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Deafness-Specific Tactic Knowledge: A New Understanding of Mental Health, and Social and Professional Participation

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1. Introduction

Living with a disability offers inordinate cognitive and social challenges. A person with a disability that is maximizing their social and professional opportunities therefore offers a unique understanding of human potential. This chapter proposes that a deaf individual's mastery and execution of disability-specific tactic knowledge is essential for their mental health, and their social and professional participation. Tactic knowledge defines the cognitions that an individual uses to perform practical everyday tasks to maximize their social or professional outcomes (Sternberg, 1985; Sternberg & Wagner, 1986). Disability-specific tactic knowledge is the individual's use of specialized proactive cognitive and social (psychosocial) strategies to identify, circumvent, or master disability-related psychological, social, or professional challenges (Jacobs, 2010). Disability-specific tactic knowledge is also speculated to be absent in individuals without disabilities. They have no need to acquire, nor require the use of, such an esoteric psychosocial skill set (Jacobs, 2010). As such, it appears that deaf individuals need to master two sets of tactic knowledge to maximize their potential.

These concepts derive from my research with professionally successful deaf participants and owe much to research into Learning Disabilities (LD) by Henry Reiff, Paul Gerber, and Rick Ginsberg. Before elaborating on this cross-disability connection, attention will be given to issues linked with social and professional participation and also the mental health of deaf people. At the outset, however, the author acknowledges that certain mental health conditions have biological origins. But this should not distract us from the reality that adverse environmental influences and an individual's maladaptive coping strategies can negatively impact on their mental health, and social or professional pursuits. In addition, this book chapter is by no means an exhaustive survey of the deafness literature of social and professional participation, and mental health. The main aim is to canvass themes and to thereafter illustrate the associated importance of disability-specific tactic knowledge.

2. Social participation and mental health issues in deaf children

By definition, deafness is not a learning disability. Deafness, however, can significantly impact on the individual's spoken expression and listening comprehension, and - by

extension - their social learning, development, and interaction. Deaf people appear to be more prone to social isolation or exclusion than the general population (de Graaf & Bijl, 2002; Punch, Hyde, & Power, 2007). Deaf child participants have reported higher prevalence of emotional and conduct problems when compared with hearing peers (Hintermair, 2006; van Gent et al., 2007). Qualitative studies have additionally observed ongoing social difficulties by deaf children in their interactions with hearing peers (Bat-Chava & Deignan, 2001; Punch & Hyde, 2011). An Australian study by Remine and Brown (2010) found that the prevalence rate of mental health problems in deaf child participants ($n = 38$) were comparable to that of Australian population norms. Deaf participants in this study were mostly conversant with spoken language unlike an earlier Australian study by Cornes et al. (2006) whose deaf participants ($n = 54$) mostly preferred sign language (SL) for communication. SL is a manual language that has many official forms (e.g., American Sign Language [ASL], Auslan [Australian SL]) and places a premium on hand signs over speech and listening for communication (Scheetz, 2004). Using an interactive Auslan assessment tool instead of a standard English version, Cornes et al.'s study yielded a prevalence of clinically significant emotional and behavioral problems in deaf adolescents (42.6%) when compared with the standard English version (21.4%).

The higher reported psychopathology rates in Cornes et al.'s (2006) study compared with Remine and Brown's (2010) study may be associated with the deaf participants' communication competence. According to Hindley (2005), children with early onset and severe to profound deafness are more likely to experience mental health problems than their hearing peers. Early communication deprivation is one of the key risk factors. For example, van Gent et al.'s (2007) study with deaf adolescents ($n = 70$) found that of psychopathology was related to a signing mode of communication among other factors (e.g., low IQ). By contrast, a study by de Graaf and Bijl (2002) found that deaf participants with a higher speech-reading competence were less likely to report mental distress than those with lower competence. Speech-reading is the ability to synchronize body language - particularly the formations of the lips - with the auditory input and pretexts of the conversation when the speaker is talking (Jacobs, 2007). Good speech-reading ability and speech intelligibility by deaf individuals are also indicators of psychosocial adjustment with hearing peers (Arnold, 1997; Bain, Scott, & Steinberg, 2004; Polat, 2003). Studies additionally suggest that deaf individuals with same aged or superior spoken language skills have fewer relationship problems with hearing peers than do deaf individuals lacking spoken language skills (Fellinger, Holzinger, Beitel et al., 2009; Hintermair, 2006).

According to Toe, Beattie, and Barr (2007), deaf individuals with under-developed pragmatic skills are likely to experience social difficulties, and are at risk of lower self-esteem and social isolation. Pragmatic skills are defined by conversational and communicative competence. Language proficiency is required to perform pragmatic skills effectively. As pragmatic skills develop through conversations with numerous people, the individual learns more about the rules of conversations and how relationships are formed. Toe et al.'s study was with 18 participants aged between six and 16 years who had severe and profound deafness, and included both hearing aid users and cochlear implant (CI) users. All conversed using spoken English and attended regular classroom settings for at least daily. Video analysis of these participants conversing with their supporting teacher of the deaf showed that very few conversational breakdowns occurred. Younger participants

relied heavily upon simple responses to teacher questions whereas the older students were more likely to initiate conversational turns and to evenly share the conversational talk time. A strong relationship was observed between students' age, linguistic competence, and pragmatic skills. The authors speculated that the participants' engagement in mainstream secondary school environments gave them opportunities to practise, and therefore develop, pragmatic skills with hearing peers.

The literature therefore suggests that there is a strong link between the use of language, social participation, and mental health. It is pertinent, however, to note that discretion is required when considering studies with deaf child participants. For instance, studies may show that deaf children or adolescents have similar levels of language development or social adjustment to their same age hearing peers; but this may say little about their capacity to deal with a whole new set of deafness-related psychosocial challenges when they leave the confines of school or family life as a young adult. I sought to convey as much of my own experiences living with profound deafness in *Neither-nor: A young Australian's experience of deafness* (Jacobs, 2007). Leaving the protective environs of school and family may confront a deaf individual with a series of persistent psychosocial challenges for which they may be woefully underprepared. While the use of language appears to be essential in facilitating social participation, additional cognitions are likely required to attain and sustain quality of life. Namely: deafness-specific tactic knowledge. Before elaborating on this key concept, it is necessary to provide a short survey of serious challenges encountered by many deaf adults.

3. Mental health, and professional and social participation in deaf adults

Given the reported psychosocial challenges experienced by young deaf participants, attempts to attain and maintain quality of life in adulthood are perhaps more difficult for deaf individuals than for individuals without a disability. Chronic unemployment, under-employment, and maintaining employment are problems for many deaf adults (Hogan et al., 2009a; Punch, Hyde, & Creed, 2004; Rosengreen, Saladin, & Hansmann, 2009). For example, a disproportionately high 45 percent of unemployed deaf Australians were deaf before 20 years old (Hogan, O'Loughlin, Davis, A., & Kendig, 2009a). Moreover, deaf Australians with just one disability (i.e., deafness) are currently nine times less likely to be employed than average Australian (Access Economics, 2006). Individuals with additional disabilities to deafness are also proportionately less likely to be employed per additional disability (Australian Safety & Compensation Council, 2007).

Career difficulties for deaf people can include physical or structural impediments such as excessive background noise, the workplace requirement of using telephones, the non-provision of assistive auditory devices (e.g., FM systems), and auditory rather than visual alerting signals (e.g., colleagues announcing departure) (DeCaro, Mudgett-DeCaro, & Dowaliby, 2001; Scherich, 1996). Other difficult workplace circumstances include group situations such as departmental, staff meetings, work-related social functions, in-service training sessions, and informal social interactions (e.g., lunch breaks) (Hyde & Punch, 2009; Scherich & Mowry, 1997; Scherich, 1996; Steinberg, Sullivan, & Montoya, 1999). Additional barriers are the discriminatory practices of being refused workplace promotion on merit, being bullied, and being denied necessary and reasonable deafness-related accommodations (e.g., a note taker for meetings) (Scherich, 1996; Scherich & Mowry, 1997; Wheeler-Scruggs, 2002). Many deaf people are also significantly disadvantaged because they have not

developed strong social skills necessary for effective workplace relationships before entering the workforce (Rosengreen et al., 2009).

Unemployment and living alone have been found to be significant indicators of mental distress in deaf adults (de Graaf & Bijl, 2002). Social isolation or unsatisfactory social participation has been linked with loneliness, exhaustion, lethargy, anxiety, apathy, despondence, social dissatisfaction, and severe self-doubting (Backenroth-Ohsako, Wennberg, & af Klinteberg, 2003; Heydebrand et al., 2005; Steinberg, Sullivan, & Montoya, 1999; Wheeler-Scruggs, 2002). Cited problems include communication difficulties in group situations, understanding conversational nuances, and learned helplessness (Heydebrand et al., 2005; Hyde, Punch, & Komesaroff, 2010). Studies have also reported higher levels of mental distress, depression, interpersonal sensitivity, phobic anxiety, substance abuse, and hostility in deaf individuals compared with population norms (Brunnberg, Boström, & Berglund, 2007; de Graaf & Bijl, 2002; Fellingner et al., 2007; Jones, E.G., Ouellette, & Kang, 2006; Monzani et al., 2008). Irritability, feelings of inferiority, and phobias can create a mutually impacting cycle of social rejection and psychological dejection, and deliberate self-seclusion from social and professional activities (Heydebrand et al., 2005). Kvam, Loeb, and Tambs (2007) further found that negative childhood experiences (e.g., parental abuse, bullying, and sexual abuse) increased the probability of mental health problems in deaf adults. Hearing spouses of people with acquired deafness have additionally reported comparatively poorer psychological, physical, and social wellbeing when measured with population norms (Fellinger et al., 2005; Hogan et al., 2001; Hogan, O'Loughlin, Davis, A., & Kendig, 2009b).

The aforementioned studies mostly had small sample sizes and were conducted in Western nations. Larger studies by Hintermair (2008) and Hogan et al. (2009b) suggested that many themes in the smaller studies are prevalent across the broader population of deaf people. When interacting with hearing peers, deaf individuals are often required to make sense of - and to concurrently act upon - the social situation with less-than-ideal hearing. Another important finding is that stress and anxiety tends to occur when the environmental demands exceed a deaf individual's resources for coping with events (Hogan et al., 2009b; Jones, E.G., et al., 2006). As such, it is not deafness per se that contributes to psychiatric problems. Rather, maladaptive communication and coping strategies appear to be the chief problems for deaf individuals in their quest to gain and sustain social and workplace participation and a healthy mental well-being (Fellinger, Holzinger, Sattel et al., 2009; Hintermair, 2008; Monzani et al., 2008; van Gent et al., 2007). Ineffective communicative abilities can also retard the development of emotional and social skills vital to social participation (Leigh et al., 1996).

It is speculated that the deafness-related difficulties are associated with 1) an individual being a member of a minority that can encounter considerable and consistent ostracism - whether subtle or overt (Hogan, 2001); 2) the cognitive demands deriving from learning and executing deafness-specific proactive psychosocial skills, and; 3) difficulties deriving from real-time interaction with less-than-ideal hearing. Deaf individuals therefore appear to encounter more psychosocial challenges than do nondisabled individuals (Kvam et al., 2007; Lukomski, 2007). These extra and unique psychosocial difficulties for deaf individuals - or disability-related psychological, social, and professional challenges - may negatively impact on their mental health (Jones, E.G., Ouellette, & Kang, 2006). In addition, these challenges

appear to have two primary characteristics: external and internal (Glickman, 2008). External challenges are outward social and professional pressures encountered by the individual. Internal challenges are the individual's cognitive capacity to deal with these external challenges.

4. Shifting focus: A strength-based understanding

The previous survey of the literature runs the risk of portraying a dire picture of living life with deafness. However, when viewed from another angle, positives also appear. For example, studies show that a majority of deaf participants are achieving workplace participation and a healthy mental well-being. An additional finding is that the attainment of tertiary qualifications is an indicator of deaf people achieving near identical incomes to similarly qualified hearing peers (Jones, D.D., 2004). But what are these deaf people actually doing in their daily lives to maximize their social and professional potential? This question may be best answered by a focus shift.

According to Hintermair (2006), there is a need for a "capabilities-resources" perspective of understanding deaf people. This focuses on 'what works' as opposed to describing the dimensions of deafness-related problems. In 1998, the then president of the American Psychological Association Martin Seligman stressed the need for substantial strength-based research into psychosocial attributes and tactics for coping with day-to-day life (Hintermair, 2006). Seligman also argued that research focusing on personal weaknesses has contributed to mental health professionals being ill-equipped to conduct or devise effective interventions (Hintermair, 2006). Similarly, describing the dimensions of deaf people's social isolation, employment disadvantages, and mental health problems may not actually benefit deaf people, their peers, or family. This is a deficit mode of thinking because it focuses on what deaf people cannot do, or have difficulties with. Descriptions of problems can have little or no practical value for everyday living. Oppositely, strength-based research seeking to understand what deaf people can do – or how their healthy personalities are operationalized – can uncover knowledge of their capabilities and utilization of resources. This practical knowledge also has a prescriptive value. The specialized tactics gleaned from the research can thereafter be used to inform educational or intervention practices designed to assist deaf people who, in turn, will use these skills. That is not to dismiss that challenges do and will continue to exist – or underestimate the importance of research identifying these challenges – but to emphasize a shift in focus toward deaf people's strengths and capabilities (Hintermair, 2006).

Three examples of studies seeking to understand strength-based psychosocial attributes in deaf participants are as follows. Powers (2011) studied factors influencing the success of high achieving English deaf adolescents. Interviews were conducted with the deaf students themselves (n = 27), their parents (n = 27), teachers of the deaf (n = 27), and professionals other than teachers of the deaf (n = 21). The methodology was similar to Luckner and Muir's (2001) American study and also produced remarkably similar findings. In both studies, each of the participant groups attributed success to 1) the child's own personal attributes and character over other factors in order of importance: 2) the influence of parents, 3) the support of teachers of the deaf and teaching assistants, and 4) skills in language, communication, and reading. In addition to the crucial finding that attributes and character are key aspects to success in deaf people, studies by Powers and Luckner and Muir also

revealed specific cognitive attributes (e.g., hard work and high expectations). In another strength-based study, Bain et al. (2004) sought to understand the connection between coping strategies and socialization in deaf adult participants (n = 38) raised using spoken language. The majority of participants had developed psychosocial strategies to negotiate deafness-related social difficulties. Strategies included initiating modifications of the environment to ensure communication ease, adapting to the needs of others, 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.

Given the unique psychology required to contend with inordinate challenges, a deaf individual who is achieving social and professional participation, and who sustains a healthy mental wellbeing, can be considered a remarkable example of human performance. Strength-based studies by Bain et al. (2004), Luckner and Muir (2001), and Powers (2011) emphasized the importance of the deaf individual's own attributes and character, and also alluded to proactive psychosocial strategies. Despite this, Bain et al. and Powers both opined that there is scarce research of how deaf children become successful adults regarding their professions, relationships, mental health, and overall quality of life. Should such future research be undertaken, much could be gained from understanding how deaf individuals operationalize their success in their daily interactions. This focus may become sharper when viewed from the perspective of expert performance.

5. Expert performance and practical intelligence

In recent years, the general public's interest has been captured by the role of expert performance by individuals who have achieved world-class acclaim in their chosen profession. Books of the topic include Geoff Colvin's *Talent is Overrated* (2010), Daniel Coyle's *The Talent Code* (2009), and Malcolm Gladwell's (2009) *Outliers*. Each book has popularized the seminal work of Professor Anders Ericsson, widely acclaimed as the world's leading authority on expert performance, and his colleagues. Ericsson, Charness, Feltovich, and Hoffman's (2006) review of studies regarding expert performance has suggested that deliberate practice is more valuable than innate talent. Deliberate practice is defined as the individual's intense and often repetitive practice of a technique, craft or skill. Many of these tasks are highly sophisticated and specialized, and cannot be mastered or executed without sustained deliberate practice. Ericsson, Krampe, and Tesch-Romer (1993) further noted that ten or more years of sustained, intense, and specified practice are the norm with world-class performers across the breadth of professions. Gladwell (2009) refined this concept as the '10,000 hour rule'. Expert performers typically devote 1,000 hours of deliberate practice yearly to their craft for at least a decade before operating at a world class level of performance; beyond 1,000 hours practice a year diminishes the quality due to the human inability to sustain such effort.

The consensus is that no amount of innate talent will achieve optimum outcomes if practice is forfeited, denied, or is of a continuous poor quality. Ericsson et al. (1993) additionally note that efficient learning is impossible and improvement minimal - even for highly motivated individuals - without adequate tuition or feedback. Nevertheless, Ericsson et al. suggested that the intervention of specific instruction can lead to the eventual improvement of temporarily arrested or suboptimal skill levels. The acquisition of expert knowledge ideally requires an individual to receive explicit instructions through supervision of a teacher who

can make astute diagnoses of errors and provide corrective feedback when necessary. Training and monitoring of expert performance also involves the administering of appropriate tasks according to the individual's skill level. Individualized instruction is generally recognized as superior to training by curricula or in groups. After tuition, a high performer can operate alone to accumulate and refine knowledge of the effective methods and associated practices necessary for expert performance.

However, Ericsson et al.'s (2006) investigated foci are located in the diverse professions within which extraordinary individuals have maximized or are maximizing their potential. Examples are sport, art, science, and medicine - but professions nonetheless. Taking nothing away from this exemplary research, expert performance also appears to have an association with the mental health, and the social and professional participation for people with disabilities. Here is where deaf individuals, or individuals with a LD, can offer contemporary science a greater understanding of human potential. Instead of using expert knowledge for a profession alone, successful individuals with a disability are likely using additional specialized skills to maximize their professional, social, and romantic potential. Explicitly: psychosocial skills specific to dealing with disability-related challenges. This expert knowledge may, in turn, be instrumental to the individual maintaining and sustaining their healthy mental well-being over time. But how is this potential operationalized on a daily basis?

Everyday psychosocial skills specific to identifying, circumventing, or mastering disability-related challenges appear to be a specialized form of tactic knowledge. Also known as practical intelligence, tactic knowledge defines an individual's competence in everyday real-world settings (Sternberg, 1985, 1988). According to Wagner and Sternberg (1986), tactic knowledge is "(1) practical rather than academic, (2) informal rather than formal, and (3) usually not directly taught" (p. 54). Tactic knowledge also regards managing the self, managing others, and career management. Management of the self connotes knowledge of conducting daily tasks efficiently and how to maximize one's own productivity through self-initiative (Wagner & Sternberg, 1986). Management of others refers to tactic knowledge which tailors and assigns tasks that utilizes the strengths and minimizes the weakness of others, and also how to cooperate with others generally (Wagner & Sternberg, 1986). Management of career includes tactic knowledge of what is valued in the workplace, how to convince others of your work's value, and how to sustain a good reputation (Wagner & Sternberg, 1986).

Individuals with high practical intelligence are skilled at absorbing tacit information and then utilizing that information in every day contexts (Sternberg, 2003). Practical intelligence is also used by individuals to shape to their environment and to also adapt to the needs of others. Experience plays a crucial role in the acquisition of, and effective use of, practical intelligence (Sternberg, 2003). Through the use of creative or synthetic intelligence, an individual undertakes a challenge - or a new type of problem - by incorporating the new knowledge with their pre-existing knowledge (Sternberg, 1985). They will then sift purpose-irrelevant from purpose-relevant information, synchronize this selected information into a plausible whole, and then act on this evaluation. It is by successfully dealing with what Sternberg (2003) calls 'relative novelty' that an individual becomes skilled to the point of 'relative familiarity.' Having acquired the experience through practice, an individual will likely become so familiar with a process of a task that their actions will be automatic. When

such mastery occurs, the individual will have the mental resources for coping with new challenges associated with the process or task. It is through active risk taking and continual interpersonal engagement that individuals develop tactic or practical knowledge in diverse social settings. Otherwise, successful social or professional participation cannot occur (see Sternberg & Wagner, 1986). Individuals who avoid engagement, or to overly seek protection in parents, an organization, or peer group, are more likely to experience negative cognitive and social outcomes when confronting adversity (Sternberg, 1988). The reason: they have not practiced or developed the psychosocial skills necessary for optimal functioning. As Kentish (2007) noted, parents who shelter their deaf child from emotionally or socially awkward situations (e.g., as an interpreter or negotiator) can compromise their child's opportunities, and therefore ability, to develop coping skills. Parental overprotection can result in the child remaining dependent, passive, and socially immature.

6. Psychosocial skills and social participation

To illustrate the proposed phenomenon of two types of psychosocial skill sets required of a deaf individual to maximize their potential, it is perhaps helpful to review themes in the following studies. These studies are grouped according to the roles of five themes relating to the acquisition of tactic knowledge: 1) spoken language and cognitive capacity, 2) the onset of deafness as impacting on psychosocial performance, 3) the pre-existing lack of psychosocial development despite improved hearing through cochlear implantation, 4) parenting and deafness-specific tactic knowledge, and 5) the idea that deafness-specific tactic knowledge can be taught through expert tuition.

Studies by Roberts, Brown, and Rickards (1996) and Brown et al. (2000) of pre-schoolers show that the deaf participants appeared to lack tactic knowledge when compared with hearing participants. The studies were of entry behaviors into play groups. Hearing children appeared to be more innovative with entry behaviors when met with resistance from the play group. These persistence strategies commonly saw the child eventually gaining acceptance. The deaf children, however, tended to use the same strategies regardless of previous failure. As such, their comparative lack of tactic knowledge saw them being continually rejected by the play group. It is probable that less-than-perfect hearing had restricted the deaf children's acquisition of language. Hearing children have the advantage of learning through their greater listening capacity to acquire and use effective tactic knowledge. Another factor is worth considering: pre-schoolers are yet to develop their powers of concentration, attention, and cognitive reasoning. Trying to make sense of the situation – particularly with the additional challenge of deafness – may be beyond the capacity of the human brain at this age. Furthermore, deaf preadolescents are yet to acquire the numerous hours of practice necessary to produce consistent optimal social outcomes for themselves.

Studies have further indicated that the later the onset of deafness the poorer was the participants' psychosocial adjustment (de Graaf & Bijl, 2002; Polat, 2003; Powers, 2003). For example, de Graaf and Bijl's study with 23 deaf adult participants found that more post-lingually than pre-lingually deaf participants experienced daily deafness-related problems. Participants who acquired deafness after the age of three were more likely to report mental distress than participants who were deaf prior to that age. Mental distress was also linked with communication problems, lower self-esteem, inferior speech-reading competence, and

lesser acceptance of deafness-related psychosocial problems. Onset of deafness places certain demands on an individual's cognitive capacity. The tactic knowledge they acquired and executed as a 'hearing person' prior to their deafness is not enough; mastery of a new additional set of deafness-specific tactic knowledge is required for their potential to be maximized. One example of a deafness-specific skill is speech-reading - a learned skill that takes much practising, and therefore time, to master (Arnold, 1997).

Many hearing parents of deaf children have additionally reported stress and anxiety regarding the increased social demands during their deaf child's adolescence (e.g., difficulties with group conversations and fitting in a social group) (Hintermair, 2006; Hyde et al., 2009). Polat (2003) further found that deaf participants with deaf parents were better adjusted than were deaf participants with hearing parents. Hintermair additionally reported that deaf mothers were less stressed than were hearing mothers of deaf children. Reported high stress levels in the hearing mothers may be a consequence of them not having access to, or possessing, knowledge of the skills required to identify, circumvent, or master deafness-related psychosocial challenges. Hearing parents typically 'start from scratch' with little or no pre-existing experience of deafness. Deaf parents, by contrast, have first-hand experience of deafness. They are therefore more likely to be conversant and resourceful with deafness-specific knowledge to instruct and nurture their deaf children than are hearing parents. For example, Meadow-Orlans (1990) observed that deaf parents tend to grant their deaf children independence and are less anxious to about their child's ability to navigate the world. As Ericsson et al. (2006) reasoned, expert tuition is essential for the nurturing of specialized performance. Polat also speculated that hearing parents may exert "strong parental control which reinforces passivity rather than active exploration" (p. 331) in their deaf children. Active exploration links with Sternberg's (2003) idea that experience is necessary for the acquisition and optimal functioning of tactic knowledge.

Several studies report varying degrees of social skills functioning and social participation in children with CIs (Bat-Chava & Deignan, 2001; Bat-Chava Martin, & Kosciw, 2005; Punch & Hyde, 2011). Cochlear implantation in profoundly deaf people brings their hearing capacity into the speech range and has been found to improve their social interaction (Hogan et al., 2001). While cochlear implantation can improve a deaf individual's speech retention, it does not necessarily translate directly into improved social participation (Punch & Hyde, 2011; Leigh et al., 2009; Schorr, 2006). For example, Schorr found that children implanted at older ages were more likely to report loneliness, were slower to adjust, and had difficulties achieving feelings of belongingness at school than were children implanted at earlier ages. Despite an improved hearing capacity gained through a CI, the individual may have pre-existing maladaptive behaviors associated with their deafness. However, Bat-Chava et al. report that developmentally delayed deaf children had achieved significant progress in age-appropriate development of communication, socialization, and daily living skills after years of hearing aid or CI use. According to the authors, deaf children's communication and social skills may be improved through CIs. Another possibility is that deafness-specific tactic knowledge develops over time through practice. According to Ericsson et al. (1993), deliberate practice is time consuming but essential for expert performance.

Findings in de Graff and Bijl's (2002) study indicated that the improvement of communication skills in a variety of situations could help avert mental health problems in deaf adults. Books by Glickman (2008) and Hogan (2001) contain a diverse range of

prescriptive communication and psychosocial skills specific to deafness-related social challenges. The value of Glickman's text is that it makes cognitive behavioral therapy accessible to low functioning deaf individuals and also to deaf people whose first language is SL. Hogan's communication skills program adapted the Hearing and Listening Skills Program published by Hetu and Getty (1991) - perhaps the most acknowledged intervention for deaf people to enhance their management of everyday difficulties (Heydebrand et al., 2005). Hogan's program aims to equip deaf people with 1) problem identification, 2) problem exploration, and 3) problem resolution. Many excellent deafness-specific strategies are provided. Hogan's program was additionally adapted for a study by Heydebrand et al. Adaptation of the program included enhancement of communication skills through cognitive behavioral techniques designed to positively reframe the participants' negative assumptions, attitudes, and beliefs associated with their deafness. Participants were taught to identify the emotional reasons and consequences of why they might not, or should, initiate strategies (e.g., asking to turn down loud music at a party to improve conversational ease). These are examples of deafness-specific tactic knowledge. Heydebrand et al. found that the psychosocial skills program proved effective to the study's participants, which highlights the value of specialist tuition in the nurturing of expert performance (Ericsson et al., 1993). Without question, the aforementioned books and programs have covered much ground regarding the understanding and prescription of deafness-specific tactic knowledge. But a systematic and comprehensive framework of proactive deafness-specific tactic knowledge may further improve our understanding of deaf people's social and professional participation and mental wellbeing.

7. A framework of disability-specific tactic knowledge

In their seminal qualitative study, Reiff, Gerber, and Ginsberg (1995) used a framework of proactive cognitive and social tactics to define how 71 participants maximized their social and professional potential despite living with LD. The framework also appears in other works by the same authors (e.g., Gerber, Ginsberg, & Reiff, 1992; Reiff, 1998, 2004; Reiff, Gerber, & Ginsberg, 1997). Perhaps the most unique feature of this research is the pursuit of what could be termed expert knowledge in a disability context. Unsurprisingly, Reiff et al. (1995) stated that a study of expert performance by Bloom (1982) was a significant influence on their framework. Bloom's study was with 25 participants who achieved world class accomplishments before the age of 35 and predates the works of Ericsson and colleagues. The link between expert performance and disability-specific tactic knowledge is therefore clear.

A distinctive feature of Reiff et al.'s (1995) framework is that it defines how individuals maximize their potential through their operationalization of psychosocial attributes and tactics to identify, circumvent, or master disability-related difficulties. Maslow (1970) defined psychosocial attributes as an individual's cognitive traits and processes. For Reiff et al., these are defined as 'Internal Decisions' and consist of three parts: Desire, Reframing, and Goal Orientation. Sternberg (1985) further theorized that psychosocial tactics are externalized behavior outcomes caused by cognitive attributes. For Reiff et al., these are defined as 'External Manifestations' and consist of four parts: Persistence, Goodness of Fit, Learned Creativity, and Social Ecologies. As such, the individual's Internal Decisions are instrumental to their adaptive behavior, which is defined as External Manifestations. Overriding these seven psychosocial skills is the eighth theme of Control, which has a dual

role as being both independent of and also inherent within the seven other themes. A summary of Reiff et al.'s framework appears below:

Control: is controlling one's own destiny, both in real time interaction and with general life circumstances, through use of proactive thinking strategies and social skills.
Internal Decisions
Desire: is putting motivation into action and also describes the individual's endeavor to achieve professional and social outcomes.
Goal Orientation: is the purposeful planning and pursuit of short- or long-term goals in social and professional situations.
Reframing: is purposefully challenging negative thought processes in order to create proactive behavioral outcomes.
External Manifestations
Persistence: is proactively dealing with immediate or long-term disability-related adversity.
Learned Creativity: is the use of various disability-specific compensatory strategies, techniques, methods, or aids.
Goodness of Fit: is choosing social environments that suit personal strengths and/ or avoiding or minimizing entry into settings where success is unlikely.
Social Ecologies: is initiating and maintaining relationships of varying degrees of intimacy to gain the assistance or emotional support of others.

Table 1. Reiff et al.'s (1995) framework of proactive cognitive and social tactics

My PhD research used Reiff et al.'s (1995) framework to observe how deaf participants maximize their social and professional potential (Jacobs, 2009). Although numerous deaf adults have achieved prominence in a variety of professions, scarce research has been systematically undertaken to understand how their success is attained. The review of the literature suggested that the aforementioned eight themes in Reiff et al.'s framework could be applied to a deafness context (see Jacobs, 2010). In other words, deaf people likely use tactic knowledge specific to identifying, circumventing, or mastering social and professional deafness-related challenges. Unlike Reiff et al.'s (1995) study, my study sought to compare the psychosocial competencies in deaf adult participants with a control sample of adult participants without a disability (Jacobs, 2009). This exploratory study was with 49 deaf (n = 30) and hearing (n = 19) adult participants who were residing in America, Australia, England, and South Africa. All participants regarded themselves as maximizing their potential and were currently employed.

Survey items were created for both quantitative and qualitative analyses. In order to conduct statistical analyses, Reiff at al.'s framework was modified so that the eight psychosocial themes combined to create the overall outcome of Potential Maximization (see Jacobs, 2010). The theme of Control was assigned to an independent thematic category mostly to reduce the ambiguity of Reiff et al.'s definition of the theme. This adaptation

enabled the implementation of statistical procedures whereby survey items could be scored. As such, Potential Maximization was the combined score of the three grouped competencies of Control, Internal Decisions, and External Manifestations. At the time of writing, a paper reporting the empirical findings prepared by myself with Dr Louise Paatsch and Associate Professor Margaret Brown was accepted for publication with the *Volta Review*. Summarized, however, there were remarkable findings. Statistical data found no significant differences between deaf and hearing participant groups across four variables of Control, Internal Decisions, External Manifestations, and Potential Maximization. As such, this study's deaf and hearing participants shared similar psychosocial attributes, and tactics to maximize their potential. Qualitative data further revealed that deaf participants maximized their potential using two types of proactive psychosocial attributes and tactics: 1) skills that individuals with typical hearing use to socially participate combined with 2) specialized skills for identifying, circumventing, or mastering deafness-related difficulties. These attributes and tactics were uncovered using Reiff et al.'s (1995) framework, which can further be used to frame previously unpublished findings from my study (Jacobs, 2009). As such, the coming analyses of case studies may provide greater clarity of expert performance that is the proactive use of specialized psychosocial skills by deaf people.

8. Case studies

Investigating outliers of a professionally successful participant sample offers an interesting insight when considering their use of psychosocial skills. In order to better understand proactive deafness-specific tactic knowledge, the scores of the 49 participants were scrutinized and the highest and lowest scoring participants for Potential Maximization (the overall score) were selected as case studies. These participants included two deaf Anglo-Saxon males and who both used spoken language to communicate. The highest scorer was Anthony¹, an American dentist in his early forties from New York. The lowest scorer was Jason, an Australian public servant in his late thirties from Canberra. English was their parents' and their own first language. Neither participant had experienced more than one year's unemployment or had an additional disability. It is prudent to note that both participants considered themselves as maximizing their potential as defined by a preliminary survey item. Both participants were also professionally successful, meaning they were two high functioning deaf individuals.

Deaf from birth, Anthony reported profound bilateral deafness, had a CI, 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. His highest educational qualification was unspecified. He learnt SL at 19 years old, and was a continued and fluent signer. He did not, however, nominate himself as Culturally Deaf 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." Cultural Deafness indicates that the deaf individual self-identifies as belonging to a community of Deaf people who share the commonalities of 1) deafness, 2) a similar language (e.g., ASL, etc.), 3) often a similar education in a segregated specialist education setting for deaf students, and 4) a shared cultural and social history

¹ Pseudonyms are used for both participants.

(Davis, L.J., 1995). In short, the Deaf community has a biological, linguistic, and cultural uniqueness that defines it as a legitimate social minority. However, the majority of deaf people do not self-identify as being culturally Deaf largely due to their having no association with this community or use of SL (Access Economics, 2006).

Jason wore hearing aids and reported moderate bilateral deafness. All deaf participants in the study 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 likely lost his hearing in adulthood. Jason had attained a Masters degree. He reported no Deaf community involvement and had not learnt SL. He did, nonetheless, agree that his life would be better with greater Deaf community involvement.

From here we can look at the two participants’ responses to select survey items that were guided by deafness-related studies grouped according to Reiff et al.’s (1995) framework (Jacobs, 2010). The following three tables summarize responses according the three thematic categories of Control, Internal Decisions, and External Manifestations. The purpose of such analysis is to provide a contrast effect whereby responses to survey items can illustrate trends. Table 2 summarizes the responses of the two participants for items related to Control.

	Anthony	Jason
<i>Control</i>		
I am in control of my work and social life	Strongly agree	Disagree
Adulthood is easier for me than childhood	Strongly agree	Disagree
My life is miserable because of deafness	Strongly disagree	Agree
Summary of deaf person who has maximized their potential	Numerous actual attributes and tactics	“John Howard”
I have overcome the challenges of my deafness	Yes	No

Table 2. Comparisons of Anthony’s and Jason’s distinctive responses to items: Control

The two participants’ responses to five Control items reveal some interesting insights. Anthony strongly agreed and Jason disagreed that he felt in control of both his work and social life, and also that adulthood was easier than childhood. Anthony also strongly disagreed but Jason agreed that his life is miserable because of his deafness. In addition, and interestingly, Jason simply wrote the former Australian Prime Minister “John Howard” when summarizing a deaf person maximizing their potential with hearing peers. For the same item, Anthony elaborated that such a deaf person has attributes such as acknowledging deafness-related challenges and the quickness “to formulate ways to get around the problem” by using tactics such as providing an email address or a SMS number and not “a voice phone number, and explaining it is the preferred way to contact the deaf person, etc.” Anthony further agreed that he had overcome the challenges of his deafness,

whereas Jason did not. Jason cited “practical, technical and aesthetic difficulties with needing to use hearing aids” as his reasons. Anthony, however, mentioned specific deafness-related social 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.” Summarized, Jason’s responses suggest that being deaf has rendered him without a sense of control of his life. Anthony, by contrast, appears use deafness-specific tactic knowledge and to be in control of his destiny.

Table 3 shows the two participants’ different answers to the items associated with the thematic codes of Internal Decisions: Desire, Goal Orientation, and Reframing.

	Anthony	Jason
<i><u>Desire</u></i>		
Successful people seem to be lucky	Strongly disagree	Agree
Negative childhood experiences made me try harder	Strongly agree	Disagree
<i><u>Goal Orientation</u></i>		
I am a risk taker	Strongly agree	Disagree
<i><u>Reframing</u></i>		
I am proud of the skills I use to maximize potential with hearing peers	Strongly agree	Disagree
Dealing with deafness has made me a better person	Agree	Disagree

Table 3. Comparisons of Anthony’s and Jason’s distinctive responses to items: Internal Decisions

Both participants had different responses to two Desire items. Anthony strongly disagreed and Jason agreed that successful people seem lucky. This is perhaps understandable considering that Anthony responses to other items suggested his greater use of purpose-driven tactics that Jason appeared not to possess, let alone be able to use. Anthony also strongly agreed and Jason disagreed that negative childhood experiences made him try harder. Different responses to this item may be related to Jason not being deaf in childhood whereas Anthony was. Jason’s response may also illustrate the difficulty of adjusting to the onset of deafness in adulthood.

Responses to a Goal Orientation item saw Anthony strongly agree and Jason disagree that he was a risk-taker. Jason 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, Anthony 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. While not disability-specific, Anthony’s response expresses comparatively greater exploration – a key prerequisite for the acquisition of tactic knowledge (Sternberg, 2003) – than does Jason’s response.

Two Reframing items received different responses. First, Anthony strongly agreed and Jason disagreed that he was proud of the skills he used to maximize his potential with hearing peers. Anthony also agreed and Jason disagreed that dealing with deafness had made him a better person. Jason wrote that he would be “more vocationally and socially successful” if not deaf. Anthony believed he would have been “more of a product of my parents’ influence ... Mine was more on my own ... I think I would have done just great no matter if I were deaf or hearing.” Anthony therefore appears to have reframed negative connotations related to deafness as positives whereas Jason has not.

Table 4 shows the two participants’ different answers to the items associated with the thematic codes of External Manifestations: Persistence, Goodness of Fit, Learned Creativity, and Social Ecologies.

	Anthony	Jason
<i>Persistence</i>		
The process of self-determinism helps me to be more self-determined	Strongly agree	Disagree
Mastering speech-reading requires practice	Strongly agree	Disagree
<i>Goodness of Fit</i>		
I have chosen employment where my deafness is not a problem	Agree	Disagree
I have made life choices that suit my strengths	Focused on strengths from childhood; chose dentistry because less emphasis on hearing	Misunderstood concept
<i>Learned Creativity</i>		
Text-based telecommunications have put me on a ‘level playing field’ with hearing people	Strongly agree	Disagree
Captioned TV/DVD has improved my social skills	Can make out irony, sarcasm, jokes which helped him with social interaction	“No relationship between watching captions and socialising”
<i>Social Ecologies</i>		
I have had a close hearing friend throughout adulthood	Yes	No
I am sociable with hearing peers	Strongly agree	Disagree

Table 4. Comparisons of Anthony’s and Jason’s distinctive responses to items: External Manifestations.

Answers to two Persistence items saw Anthony strongly agree and Jason disagree that the process of self-determination helped him learn to be more self determining, and that mastering speech-reading requires continual practice. Jason believed that “self-determination is a trait developed in upbringing through good parenting, social interaction, and personal value. Difficult to develop later in life.” This response may allude to the difficulty of acquiring and understanding deafness-specific tactic knowledge – especially without expert instruction. Anthony, however, gave three examples whereby learning to drive, doing taxes, and buying a house require proportionately greater degrees of self-determinism because each require exponentially more complex processes. As such, he identifies a key aspect of tactic knowledge being exponentially related to experience (Sternberg, 2003).

Different responses to a Goodness of Fit item saw Anthony agree and Jason disagree that he had chosen employment whereby deafness is not a problem. Both Jason and Anthony agreed he had made lifestyle choices that suited his strengths. A difference, however, was in the participants’ understanding of the concept. Jason simply stated: “Academic and vocational choices and interests”, which do not define the active engagement in social or professional settings in which success is likely. In contrast, Anthony provided a 152 word justification that began with “I analyzed 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.” Anthony thereafter mentioned that he ignored the advice of “well meaning teachers” who discouraged him to pursue a dentistry career. Now a dentist of 20 years, and having achieved a goodness of fit with personal interests and strengths, Anthony concluded “I look back and think ‘what if I were more naïve and allowed my teachers to decide my future job for me?’”

Responses to two Learned Creativity items were different. Anthony strongly agreed and Jason disagreed that text-based telecommunications (e.g., email, sms, online chat) placed him on a ‘level playing field with hearing peers’ and that watching captioned DVDs and television programs had improved his social skills. Jason did not perceive text-based telecommunications as an aid for connecting with others when stating “Hearing remains a critical element in vocational and social situations.” Anthony, however, wrote that he appreciated the greater ease of social contact through range of text-based telecommunication that was unavailable in his younger years. Jason additionally saw “No relationship between watching captions and socialising”, whereas Anthony stated that watching captioned TV/DVD assisted his social development. Captioned TV/DVD bypasses the auditory challenge whereby subtitled dialogue can be read by the deaf person when watching a program. Anthony explained 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.” As such, he has creatively learned social nuances and strategies that he can use in face-to-face interaction. Again, we see Anthony’s greater understanding of deafness-specific tactic knowledge.

Two Social Ecologies items received different answers. First, Anthony had close hearing friends throughout his adulthood but Jason had not. Second, Anthony strongly agreed and Jason disagreed that he was sociable with hearing peers. Anthony mentioned that his friends helped him integrate by acting as a ‘sounding board’ for social situations and by

answering hypothetical questions such as “what would you do if this happened to you?” This seems to be an effective strategy to gain tactic knowledge that his deafness may otherwise prevent him from gaining. However, Jason’s apparent lack of social interaction and support is perhaps unsurprising given his responses to other items.

9. Deafness-specific tactic knowledge and expert performance

The case studies illustrate three important findings. First, Reiff et al.’s (1995) framework can be applied across disabilities from a LD to a deafness context. Second, the framework is a useful tool for identifying proactive psychosocial attributes and tactics in deaf participants. Third, the case studies suggest that certain deaf individuals have more deafness-related tactic knowledge than do others. Anthony’s survey responses differed greatly to Jason’s - both quantitatively and qualitatively. Anthony clearly appeared to be maximizing his psychosocial potential more so than Jason. Compared with Jason, Anthony displayed consistently a greater range of psychosocial skills specific to identifying, circumventing, and mastering deafness-related social and professional challenges. A key to this trend can be found in the relative pessimism and helplessness that Jason reported compared with Anthony’s optimism and resourcefulness - which are telling indicators of their mental health.

Jason became deaf in adulthood whereas Anthony had been deaf since birth. Studies report that the later the onset of deafness the poorer was the participants’ psychosocial adjustment (de Graaf & Bijl, 2002; Polat, 2003). Anthony has had many more years experience with challenges associated with deafness than has Jason, and therefore much more time in which to practise deafness-specific proactive psychosocial skills. Anthony’s deafness-specific expertise has likely been honed through more intense practice and application - the stimulus of acquired learning and adaptation through social exposure. Jason’s evident self-seclusion and introversion may also impair his acquisition of deafness-specific tactic knowledge. The onset of deafness in adulthood particularly impacts on real-time communication, which - by extension - can devastate the individual’s social, professional, and romantic standings (Hogan, 2001). The onset of deafness also confronts individuals with the need to acquire esoteric deafness-specific psychosocial skills - or tactic knowledge - they had no need to practise prior to the onset of their deafness. More dauntingly, late deafened individuals typically learn the esoteric skills by trial and error without expert tuition. The ramifications for the individual’s mental wellbeing are therefore likely to be negative, if not traumatic.

Interestingly, Anthony attended a school for the deaf, which means he likely had access to specialist teaching and also other people (i.e., his classmates) whom have an experience of deafness. That early and continuous social exposure may have resulted in the sharing of esoteric deafness-specific knowledge that stood him good stead into his middle age. Jason’s desired contact with the Deaf community also may reflect his desire for peer support and, perhaps, access to tuition of deafness-specific psychosocial skills.

10. Conclusion

This chapter emphasized that deaf individuals require deafness-specific tactic knowledge to achieve a healthy mental wellbeing, and quality social and professional participation. The

case studies indicate that deaf individuals require two forms of intelligence to maximize their potential: 1) psychosocial skills expected of the common person in addition to 2) psychosocial skills specific to identifying, circumventing, and mastering deafness-related social challenges. Effective use of pragmatics is an example of psychosocial skills expected of the common person. Knowing the value of watching captioned TV/DVD to understand how social interaction may occur is one example of deafness-specific tactic knowledge. Given their inordinate cognitive, professional, and social challenges, the concept of having to master and to use two types of intelligences makes the feat of human endeavor in successful deaf people remarkable. The case studies further indicate that deafness-specific tactic knowledge is learned just like any other specialized skill. Many years of deliberate practice leads to expert performance in the form of attaining, maintaining, and sustaining quality of life. But if this practice is forfeited, denied, or is of a continuous poor quality, the limitations of deafness may cast a stronghold on the individual's ability to actualize their potential.

The deaf individual's sustained daily efforts to maximize their potential, or quality of life, is the outcome of their mostly unseen psychological processes. In the research of expert performance, this is known as the 'iceberg illusion'; we observe simply an individual's performance - their externalized behavior when interacting with us - which is the metaphorical iceberg's tip (Ericsson & Simon, 1984). Hidden is the submerged evidence of their performance, or direct behavior toward us - the outcome of their cognitive process, or numerous processes, operating concurrently. This unseen quality of human performance may explain why a person without a disability may have difficulty understanding or empathizing with disability-specific psychosocial strategies. They themselves do not use these skills nor contend with disability-related challenges - daily for a lifetime. This issue is of vital importance when considering many, if not most, significant others in a deaf person's life - family, friends, and partners, as well as strangers and acquaintances - are typically not deaf themselves. The same can be said of deafness-related researchers and service providers. A deaf individual's sophisticated hard-earned cognitions and efforts can easily be discounted or overlooked.

According to Gladwell (2009), *opportunity* is the crucial twin to *practice* for potential to be fully maximized. Opportunity consists of a coalition of external factors necessary for the nurturing of an individual's potential. Examples are the accommodations made by parents and the educational system being important factors for optimal psychosocial functioning whether the deaf child had a CI or not (Leigh et al., 2009). While an absolute necessity for potential maximization, the provision of opportunity - commonly worded as providing 'access' in the disability literature - can have a flaw. It can assume that access - in the form of services or improved hearing technology - will translate instantly into participation for the individual. Much, however, is dependent on the quality of service provision or social interaction *when access is gained*. For example, access to a psychologist - an expert in their own right - may be a futile venture for a deaf client if the psychologist knows nothing of the specialized psychosocial skills for identifying, circumventing, or mastering deafness-related challenges (Jacobs, 2007). Without adequate support, deaf children can be vulnerable to isolation within their own families or schools and be deemed 'problem children' (Fellinger et al., 2005). People who become deaf in adulthood can face a similar predicament in the workplace, and in their social and romantic endeavors. Quality of service provision is

therefore vital. Without sufficient psychosocial tuition, deaf people and families with deaf children may encounter needless adversity.

Disability-specific expert performance may today seem an improbable concept. Consider, however, that the English scholar Roger Bacon argued in the thirteenth century that a human required at least thirty years of study to master the mathematics as was then understood (Colvin, 2010). Today, Colvin reminds us, almost every college student has mastered the mathematics Bacon described. Innate human talent has not changed. Rather, the understandings of techniques that foster human potential have considerably improved. Training systems, our education, have become smarter and more efficient to produce mastery in shorter time. Similarly, we may currently assume that the proactive deafness-specific skills that deaf people use to maximize their potential are so random as to be without possible underlying order. As the research presented here and that of Reiff et al. (1995) attest to, the complex and seemingly random psychosocial skills specific to successfully dealing with a disability can be codified as a systematic and comprehensive framework.

Purposefully seeking to understand strength-based psychosocial attributes and tactics in deaf people is in alignment with the scientific study of the healthy personality and also expert performance. Future research with deaf adults who are achieving social and professional success and quality of life is therefore strongly encouraged. The investigation of positive behaviour offers a richer understanding of human psychology and, importantly, has a prescriptive quality that can be applied to practice. The effect will likely be twofold: we gain a deeper understanding of human potential regarding deafness and we will be able to provide more effective prescriptive measures not yet in practice. Identifying and then cataloguing proactive deafness-specific psychosocial skills may provide additional knowledge to existing programs (e.g., Hetu & Getty, 1991; Heydebrand et al., 2005; Hogan, 2001). Given the seriousness of the social, professional, and psychological challenges reported in the literature, it is also essential that these programs be made widely available in deafness-related education, service delivery, and rehabilitation. The desired outcome: greater social and professional participation, and a healthier mental wellbeing for individuals living with deafness.

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12. About the author

Dr Jacobs graduated with a PhD in Education from the University of Melbourne in 2009. He is the author of *Neither-Nor: A young Australian's experience of deafness*, which portrays the social and romantic challenges of being a deaf person who is neither fully hearing nor has a cultural Deaf identity. He also wrote the award winning column *Psychosocial Potential*

Maximization for the Volta Voices. Written for parents of deaf children, it defines everyday deafness-specific life skills according to the framework outlined in this book chapter. He is currently designing an education program of deafness-specific tacit knowledge. His contact is neithernor74@yahoo.com.au.

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Learning disability is a classification that includes several disorders in which a person has difficulty learning in a typical manner. Depending on the type and severity of the disability, interventions may be used to help the individual learn strategies that will foster future success. Some interventions can be quite simplistic, while others are intricate and complex. This book deserves a wide audience; it will be beneficial not only for teachers and parents struggling with attachment or behavior issues, but it will also benefit health care professionals and therapists working directly with special needs such as sensory integration dysfunction.

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