In November 2019, the third international Kentalis Conference Teaching Deaf Learners (TDL2019) had the core question: ‘How can deaf and hard-of-hearing students best be taught given their individual strengths and needs?’ The conference hosted approximately 300 visitors from over 25 countries. With input from their colleagues from Royal Dutch Kentalis and the National Technical Institute for the Deaf (USA) and support by Oxford University Press, Dr Harry Knoors and Marc Marschark led an excellent conference which aimed to bring research and practice in the field of deaf education closer. The conference struck a balance between information for professionals from developing countries and also those from developed countries who are experienced in resource and research-rich educational provision for deaf learners.

Dr Knoors, Programme Director at Kentalis Academy and Professor at the Radboud University, Nijmegen, opened the conference with a presentation promoting cognitive development. The need for more evidence-based focus in this area was acknowledged. In the opening slides of his presentation Dr Knoors referred to the August 2019 NDCS campaign that had urged attention be paid to the attainment gap between deaf and hearing children and young people. Noting his empathy with the campaign, Dr Knoors shared how one sentence in their campaign had struck him: ‘Deafness is not a learning disability’. For him, he posed the question “Why then this attainment gap?” He expressed his view that, “It’s too simplistic”, explaining why the simple statement might unintentionally create a negative impact for deaf learners. He explained that flaws in the educational systems or lack of resources in education are not the only reasons why there is an attainment gap between deaf students and their hearing peers.

The attainment gap:
- yes, early, ongoing, specialised support needed
- but is a suboptimal education system the only causal factor?
- definitely challenges in learning
- simplicity is not going to help.

Dr Knoors noted there is a body of evidence, spanning the last two decades, about cognitive challenges for deaf children and young people. He explained, “… whilst there are instances that deafness leads to challenges in learning, they are not all consequences of failures in education.” He reflected “It is complicated.” (This phrase was a common statement throughout the conference). The last two decades of research have highlighted that deaf children experience challenges in cognitive processing as well as with language and reading. He highlighted the example of executive functioning.

Dr Knoors clarified that whilst ‘Deafness is not a learning disability’ it may result in cognitive problems that influence learning negatively, for many or all deaf learners. He summarised some of the realities experienced by deaf children:
- language development in the first year of life
- language and cognition issues
- aetiology of their deafness
- non-syndromic heritable hearing loss also syndromic hearing loss (eg Waardenburg, Usher)
- Connectome disease
- language deprivation
- intersubjectivity.

Dr Knoors stated that deaf children’s intellectual capacity is in line with that of their hearing peers. He emphasised delays in language development increase the risk of cognitive and social problems. He noted that cognitive deficits in early life include:
- sustaining attention
- working memory
- statistical learning
- later developing executive functions
- social cognition (Tools of the Mind – TOM).

Dr Knoors referenced his book, jointly written with Marc...
Dr. Knoors in 2014, Teaching Deaf Learners and relayed his belief that, “Learning is an ecological process shaped by aspects of the learning situation and by characteristics of the learner. Learning is both a cognitive and a social activity.” He summarised by saying that cognitive development can be promoted by:

- prevention of problems
- early intervention
- focus on parent-child interaction
- access to good quality language and communication
- minimizing risks of cognitive overload
- structuring task demands
- structuring information
- combining effective methods
- modelling
- posing questions
- feedback
- repeating and differentiating
- multi modal presentation of information.

He emphasised that there is no panacea. He categorised intervention as:

- General – instrumental enrichment (Instrumental Enrichment is a cognitive intervention program)
- Specific – Cogmed (Cogmed is a software based intervention entailing different visuospatial and verbal tasks that systematically challenge the working memory capacity during a 5-10 week training period), game-based working memory training, brain game
- EF (Executive Function) interventions
  - music therapy, inner speech/sign intervention
- TOM (Tools of the Mind) intervention
  [www.toolsofthemind.org](http://www.toolsofthemind.org)

Dr. Knoors referred to the consensus in deaf education that preventative measures have to be taken as early as possible and, ideally, in the context of family-centred early intervention. Early life examples given included providing access to language and stimulating parent-child interaction and communication. Within the education-based content there is a need to minimise risk of:

1. cognitive overload. Examples given included task demands, structuring information, combining effective instruction methods, worked exemplars, fill-in exercises, use of process worksheets

2. communication load. Examples given included combining evidence-based effective instruction methods eg explicit direct instruction, teaching in small groups, activation of prior learning, mastery learning and making the thinking of both teachers and learners explicit. (Mastery learning keeps learning outcomes constant but varies the time needed for pupils to become proficient or competent at these objectives – [educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/mastery-learning](http://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/mastery-learning))

In relation to making thinking explicit, Dr. Knoors suggested using worked examples of instructions and by modelling the thinking steps in problem solving, providing feedback, posing questions. He stated the application of metacognitive strategy was the most effective strategy.

He clarified that these are didactic techniques that help minimise cognitive load. Additionally, he drew attention to differentiation, repeating content and, for more complex cognitive problems, the use of collaborative learning.

The use of multi-modal presentation of information was referenced as an approach which can reduce communication overload, if carried out appropriately. Use of too many sources of information adds to cognitive load. Dr. Knoors suggested particular cognitive functions are targeted through specific interventions. He quoted Diamond et al, (2013) “The interesting question is no longer whether executive functions can be improved. They can. At every age, from infants through to elders and via diverse approaches. We do not know how much they can be improved, however, or how long benefits last and what determines how much executive functions improve or whether benefits last.” Dr. Knoors presented a warning about these specific interventions. He emphasised the importance of making sure that the tasks that we train are meaningful in the daily life of deaf learners and highlighted possible useful intervention programmes: Tools of the Mind and Teach like a Champion.

Nevertheless, as he also acknowledged, there is a dearth of effectiveness studies and a need for more, larger scale and replication studies.

He concluded with his view that interventions need to be bundled in a “cognitive curriculum for deaf learners” with provision of appropriate training for teachers because deaf learners are more at risk of developing cognitive problems that may impact learning in various ways.

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The second speaker of the day was Dr Karen Emmorey, a professor at San Diego State University and director of the laboratory of neuroscience. Her research focuses on sign languages and what they can reveal about language, cognition, the brain and the underpinning of reading. The research presented focused on ‘the neurobiological foundations of reading in deaf adults’.

In 2019, Kentalis, with Oxford University Press, published a book Deaf Education Beyond the Western World. The Conference included many speakers and attendees who were contributors to that book. Personally, it was great to have read the book and then listened to and in some cases chatted with the articles’ authors in person. Dr Brons, Manager of Kentalis International Foundation, co-author and co-editor of the volume Deaf Education Beyond the Western World set the scene for the next block session with a short talk on ‘Deaf education – perspectives from the South’. Maria reminded the audience that:

- international law provides that all learners with a disability have the right to adequate language provision, quality teacher education and full access to learning.
- Article 24.3 B and C from the Convention on the Rights of Persons with Disabilities (CRPD) states parties should enable persons with disabilities to learn about life and be social participants in education and as members of the community. They should take the appropriate measures including facilitating the learning of sign language and promotion of the linguistic identity of the deaf community.
- Article 24.3C states that the education of all persons and in particular children who are blind, deaf and deafblind should be delivered in the most appropriate languages, modes and means of communication for the individual.
- United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) article on teacher training highlights that teachers should be employed who are qualified in sign language. Professionals should be trained in appropriate augmentative and alternative modes, means and formats of communication, educational techniques and materials to support deaf learners.

She emphasised the sustainable development goals, particularly Goal 17 that reminds everyone to share expertise, learn from each other and help each other. She iterated the fact that there is a connection between poverty and deafness.

Maria shared the findings that, in deaf education beyond the Western World, there is a lack of linguistic development, standardisation and ability to teach sign language alongside a high recognition that sign language is the language of the Deaf community. The unmet need regarding hearing aids and the lack of infrastructure in speech therapy were also highlighted.

However, the presentation themes for the afternoon echo conversations which continue to take place in the Western World.

The first speaker in this International block session was Dr Peter Oracha. Dr Oracha started his career as a primary teacher before gaining a diploma in special education, which led him to a 15-year period teaching deaf children. He studied Deaf Studies at the University of Bristol, returned to teaching in Kenya and then undertook a PhD with the University of Hamburg. He returned to Kenya and progressed from the role of lecturer to Head of Department with Marceno University in the special needs education and rehabilitation department. His presentation focused on a summary of his research on the level of English grammar used by prelingually deaf learners in Grade 3 in Kenya. Dr Oracha shared deaf education statistics: the deaf population is 366,811; those with speech and language difficulties is 236,491. 13,413 attend primary education, 2648 attend secondary education and 37 are at University. He explained that prelingually deaf learners in Kenya are expected to have a suitable standard in English by the end of Grade 3 as English based sign is used in Grade 4. His study highlighted that the functional English level of Grade 3 learners in Kenya was at the level of a Grade 1 beginner ie the learners were lagging behind by three academic years. The learners were not grasping English skills as the English teaching they were exposed to was above their functional level. He concluded the need for the Kenyan learners to be taught at their functional level regardless of their age and that the three key focus areas should be the grammatical, morphological and syntactical categories.

Dr Maria Rosa Lissi, professor within the psychology department and Director of the LECSOR (Language, Education and Deaf Culture) laboratory at the Pontificia University in Chile, gave an insight into deaf education in her presentation – ‘Chile: Current conflicts and future challenges’. Dr Lissi’s research interests include literacy and language learning in deaf education. Current research
lines at the laboratory include:
- the role of deaf educators in intercultural bilingual education
- development of collaborative and intercultural practices between deaf and hearing educators
- game-based teaching on reading comprehension strategies.

She explained that deaf education has been established for a long time in Chile; they have the oldest school for the deaf in South America. The department for special education, which includes deaf education, was created 100 years later. When the ministry of education started providing special funding for schools to have a mainstream program, there were four schools for the deaf in Santiago. Two schools were oral and the other two used a mixture of approaches. In 2000, one of the latter schools started a bilingual program and, a few years ago, the other school followed a similar approach.

Dr Lissi also outlined the more recent history which included:
- 10 years ago a group of linguists worked with members of the deaf community to study the language and published the first Chilean sign language Spanish dictionary.
- The introduction of a law (20.422) regarding social inclusion for individuals with disabilities. It was the first time in law that sign language is mentioned, not as a language, but in the context of the modality of communication for the deaf community.

Parallel session blocks – day 1

After a lunch which involved lots of networking and discussions with the poster presenters, the first round of parallel sessions included the following presentations:

Chloé Marshall, a professor of Psychology, Language and Education at the University College London Institute of Education and affiliated with the Deafness, Cognition and Language Research Centre, presented on ‘Developmental language disorders in deaf children: Implications for teaching’. Her current research focuses on sign language acquisition in deaf children and hearing adults.

Helen Blom, a PhD candidate at the Behavioural Science Institute of Radboud University in the Netherlands, presented on ‘Hypertext comprehension in deaf and hard-of-hearing students’.

Daniel Holzinger, a clinical linguist and director of the Centre for Communication and Language at the Institute of Neurology of Senses and Language in Linz, Austria, presented on ‘Effects of family environment on language and mental health outcomes of children who are deaf or hard-of-hearing: in search of specific family behaviors and mechanisms’.

Constance Vissers, a clinical neuropsychologist and post doc researcher, and Lidy Smit, a pedagogue, psychologist and PhD student co-presented on ‘Theory of Mind group treatment to improve social-emotional functioning in adolescents who are deaf/hard of hearing’.

The second round of parallel sessions included the following presentations:

Cheri Williams, a professor of Literacy and Second Language Studies at the School of Education at the University of Cincinnati, has specific expertise in writing development and writing instruction, particularly among children who are deaf and hard of hearing. She presented ‘Empirical perspectives on writing instruction with deaf learners’.

Lian van Berkel-van Hoof, a PhD candidate at Radboud University who is undertaking a project focusing on the efficacy of augmentative signs for word learning in children who are deaf/hard-of-hearing and children with Developmental Language Disorder, presented on ‘The role of augmentative signs in spoken word learning by adults with limited auditory access’.

Loes Wauters, a senior researcher at Kentalis and the Behavioural Science Institute, (Radboud University Nijmegen) co-delivered with Hille van Gelder, a linguist and researcher at Kentalis, a presentation ‘Achieving functional literacy for struggling DHH readers’. Loes has a research focus on the language, reading, and maths development
of deaf and hard of hearing learners. Hille’s projects focus on the inventory and analysis of processes of reading and language development of deaf/hard-of-hearing people, from children to adults.

Peter K Isquith, PhD, a developmental neuropsychologist and Senior Attending Psychologist with the Deaf and Hard of Hearing Program at Boston Children’s Hospital co-delivered with Matt Fasano-McCarron, Psy D, a clinical psychologist fluent in American Sign Language who specializes in paediatric neuropsychology. Their presentation was ‘A collaborative problem-solving approach to enhancing self-regulation’.

Dr Fasano-McCarron introduced executive function as a “cognitive construct, a mental activity, the mental control process that helps us undertake goal directed problem solving”. He recognised there is much disagreement in publications about what is executive function and requested referring to Tueber’s (1972) use of ‘The unity and diversity of executive functions’. They also referred to Miyake et al (2000) who found various measures of executive functioning that reflect the ‘diversity’ of the definition, with sub-components: inhibition, updating (working memory) and shifting (cognitive flexibility). It was suggested that unity occurs as “they must function together for goal-directed problem-solving to be effective and for a child to be successful”.

They discussed the relationships of delays in the acquisition of language development being “strongly and constantly related to delays in the development of executive function”. Visser and Herman’s work in the OUP book (2018) Evidence based practices for deaf learners was highlighted, particularly the model based on Vygotsky’s model of understanding the relationship between language and cognitive development. The importance of the language children are exposed to with adults and more linguistically able peers, which influences their behaviours and informs their inner language as this in turn impacts on their learning and problem-solving, was highlighted. Hence the need for self-regulation and other cognitive processes to nurture this process in deaf children.

Dr Isquith led the section that reviewed associated interventions. In his opening slides he drew attention to an article by Adele Diamond ‘Interventions shown to aid executive function development in children 4 to 12 years old’, recommending her work as articles to read. Dr Isquith outlined findings from attempts to train cognitive function (working memory). He focused on Cogmed, the computer-based program; children practise the computer-based activity and they get better at the task but there is little improvement in the classroom and after six months the improvement is gone.

In relation to teaching children not to be impulsive, he emphasised that in the moment they will be impulsive. He highlighted that the greatest benefits stem from the use of a particular coaching model – a collaborative problem-solving model (Ylvisaker and Feeney). He emphasised the need for the learner’s goals to be meaningful and based in the real world. He raised the question of who the coach should be and signposted the ‘tools of the mind’ curriculum.

It was reiterated that executive function is strongly related to language skill and competence but not to hearing status. Dr Isquith stated that children who don’t have executive function problems will not improve their executive function skills. He signposted another resource for children who don’t like change ‘Unstuck & On Target’. He also noted that it is hard to teach people how to coach.

Dr Isquith summarised with these take-home messages:

- we can improve executive function (EF)
- early and continuous support for EF development in natural environments is not effective
- how an EF activity is presented is as important as the activity
- direct EF training may improve skills in isolation but transfer is narrow
- a coaching model across the curriculum may be most effective.

Following a short break, the conference programme returned to the main presentations with Mary Rudner, Linnaeus Centre deputy head, outlining a theoretical perspective on ‘Signing skills support word reading’. It was explained, “Swedish special schools for deaf and hard-of-hearing (DHH) children have a bilingual curriculum whereby written Swedish is learned through the medium of Swedish Sign Language (SSL)”. Mary explained they “have investigated the cognitive underpinnings of learning to read in children who were beginning readers and who attended Swedish special schools for DHH children”. They “found that word reading and its development were associated with the ability to process signs at the sublexical level”. Additionally they “found some evidence that development of word reading is supported by training the links between signed and written language”. It is suggested that “sublexical processing may be a
supramodal mechanism underlying word reading and its development”.

Day 1 closed with a presentation from Jesper Dammeyer, head of a research unit at the Department of Psychology, University of Copenhagen. His research interests include “psychological well-being, mental health and communication among people with hearing loss and deafblindness”. His presentation ‘A new look at (deaf) identity’ discussed four types of identity: 1) Hearing identity, (2) Deaf identity, (3) Bicultural identity – in which the individual identifies with both the hearing and Deaf cultures, (4) Marginal identity – the individual identifies with neither the hearing nor the Deaf culture. Jesper outlined the differences found between the groups with regard to, for example, well-being and communication. He described how “recent research has also investigated how identity might be linked to other individual differences including personality traits, self-efficacy and social dominance orientation”. He also expressed “New theories of identity, however, understand identity as a process and negotiation of (multiple) identities across contexts rather than fixed categories”. Jesper discussed how “these theories might be relevant for understanding how factors, such as the use of cochlear implants, impact on identity formation in adolescents.”

An intensive first day of presentations!

Dr Shyamani Hettiarachchi

Gary Morgan, a professor of Psychology at City, University of London, opened the second day with his presentation ‘Cognitive development and access to language’. BATOD readers may be aware that Gary’s research interests are the language development in deaf children, with recent focus on interaction between language and cognition, particularly on the variability and outcomes within the cochlear implanted cohort. He discussed the importance of the social communication children experience in everyday activities with individuals, particularly parents and the role of early joint attention.

Despite a technical failure, Derek Houston delivered a presentation on ‘Development of spoken word-learning skills after cochlear implantation: Access to sound is just the beginning’. He started by highlighting research which indicates speech perception skills in children with cochlear implants do not account for a lot of variability in language outcomes. Very early auditory experience was noted as important for spoken language outcomes but has to do with more than just speech perception. He noted that early auditory experience affects word learning but there are in fact other influences on learning; parent-child interaction and joint attention. However, he emphasised before trying to change anything further research is required with deaf children and their parents regarding what the effects are on word learning.

After the break Dr Susan Nittrouer, a professor and chair of the department of speech, language, and hearing sciences at the University of Florida College of Public Health and Health Professions, gave a presentation entitled ‘Sensorimotor development underlies acquisition of spoken language and cognitive functions in children with CIs’.

After a morning of academic and theoretically intense presentations, Dr Shyamani Hettiarachchi, senior lecturer in the department of disability studies at the University of Kelaniya, Sri Lanka, gave an engaging presentation: ‘Access without success: Reflections on deaf education in Sri Lanka’. Dr Hettiarachchi noted her department has four colleagues who are deaf and had co-authored with her. We were educated briefly on the history of Sri Lanka and its status as a low-middle income country. She explained the post-conflict implications of a 30 year war history for special education and sign language. The North, where the war was, has a variety of sign languages. The education policies are listed in the image below/above.

Dr Hettiarachchi outlined some statistics about the children with disabilities (see image). She acknowledged the view held by many that education is seen as a way out of poverty allowing children to access the social ladder to a better life. However, as is also common in
other countries, many deaf children:
- are from poor families
- are late school starters (starting with a likely language delay)
- are late diagnosed
- have poor amplification
- have limited spoken language
- have limited sign language
- have limited or no access to sign language.

There are no training courses for Teachers of the Deaf so, as a speech and language therapist, Dr Hettiarachchi explained their role has been adapted from the oral tradition to include signed communication.

In order to move forward they generated a list of recommendations (see image) derived from multi-stakeholder interviews and discussions with deaf individuals, provincial education directors, principals and teachers. Additionally, Dr Hettiarachchi shared the progress already made for deaf students at University, at curriculum level, in advocacy work and in employment.

Deaf Education Beyond the Western World – main speakers

Dr Eman Al-Zboon, associate professor at the department of special education at the Hashemite University, delivered a presentation on ‘Deaf education in Jordan’. She explained that Jordan is now the leading nation in the Middle East for deaf education, with active support from the Jordanian Royal family. Since 1981, the International Year of the Disabled, there has been significant improvement in the private, public and voluntary sector services. In 1993 the law for the Welfare of Disabled Persons was enacted and in 2007 the Jordanian officials signed the UNCRPD. Dr Al-Zboon gave a brief history on the provision of services:
- Local churches provided education for deaf children in the late nineteenth century
- The first institutions for deaf children were established in the late 1960s
- In 1978, the Ministry of Social Development, under the direct management of the Ministry of Education, was responsible for providing services for disabled children
- Today the Ministry of Education has full responsibility for the education of deaf children and has an established directorate of special education
- There are 10 Al-Amal schools for deaf children in Jordan with over 900 enrolled students. Their students, from kindergarten to sixth grade, are taught sign language, lipreading and speech articulation
- In August 2017, with a grant from the Korea International Cooperation Agency, a special school for deaf students was established in Marea.

Dr Al-Zhoon suggested there were 73,000 deaf children in 2004 (source 2004 census). There are 2500 primary aged deaf children but only 1300 enrolled in school. Only 150 children access secondary education and half of that population attend mainstream where there is limited support. She noted 20-29 students each year pass the secondary phase exam and many of them attend Jordanian universities. They access the Prince Ra’ad bin Zeid scholarship and the Jordanian government provides a 90% discount on the university fees to support them completing their higher education.

She discussed the problem with the statistics about deaf children arising from variation in the definition of disability, the lack of classification systems, lack of disability registry data, inadequate data maintenance, use of different methodologies and variation in study design. She noted the aetiology is usually reported as consanguinity and poor health due to poverty.

Dr Al-Zhoon explained that, in 2003, the Holy Land Institute for the deaf and local and international partners established a national early identification and intervention program, but there is a need to establish newborn hearing screening services to achieve early diagnosis and subsequently offer suitable treatment and intervention.

It was summarised that, whilst Jordan is strong in areas such as policy frameworks, service provision, research studies, model schools and access to higher education, there needs to be improvement with:
- core curriculums
- learning languages such as English
- mental and emotional development
- awareness of rights
- impact of policies that affect the lives of deaf individuals
- structured training programmes for sign language interpreters
- quantity of research studies in family involvement, technology, abuse, addiction, learning environment, curriculum and emotional-social language development.

Parallel session blocks – day 2

After the international main speakers, the block of parallel sessions offered a range of presentations.

Daan Hermans, a cognitive psychologist senior researcher at Kentalis, and Evelien Dirks, a senior researcher at the NSDSK (The Dutch Foundation for the Deaf and Hard of Hearing Child) who is a specialist in Language and Hearing presented ‘May I have your attention please? The importance of joint attention in the development of young DHH children’.

Jessica Trussell, an assistant professor at the National Technical Institute for the Deaf, Rochester, New York, presented on ‘Reading-to-learn while still learning-to-read: The case of adolescent DHH readers’.
Ros Herman, professor at the City, University of London and research associate at DCAL, opened the last session of the Teaching Deaf Learners section with a presentation on ‘A pilot language and reading intervention for deaf and hearing children’. Professor Herman recapped that a focus on phonics in mainstream teaching detracts from an emphasis on language skills which can lead to a risk of children not engaging with reading. She explained their study was trying to address both aspects of the simple model of reading in an integrated way and querying “Could they train staff in schools to deliver the intervention in their classes effectively for a year?” Hearing children, ie those in the mainstream school attached to the resource provisions, were included in order to access a large sample size to access funding, which they secured from the Nuffield Foundation. The children were assessed at the start and end of the school year on tests of language, reading, spelling and phonological skills.

The integrated program has three key components: Floppy Phonics, Visual Phonics and Word Aware. The pilot study highlighted differences between the way the deaf schools and mainstream schools taught the scheme. In the deaf schools, Teachers of the Deaf needed to increase the frequency of sessions and introduce more vocabulary whereas the mainstream teachers used varying teaching approaches for children with different abilities, had little understanding of language, spent little time on consolidation and liked the intervention but did not like to use the activity sheets.

Professor Herman concluded that the pilot study had provided them with an invaluable learning opportunity. Their next steps are to seek funding for a full intervention.

Annet de Klerk delivered a presentation entitled ‘Reflections from educational perspectives’. Annet reviewed the interventions from the Kentalis two day conference as belonging to one of the following five areas:

- Early communications and word learning
- Literacy: reading and writing
- Stimulating cognitive processes
- Identity and psychological wellbeing
- Accommodating diversity: deaf learners from Asia, Africa, South America.

Annet posed the question ‘How can we support and empower teachers to use research evidence to construct and apply evidence-based techniques in their teaching?’ She emphasised the complexity of teaching and the complexity of influencing teachers’ behaviour. The importance of teacher training was highlighted ie training on the job – in the classroom, video coaching, observing others and doing research in their practice. She shared her opinion that learning never stops, stating that all teachers, including the more experienced, need ongoing development. She highlighted the concept of the professional learning community with collaborative, classroom-based, working between teachers and researchers.

The conference closed with Marc Marschark presenting ‘Teaching deaf learners: reflections from a research perspective’. However, this was Marc’s last academic presentation so he didn’t fully reflect on the conference but rather presented a conclusion of his academic career. He stated his interest, for the last ten years, in the evidence base in deaf education. He also acknowledged that this presentation would capture his views on statements he had read or sometimes made over his career about deaf children, regarding when things are simple or not. Early in his career he read the statement “Deaf children are concrete, literal and egocentric”. He discussed how he had found deaf children were not concrete and literal, but very creative. However, he stated, “things aren’t that simple” as “it is complicated”. He explained we have to think about asking the right questions ie to ask about which students? Which characteristics? What ages? Which settings?

“If deaf children read like hearing children they’d read as well as hearing children.” He drew some reflections from the conference presentation. He stated again “It is more complicated”. There are many cognitive aspects underlying reading.
“If deaf children learned sign language, they would read and achieve the same levels as hearing children.” He reflected that “it’s way more complicated”. It is not just about language (sign or spoken). He discussed the need to question if there is evidence for some recommendations or if they are beliefs. Also, at what stage are levels of the deaf children (including those with cochlear implants) being compared? At the end of primary school when there is a lot of support and therefore possibly the support is the reason for the progress, or after the support has been reduced but the demands relating to adjusting to curriculum content, teaching methods and Inferential reading have increased? He suggested not every deaf child needs bilingual education. He pointed out that research evidence suggests that, in primary school, bilingual education has a range of supportive outcomes, but he was not aware of any evidence from secondary school. He expressed his belief in bilingual education but noted he doesn’t have the evidence yet for whom it is best, at what ages, in which settings nor how it should be taught.

He moved on to discuss “deaf children who use cued speech read better”. He reflected that he believed once that cueing would improve the reading ability of his American students and had learnt to cue. However, he stated there has never been evidence that cued speech helps deaf children learn to read English whereas there is a lot of evidence that it helps deaf children read better with Spanish. He suggested for this reason the statement is simple, deaf children who use cued speech read French and Spanish better.

Marc then discussed the statement “simultaneous communication/sign support speech is evil”. He highlighted that it has been known since the 1970s that for children in the classroom, sign supported speech works as well as anything else. Referring to more recent studies he noted that he and Helen Blom had shown that sign supported speech is beneficial for children with cochlear implants. He noted that, when the information is delivered effectively with sign supported speech, there is information available in at least one format should acoustic or signed detail be missed. He concluded this statement that the evidence tells him, “it is not complicated but rather, it is sensitive”.

He briefly addressed the following statements:

“Deaf children are visual learners.” His work with Al Paivio made him aware they are no more visual than their hearing peers.

“Age of implantation is the key to CI success.” It is not as great as thought with older children but it is important for younger ages.

“Schools for the deaf are better than the mainstream.” He noted some children thrive in schools for the deaf, others thrive in mainstream. The strengths and needs of the individual have to be considered.

“Sign language equals spoken language in deaf education.” He stated that evidence over the years has shown that sign language and spoken language are equally effective and appropriate for education.
emphasising they are both appropriate but not the same.

“CIs lead to hearing assimilation.” Research has shown that having an implant as a child doesn’t make the child part of hearing culture. It helps with speaking ability and therefore acceptance by hearing peers but it does not make the child a hearing child.

“Deaf (signing) students learn more from sign language than from text.” Marc clarified that individuals learn as much or more from text than signing, although some individuals may think they learn more from sign.

“Deaf (signing) students learn more from deaf teachers than from hearing teachers.” Marc stated that the research indicates this is not true. The questions to be asked include how good is the teacher, how much does the teacher know about teaching deaf children, and how much does the teacher know about teaching language?

Marc concluded his presentation with a range of take home messages (on page above)

Some of Dr Knoors’ closing words of the conference were, “Research is important, practice is important, bridging the gap is important. It is not easy; it is complicated but in the end things can be achieved.”

One other Conference highlight for BATOD was winning a book from their Twitter-based feedback competition. The book, written by deaf researchers, ‘Innovations in Deaf Studies’ is currently with our President Elect, Martine Monksfield, who is Chair of the d/DoD group. Watch this space for a review of the book.

This article was written in late March for the conference theme edition due to the current absence of BATOD 2020 Conference articles as a result of the coronavirus. At the time of writing, some presentations were accessible on the Kentals website https://www.kentalis.com/home-en However, it is recommended that readers who wish to explore any aspects of the articles, should contact the presenters directly. Many of the presenters are on social media platforms eg LinkedIn and Twitter.
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