactive psychosocial attributes and tactics. The implications of these trends will be discussed.

This study combined seven main factors that helped to provide rich data about how deaf individuals maximise their psychosocial potential. First, a comprehensive and systematic range of psychosocial attributes and tactics were investigated using Reiff et al.’s (1995) modified framework. Secondly, the Risk and Resilience (R&R) model — a hereto unused model in a study of deafness — was used. Thirdly, the current study was framed by a Pragmatist research paradigm. Fourthly, a less frequently used research methodology, mixed-methods, was used. Fifthly, vocationally and socially successful deaf and hearing adults who self-rated as maximising their psychosocial potential participated in the study. Sixthly, between-group and within-group analyses were conducted. Finally, the current study was international and the deaf...
participants were mostly in the workforce. This is an unusual sample because studies with adult
deaf participants mostly involve students from the NTID or Gallaudet University (Danermark. 1995). The combined effect of these seven aforementioned factors may account for numerous data indicative of what deaf individuals can do rather than what they cannot do when compared with hearing individuals.

5.1. Advantages of the research model, paradigm, and methods used in the current study

5.1.1. Implications associated with the R&R model and Pragmatism

The current study’s research model, methodology, and paradigm provided many advantages. Maxwell and Loomis (2003) emphasised the importance of establishing a strong link between the conceptual framework, the research questions, and the methods. The R&R model and Reiff et al.’s (1995) modified framework provided strong conceptual guidelines. Pragmatism’s ‘transtheoretical’ perspective was also deemed the suitable paradigm (Creswell, 2003; Forthofer, 2003). This involved employing Positivist research instrumentation (i.e., the use of ANOVAs and t-tests) and Poststructuralist ideas (e.g., the survey item “Bad things that happen to deaf people are the result of society’s barriers”). In addition, Pragmatism’s focus on psychosocial actions, situations, and consequences was better suited to this study’s purposes (Creswell, 2003).

This study was typical of Pragmatist research in that the design was shaped during the research process (Rallis & Rossman, 2003). It began with a theory base whereby Reiff et al.’s (1995) framework was used for reporting relevant studies. The emergence of an appropriate model that best framed the creation and scoring of survey items then followed. The current study’s theoretical drive was also primarily deductive, which meant that Control had to be redefined to suit the purposes of the scoring system. As a scoring device, Potential Maximisation successfully defined the outcome of eight mutually-impacting psychosocial themes structured under three thematic categories. Scrutiny of the data further led to the
shaping of a design that best presented quantitative and qualitative trends as presented in Chapter Four.

5.1.2. Implications to be gleaned from the statistical analyses

Statistical analyses yielded some interesting and surprising findings. The between-group analyses showed that Reiff et al.'s (1995) modified framework is equally applicable to deaf and hearing individuals. The ANOVAs conducted on the overriding variable of Potential Maximisation, and the three thematic categories of Control, Internal Decisions, and External Manifestations, revealed no significant differences between the three groups. These results suggest that hearing status or deaf identity are not antecedent conditions with regard to individuals maximising their psychosocial potential.

The scores of the two deaf groups were then combined and compared with the H group to observe whether hearing status was a possible factor. Results also revealed that there was no significant difference between these two groups for Control, Internal Decisions, External Manifestations, and Potential Maximisation. This suggests that the three groups have similar beliefs and are using similar psychosocial attributes and tactics to maximise their potential.

The results further revealed no significant differences between the OD and CD groups for the four variables after the addition of deafness-specific items. This indicated that the two deaf groups had similar beliefs about aspects of deafness, and were using similar additional psychosocial attributes and tactics to circumvent deafness-specific challenges.

5.1.3. Implications to be gleaned from the qualitative data

As mentioned previously, open-ended and nominal non-scoring items were included for exploratory purposes. The inclusion of open-ended items enabled the participants' 'voice' to exemplify additional aspects of psychosocial attributes and tactics to the statistical data. Nominal non-scoring items provided further descriptive aspects to the data. These helped to illustrate statistical trends in the composite pictures (i.e., demographic data gleaned from
screening surveys) and to embellish qualitative trends in section 4.5 (e.g., non-scoring items provided percentages of participants who agreed with the idea).

Qualitative data showed that deaf participants were generally positive about their lifestyle. The H participants were also generally optimistic of deaf individuals' psychosocial capabilities. Although the H participants clearly had an intimate knowledge of deafness, the deaf participants provided comparatively rich and detailed data of psychosocial attributes and tactics. The deaf participants also reported numerous examples of how to actively circumvent deafness-related difficulties. Data further showed that some H participants viewed deafness as an impediment to psychosocial development. This opinion may be indirectly related to the negative stereotypes of deafness outlined in the review of the medical model (Davis, 1995; Ferguson, et al., 1992; Lane, 1993; Oliver, 1996). Interestingly, OD8 was the only deaf participant who gave many examples of why he viewed his deafness as limiting his psychosocial development. This trend may be explained by data suggesting that OD8 was an outlier because the majority of deaf participants appeared not to view their deafness as limiting their lifestyles.

5.1.4. Implications gleaned from mixed-methods

Both quantitative and qualitative data generally mirrored the other’s trends. Not only did the strong relationship between the quantitative and qualitative data suggest that the higher scoring participants of each group (OD21, H12, and CD2) were maximising their potential more than the lower scoring participants (OD8, H14, and CD8), the higher scoring participants’ provided more extensive and specified qualitative data about proactive psychosocial attributes and tactics. Low scoring participants did provide some qualitative data suggesting mastery of a number of attributes and tactics, but, overall, the range was more limited.

The ‘mixing’ of the methods involved the use of between- and within-group analyses. Variations of these group analyses illustrated different aspects of the phenomenon studied. For example, the high scoring deaf participants in the three group comparison also scored highly in
the OD and CD group comparison which included deafness-specific items. This suggests that these high scoring deaf participants had psychosocial attributes and tactics that hearing individuals use in addition to deafness-specific tactic knowledge. Trends related to high versus low scoring participants should, however, be interpreted with caution. The qualitative data were instrumental in providing detailed psychosocial attributes and tactics that cannot be quantified.

From a research perspective, using mixed-methods provided a complexity and richness of data. The use of both Positivist and Interpretivist methodologies also gave the current study methodological flexibility and additional rigour. For example, a study using solely Positivist and a between-group analysis (e.g., Gulliver & Ghinea, 2003) may overlook psychosocial aspects that a within-group analysis may uncover. A study using solely Interpretivist research or a within-group analysis (e.g., Reiff et al., 1995) may also fail to uncover aspects that a between-group analysis can reveal. The current study’s use of a Pragmatist paradigm therefore helped to achieve both internal and external validity as suggested by Rallis and Rossman (2003).

5.2. **Implications to be gleaned from demographic data**

The participants were generally linguistically and ethnically homogenous. All but H11, CD7, and CD8 were native English speakers and had a native English speaking parent. Demographic data also indicated that the native language of 28 (93%) deaf participants was spoken. CD7 and CD8 each reported learning SL at “0 years” and having two parents whose first language was SL. The other 28 deaf participants were born to, and presumably raised by, hearing parents. Such trends therefore partially reflected Mitchell and Karchmer’s (2004) finding that deaf individuals with hearing parents are less likely to be CD. Although the CD sample size was very small, the results did not support Polat’s (2003) finding that deaf participants with deaf parents were better adjusted than were those with hearing parents.

Forty-seven (96%) participants demonstrated sufficient conceptual, syntactical, and grammatical abilities required to complete their surveys. Text analyses found many conceptual
and grammatical errors in CD7’s and CD8’s data. Both were low scoring participants. CD8 stated that his profession was a teacher, which seemed implausible because Year 10 was his highest level of education. CD7 reported having a Masters degree, which seemed unlikely given her limited English, but she may have received this degree at a non-English speaking university.

Low scores by CD7 and CD8 could be further related to Scheetz’s (2004) notion that CD individuals can value the group mindset over individualism. As outlined in section 2.2, individualism is closely aligned with the R&R model, which guided the creation of this study’s scoring system. General cultural issues raised by Matthews et al. (2004) and Scheetz, however, appeared not to impact on the results because the participants were generally ethnically and linguistically homogenous. The predominance of Anglo-Saxon participants also reflected Reeve’s (2008) finding that this ethnicity typically represents the majority of survey respondents.

The results provided partial support for studies reporting that deaf participants who identify strongly with the culturally Deaf are typically educated in specialist schools for the Deaf and communicate primarily with SL (Jambor & Elliot, 2005; Israelite et al., 2002; Leigh, 1999; Nikolaraizi & Hadjikakou, 2006). CD7 and CD8 spent more than six years in a School for the Deaf and likely communicated primarily with SL. Five of the six other CD participants, however, were wholly educated in mainstream educational settings and likely communicated using both speech and SL. In addition, OD18 and OD21 were educated solely in a School for the Deaf but did not self-identify as CD. The results also partially supported Musselman et al.’s (1996) finding that mainstreamed deaf participants had similar levels of social adjustment to hearing participants compared with CD and partially mainstreamed deaf participants.

The participants were a highly educated sample. The proportion of deaf participants with a Bachelors, Masters, or PhD was higher than the H participants. The deaf participants’ high educational achievements may be outcomes of recent educational trends focusing on improving deaf students’ spoken language and speech skills as well as academic abilities (Bonds, 2003; Bowe, 2003; Calderon & Greenberg, 2000; Hogan, 2001; Punch & Hyde, 2005). These data
also may reflect the benefits of legislation in recent decades designed to integrate individuals with disabilities into mainstream schools (Bain et al., 2004; Byrnes et al., 2002; Higgins, 1992; Luckner & Muir, 2001; Stinson & Antia, 1999).

All participants reported current employment. Their professions were almost exclusively service-based and likely required a university education. It is therefore possible that the majority of participants belonged to middle to high socioeconomic groups. Parental socioeconomic backgrounds were not investigated, so it was not possible to verify Marschark’s (2000) view and Menchel’s (1995) findings that high achieving deaf individuals typically come from families of high socioeconomic status and with high academic qualifications.

Most deaf participants had greater than severe-to-profound deafness so it was not possible to compare the scores according to degree of deafness. The lack of significant differences in the groups, however, indicated support for studies reporting that severity of deafness and deaf identity do not necessarily determine the quality or quantity of social relationships, academic, and vocational achievement (Hyde & Power, 2003; Israelite et al., 2002; Punch & Hyde, 2005; Saur et al., 1986; Stinson & Anita, 1999).

The participants were a self-selected sample. Even though their motivation to participate was not ascertained, it is possible that only participants who felt comfortable about their identity and deafness chose to participate. The screening process had further implications for the study. Participants who regarded themselves as maximising their potential were included and those who did not were excluded. All participants were also over the age of 25. All H participants self-reported as not having a disability and all deaf participants self-reported as not having an additional disability. Polat’s (2003) study found that an additional disability can impact a deaf individual’s self-image, emotional, and social adjustment. All H participants further had had a close relationship with a deaf individual.

Despite the participants’ different nationalities, trends related to linguistic competence, ethnicity, education level, socioeconomic status, deafness-related issues, and the screening
process suggest that the sample was largely homogenous. These demographic issues may also partially explain the lack of significant statistical differences.

5.3. **Reiff et al.’s (1995) modified framework**

Given these demographic trends, the results will be further discussed in accordance with Reiff et al.’s (1995) modified framework. The thematic categories of Control, Internal Decisions, and External Manifestations will be presented in succession and will conclude with Potential Maximisation. The case studies and composite pictures will be discussed. A contrast effect was conducted in order to highlight factors affecting the maximisation of deaf individuals’ psychosocial potential and not to discount the overall similarities shared by the participants. In addition, qualitative data provides insight into the personalised nature of the psychosocial attributes and tactics and how these are operationalised by the participants. One important trend emerged when cross-referencing the data with the existing literature: there were many overlaps between the themes. This further supports Reiff et al.’s (1995) explanation that the eight themes are mutually-impacting and influential.

5.3.1. **Control**

The case studies provided strong support for Rotter’s (1966) concepts of internal and external locus of control. Trends in Table 10 (see page 151) showed some clear differences in the two participants’ responses for many items. These strongly suggest that OD21 is in control of his lifestyle and, in particular, issues relating to his deafness. In contrast, OD8’s data conveyed a sense of helplessness.

This notion of internal locus of control was apparent in OD21’s high score for Control and his qualitative data providing deafness-specific tactic knowledge. For example, OD21’s qualitative data emphasised the importance of acknowledging deafness-related challenges and tactics to circumvent deafness-related difficulties (e.g., providing an email address or SMS number). In contrast, OD8 stated the “practical, technical and aesthetic difficulties” of hearing
aids as the reason why he had not overcome the challenges of deafness. This response was suggestive of external locus of control. These are important findings because OD21’s deafness-specific tactic knowledge may likely be associated with his internal locus of control. OD8’s comparative lack of this tactic knowledge could also explain his feelings of helplessness and external locus of control.

The three groups had distinct typical responses for one Control item related to adulthood being perceived as easier than childhood. The importance of this item will be scrutinised in Potential Maximisation (section 5.3.4). The possibility of six CD participants being ‘bicultural’, however, may explain the CD group’s higher scores for Control than the OD and H groups. Although speculative, this could reflect Jambor and Elliot’s (2005) finding that ‘bicultural’ participants had higher self-esteem than either OD or CD participants.

There was also one interesting result in the additional six deafness-specific scoring items for Control. An OD participant would likely disagree that life would be better if not deaf, which refutes anecdotal claims that deaf individuals who do not accept cultural Deafness are in denial of their deafness (Hogan, 2001; Lane, 1993; Padden & Humphries, 1988; Wooley, 1993). A CD participant, however, would typically agree their life would be better without deafness. This was perplexing given that many authors have extolled the benefits of CD individuals’ identification with cultural Deafness (Bauman, 2004; Corker, 1998; Ladd & Woll, 2003; Lane, 1993, 1997; Rosen, 2003; Sacks, 1989). Qualitative data cannot explain this unexpected finding. A speculative explanation, however, could be linked with the notions that some CD individuals find the demands of individualism too overwhelming (Muma & Teller, 2001; Scheetz, 2004) and feel oppressed by the hearing majority (Bauman, 2004; Corker, 1998; Kormesaroff & McLean, 2006; Lane, 1993; Sacks, 1989; Young et al., 2008). Life as a hearing person could therefore be perceived as easier.

It was interesting to observe the percentages of deaf participants’ who believed they had superior linguistic (90%) and social (52%) skills when compared with the average hearing
person. Even though these responses were self-rankings, these trends may reflect the larger picture of recent educational outcomes, which suggests that deaf education has focused mainly on the development of linguistic skills but not on psychosocial attributes and tactics that assist potential maximisation (Bowe, 2003; Calderon & Greenberg, 2000; Harvey, 1998; Hogan, 2001; Punch & Hyde, 2005).

These trends can be compared with the percentages of H participants’ agreeing to whether a deaf person can have superior linguistic (71%) and social (63%) skills compared with the average hearing person. Qualitative data provided by H1 and H5, who disagreed with the linguistic concept, were interpreted as relating to the auditory aspect of language. These participants’ interpretations contradicted linguistic capabilities provided in the deaf participants’ qualitative data (e.g., competence with a second written/spoken language). H1, H5, and H14 further disagreed with the social concept and each provided negative aspects that may affect a deaf individual’s socialisation (e.g., discrimination), which contrasted with the social skills provided by the deaf participants (e.g., competence with diplomacy). The contrasting interpretations of deaf individuals’ psychosocial competence can reflect the larger picture of the R&R model’s focus on what people with a disability can do as opposed to cannot do (Reiff et al., 1995; Wong, 2003).

5.3.2. Internal Decisions

There were 11 identical scoring items used for the three group comparison for Internal Decisions inclusive of Desire, Goal Orientation, and Reframing. Overall, the composite pictures showed that typically the group responses were similar. There were, however, different responses for a typical group member for one item for both Desire and Reframing that will be discussed. An additional five deafness-specific scoring items were used in the comparison of the OD and CD groups. Again, the group responses were very similar.
There were, however, some clear differences in the case studies related to Internal Decisions. Trends in Table 11 (see page 153) reflected OD21’s high score and OD8’s low score for Internal Decisions because the items were ranked whereby Strongly Agree was scored higher than Disagree. Table 11 also provided insight into the two participants’ cognitive attributes.

4.3.2.1. Desire

The different responses of OD21 and OD8 to the items related to Desire in Table 11 suggest the strong relationship between Desire and Rotter’s (1966) internal locus of control. Trends in OD21’s data further indicated a sense of belonging with hearing peers, good self-advocacy and adaptive skills, a strong internal drive to be independent, and that he lacked social inhibition relating to his deafness. These findings support previous studies reporting these aspects of Desire (Luckner & Muir, 2001; Bain et al., 2004).

The composite pictures showed that a typical OD participant would agree, whereas typical H and CD participants would disagree, that she could be more successful socially and career-wise if she tried harder. The qualitative data provided no clear explanation for this. Close inspection, however, revealed that just two CD participants answered the open-ended item related to self-determinism. Some OD participants further mentioned that learning to take control of their life outside their comfort zone was an example of Desire. These interesting trends may reflect research reporting that many CD individuals desire to remain within the protective environs of the Deaf community and not venture outside this ‘security base’ (Hardaway, 1988; Muma & Teller, 2001; Scheetz, 2004; Young et al., 2008).

5.3.2.2. Goal Orientation

OD21 strongly agreed that he was a risk taker but OD8 disagreed. OD8’s qualitative data further suggested a lack of future planning or goals regarding vocational and social orientations. OD8’s low scores and general feelings of helplessness may be reflective of his lack of risk-taking.
OD21’s high scores, however, could suggest that his risk-taking has enabled the accumulation of deafness-specific tactic knowledge that, in turn, generates general feelings of psychosocial competence.

Reiff et al.’s (1995) notion that the eight themes are mutually-impacting was particularly apparent in the theme of Goal Orientation. For example, the deaf participants’ high levels of educational qualifications could be viewed as them exhibiting Goal Orientation as well as Desire and Persistence. The results therefore supported Bloom’s (1982) finding that industrious commitment in high achievers was crucial for realising aspirations. The educational and employment trends further support studies reporting that educational achievement is a significant indicator of deaf individuals’ sharing a similar socioeconomic status with hearing peers (Jones, 2004; Schroedel & Geyer, 2000).

The majority of all participants (47/49) agreed that they had made life choices to suit their strengths, which could be indicative of their Goal Orientation as well as Goodness of Fit. The deaf participants provided qualitative data that reflected Reiff’s (2004) finding of changing a school/university subject/course to better suit career choices. The results further supported Reiff et al.’s (1995) findings relating to effective use of prostheses, choice of an accommodating workplace, avoiding professions whereby deafness or personality factors can be problematic, and refusing to accept low expectations of others because of the disability. Additional examples of strength-based choices in the results included choosing a lifestyle to assist family needs and working or socialising with Deaf people. Interestingly, participants from all three groups chose professions on the basis of personality traits, interest, and specialised skills or expertise. This suggests that Goal Orientation transcends disability.

5.3.2.3. Reframing

Given that OD21 provided numerous examples of deafness-specific tactic knowledge throughout his data, it is not surprising that he felt pride and agreed that dealing with deafness
made him a better person. These trends support claims by authors suggesting that dealing with deafness can be a stimulant to personal growth (Bain et al., 2004; Jacobs, 2007; Lysons, 1980; Reisler, 2002; Wright, 1993) and that dealing with negative stereotypes and ambiguity assists personal development (Bibby et al., 1995; Calderon & Greenberg, 2000; Leigh, 1999; Paul & Jackson, 1993; Punch et al., 2005).

The composite pictures yielded an interesting finding related to Reframing. OD and H participants typically disagreed, whereas a CD participant typically agreed, that bad things that happen to deaf people are a result of society's barriers. Typical responses from the OD and H participants indicated that they believed internal locus of control is required to overcome adversity. Typical replies from CD participants, however, suggested that they have not reframed the concept of extrinsic factors causing adverse effects for individuals. For example, CD2 stated that deaf people are part of a minority “trying to participate in a hegemony that is not conducive or inclusive”. This statement was reflective of numerous authors viewing deaf and hearing people as two theoretical opposites (Bauman, 2004; Boutin, 2008; Corker, 1998; Kormesaroff & McLean, 2006; Lane, 1993; Padden & Humphries, 1988; Wooley, 1993; Young et al., 2008).

Qualitative data further showed two distinctive common beliefs related to whether deaf participants thought life would be better if they were not deaf. First, the deaf participants believed life would be worse as a hearing person, and indicated they were effectively managing their disability by acknowledging its challenges and reframing the concept of deafness in a positive manner. These data provided support for research vouching for the value of reframing self-deprecatory cognitions, ‘integrative thinking’, and tolerance of ambiguity (Cosden et al., 2002; Dugas et al., 2005; Ellis & Harper, 1961, 1977; Lange et al., 1998; Loevinger, 1976; Lysons, 1980; McGuire & McGuire, 1996; McMahon et al., 2003). Secondly, some participants believed life would be better as a hearing person, and their reasons hinted support for studies (e.g., Dugas et al., 2005; McMahon et al., 2003) reporting that the disadvantages of self-deprecatory cognitions related to the impact of extrinsic factors (e.g., societal barriers).
5.3.3. *External Manifestations*

There were 12 identical scoring items used for the three group comparison for the themes of Persistence, Goodness of Fit, Learned Creativity, and Social Ecologies. The composite pictures showed that the typical group responses were very similar. There were, however, different group replies for one Reframing item and two items for Social Ecologies that will be discussed. An additional 22 deafness-specific scoring items were used in the comparison of the OD and CD groups. Again, typical group responses were very similar. There were, however, differences in typical group responses to an item each for Persistence and Social Ecologies, and two items for Learned Creativity.

Table 12 (see page 154) highlighted some clear differences in the case studies, which reflect OD21’s high score and OD8 low score for External Manifestations. Table 12 also provided insight into the two participants’ behavioural outcomes and knowledge of psychosocial tactics.

5.3.3.1. *Persistence*

OD21 strongly agreed that the process of self-determinism helped him learn to be more self-determined and that speech-reading requires practice in order to be mastered. OD8 disagreed with both these concepts. OD21’s data supported research showing that high achievers demonstrate willingness to refine their skills through practice (Anshel, 1995; Bloom, 1982; Ericsson et al., 2006). Text analysis further showed that OD8 believed self-determinism was an innate trait, which was a view shared by H6 and H8. H17 further believed self-determinism was not a process. These opinions contradict findings in Fullerton and Coyne’s (1999) study suggesting that self-determinism is a learned trait.

With respect to the composite pictures, an OD participant typically agreed whereas a CD participant disagreed that persisting through experiences of loneliness and rejection produces equality with hearing people. The typical response from the CD participants implied that they
believed they were exempt of responsibility for initiating and sustaining relationships with hearing peers, which has been suggested by some authors (Bauman, 2004; Corker, 1999; Kormesaroﬀ & McLean, 2006; Wooley, 1993). The trends also suggest OD participants generally share the belief of Humanistic Psychologists that internal locus of control and tactic knowledge are required for the maximisation of psychosocial potential (Allport, 1955, 1965; Maslow, 1970, 1973; Rogers, 1961; Sternberg, 1985, 1988). In contrast, CD participants likely have a Post-structuralist mindset, which is not surprising given that many texts supporting cultural Deafness are framed by a Post-structuralist paradigm (Bauman, 2004; Corker, 1998; Davis, 1995; Ladd & Woll, 2003; Kormesaroﬀ & McLean, 2006; Lane, 1993, 1997; Rosen, 2003; Sacks, 1989; Wooley, 1993).

Forty-two (89%) participants agreed that self-determination is a process that helped them learn how to be more self-determining. The qualitative data and overall data support research on self-determinism (Bain et al., 2004; Bloom 1982; Johnson, 1999; Kennedy, 1996; Reiﬀ et al., 1995; Reisler, 2002). Some participants mentioned becoming more self-aware with age, which supports research showing that age is a factor related to self-actualisation and Emotional Intelligence (Bar-On, 1997; Maslow, 1970). The results suggest additional aspects of Persistence including dealing with adversity (e.g., social barriers), seeing this as providing opportunities for learning, and adaptation (e.g., changing work/social environments for a better lifestyle).

5.3.3.2. Goodness of Fit

OD21 agreed, whereas OD8 disagreed, that he had chosen employment whereby his deafness was not a problem. OD21’s qualitative data further supporting research advocating the value of career planning for deaf individuals from an early age (Bonds, 2003; Bullis & Bull, 1995; Punch et al., 2005; Schroedel & Geyer, 2000, 2001). Given that OD8 misunderstood the concept of making life choices that suit his strengths, it is not surprising that he disagreed that he had not
chosen employment whereby his deafness is not a problem. The case studies are additionally suggestive of research reporting that successful individuals, regardless of IQ, tend to remove themselves from non-productive environments and find environments conductive to success. Unsuccessful individuals, however, do not (Reiff, 2004; Sternberg 1985).

The composite pictures revealed a distinct difference in the groups’ responses to one Goodness of Fit item. Typically, a CD participant would strongly agree that she chooses friends who accommodate her deafness, and an OD participant would agree. Interestingly, the H participants typically disagree that friends are chosen on the basis of accommodation to her weaknesses. The differences in the typical replies between the deaf and H participants may reflect the view that the deaf participants do not see their deafness as a weakness. The stronger responses from the CD participants may be further reflective of their involvement with the Deaf community, supporting work by Jambor and Elliot (2005), Lane (1993, 1997), Leigh et al. (1998), and Sacks (1989).

Deaf communities may provide opportunities for some CD individuals to maximise their psychosocial potential, but not all. CD7 and CD8, who were likely this study’s only ‘purely’ CD participants, were possibly maximising their potential within the Deaf community. These trends suggest support for studies indicating that deaf participants who lack social competence, self-confidence, and social connectedness with hearing peers are more likely to find Goodness of Fit with deaf peers (Musselman et al., 1996; Stinson & Kluwin, 1996; Stinson et al., 1996; Stinson, Whitmire & Kluwin, 1996). This notion is further supported by OD8 desiring greater involvement with the culturally Deaf because his data suggested a disassociation from hearing peers.

The high scores of the OD participants, however, refute Jambor and Elliot’s (2005) finding that group identification with the Deaf and withdrawal into the Deaf community correlates with positive self-esteem. Trends in the DSS data show that 15 of the OD individuals rejected Deaf culture. Similar to other studies, reasons for this were given as: a perceived lack of intelligence (Bain et al., 2004; Jacobs, 2004), disliking Deaf militancy (Jacobs, 2004; Leigh,
1999), and a preference for hearing rather than Deaf peers (Kersting, 1997; Leigh, 1999; Nikolaraizi & Hadjikakou, 2006; Reisler, 2002). Additional reasons in the results included parental influence, greater social and career opportunities in mainstream society, and choosing not to learn SL. Interestingly, these rejections of Deaf culture were not cited in Johnston’s (2004) study and suggest additional reasons for the gradual decline in Deaf populations.

The disadvantage of slow communication pace or ineptitude with SL in Deaf-only settings found in other studies (e.g., Barnhart, 1991; Musselman et al., 1996; Saur et al. 1986; Stinson et al., 1996) were not evident here. The eight OD participants who had learned SL stated that they learnt SL for mostly for practical reasons (e.g., to increase career prospects). The practical reasons stand in contrast to the cultural significance of SL in relation to identity for CD individuals as reported by many authors (Davis, 1995; Harvey, 1998; Ladd & Woll, 2003; Lane, 1997; Paul & Jackson, 1993; Rosen, 2003; Sacks, 1989). Only five OD participants also believed their life would be better if they were CD. OD22 cited a professional reason for his desire to be CD, which was different to the psychosocial reasons given by others. OD1, OD2, OD4, and OD8 believed being CD would help them with social coping/support and provide the perceived benefit of meeting people who share similar life experiences.

Even though speech intelligibility was not a topic of investigation, the majority of deaf participants likely communicated independently of a SL interpreter because the majority also self-rated as very good or master speech readers. The combination of good speech intelligibility and speech-reading ability may also have been positively associated with psychosocial adjustment and social knowledge with hearing peers as reported elsewhere (Arnold, 1997; Franklin, 1988; Harris & Moreno, 2006; Polat, 2003; Weisel & Kamara, 2005). In contrast, the high probability that CD7 and CD8 were socially segregated from mainstream society provides tentative support for the psychosocial disadvantages of sole reliance on both SL and Deaf community support (Antia et al., 2005; Bain et al., 2004; Brown & Foster, 1991; Johnston et al., 2002; Muma & Teller, 2001; Saur et al., 1986; Scheetz, 2004). This lack of engagement in the
mainstream, however, cannot be directly linked with deaf identity or sole use of SL because OD8 also appeared to be socially segregated.

5.3.3.3. Learned Creativity

OD21 strongly agreed that viewing captioned TV/DVD was a prosthesis that assisted his linguistic and social development. He explained that watching TV/DVD helped with understanding irony and sarcasm, which can then be transferred into face-to-face interaction as found by Jacobs (2004). This participant, like the majority of deaf participants, also saw the value of text-based telecommunications putting him on a ‘level playing field’ with hearing peers. These results reflect studies citing the value of technological prostheses to circumvent disability-related challenges (Bowe, 2002; Jacobs, 2004; Jelinek-Lewis & Jackson, 2001; Power & Power, 2004; Reiff et al., 1995). In addition, the deaf participants preferred SMS and email over TTY and the NRS, which other studies have also reported (Bruce & Beattie, 2002; Harkins & Bakke, 2003). OD8, however, clearly saw no value in the text-based prostheses, which may be reflective of his lack of deafness-specific tactic knowledge.

OD21’s data trends did not wholly reflect the OD group’s typical responses to items related to Learned Creativity. An OD participant would likely disagree, whereas a CD participant would strongly agree, that watching subtitled TV/DVD improved their reading skills. An OD participant would also likely disagree but a CD participant would agree that watching captioned TV/DVD improved their social skills. It was interesting to observe that many deaf participants disagreed with the concept that watching TV/DVD had developed their linguistic and social skills yet provided no additional information about their reasons. It is possible that they may not have fully understood the relevance of the prosthesis to their social lives. Some participants, however, stated that they did not watch TV/DVD.

Most deaf participants (63%), like OD21, agreed that watching captioned TV/DVD had improved their linguistic skills. This response, and the qualitative data related to the item,
supports research suggesting that watching captioned media may advance deaf individuals’ literacy levels (Andrews et al., 2004; Arnold, 1997; Jacobs, 2004; Jelinek-Lewis & Jackson, 2001; Luckner & Muir, 2001; Power & Power, 2004; Toscano et al., 2002). Interestingly, a smaller percentage of deaf participants (47%) agreed that watching captioned TV/DVD improved their social skills. Deaf participants who agreed with the concept demonstrated tactic knowledge acquired from TV/DVD such as: conversational topics, knowing appropriate social behaviour, cultural appreciation, linking body language with spoken language, and humour.

Of the H participants, however, only 21% agreed that watching TV/DVD improved their social skills. Given this, it is likely that watching TV/DVD is more of a prosthesis that assists social integration for deaf rather than hearing individuals. These are interesting trends because some deaf and hearing participants who disagreed with this concept stated that watching media is non-social or that they did not watch much media. In contrast, H participants who agreed mentioned the value of TV/DVD providing conversational topics, which was a tactic used by some deaf participants.

5.3.3.4. Social Ecologies

OD21 had close hearing friends in adulthood and was sociable with hearing peers. He mentioned that his friends helped him integrate by acting as a ‘sounding board’ for social situations. This tactic is reflective of authors who suggest that deaf individuals can purposefully seek interdependence with hearing peers for financial or employment assistance, physical accommodations, feelings of solidarity, and emotional support (Bullis & Bull, 1995; Calderon & Greenberg, 2000). OD21’s and OD8’s data also provided support for the notion that over-dependence on support systems can restrict experiential knowledge and therefore have adverse psychosocial effects (Barnhart, 1991; Calderon & Greenberg, 2000; Johnston et al., 2002; Muma & Teller, 2001; Reiff et al., 1995; Saur et al., 1986; Scheetz, 2004).
With respect to the composite pictures, OD and H participants would typically agree that they need to be liked by hearing people and that it is important for them to be a social person in mainstream society. CD participants typically disagreed with both of these concepts. The OD participants' typical replies to these items support claims that successful social integration increases the likelihood of a deaf adult's identity being linked to the hearing mainstream and dissociated from the Deaf (Aguayo & Woodcock, 2000; Golan, 1995; Harvey, 1998; Leigh et al., 1998). As CD4 wrote, "Integrate into society is a strange statement", which supports Aguayo and Woodcock's (2000) notion that CD individuals may devalue psychosocial attributes and tactics that enable deaf individuals to integrate into mainstream society.

Further analysis of the composite pictures revealed that an OD participant would likely disagree, whereas a CD participant would strongly agree, that childhood would have been easier if their parents knew more about deafness. These trends may reflect studies reporting that negative childhood experiences with hearing peers may cause closer attachment with deaf peers in adulthood (Leigh, 1999; Leigh et al., 1998; Stinson, Whitmire & Kluwin, 1996). Numerous deaf participants, however, reported family members who had played a significant role in their life. The results suggest support for studies that have found that the family's value system significantly affects an individual's psychosocial potential maximisation (Bloom, 1982; Luckner & Muir, 2001; Luckner & Velaski, 2004; Toscano et al., 2002). The deaf participants' data also revealed that their hearing friends in childhood and adulthood had made adaptations and accommodations for their disability as found by Bain et al. (2004), Bibby et al. (1996), Jacobs (2004), and Stinson et al. (1996). Compared with Brown and Foster's (1991) results, the H group provided more detail about their shared interests with deaf peers (e.g., literature, philosophy, music, sport, and television) but did not mention the deaf individual's positive outlook towards life. The qualitative data relating to shared interests of the deaf participants also reflected that of the H group.
Only five (17%) deaf participants had a childhood deaf role model, which was similar to the percentage reported in Jacobs’ (2004) study. The benefits of deaf role models included providing counselling, teaching SL, and inspiration. Participants did not, however, mention Reiff et al.’s (1995) finding that role models can provide career modelling. OD1, OD2, and CD2 further reported that hearing role models had acted as sufficient supplements, which again reflected a finding in Jacobs’ study. The results also affirmed Bonds’ (2003) suggestion that deaf role models could provide career orientation and provide proactive psychosocial strategies to circumvent deafness-related difficulties as reported by Bain et al. (2004). Additional perceived benefits of having a deaf role model in the results included providing standards and having a sense of reassurance.

5.3.4. Potential Maximisation

This study’s participants appeared generally adept according to Sternberg’s (1985) Triarchic Theory of Intelligence because they demonstrated: 1) numerous examples of proactive cognitive strategies; 2) competence in dealing with experiences that place a demand on their intelligence, and; 3) purposeful adaptation to, selection, and shaping of, real-world environments relevant to their overall lifestyle. The proactive rather than reactive nature of these psychosocial skills was noticeable. The participants’ knowledge and practice of these skills could therefore be viewed in the context of them exhibiting Sternberg’s tactic knowledge.

Even though all participants self-regarded as maximising their psychosocial potential, the differences in the case studies was a clear example of some participants not maximising their potential as much as others. OD21’s qualitative data further provided numerous consistent practical examples of proactive psychosocial attributes as well as tactics to circumvent deafness-related difficulties. OD8’s qualitative data suggested the opposite trend.

With respect to the composite pictures, only one of the 26 items showed a distinct difference in the typical groups’ responses. This Control item showed that the CD participant
would likely strongly agree, the OD participant would less strongly agree but the H participant would disagree that adulthood has been easier than childhood. This was particularly interesting given that the majority of deaf participants (28/30) were deaf during childhood and the H participants had not had to deal with a disability. Not surprisingly, OD8 and OD19, who were late deafened, disagreed that adulthood was easier. As children, the deaf participants were likely trying to master the psychosocial challenges of a severe disability with limited cognitive abilities and experiential knowledge. This provides support for studies suggesting that people with a disability can eventually master disability-related challenges (Goldberg et al., 2003; Polat, 2003).

Qualitative data further revealed some interesting trends regarding the definition of a deaf person who is maximising their potential with hearing peers. H participants tended to identify such a person rather than enumerate the psychosocial attributes or tactics such a person would use. Only two H participants mentioned attributes and none provided tactics. In contrast, the deaf participants provided richer and more detailed data of psychosocial attributes and tactics in addition to examples of deaf individuals maximising their potential. These data suggest that deaf individuals are acutely aware of the challenges of being deaf and recognise proactive strategies required of deaf individuals to maximise their potential.

5.4. Concluding remarks
The results provided strong evidence for the view of Humanistic Psychologists that academic intelligence, or IQ, is not predictive of an individual’s ability to self-actualise (Allport, 1955, 1965; Maslow, 1970, 1973; Rogers, 1961; Sternberg, 1985, 1988). The participants were mostly tertiary educated and likely had a higher than average IQ. The results, however, strongly suggested that other factors influence the maximisation of an individual’s psychosocial potential. For example, CD participants in Toscano et al.’s (2002) study reported exemplary literacy skills but limited mainstream socialisation. Despite IQ and linguistic competence having many
psychosocial benefits, a deaf individual’s capacity to maximise their potential appears to be dependent on their operationalising a range of psychosocial attributes and tactics.

Trends in the data further suggest that successful deaf individuals (OD and CD) likely maximise their potential with a greater degree of personal accountability than that of hearing individuals. In addition to mastering cognitive tactics related to circumventing deafness-related difficulties, deaf individuals are required to exhibit socially appropriate behaviour. The deaf participants’ direct experiential knowledge of deafness has likely honed a specialised form of Sternberg’s (1985) tactic knowledge that may not be fully understood or articulated by hearing individuals. The extent of effective use of this specialised tactic knowledge, however, may significantly determine a deaf individual’s social and career destiny. Even though accommodations and adaptations made by hearing individuals are important extrinsic factors, age of onset of deafness and social exposure may be two likely factors determining the extent of this deafness-specific expertise.

Onset of deafness in adulthood likely brings psychosocial challenges that the individual is ill-prepared to deal with. Both OD8 and OD19, for example, have had their identities shaped as hearing people. Both participants have also had a short time to learn or practice the specialised tactic knowledge required for circumventing deafness-related challenges. As Sternberg (1985, 1988) theorised, knowledge and practice are mutually-impacting. OD8 and OD19 may also be without the Social Ecologies conducive to fostering deafness-specific tactic knowledge (e.g., their significant others likely have no experience of deafness). Research of expert performance by Anshel (1995), Bloom (1982), and Ericsson et al. (2006) further indicate that specialised skills are learned, nurtured, and, importantly, honed through industrious commitment. By comparison with the late-deafened participants, OD15 and OD21 have had more time to acquire and practice deafness-specific tactic knowledge. Data also showed that both participants experienced supportive and resourceful childhood Social Ecologies.
Cognitive expertise and expert performance cannot be honed without social exposure, or risk and resilience. Cognitive expertise can be defined as the individual’s Internal Decisions. Expert performance could additionally be defined as the External Manifestations of behaviour created by Internal Decisions. The combined effect of Internal Decisions and External Manifestations plus Control equals Potential Maximisation. The results further suggest an accumulative effect whereby more practice leads to the acquisition of more cognitive and social knowledge. As OD15 suggested, deaf individuals may not fully master this deafness-specialised tactic knowledge “until they reach about 25-27 years old”. According to Ericsson et al. (2006), this knowledge can, in turn, lead to more specialised practice. In contrast, the lack of practice through limited social exposure can cause the restriction of knowledge (Sternberg, 1985, 1988), which may explain trends in OD8’s, CD7’s, and CD8’s data.

Given the varying levels of psychosocial competencies evident throughout the data, certain individuals likely have greater psychosocial expertise than do others. Some deaf participants also demonstrated greater deafness-specific tactic knowledge than other deaf participants. This was highlighted in case studies and in trends showing that higher scoring deaf participants provided richer and more detailed qualitative data than did lower scoring deaf participants. Interestingly, some deaf participants are likely maximising their psychosocial potential more than are H participants.

The OD group appeared to score higher than the H and CD groups for Internal Decisions and External Manifestations. The CD group also appeared to score higher than the H group for these variables. Possible reasons for these seemingly higher scores may be related to the additional psychosocial challenges facing deaf comparative to hearing individuals. Some OD participants mentioned they need to take control outside their comfort zone in hostile social environments because of communication issues and social stigmas relating to deafness. The CD group’s higher score for Control than the OD group may therefore be reflective of their
having the protective and supportive ‘security base’ of the Deaf community where socialisation may be easier.

Competence with risk and resilience, however, is required to circumvent deafness-related difficulties. The OD groups’ higher mean scores than the CD group for Internal Decisions, External Manifestations, and Potential Maximisation (see Appendix J) in the two between-group analyses may be reflective of the group’s greater and more varied social exposure. In addition, the H participants’ lifestyles may not demand the same degree of competence with risk and resilience because they likely experience easier communication and less severe social stigmas. Again, the current study’s scoring system was guided by the R&R model. It is therefore not surprising that the combined deaf group mean score (78.53) was higher than the H group (75.32) for Potential Maximisation and the $p$ value ($= .068$) approached significant difference. All in all, the data strongly support Lysons’ (1980) anecdotal notion that the effective management of a disability can be a stimulus towards higher achievement.

5.5. Limitations of the study

This study featured the development of a survey instrument to investigate psychosocial skills and also used descriptive research techniques. The results must therefore be interpreted with caution and several limitations be noted.

To estimate the internal reliability of the test instrument, two analyses were conducted because the surveys completed by the two deaf groups had additional items. In the first analysis, which included all three groups, the subscales of Control, Internal Decisions and External Manifestations were entered into the statistical model. This yielded a Chronbach’s Alpha of .56. None of the subscales were excluded from the model because they were all below the Alpha value. A second analysis was conducted on the subscale for the deaf participants. This yielded a Chronbach’s Alpha of .66. Because the subscale External Manifestations was correlated at .834 with the alpha overall reliability, this was excluded from the next analysis.
Including only Control and Internal Decisions the internal reliability analysis yielded a Chronbach’s Alpha of .83, which suggests good internal consistency. This indicates that the collection of items with additional deafness-specific items in the subscales (apart from External Manifestations) renders the instrument as more reliable for use with deaf participants.

Using survey instruments was a deliberate choice. The option of interviewing participants provided three logistical problems. One, the researcher would have had the costly and inconvenient pursuit of travelling to the USA, UK, and interstate Australia. Two, the act of writing down responses gave the participants a better chance of providing thoughtful responses and to respond at a time of their convenience. Three, deaf participants were not compromised by possible communication issues relating to their own and the researcher’s deafness.

Regarding the surveys, some participants nominated more than one option to Likert scaled items (e.g., circling both “Agree” and “Disagree”), and some participants did not answer nominal scoring items. In addition, some returned surveys featured unsolicited comments in the survey margins alongside Likert scales. Although this was rare overall, H19 wrote unsolicited comments in the margins for each of her unanswered items. Survey manipulation occurred once in that a CD participant deleted the DSS item 2.7a relating to speech-reading and changed the spelling of some survey items (e.g., “Sometimes” to “Sometime” and “Cochlear” to “Cochler”). He was subsequently deemed ineligible for the study because of his unreturned DFS. According to Morse (2003) these issues are indicative of the surveys’ structural flaws. The surveys were either hard copies or Microsoft word documents. A computer program (e.g., Survey Engine Enterprise) would have prevented unsolicited comments, survey manipulation, and ensured the completion of all nominal scoring items. Such a program would further assist speedier management of the data avoiding the task of manual inspection and transcription of the responses. There were also a considerable number of qualitative and nominal non-scoring items in addition to nominal scoring items. Despite these issues, a richer and broader understanding of the studied phenomena was achieved.
Not all participants returned their follow-up survey. At least one participant objected to the length of the surveys. The survey length may also have discouraged potential participants from participating. The quality of answers provided by participants may also have been compromised by the surveys’ length. Some participants appeared more motivated to complete the writing tasks than others because some returned follow-up surveys had many unanswered open-ended items (e.g., OD7, H12, and CD7). The researcher, however, received emails from participants who appreciated the opportunity to have their ‘voice heard’, the comprehensiveness of the surveys, and the relevance of the study to deaf individuals’ lives.

There were some instances whereby participants differently interpreted certain words or phrasings of the items. There were three aspects to this: 1) semantic, 2) conceptual, and 3) theoretical differences in interpretation. Examples of a semantic difference in interpretation appeared when OD10 and OD17 disagreed that they had superior linguistic skills to the average hearing person. Qualitative data showed that OD10 interpreted “linguistic” as speech articulation and OD17 interpreted “linguistic” as an auditory concept. A conceptual difference in interpretation were the justifications by OD4, OD5, OD6, OD14, and OD15 that written and vocabulary skills acquired in childhood were reasons for having superior linguistic skills than the average hearing person. An example of a theoretical difference in interpretation was CD4’s response “Integrate into society is a strange statement” in reference to the idea of deaf individuals integrating with hearing peers. Even though these differences in interpretation were rare, these issues emphasise the importance of carefully worded survey items.

Perhaps the most confusing finding was H13’s data. Although H13’s quantitative data suggested he was not maximising his potential as much as other participants, his qualitative data provided numerous examples suggesting the opposite. There were no other instances of this trend. H13 scored the same as H14 (68) for Potential Maximisation - the lowest of the H group and equal second lowest score for all three groups. There were, however, numerous differences in H13’s and H14’s qualitative replies. For example, H13 agreed and H14 disagreed
that he had made choices that suit his strengths. H14’s response to the accompanying open-ended item stated he often takes “the easy option and coast rather than strive for a goal”. On the other hand, H13 stated “my personal tendency towards introspection is an integral part” of his career as a psychologist. Closer inspection found H13’s low scores on items relating to socialisation. For example, H13 nominated “Disagree” to the items that stated “I need to be liked by other people” and “It’s important for me to be a social person”. Each response was scored as 2. These data are interesting because Maslow (1970) theorised that self-actualising individuals have a stronger need for privacy and quality of detachment than the average person.

The strategy of a third qualitative survey could have clarified some emerging data trends. For example, a qualitative survey specifically designed for H13 may have led to a better understanding of the discrepancies between his quantitative and qualitative data. A qualitative survey specifically designed for CD participants may also have revealed specific psychosocial skills that are valued in the cultural Deaf community. Tailor-made surveys for certain participants may, however, have led to more discrepancies. It was therefore important to remain within the parameters of the study’s aims.

5.6. Implications of the study

This exploratory study showed the value of Reiff’s (2004) notion of ‘reframing’ how research is conducted with participants who have a disability. Theorists have lamented that the medical model’s inclination towards epidemiology and the social model’s focus on social barriers are largely unrelated to the daily lives of individuals with a disability (Briker, 2000; Galvin, 2003; Humphrey, 2000; Oliver, 1992, 2004; Shakespeare, 1997). In contrast, research framed by the R&R model investigates how an individual with a disability operationalises proactive psychosocial attributes and tactics. This perspective involves reframing negative or reactive aspects of disability (Reiff, 2004; Wong, 2004). As Bloor (1976) and Kuhn (1962) argued, much depends on the researcher’s motives and the paradigm they use to frame how the research is
conducted. The R&R model, however, is an ideology and not a methodology. Research framed by Positivism and Interpretivism have made sizable contributions to the knowledge of deafness, but Pragmatism has a methodological flexibility and a different perspective that can have significant benefits. The paradigm shift to Pragmatism is another example of how this study ‘reframed’ how deafness research is conducted.

Strategies for psychosocial development have become popular in the area of Learning Disabilities (LD) (Reiff et al., 1995). According to Reiff et al., the University of Kansas Institute for Research on Learning Disabilities have developed generalised learning strategies for individuals with LD with the Strategies Intervention Model (SIM). Trained professionals use SIM to teach individuals with LD to become proactive “independent learners who learn to learn” (Reiff et al., 1995, p. 30). Learning to learn assists the development of self-determinism and independence, or competence with risk and resilience. Knowledge of how psychosocial attributes and tactics are operationalised in daily interaction is a key feature of SIM. This LD-specific psychosocial knowledge can, in turn, be used by the individual to create a proactive lifestyle.

In the current study, Reiff et al.’s (1995) modified framework helped to structure a systematic and comprehensive understanding of deafness-specific tactic knowledge. The results could therefore contribute significantly to a deafness-specific training program similar to the University of Kansas’ SIM as well as to future research of deaf individuals’ psychosocial potential maximisation.

5.7. Directions for future research

Future research investigating vocationally successful deaf participants is strongly encouraged. Interestingly, Boutin (2008), Danermark (1995), and Toscano et al. (2002) each referred to Menchel’s (1995) 30 OD participants attending mainstream universities as an ‘elite’ sample population. This anecdotal perspective may be dismissive and imply that only the ‘elite’ are
The current study suggests that more deaf individuals are practicing proactive psychosocial skills than research has alluded to. As Danermark cautioned, deaf adult participants have been primarily students sourced from the NTID and Gallaudet University. These two institutions have a strong emphasis on cultural Deafness, SL, and have deafness-related support services for their students. This demographic is therefore not reflective of the general deaf adult population because the overwhelming majority are not CD, do not use SL, and are within mainstream society (Aguayo & Woodcock, 2000; Harvey, 1998; Holt et al., 1994; Johnston, 2004; Mitchell & Karchmer, 2004). The recruitment strategy is therefore important. A recruitment strategy that involves OD participants who are in the workforce and mainstream universities may lead to a richer understanding of deafness than research has previously uncovered.

Authors have raised concerns about the lack of psychosocial skill development in deaf education (Bowe, 2003; Bonds, 2003; Calderon & Greenberg, 2000; Hogan, 2001; Jacobs, 2006; Punch & Hyde, 2005). Bowe theorised that specialised teachers of the deaf with knowledge of psychosocial skill development are a minority. Bonds further opined that current teachers are mostly trained to improve deaf individual’s spoken and written skills, which is important, but these foci are largely unrelated to real-life experiences. In addition, deaf adults’ low levels of psychosocial competence have been anecdotally observed by mental health professionals (Bowe, 2003; Harvey, 1998). Many deafness-related professionals are also graduating from professional training programs unaware of how to foster their students’ or clients’ psychosocial potential (Bowe, 2003; Calderon & Greenberg, 2003). Until now there has not been a comprehensive and systematic framework for researchers or deafness-related professionals to conceptualise how deaf individuals maximise their psychosocial potential. These serious issues are likely to be interrelated.

The task now is to use this study’s findings to frame a deafness-related training program along the lines of the University of Kansas’ SIM. A future study using a pre/post test design
would significantly assist in the evaluation and ongoing development of such a program. This program could be designed for different audiences such as deaf adolescents, their parents, teachers of the deaf, and deaf role models. It would be profitable to examine the participants’ awareness of psychosocial potential maximisation prior to and after the program’s implementation. The participants’ contributions could significantly assist refinement before implementing the program as policy. Of pressing need, however, is the implementation of this proposed program into the curriculum of institutions training deafness-related professionals.
References


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APPENDIX A – Plain Language Statement and Consent Form
Plain Language Statement for persons participating in research projects

PROJECT TITLE: “The psychosocial attributes and tactics that assist the psychosocial potential maximisation of deaf people in society.”

Dear potential participant,

Introduction
You are invited to participate in the above research project, which is being conducted by Associate Professor Margaret Brown, Ms Louise Paatsch and Mr Paul Jacobs of the Faculty of Education at the University of Melbourne. The aim of this study is to investigate how both hearing and deaf adults view the social and emotional attributes and tactics they use socially and vocationally. The information you may provide will be pooled together with other surveys completed by both hearing and deaf participants. We aim to analyse this data and hope that it will assist the education of deaf students. The project has been funded by the Melbourne Research Scholarship, the Elisabeth Murdoch Scholarship and the June Opie Fellowship. Your name and contact details have been attained either through personal contact by Mr Jacobs or through one of his associates. This project will form part of Mr Jacobs’s PhD thesis, and has been approved by the University of Melbourne’s Human Research Ethics Committee.

What will I be asked to do?

We would like to ask you to complete a screening survey at a time convenient to you. Should you agree to participate, the survey should take no longer than 15 minutes to complete. Following the completion of this survey you may be contacted by Mr Jacobs by email to complete another two surveys at later dates. These surveys focus on your socio-emotional attributes and tactics that enable you to achieve social and vocational success. The first follow-up survey will take about 20 minutes to complete and will provide unique insights into deaf and
hearing people's beliefs, attributes and tactics related to socio-emotional issues. The second follow-up survey will be a short open-ended survey that will take 15 minutes to complete.

**How will my confidentiality be protected?**

We intend to protect your anonymity and the confidentiality of your responses to the fullest possible extent, within the limits of the law. Your name and contact details will be kept in a password-protected computer file separate from the data you supply. It will be accessible only to the mentioned researchers. In the final report, you may be referred to by a pseudonym. Any references to personal information that might allow someone to guess your identity will be removed.

**How will I receive feedback?**

A written report of the final project outcomes can be provided upon request once the study is completed. The data will be kept secure with Mr Jacobs during the time in which he will be analysing the data. Afterwards, the survey will be kept in the Faculty of Education at the University of Melbourne for five years from the date of publication, before being destroyed.

**Will participation prejudice me in any way?**

Please be advised that your participation in this study is completely voluntary. Should you wish to withdraw at any stage, or to withdraw any unprocessed data you have supplied, you are free to do so without prejudice. The researchers are not involved in the ethics application process. Your decision to participate or not, or to withdraw, will be completely independent of your dealings with the ethics committee, and we would like to assure you that it will have no effect on any applications for approval that you may submit.

**Where can I get further information?**

Should you require any further information, or have any concerns, please do not hesitate to contact the researchers; Associate Professor Brown (613) 8344 0987, Ms Paatsch (613) 8344 0989 or Mr Jacobs by e-mail: pjad74@yahoo.com.au or 0419539251 (text only). Should you have any concerns about the conduct of the project, you are welcome to contact the Executive Officer, Human Research Ethics, The University of Melbourne, by ph: (613) 8344 7507, or fax: (613) 9347 6739.

**How do I agree to participate?**

If you would like to participate, please complete the online survey provided. Returning the survey via email will indicate that you have read and understood the information in this statement. It will also indicate that you have given your consent for the survey to be used in this study. If completing a hard copy of the survey please sign the accompanying Consent Form with the Plain Language Statement.
Consent form for persons participating in research projects

PROJECT TITLE: “The psychosocial attributes and tactics that assist the psychosocial potential maximisation of deaf people in society.”

Name of participant:

Name of investigators: Margaret Brown, Louise Paatsch and Paul Jacobs

1. I consent to participate in the project named above, and the requirements of the survey have been explained to me. A written copy of the information has been given to me to keep.

2. I authorize the researchers to use the survey referred to under (1) above.

3. I acknowledge that:
   (a) The possible effects of the survey have been explained to me to my satisfaction;
   (b) I have been informed that I am free to withdraw from the project at any time without explanation or prejudice and to withdraw any unprocessed data before publication of the thesis;
   (c) The project is for the purpose of research.
   (d) I have been informed that the confidentiality of the information I provide will be safeguarded and subject to any legal requirements.
   (4) I am aware that given the small sample size, I may be known to the researcher/s but I am assured that references that may allow someone to guess my identity will be removed in the final report. My name and contact details will be kept in a separate, password-protected computer file separate from any data that I supply.

Signature

Date

(Participant)
APPENDIX B – Screening Survey for deaf participants
Screening survey for participants who are deaf

Please underline, circle or embolden your answers where appropriate

1.0 Preliminary background information

1.1 Email address ____________________________________________________________

1.2 Age:  18-21  22-25  26-29  30-33  34-37  38-41  42-45  46-49  50+

1.3 Gender: Male/Female

1.4 Is English your first language? Yes/No

1.5 What was your mother’s first language? __________

1.6 What was your father’s first language? __________

1.7 Nationality ________________________________

1.8 City of residence ________________________________

1.9 Ethnicity ________________________________

1.10 What is your current profession? ________________________________

1.11 Do you have an additional disability to deafness? Yes/No

2. Deafness-specific questions

2.1 Were you born deaf? Yes/No (If yes, go to 2.6)

2.2 At what age did you lose your hearing or did the deterioration of your hearing start? ___ years old. (Insert number)

2.3 Was this a sudden hearing loss? Yes/No (If yes, go to 2.6)

2.4 Was this a gradual hearing loss? Yes/No (If no, go to 2.6)

2.5 At what age did the deterioration of your hearing stop? ___ years old.
2.6 What level of hearing loss do you have now?

<table>
<thead>
<tr>
<th>Left ear:</th>
<th>Right ear:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate/Severe</td>
<td>Moderate/Severe</td>
</tr>
<tr>
<td>Severe</td>
<td>Severe</td>
</tr>
<tr>
<td>Severe/ Profound</td>
<td>Severe/ Profound</td>
</tr>
<tr>
<td>Profound</td>
<td>Profound</td>
</tr>
<tr>
<td>No Hearing</td>
<td>No Hearing</td>
</tr>
<tr>
<td>Don’t know</td>
<td>Don’t know</td>
</tr>
</tbody>
</table>

2.7 Do you speech read? Yes/No (If no, go to 2.8)

2.7a How would you rank your speech reading skills?

- Master
- Very good
- Good
- Average
- Poor

2.8 How often do you use your voice to communicate?

- All the time
- Sometimes
- Rarely
- Never

2.9 What type of assistive hearing technology do you mostly use?

- None
- Hearing aids
- Cochlear Implant
- Other

3.0 Education and Employment:

3.1 Were you educated in a mainstream school? Yes/No (If no, go to 3.3)

3.2 How many years in total did you attend a mainstream school?

- Less than one year
- 1-3 years
- 4-6 years
- More than 6 years

3.3 Did you ever attend a mainstream school with a specialist facility for deaf and hearing-impaired people? Yes/No (If no, go to 3.4)

3.3a How many years in total did you attend a mainstream school with a specialist facility for deaf and hearing-impaired people?

- Less than one year
- 1-3 years
- 4-6 years
- More than 6 years

3.3b What method of instruction did this school/facility mainly use?

- Sign Language
- Oral (speech only)
- Total communication ( Signing and speech)

3.4 Did you attend a School for the Deaf? Yes/No (If no, go to 3.5)

3.4a How many years in total did you attend a School for the Deaf?

- Less than one year
- 1-3 years
- 4-6 years
- More than 6 years
3.4b What method of instruction did this school mainly use?

Sign Language  Oral (speech only)  Total communication (Signing and speech)

3.5 What is the highest level of education you have achieved? ______________

3.6 Have you ever had paid employment? Yes/No (If no, go to 3.7)

3.7 Have you spent more than one year unemployed? Yes/ No (If no, go to 4.0)

3.7a How many years in total were (or have you been) unemployed?

1-3 years  4-6 years  7 plus years

4.0 Deaf Community

4.1 Have you ever become involved with the Deaf community? Yes/No (If no, go to 4.4)

4.2 The Deaf community was very welcoming towards me.

Strongly agree  Agree  Disagree  Strongly disagree

4.3 Do you define yourself as Culturally Deaf? Yes/No (If yes, go to 4.5)

4.4 I feel that my life would be better if I had had greater involvement with the Deaf community? Yes/No

4.4a Could you provide some reasons for your answer?

4.5 Have you learned to sign? Yes/No (If no, go to 5.0)

4.5a How old were you when learned to sign? ___ years old

4.5b List the reason/s why you learnt to sign

4.5c Are you a fluent user of sign language? Yes/No

4.5d Do you still use sign language? Yes/No

5.0 Potential maximisation

5.1 I regard myself as maximising my potential in society

Strongly agree  Agree  Disagree  Strongly disagree
Screening survey for hearing participants

Please underline, circle or embolden your answers where appropriate

1.0 Preliminary background information

1.1 Email address

1.2 Age: 26-29 30-33 34-37 38-41 42-45 46-49 50+

1.3 Gender: Male/Female

1.4 Is English your first language? Yes/No

1.5 What was your mother’s first language? __________

1.6 What was your father’s first language? __________

1.7 Nationality

1.8 City of residence

1.9 Ethnicity

1.10 What is your current profession? __________

1.11 Do you have a disability? Yes/No

1.11a If yes, what kind of disability? ________________

2.0 Education and Employment:

2.1 What is the highest level of education you have achieved? __________

2.2 Have you ever had paid employment? Yes/No (If no, go to 2.3)

2.3 Have you spent more than one year unemployed? Yes/ No (If no, go to 3.0)

2.3a How many years in total have you been unemployed?

1-3 years 4-6 years 7 plus years

3.0 Deafness related questions

3.1 What's your experience of deafness?
3.2 Have you ever had a close work or social relationship with a person who is deaf?  
Yes/No  (If no, go to 4.0)

3.3 How long have you (or did you) know this person?  
Less than 1 year  1-3 years  4 plus years

3.4 What was/were the common bond/s between you?

3.5 Have you ever become involved with the Deaf community?  
Yes/No (If no, go to 4.0)

3.6 The Deaf community was very welcoming towards me  
Strongly agree  Agree  Disagree  Strongly disagree

3.7 Have you learned to sign?  
Yes/No (If no, go to 4.0)

3.7a How old were you when learned to sign? ___ years old.

3.7b List the reason/s why you learnt to sign

3.7c Are you a fluent user of sign language?  
Yes/No

3.7d Do you still use sign language?  
Yes/No

4.0 Potential maximisation

4.1 I regard myself as maximising my potential in society  
Strongly agree  Agree  Disagree  Strongly disagree
APPENDIX D – Follow-up survey for deaf participants
Follow-up survey for deaf participants

Please underline, circle or embolden your answers where appropriate

5.0 Lifestyle and Society

5.1 I feel I am in control of my social life
   Strongly agree  Agree  Disagree  Strongly disagree

5.2 I am proud of the skills I use to maximize my potential with hearing peers
   Strongly agree  Agree  Disagree  Strongly disagree

5.3 My life is miserable because of my deafness
   Strongly agree  Agree  Disagree  Strongly disagree

5.4 I have chosen employment whereby my deafness is not a problem
   Strongly agree  Agree  Disagree  Strongly disagree

5.5 My experience with deafness has made me feel worthless in the past year
   Strongly agree  Agree  Disagree  Strongly disagree

5.6 Risk taking is an important part of achieving my goals
   Strongly agree  Agree  Disagree  Strongly disagree

5.7 It is very important to me to have full time employment
   Strongly agree  Agree  Disagree  Strongly disagree

5.8 Deaf people work harder than hearing people to be accepted by others
   Strongly agree  Agree  Disagree  Strongly disagree

5.9 It is very important to me to have friends who are deaf
   Strongly agree  Agree  Disagree  Strongly disagree

5.10 Successful people seem to have a lot of luck on their side
    Strongly agree  Agree  Disagree  Strongly disagree

5.11 My deafness severely affects my ability to achieve goals
    Strongly agree  Agree  Disagree  Strongly disagree
5.12  I feel I must make my own decisions
      Strongly agree    Agree    Disagree    Strongly disagree

5.13  It is important for me to handle adversity
      Strongly agree    Agree    Disagree    Strongly disagree

5.14  Deaf people must work hard to be accepted by hearing people
      Strongly agree    Agree    Disagree    Strongly disagree

5.15  Negative experiences in childhood made me try harder
      Strongly agree    Agree    Disagree    Strongly disagree

5.16  It is very important to me to have friends who are hearing
      Strongly agree    Agree    Disagree    Strongly disagree

5.17  I am a person who takes risks
      Strongly agree    Agree    Disagree    Strongly disagree

5.18  Adulthood has been easier for me than childhood
      Strongly agree    Agree    Disagree    Strongly disagree

5.19  Failure to properly plan can result in problems for people
      Strongly agree    Agree    Disagree    Strongly disagree

5.20  Dealing with my deafness has made me a better person
      Strongly agree    Agree    Disagree    Strongly disagree

5.21  I could be more successful socially and at work if I worked harder
      Strongly agree    Agree    Disagree    Strongly disagree

5.22  I chose friends who accommodate issues relating to my deafness
      Strongly agree    Agree    Disagree    Strongly disagree

5.23  I am a social person with hearing peers
      Strongly agree    Agree    Disagree    Strongly disagree

5.24  It is important for me to be a social person with hearing peers
      Strongly agree    Agree    Disagree    Strongly disagree
5.25 I need to be liked by hearing people
   Strongly agree    Agree    Disagree    Strongly disagree
5.26 My successes in life have been the result of luck
   Strongly agree    Agree    Disagree    Strongly disagree
5.27 I feel I am in control of my work life
   Strongly agree    Agree    Disagree    Strongly disagree
5.28 I am a person who can handle adversity
   Strongly agree    Agree    Disagree    Strongly disagree
5.29 People could be more successful if they put more time into it
   Strongly agree    Agree    Disagree    Strongly disagree
5.30 Persisting through experiences of loneliness and rejection produces equality with hearing people
   Strongly agree    Agree    Disagree    Strongly disagree
5.31 Bad things that happen to deaf people are the result of society’s barriers
   Strongly agree    Agree    Disagree    Strongly disagree
5.32 Speech-reading requires continual practice in order for it to be mastered
   Strongly agree    Agree    Disagree    Strongly disagree
5.33 My voice would get worse if I did not continually use it
   Strongly agree    Agree    Disagree    Strongly disagree
5.34 My life would be better if I were not deaf
   Strongly agree    Agree    Disagree    Strongly disagree
5.35 My work colleagues are able to accommodate my deafness
   Strongly agree    Agree    Disagree    Strongly disagree
5.36 Childhood would have been easier if my parents knew more about deafness
   Strongly agree    Agree    Disagree    Strongly disagree
6.0 Open-ended items

6.1 I have made choices in my life that suit my strengths
   Strongly agree     Agree     Disagree   Strongly disagree
6.1a Could you provide some reasons for your answer?

6.2 Provide a brief summary of a deaf person who is maximising their potential with hearing peers

6.3 Do you feel that you have overcome the challenges of your deafness? Yes/No
6.3a Could you provide some reasons for your answer?

6.4 I have superior linguistic skills in comparison with the average person
   Strongly agree     Agree     Disagree   Strongly disagree
6.4a Could you provide some reasons for your answer?

6.5 What kind of person do you think you would have been if not for your deafness? Would your life be better or worse? How?

6.6 Self-determination is a process. You keep learning how to be more self-determining.
   Strongly agree     Agree     Disagree   Strongly disagree
6.6a Could you provide some reasons for your answer?

6.7 I have superior social skills compared with the average hearing person
   Strongly agree     Agree     Disagree   Strongly disagree
6.7a Could you provide some reasons for your answer?

7.0 Reading, television and telecommunication

7.1 Reading has helped me better understand the world

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

7.2 Reading is significant in improving my quality of life

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

7.3 Reading has helped me 'catch up' on things that I may miss because of my deafness

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

7.4 Circle the approximate number of hours of television you watch weekly

- None
- 1-5 hours
- 6-10 hours
- 11-15 hours
- 15 plus hours

7.4a Do you rely on Supertext (subtitles) for television viewing?

<table>
<thead>
<tr>
<th>Yes/No</th>
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</table>

(If no, go to 7.5)

7.4b Watching subtitled programs has helped me better understand the world I live in

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

7.4c Watching subtitled programs has improved my reading skills

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

7.5 Do you use e-mail?

<table>
<thead>
<tr>
<th>Yes/No</th>
</tr>
</thead>
</table>

(If no, go to 7.6)

7.5a How often do you use e-mail?

- More than ten times per week
- 1-10 times per week
- Less than once a week

7.5b Circle one or more the types of people you will contact by e-mail.

<table>
<thead>
<tr>
<th>Friends</th>
<th>Family</th>
<th>Work colleagues</th>
<th>Fellow students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clients</td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7.5c I regard e-mail as a very important part of my social life

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

7.6 Do you use SMS (text) on a mobile phone?

<table>
<thead>
<tr>
<th>Yes/No</th>
</tr>
</thead>
</table>

(If no, go to 7.7)
7.6a How often do you use SMS?
More than ten times per week 1-10 times per week Less than once a week

7.6b Circle one or more the types of people you will contact by SMS
Friends Family Work colleagues Fellow students Clients Other

7.6c I regard SMS as a very important part of my social life
Strongly agree Agree Disagree Strongly disagree

7.7 Do you use TTY (Teletypewriter)? Yes/No (If no, go to 7.8)

7.7a How often do you use TTY?
More than ten times per week 1-10 times per week Less than once a week

7.7b Circle one or more the types of people you will contact by TTY
Friends Family Work colleagues Fellow students Clients Other

7.7c I regard the TTY as a very important part of my social life
Strongly agree Agree Disagree Strongly disagree

7.8 Do you use the National Relay Service (NRS)? Yes/No (If no, go to 7.9)

7.8a How often do you use the NRS?
More than ten times per week 1-10 times per week Less than once a week

7.8b Circle one or more the types of people you will contact through the NRS
Friends Family Work colleagues Fellow students Clients Other

7.8c I regard the NRS as a very important part of my social life
Strongly agree Agree Disagree Strongly disagree

7.9 Do you use Instant Messenger (IM)? Yes/No (If no, go to 7.10)

7.9a How often do you use IM?
More than ten times per week 1-10 times per week Less than once a week
7.9b Circle one or more the types of people you will contact through IM

| Friends | Family | Work colleagues | Fellow students | Clients | Other |

7.9c I regard IM as a very important part of my social life

| Strongly agree | Agree | Disagree | Strongly disagree |

7.10 Telecommunication devices have helped put me on a level playing field with hearing peers

| Strongly agree | Agree | Disagree | Strongly disagree |

7.10a Could you provide some reasons for your answer?

7.11 Watching captioned DVDs and television programs have improved my linguistic skills?

| Strongly agree | Agree | Disagree | Strongly disagree |

7.11a Could you provide some reasons for your answer?

7.12 Watching captioned DVDs and television programs have improved my social skills?

| Strongly agree | Agree | Disagree | Strongly disagree |

7.12a Could you provide some reasons for your answer?

8.0 Family and Friends

8.1 Has there been a particular family member who has played a significant role in your life? (If no, go to 8.2)

| Yes/No |

8.1a Circle one or more the family member/s who played a significant role in your life

| Father | Mother | Brother | Sister | Aunty | Uncle | Grandfather | Grandmother | Cousin | Other |

8.1b Provide a brief summary of the role/s they played
8.2 Did you have a close friend at school that was hearing? Yes/No (If no, go to 8.2c)
8.2a How did this person (or people) help you better integrate into school life?
8.2b What was the common bond/s between you? (then go to 8.3)
8.2c Provide a brief summary of the reason/s why you did not have a close friend at school
8.3 Did you have a role model who was deaf as a child? Yes/No (If no, go to 8.4)
8.3a Provide a brief summary of who this deaf person was and how they were a role model
8.4 Would you have benefited from having a deaf role model as a child? Yes/No
8.4a Could you provide some reasons for your answer?
8.5 Have you had close hearing friends throughout the course of your adulthood? Yes/No
8.5a How have these people helped you better integrate into society?
8.5b What were the common interests you shared together?
8.6 Where do you think you will be in 5 years time?
8.6a What strategies will you use to get there?
8.7 If there were three words with which you could describe yourself what would they be?
APPENDIX E – Follow-up survey for hearing participants
Second survey for hearing participants

Please underline, circle or embolden your answers where appropriate

5.0 Lifestyle and Society

5.1 I am a person who takes risks.
   Strongly agree   Agree   Disagree   Strongly disagree

5.2 I feel I am in control of my work life
   Strongly agree   Agree   Disagree   Strongly disagree

5.3 Adulthood has been easier for me than childhood
   Strongly agree   Agree   Disagree   Strongly disagree

5.4 Successful people seem to have a lot of luck on their side
   Strongly agree   Agree   Disagree   Strongly disagree

5.5 Failure to properly plan can result in problems for people
   Strongly agree   Agree   Disagree   Strongly disagree

5.6 Self-determination is a process. You keep learning how to be more self-determining
   Strongly agree   Agree   Disagree   Strongly disagree

5.6a Could you provide some reasons for your answer?

5.7 I am a person who can handle adversity
   Strongly agree   Agree   Disagree   Strongly disagree

5.8 Negative experiences in childhood made me try harder
   Strongly agree   Agree   Disagree   Strongly disagree

5.9 I feel I am in control of my social life
   Strongly agree   Agree   Disagree   Strongly disagree

5.10 Risk taking is an important part of achieving my goals
   Strongly agree   Agree   Disagree   Strongly disagree
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5.11</td>
<td>I could be more successful socially and at work if I worked harder</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.12</td>
<td>My successes in life have been the result of luck</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.13</td>
<td>It is important for me to handle adversity</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.14</td>
<td>I feel I must make my own decisions</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.15</td>
<td>I chose friends who accommodate issues relating to my weaknesses</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.16</td>
<td>I need to be liked by other people</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.17</td>
<td>Bad things that happen to deaf people are the result of society’s barriers</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.18</td>
<td>People could be more successful if they put more time into it</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.19</td>
<td>It is important for me to be a social person</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.20</td>
<td>It is very important to me to have full time employment</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.21</td>
<td>I have chosen employment whereby my weaknesses are not a problem</td>
<td>Strongly agree</td>
<td>Agree</td>
</tr>
<tr>
<td>5.21a</td>
<td>Could you provide some reasons for your answer?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.22 I have made choices in my life that suit my strengths

Strongly agree  Agree  Disagree  Strongly disagree

5.22a Could you provide some reasons for your answer?

6.0 Reading, television and telecommunication

6.1 Reading has helped me better understand the world.

Strongly agree  Agree  Disagree  Strongly disagree

6.2 Reading is significant in improving my quality of life.

Strongly agree  Agree  Disagree  Strongly disagree

6.3 Circle the approximate number of hours of television you watch per week.

None  1-5 hours  6-10 hours  11-15 hours  15 plus hours

6.4 Watching DVDs and television programs have improved my social skills?

Strongly agree  Agree  Disagree  Strongly disagree

6.4a Could you provide some reasons for your answer?

6.5 Do you use e-mail?  Yes/No  (If no, go to 6.6)

6.5a How often do you use e-mail?

More than ten times per week  1-10 times per week  Less than once a week

6.5b Circle one or more the types of people you will contact by e-mail.

Friends  Family  Work colleagues  Fellow students  Clients  Other

6.5c I regard e-mail as a very important part of my social life.

Strongly agree  Agree  Disagree  Strongly disagree

6.6 Do you use SMS (text) on mobile phones?  Yes/No  (If no, go to 6.7)

6.6a How often do you use SMS?

More than ten times per week  1-10 times per week  Less than once a week
6.6b Circle one or more the types of people you will contact by SMS.

Friends    Family    Work colleagues    Fellow students
Clients    Other__________

6.6c I regard SMS as a very important part of my social life.

Strongly agree    Agree    Disagree    Strongly disagree

6.7 Do you use Instant Messenger (IM)? Yes/No (If no, go to 7.0)

6.7a How often do you use IM?

More than ten times per week    1-10 times per week    Less than once a week

6.7b Circle one or more the types of people you will contact through IM

Friends    Family    Work colleagues    Fellow students
Clients    Other__________

6.7c I regard IM as a very important part of my social life

Strongly agree    Agree    Disagree    Strongly disagree

7.0 Family and Friends

7.1 Has there been a particular family member who has played a significant role in your life?

Yes/No (If no, go to 7.2)

7.1a Circle one or more the family member/s who played a significant role in your life

Father    Mother    Brother    Sister    Aunty    Uncle
Grandfather    Grandmother    Cousin    Other__________

7.1b Provide a brief summary of the role/s they played

7.2 Did you have a close friend at school? Yes/No (If no, go to 7.2c)
7.2a How did this person (or people) help you better integrate into school life?

7.2b What were the common bond/s between you? (then go to 7.3)

7.2c Provide a brief summary of the reason/s why you did not have a close friend at school

7.3 Have you had close friends throughout the course of your adulthood? Yes/No

7.3a How have these people helped you better integrate into society?

7.3b What were the common interests you shared together?

8.0 Deafness-related items

8.1 Provide a brief summary of a deaf person who is maximising their social potential with hearing peers

8.2 Deaf people must work hard to be accepted by hearing people

Strongly agree  Agree  Disagree  Strongly disagree

8.3 The experience of deafness can assist personal development

Strongly agree  Agree  Disagree  Strongly disagree

8.3a Could you provide some reasons for your answer?

8.4 Deaf people can have superior social skills in comparison with the average hearing person

Strongly agree  Agree  Disagree  Strongly disagree
8.4a Could you provide some reasons for your answer?

8.5 Deaf people can have superior linguistic skills in comparison with the average person?

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

8.5a Could you provide some reasons for your answer?

8.6 For deaf people, persisting through experiences of loneliness and rejection produces equality with hearing people

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

9. Conclusion

9.1 Where do you think you will be in 5 years time?

9.1a What strategies will you use to get there?

9.2 If there were three words with which you could describe yourself what would they be?
Table 13

Identical quantitative items in the DFS and HFS: Control

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<thead>
<tr>
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<tbody>
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<tr>
<td>and</td>
<td>5.18 5.3 C2</td>
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Table 14

Identical quantitative items in the HFS and DFS: Internal decisions

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<th>Reframing</th>
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<td>and</td>
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<tr>
<td>and</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>and</td>
<td>5.21 5.11 D5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and</td>
<td>5.29 5.18 D6</td>
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<tr>
<td>n=6</td>
<td>n=4</td>
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Table 15

Identical quantitative items in the DFS and HFS: External manifestations

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<th>Goodness of Fit</th>
<th>Learned Creativity</th>
<th>Social Ecologies</th>
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<td>DFS HFS</td>
<td>DFS HFS</td>
<td>DFS HFS</td>
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<tr>
<td>and</td>
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<td>and</td>
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*Identical qualitative items in the DFS and HFS: Control*

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Table 17

*Identical qualitative items in the HFS and DFS: Internal decisions*

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<th>Goal Orientation</th>
<th>Reframing</th>
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Table 18

*Identical qualitative items in the DFS and HFS: External manifestations*

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APPENDIX G – Coding scheme for deaf group comparison after the addition of deafness-specific items
Table 19

*Quantitative items specific to deaf participants in the DFS: Control*

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Table 20

*Quantitative Items specific to deaf participants in the DFS: Internal Decisions*

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<th>Reframing</th>
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Table 21

*Quantitative items specific to deaf participants in the DFS: External Manifestations*

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<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
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<td></td>
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Table 22

*Qualitative items specific to deaf participants in the DFS: Control*

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Table 23

*Qualitative items specific to deaf participants in the DFS: Internal Decisions*

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Table 24

*Qualitative items specific to deaf participants in the DFS: External Manifestations*

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<td>8.4a</td>
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APPENDIX H – Scores of the three groups
Table 25

Control: All groups’ scores

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</thead>
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Table 26

*Internal Decisions: All groups’ scores*

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## Table 27

**External Manifestations: All groups’ scores**

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<th>H group</th>
<th>CD Group</th>
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<td>H7 28</td>
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<tr>
<td>OD8</td>
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<td>H8 33</td>
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<tr>
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<tr>
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Table 28

*Potential Maximisation: All groups’ scores*

<table>
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</tr>
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APPENDIX I– Scores for the OD and CD groups after the addition of deafness-specific items
Table 29

*Control: Deaf groups’ scores inclusive of deafness-specific items*

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<td>CD7</td>
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Table 30

*Internal Decisions: Deaf groups’ scores inclusive of deafness-specific items*

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<tbody>
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Table 31

*External Manifestations: Deaf groups’ scores inclusive of deafness-specific items*

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<td>CD3 79</td>
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<tr>
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Table 32

*Potential Maximisation: Deaf groups’ scores inclusive of deafness-specific items*

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<td>OD22 169</td>
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APPENDIX J – Statistical Data
List of Statistical Data

1. Between-groups ANOVA: Control
2. Paired samples for $t$-tests for combined deaf and H groups' scores: Control
3. Paired samples for $t$-tests for OD and CD groups' scores inclusive of deafness-specific items: Control
4. Between-groups ANOVA: Internal Decisions
5. Paired samples for $t$-tests for combined deaf and H groups' scores: Internal Decisions
6. Paired samples for $t$-tests for OD and CD groups' scores inclusive of deafness-specific items: Internal Decisions
7. Between-groups ANOVA: External Manifestations
8. Paired samples for $t$-tests for combined deaf and H groups' scores: External Manifestations
9. Paired samples for $t$-tests for OD and CD groups' scores inclusive of deafness-specific items: External Manifestations
10. Between-groups ANOVA: Potential Maximisation
11. Paired samples for $t$-tests for combined deaf and H groups' scores: Potential Maximisation
12. Paired samples for $t$-tests for OD and CD groups' scores inclusive of deafness-specific items: Potential Maximisation
1. Between-groups ANOVA: Control

### Descriptives

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<th></th>
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<th>Mean</th>
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<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>95% Confidence Interval for Mean</th>
<th>95% Confidence Interval for Mean</th>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td>Minimum</td>
</tr>
<tr>
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<td>9.73</td>
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<td>.343</td>
<td>9.01</td>
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<td>8.77</td>
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<td>1.309</td>
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### ANOVA

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<th>Sig.</th>
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### Multiple Comparisons

#### Scheffe

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<th>Sig.</th>
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<th>Upper Bound</th>
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<td>.417</td>
<td>.470</td>
<td>-.54</td>
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<td>Culturally Deaf</td>
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<td>.550</td>
<td>.884</td>
<td>-1.66</td>
<td>1.12</td>
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<tr>
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<td>Oral deaf</td>
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<td>.417</td>
<td>.470</td>
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<td>.561</td>
<td>.379</td>
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261
2. Paired samples for \( t \)-tests for combined deaf and H groups’ scores: Control

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<th>( N )</th>
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<th>Std. Deviation</th>
<th>Std. Error Mean</th>
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<td>10.00</td>
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<tr>
<td>Sig.</td>
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</tbody>
</table>

Means for groups in homogeneous subsets are displayed.


b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

### Group Statistics

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<tr>
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<th>Std. Error Mean</th>
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<tr>
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### Independent Samples Test

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<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
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<td>( t )</td>
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</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.694</td>
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</table>
3. Paired samples for *t*-tests for OD and CD groups’ scores inclusive of deafness-specific items: Control

### Group Statistics

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<th>Group</th>
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<th>Std. Error Mean</th>
</tr>
</thead>
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<tr>
<td>Cultural Deaf</td>
<td>8</td>
<td>26.13</td>
<td>3.182</td>
<td>1.125</td>
</tr>
</tbody>
</table>

### Independent Samples Test

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>Control Equal variances not assumed</td>
<td>.304</td>
<td>17.099</td>
</tr>
</tbody>
</table>

4. Between-groups ANOVA: Internal Decisions

### Descriptives

<table>
<thead>
<tr>
<th>InternalDecisions</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Oral deaf</td>
<td>22</td>
<td>34.59</td>
<td>3.018</td>
<td>.644</td>
<td>33.25</td>
</tr>
<tr>
<td>Hearing</td>
<td>19</td>
<td>33.21</td>
<td>3.409</td>
<td>.782</td>
<td>31.57</td>
</tr>
<tr>
<td>Culturally Deaf</td>
<td>8</td>
<td>33.63</td>
<td>3.889</td>
<td>1.375</td>
<td>30.37</td>
</tr>
<tr>
<td>Total</td>
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<td>33.90</td>
<td>3.312</td>
<td>.473</td>
<td>32.95</td>
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</table>

### ANOVA

<table>
<thead>
<tr>
<th>InternalDecisions</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>20.139</td>
<td>2</td>
<td>10.069</td>
<td>.915</td>
<td>.408</td>
</tr>
<tr>
<td>Within Groups</td>
<td>506.351</td>
<td>46</td>
<td>11.008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>526.490</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Paired samples for $t$-tests for combined deaf and H groups’ scores: Internal Decisions
6. Paired samples for $t$-tests for OD and CD groups' scores inclusive of deafness-specific items: Internal Decisions

### Group Statistics

<table>
<thead>
<tr>
<th>HearingStatus</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>InternalDecisions Deaf</td>
<td>30</td>
<td>34.33</td>
<td>3.231</td>
<td>.590</td>
</tr>
<tr>
<td>InternalDecisions Hearing</td>
<td>19</td>
<td>33.21</td>
<td>3.409</td>
<td>.782</td>
</tr>
</tbody>
</table>

### Independent Samples Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>0.14</td>
<td>0.907</td>
<td>1.160</td>
</tr>
<tr>
<td>1.146</td>
<td>36.893</td>
<td>0.259</td>
</tr>
</tbody>
</table>

Equal variances assumed  
Equal variances not assumed

### Group Statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>InternalDecisions Oral deaf</td>
<td>22</td>
<td>49.91</td>
<td>3.753</td>
<td>.800</td>
</tr>
<tr>
<td>InternalDecisions Cultural Deaf</td>
<td>8</td>
<td>49.38</td>
<td>5.344</td>
<td>1.889</td>
</tr>
</tbody>
</table>
### Independent Samples Test

<table>
<thead>
<tr>
<th>InternalDecisions</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>Equal variance assumed</td>
<td>3.587</td>
<td>.069</td>
<td>.307</td>
</tr>
<tr>
<td>Equal variance not assumed</td>
<td>.260</td>
<td>9.633</td>
<td>.800</td>
</tr>
</tbody>
</table>

7. Between-groups ANOVA: External Manifestations

#### Descriptives

<table>
<thead>
<tr>
<th>ExternalManifestations</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Oral deaf</td>
<td>22</td>
<td>34.64</td>
<td>3.048</td>
<td>.650</td>
<td>33.28</td>
</tr>
<tr>
<td>Hearing</td>
<td>19</td>
<td>32.89</td>
<td>2.726</td>
<td>.625</td>
<td>31.58</td>
</tr>
<tr>
<td>Culturally Deaf</td>
<td>8</td>
<td>33.75</td>
<td>4.200</td>
<td>1.485</td>
<td>30.24</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>33.82</td>
<td>3.173</td>
<td>.453</td>
<td>32.90</td>
</tr>
</tbody>
</table>

#### ANOVA

<table>
<thead>
<tr>
<th>ExternalManifestations</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>30.967</td>
<td>2</td>
<td>15.483</td>
<td>1.574</td>
<td>.218</td>
</tr>
<tr>
<td>Within Groups</td>
<td>452.380</td>
<td>46</td>
<td>9.834</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>483.347</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Multiple Comparisons

Dependent Variable: ExternalManifestations

<table>
<thead>
<tr>
<th>Schaffe</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral deaf Hearing</td>
<td>1.742</td>
<td>.982</td>
<td>.219</td>
<td>-.74</td>
<td>4.23</td>
</tr>
<tr>
<td>Oral deaf Culturally Deaf</td>
<td>-.886</td>
<td>1.295</td>
<td>.792</td>
<td>-2.39</td>
<td>4.16</td>
</tr>
<tr>
<td>Hearing Oral deaf</td>
<td>-1.742</td>
<td>.982</td>
<td>.219</td>
<td>-4.23</td>
<td>.74</td>
</tr>
<tr>
<td>Hearing Culturally Deaf</td>
<td>-.855</td>
<td>1.322</td>
<td>.812</td>
<td>-4.20</td>
<td>2.49</td>
</tr>
<tr>
<td>Culturally Deaf Oral deaf</td>
<td>-.886</td>
<td>1.295</td>
<td>.792</td>
<td>-4.16</td>
<td>2.39</td>
</tr>
<tr>
<td>Culturally Deaf Hearing</td>
<td>.855</td>
<td>1.322</td>
<td>.812</td>
<td>-2.49</td>
<td>4.20</td>
</tr>
</tbody>
</table>

**ExternalManifestations**

<table>
<thead>
<tr>
<th>Schaffe</th>
<th>Subset for alpha = .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>N</td>
</tr>
<tr>
<td>Hearing</td>
<td>19</td>
</tr>
<tr>
<td>Culturally Deaf</td>
<td>8</td>
</tr>
<tr>
<td>Oral deaf</td>
<td>22</td>
</tr>
<tr>
<td>Sig.</td>
<td>.363</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed.


b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

8. Paired samples for t-tests for combined deaf and H groups’ scores: External Manifestations

### Group Statistics

<table>
<thead>
<tr>
<th>Group Status</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExternalManifestations Deaf</td>
<td>30</td>
<td>34.40</td>
<td>3.338</td>
<td>.610</td>
</tr>
<tr>
<td>Hearing</td>
<td>19</td>
<td>32.89</td>
<td>2.726</td>
<td>.625</td>
</tr>
</tbody>
</table>

267
9. Paired samples for *t*-tests for OD and CD groups’ scores inclusive of deafness-specific items: External Manifestations

### Group Statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral deaf</td>
<td>22</td>
<td>86.91</td>
<td>7.104</td>
<td>1.515</td>
</tr>
<tr>
<td>Cultural Deaf</td>
<td>8</td>
<td>83.13</td>
<td>9.296</td>
<td>3.287</td>
</tr>
</tbody>
</table>

### Independent Samples Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>ExternalManifestations</td>
<td>Equal variances assumed</td>
<td>.584</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td>1.724</td>
</tr>
</tbody>
</table>

10. Between-groups ANOVA: Potential Maximisation
### Descriptives

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral deaf</td>
<td>22</td>
<td>78.95</td>
<td>6.090</td>
<td>1.298</td>
<td>Lower Bound: 76.25, Upper Bound: 81.65, Minimum: 66, Maximum: 89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hearing</td>
<td>19</td>
<td>75.32</td>
<td>5.292</td>
<td>1.121</td>
<td>Lower Bound: 72.77, Upper Bound: 77.87, Minimum: 68, Maximum: 86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culturally Deaf</td>
<td>8</td>
<td>77.38</td>
<td>6.844</td>
<td>2.420</td>
<td>Lower Bound: 71.65, Upper Bound: 83.10, Minimum: 69, Maximum: 86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>77.29</td>
<td>6.031</td>
<td>0.862</td>
<td>Lower Bound: 75.55, Upper Bound: 79.02, Minimum: 66, Maximum: 89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>135.065</td>
<td>2</td>
<td>67.533</td>
<td>1.928</td>
<td>.157</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1610.935</td>
<td>46</td>
<td>35.020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1746.000</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Multiple Comparisons

Dependent Variable: PotentialMaximisation

Schefte

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral deaf</td>
<td>Hearing</td>
<td>3.639</td>
<td>1.853</td>
<td>.157</td>
<td>Lower Bound: -1.05, Upper Bound: 8.33</td>
</tr>
<tr>
<td></td>
<td>Culturally Deaf</td>
<td>1.580</td>
<td>2.443</td>
<td>.812</td>
<td>Lower Bound: -4.60, Upper Bound: 7.76</td>
</tr>
<tr>
<td>Hearing</td>
<td>Oral deaf</td>
<td>-3.639</td>
<td>1.853</td>
<td>.157</td>
<td>Lower Bound: -8.33, Upper Bound: 1.05</td>
</tr>
<tr>
<td></td>
<td>Culturally Deaf</td>
<td>-2.059</td>
<td>2.494</td>
<td>.713</td>
<td>Lower Bound: -8.37, Upper Bound: 4.25</td>
</tr>
<tr>
<td>Culturally Deaf</td>
<td>Oral deaf</td>
<td>-1.580</td>
<td>2.443</td>
<td>.812</td>
<td>Lower Bound: -7.76, Upper Bound: 4.60</td>
</tr>
<tr>
<td></td>
<td>Hearing</td>
<td>2.059</td>
<td>2.494</td>
<td>.713</td>
<td>Lower Bound: -4.25, Upper Bound: 8.37</td>
</tr>
</tbody>
</table>
11. Paired samples for t-tests for combined deaf and H groups’ scores: Potential Maximisation

### Group Statistics

<table>
<thead>
<tr>
<th>HearingStatus</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error of Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>PotentialMaximisation Deaf</td>
<td>30</td>
<td>78.53</td>
<td>6.219</td>
<td>1.135</td>
</tr>
<tr>
<td>PotentialMaximisation Hearing</td>
<td>19</td>
<td>75.32</td>
<td>5.292</td>
<td>1.214</td>
</tr>
</tbody>
</table>

### Levene’s Test for Equality of Variances

<table>
<thead>
<tr>
<th>PotentialMaximisation</th>
<th>Equal variance assumed</th>
<th>Equal variance not assumed</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>.271</td>
<td>1.936</td>
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<tr>
<td>Sig.</td>
<td>.271</td>
<td>.060</td>
</tr>
<tr>
<td>df</td>
<td>47</td>
<td>42.90</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.068</td>
<td>.060</td>
</tr>
<tr>
<td>Mean Difference</td>
<td>3.218</td>
<td>3.218</td>
</tr>
<tr>
<td>Std. Error Difference</td>
<td>1.724</td>
<td>1.662</td>
</tr>
<tr>
<td>95% Confidence Interval of the Difference</td>
<td>-251</td>
<td>.135</td>
</tr>
<tr>
<td>Lower</td>
<td>6.686</td>
<td>6.570</td>
</tr>
<tr>
<td>Upper</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. Paired samples for $t$-tests for OD and CD groups' scores inclusive of deafness-specific items:

Potential Maximisation

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Maximisation</td>
<td>22</td>
<td>162.50</td>
<td>13.045</td>
<td>2.781</td>
</tr>
<tr>
<td>Oral deaf</td>
<td>8</td>
<td>158.63</td>
<td>12.939</td>
<td>4.575</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Samples Test</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>------------</td>
<td>------</td>
</tr>
<tr>
<td>Equal variance not assumed</td>
<td>.724</td>
</tr>
</tbody>
</table>
Author/s:
Jacobs, Paul Gordon

Title:
Proactive psychosocial attributes and tactics of vocationally and socially successful people who are deaf: a pragmatist study

Date:
2009

Citation:

Publication Status:
Published

Persistent Link:
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File Description:
Thesis - Chapters 1 to 5

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