

Making Mathematics Instruction Meaningful: Ensuring Conceptual Knowledge and Procedural Fluency Across the Grades

David Chard PhD
Southern Methodist University

Research on effective instructional strategies and the appropriate focus for school mathematics instruction has recently been summarized in several key documents. These summaries highlight the range of obstacles that prevent students with and without disabilities from developing conceptual and procedural proficiency in mathematics. This keynote will summarize the findings and suggest implications that these findings have for school leadership and classroom teachers. Specific strategies that are well-founded in the empirical research literature will be described.

Contact

Email: dchard@mail.smu.edu

Implementation of the QuickSmart Numeracy Program at Orara High School

Lyn Alder
Orara High School

Dr. Lorraine Graham
Dr. John Pegg
University of New England

Orara High is a comprehensive Year 7 to 12 Priority Schools Program (PSP) funded public school located in Coffs Harbour on the Mid North Coast of NSW. Approximately fifteen percent of 650 students enrolled at Orara High School come from disadvantaged family backgrounds. There is an eleven percent Aboriginal enrolment in this school along with refugee students from various African nations. There is funding for one full time Learning Support Teacher at Orara High School.

From 2001 to 2004, Orara High's Secondary Numeracy Assessment Program (SNAP) statewide results were consistently below the State and Regional Average. In 2005 the school aimed to address in a specific manner the numeracy levels of Year 7 and Year 8 students. This presentation is a case study of the implementation at Orara High of the *QuickSmart* Numeracy Program from July 2005. The program began with one learning support teacher and approximately 38% (47) of Year 7 students who did not meet the National Benchmark in Numeracy or class testing. By 2007 the *QuickSmart* program had grown and our improvement in SNAP results from Year 7 to Year 8 has been the Schools best in its 37 Year history.

Sources

- Graham, L., Bellert, A., Thomas, J., & Pegg, J. (2007). QuickSmart: A basic academic skills intervention for middle school students with learning difficulties. *Journal of Learning Disabilities*, 40, 410-419.
- Pegg, J. & Graham, L., 2007 Addressing the needs of low achieving mathematics students: Helping students 'trust their heads. *21st Biennial Conference of the Australian Association of Mathematics Teachers*, Vol. 1. 33-46.
- Graham, L., Bellert, A., & Pegg, J. (2007). Supporting students in the middle school years with learning difficulties in mathematics: Research into classroom practice'. *Australasian Journal of Special Education*, 31, 171 – 182.
- Graham, L., Pegg, J., & Alder, L. (2007). Improving the reading achievement of middle years students with learning difficulties, *Australian Journal of Language and Literacy*, 30, 221-234.
- Simmer Website; <http://www.une.edu.au/simerr/index.html>

Contacts

Email: lyn.alder@education.nsw.gov.au

Successful Strategies for Inclusion of Students with Autism Spectrum Disorder: Practical Classroom Strategies for Busy Classrooms (Primary & Secondary)

Sue Larkey
Education Events

This session is full of practical ideas and solutions to address the complexity of including students with autism spectrum disorder. Inclusion has become best practice, however, research has indicated that teachers do not feel they have the time, support or resources to address the needs of students with autism spectrum disorder. This session will identify the key area of need for students with autism spectrum disorder (social, communication, behaviour) and address how to implement successful strategies to address these needs. Whether you are a teacher, parent, support worker or in administration you can't miss this session. It will identify your role in successful inclusion and how to provide successful inclusion for everyone involved.

This presentation will share the practical outcomes and strategies used by Australian Teachers to include students with ASD in their local Primary Schools. The strategies evolve from the findings from my research, Doctorate of Education, 'Inclusion of students with ASD into their local schools.'

Areas to be covered:

- Ten Key Teaching Strategies
- What are the key elements for successful inclusion?
- Successful and Practical Strategies for classroom participation
- Key Considerations and ideas to try include how to use Teacher assistant, what if you don't have any support hours, what to do if you are away, playground and more
- Preparing students for Secondary
- Teacher Concerns

Contact

Email: suelarkey@optusnet.com.au

Teachers' Attitudes and Concerns Towards the Integration of Children with Special Needs into Regular Schools: U.A.E. Perspective

Dr Keith Bradshaw
College of Education, Zayed University
Abu Dhabi, U.A.E.

Teachers from schools across the United Arab Emirates were asked to complete two questionnaires. The first questionnaire sought data from the teachers on their experience, qualifications, classes taught and attitudes in relation to integration. Information was also sought on the advantages and disadvantages of integration, the most difficult classification of children with special needs to integrate into regular classes/schools, where the U.A.E. was, at present, in terms of the integration issue and where future directions for special education in the U.A.E. should be planned.

The second questionnaire was the stages of concern questionnaire developed by Hall and Loucks (1979). The stages of concern questionnaire sought information on where a particular group was at in coming to terms with a new innovation. The stages of concern data also determine the range of strategies needed to assist the group in coming to terms with the innovation. Through their responses to the stages of concern questionnaire teachers were placed on a stage of concern ranging from stage 0 (awareness) through to stage 6 (refocusing). This ranking was based on the teachers' responses to the innovation of integration.

Strategies to assist the teachers' progress through the stages of concern are discussed. Suggestions as to how these strategies can be incorporated in undergraduate special education courses and workshops for practicing teachers were also outlined.

Contact

Email: Keith.Bradshaw@zu.ac.ae

Social inclusion: Perceptions, Incidence and Effects of Cyberbullying on Learners with Diverse Needs.

Jill Burgess
Catherine McLoughlin
Tessa Yvanovich
Australian Catholic University

While quality curriculum for students with diverse learning needs remains an essential outcome for all schools and school communities, inadequately addressing social inclusion can lead to very poor outcomes for many students. The problem of bullying in schools has become very widely recognised as a significant and serious one. Research reveals that students who have disabilities experience bullying more often than students without disabilities (Carter & Spencer, 2006). With new technologies and ways of communicating becoming increasingly central to daily life, new forms of bullying are emerging. These technologies have brought about new challenges for school communities and placed considerable pressures on educators to remain informed and vigilant to the developing phenomenon of cyberbullying. The presentation will outline preliminary findings of a large SIMERR (Science, Information technology and Mathematics Education in Rural and Regional) Australia initiative focusing on cyberbullying in an attempt to create socially inclusive, safe e-learning environments for students in their early teenage years. This SIMERR initiative investigates student and teacher perceptions of cyberbullying and the incidence and effects of cyberbullying on selected schools in rural and urban areas in the Australian Capital Territory and New South Wales. Participants in this presentation will be given the opportunity to explore recent cyberbullying research and to reflect on major issues, concerns and understandings in the field and resources presently available to schools.

Resources

- Carter, B., & Spencer, V. (2006). The fear factor: Bullying and students with disabilities. *International Journal of Special Education*, 21(1), 11-23.
- Li, Q. (2007). Bullying in the new playground: Research into cyberbullying and cyber victimisation. *Australasian Journal of Educational Technology*, 23, 435-454.
- Patchin, J., & Hinduja, S. (2006). Bullies move beyond the schoolyard. *Youth Violence and Juvenile Justice*, 4, 148-169.

Contact

Email: jill.burgess@acu.edu.au

Development of Early Numeracy in Students with and without Difficulties Learning

David Evans PhD
University of Sydney

Iva Strnadová PhD
Charles University in Prague

Karin Ishimine PhD
University of Sydney

The education of students with learning difficulties has been dominated by research in the area of literacy, and in particular, reading. The domain of numeracy has been a poor cousin for the past three or four decades, and it has only been in the past decade that systematic research into early numeracy has been evident in the literature. What may be surprising to some are the parallels between early numeracy development and early reading.

One parallel with reading has been the attempt to establish which skills are critical to early numeracy development, as phonological awareness is to early reading development. Current work in the area by Chard, Clarke, Geary and Jordan point to the importance of number sense – “a child’s fluidity and flexibility with number, the sense of what numbers mean, and an ability to perform mental mathematics, and to look at the world and make comparisons” (Gersten & Chard, 1999, p.20).

The purpose of this paper is to report the findings from a small longitudinal study investigating the development of number sense. Forty Kindergarten students commenced this study, and were assessed using the *Number Knowledge Test* (Griffin, 2004) on three occasions across 18 months. Differences between students will be highlighted, with implications made for how those students most at risk can be catered for in the mainstream classroom. In conclusion, future directions for the project will be outlined including plans to further develop assessment protocols in the area of number sense, and to conduct international comparisons of number sense development.

Contact

Email: d.evans@edfac.usyd.edu.au

An Investigative Study into the Effects of Regular Education Teacher Attitudes on the Inclusion of Students with Asperger Syndrome Placed in Regular Primary Education Classrooms in New South Wales

Cathy Little
University of Sydney

In the past, students with autism tended to be segregated from their peers. The trend in Australia appears to be similar to that of the United States in that there now appears to be an increasing trend towards the inclusion of children with autism in regular education settings as part of the movement towards including all students with disabilities in regular education. Currently, in NSW schools, students with an Autistic Spectrum Disorder (ASD), including Asperger Syndrome, are catered for in both regular education (general) and special education settings. "Despite increasing trends towards the inclusion of students with autism in regular classrooms there are few models and procedures for the facilitation of successful placement and maintenance of these students" (Roberts, 2004, p.12).

As part of a doctoral thesis investigating the effects of mainstream teacher attitudes upon the successful placement of students identified as having AS into regular education classrooms in NSW schools, a pilot study was implemented with 30 regular education teachers. This pilot was used to test the integrity and applicability of a specifically developed questionnaire designed to identify attitudes which supported success of AS student placement in regular education classrooms in NSW schools. It sought to identify what teacher factors influence the successful inclusion of these students into regular classrooms? Are these results indicative of what research has identified in other countries? Are critical features identified which require further investigation? This paper discusses the results of this pilot study investigating the impact of teacher attitudes upon successful 'inclusion'.

Resources

- Gutstein, S. & Whitney, T. (2002). Asperger syndrome and the development of social competence. *Focus on Autism and other Developmental Disabilities*, 17(3), 161-171.
- Konza, D. (2005). Secondary school success for students with Asperger's Syndrome. *Australasian Journal of Special Education*, 29(2), 128-139.
- Roberts, J. (2004). A review of research relevant to the education of students with disabilities, and in particular autism, in segregated and inclusive educational settings. AANSW: Sydney.
- Robertson, K., Chamberlain, B., & Kasari, C. (2003). General education teachers' relationships with included students with autism. *Journal of Autism and Developmental Disorders*, 33(2) 123-129.

Contact

Email: c.little@edfac.usyd.edu.au

Flexible Provision in the Mainstream setting for Students with Autism

Fiona Hancock
Summerdale Primary School, Launceston

A whole school focus at Summerdale Primary School has been to explore possibilities for flexible provision for all students at risk of becoming disengaged from school and learning. As part of this wider focus we directed our attention to the students in our school with Autism Spectrum Disorder (ASD). Our data told us, that a number of students were finding the classroom difficult on a daily basis, resulting in withdrawal or relocation. We wanted to proactively support students, their families, teachers and TAs.

In 2007 we began to look creating a purposeful and supportive teaching and learning environment that became known as "Room 7". We saw some positive results from our project that encouraged us to continue to refine the support offered.

Room 7 provides a 'chill out' space that we teach students to use prior to a meltdown. We run an alternate lunchtime program in the room. In addition, various programs (small group and individual) are run throughout the week that is developed from IEP's. Room 7 also aims to provide classroom program support and to build capacity for students to be meaningfully included in the school community. This year we have begun a forum for parents to be included in partnership in working towards proactive support.

We are continuing to collect data from the Student Support planner, data on the usage of the room and feedback from students, their families, teachers and TAs. Our project has implications for our school and the wider community in the ongoing development of supportive provision for students with A.S.D.

Contact

Email: fiona.hancock@education.tas.gov.au

Investigating the Number Sense Challenge: The Impact of Teacher Knowledge and Practice on Early 'At Risk' Mathematical Learners.

Hannah Newman
Dr David Evans
Dr Jenni Way

Faculty of Education and Social Work, University of Sydney

Attitudes towards a developing awareness of the importance of the early mathematical capabilities of children as they enter Kindergarten indicates a recent growth in the recognition of the concept of number sense, or the basic ability to understand and link quantities. Number sense, within the current climate of mathematics education and research, is now seen as a prerequisite to the formal process of mathematical thinking and a vital component of all mathematical instruction. A child's intuitive mathematical awareness, how they process and develop skills in dealing with number in a real world of quantities becomes an essential foundation upon which their mathematical achievement is built and how mathematical competence is developed. The impact of teacher knowledge and practice on the development of number sense by children in Kindergarten is greatly influenced by teacher understanding of mathematical cognition, the importance of number sense within their teaching of mathematics, how it can be recognised, understood, accommodated and therefore taught effectively. The aim of this presentation is to explore the concept of preventing early mathematical difficulties, low progress or failure with particular focus on the recognition of the 'at risk' number sense learner and why it is so necessary to develop relevant, effective professional development for teachers not only focussing on why strategies or certain practices are functional but how both their knowledge and practices will equally benefit their students. Teachers need to be empowered to meet the mathematical diversity and inclusive needs of their students as a key element for change.

Resources

- Garet, M., Porter, A., Desimone, L., Birman, B., & Kwang, S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38, 915-945.
- Gersten, R. & Chard, D. (1999). Number sense: rethinking arithmetic instruction for students with mathematical difficulties. *Journal of Special Education*, 33(1), 18–28.
- Jordan, N., Kaplan, D., Oláh, L., & Locuniak, M. (2006). The number sense growth in Kindergarten: A longitudinal investigation of children at risk for mathematical difficulties. *Child Development*, 77, 153-175.

Contact

Email: hannah.newman@bigpond.com

Bridging the Gap: Supporting Children with Autism Spectrum Disorders in their Communities

Jill Hudson
Autism Consultant
Columbus, Ohio, USA

Children with autism spectrum disorders (ASD) are a vital part of their communities. Participating within the community, however, can often be limited to a hesitancy or reluctance due to the lack of supports and understanding that exist in the various activities in which children participate. Such activities could include going to a friend's birthday party, playing on a soccer team, hanging out at the movie theater with friends or attending summer camp. They also might include more functional activities such as getting a haircut or visiting the dentist, or opportunities with family members such as eating at a restaurant, attending a wedding or visiting relatives for the holidays. This session will provide information regarding ten evidence-based specific areas to target with supports as children with ASD prepare to successfully encounter and participate in community activities. Information will be provided about each of the ten targeted areas. Interventions and strategies will be demonstrated for use across settings, age ranges, and diagnosis. Implementation of these ideas will prove to be bring about successful encounters with childhood community activities for children with ASD.

Contact

Email: Jill_Hudson@hotmail.com

Building Inclusive Secondary Schools: Barriers and Facilitators in the West Australian Context

Associate Professor Heather Jenkins
Department of Education, Curtin University of Technology.

The purpose of this presentation is to examine the sustainability of inclusion at the secondary level, given that it is acknowledged to be a challenging issue at the secondary level. The aim of this paper is to examine evidence from four secondary schools who participated in an inclusive initiative based on the implementation of the *Index for Inclusion*, but subsequently experienced difficulties in implementing inclusion in a sustainable way. Interviews with the Principals and School Coordinators associated with these schools were undertaken to determine the reasons for these difficulties.

The outcomes from the interviews were analysed from the perspective of a capacity-building framework, and the outcomes indicated that five factors were critical to the success of inclusion within the secondary context of the four participating schools:

- Leadership: issues associated with support or resistance to the inclusion of students with disabilities in secondary schools
- Organisational Development: issues associated with the failure to develop a school reference group
- Workforce Development: issues associated with the lack of experience that secondary teachers have in adapting the curriculum and the challenges of managing very confrontational behaviour
- Curriculum: issues related to the implementation of the WA Curriculum Framework within an inclusive secondary context
- Partnership: issues, associated with the continuing existence of Education Support Schools and parent-school partnerships

The facilitators and barriers associated with each of these themes will be discussed in the presentation, along with some misunderstandings regarding the utilisation of the *Index for Inclusion* process. Key outcomes from the presentation include the understanding of how to implement a capacity building framework within a secondary context, and delegates will gain insights regarding what to do, and what not do in the best interests of developing inclusive secondary schools. Delegates will be provided with a resource based on the outcomes of the study, to assist in promoting the development of more inclusive secondary schools.

Contact

Email: h.jenkins@curtin.edu.au

Making Mathematics Instruction Meaningful for Students with Special Education Needs

Professor David Chard
Southern Methodist University, Texas, USA

Recent findings of a meta-analysis on mathematics learning for students with learning difficulties describe several specific strategies that have been documented effective. They include, for example, explicit instruction, student verbalizations, formative progress monitoring, and visual representations. In this workshop, participants will discuss each of the effective strategies and how they can be used at various grade levels to support mathematics development. Specific examples will be used to ensure that teachers are able to see direct connection to their instructional content.

Contact

Email: dchard@mail.smu.edu

False Belief Meets Social Views on Autism Spectrum Disorder: A Cognitive Map of Theory-of-Mind

Yoon-Suk Hwang
Associate Professor David Evans
Faculty of Education and Social Work, University of Sydney

Theory-of-Mind is the ability to impute mental states to self and other (Premack & Woodruff, 1978). A major component of Theory-of-Mind is false belief (Flavell, 2004), where belief differs from reality. Studies of the Autism Spectrum Disorder (ASD) population have revealed severe difficulties in this area (e.g., Baron-Cohen, Leslie & Frith, 1985).

This paper aims to revisit, from the perspective of special education, the understanding of false belief held by individuals with ASD. It applies a social view to disabilities, incorporating it into data collection methods by accommodating the needs and strengths of students with ASD.

A total of 20 secondary and post-secondary students in Republic of Korea were interviewed. Interviews incorporated three sets of false belief tasks, changed contents of self, changed contents of other, and changed location tasks. Both qualitative and quantitative analysis methods were applied to illustrate the relationship between one's own false belief and that of others, and the correlations between false belief on the one hand and IQ and social competence on the other. As a result, this paper suggests a map of cognitive Theory-of-Mind as perceived by students with ASD.

Contact

Email: y.hwang@edfac.usyd.edu.au

Profiling Developmental Pathways of Communication and Literacy for Students with Additional Learning Needs

Kerry Woods
Patrick Griffin
University of Melbourne

Profiling developmental pathways of communication and literacy for students with additional needs is part of a program of research conducted at the Assessment Research Centre, University of Melbourne, with the support of the Victorian Department of Education and Early Childhood Development and the Centre for Advanced Assessment and Therapy Services. The research presented aimed to build a protocol for assessment of learning progress in communication and literacy that was tailored to the requirements of students with additional needs, reported learning in terms of abilities rather than disabilities, and could be used by teachers to plan and evaluate teaching programs and strategies.

An observation questionnaire was developed using procedures for defining standards-referenced frameworks (Griffin, 1993, 2007) and relying on the knowledge and collaboration of experienced teachers and researchers in the fields of special education, communication and literacy. This approach to assessment used expert judgment to establish an hypothesised framework of critical skills, statements of observable behaviours from which those skills could be inferred, and developmental criteria to map the quality of student performance. The hypothesised framework was then validated against observation data gathered by teachers of students with additional needs.

In 2007, 674 teachers from 77 Victorian schools (21 mainstream, 56 special education) provided observations of the communication and literacy skills of 1650 students (3 to 18 years) with additional needs. Teachers' responses were calibrated using a Rasch model for partial credit scoring (Masters, 1982). This analysis was designed to empirically identify qualitative shifts in the nature of the developmental continua, following earlier work in which Griffin (1990) used a simple logistic model to identify developmental pathways from teachers' observations of students' literacy proficiency in mainstream classrooms.

The Disability Standards for Education (2005) set out the obligation of schools to ensure that students with additional needs have access to educational opportunities without experiencing discrimination (Human Rights and Equal Opportunity Commission, Disability Discrimination Act, 1992). However, many teachers have little or no formal training to support their assessment of progress for these students or to underpin decisions about setting goals for learning and appraising the success of teaching strategies. This paper provides an overview of foundational research that attempts to redress this situation, and to build assessment protocols for communication and literacy that are inclusive and appropriate for students with diverse learning needs. It describes current developments in assessment of learning in communication and literacy for students with additional needs who attend Victorian government schools.

Resources

Griffin, P. (2007). The comfort of competence and the uncertainty of assessment. *Studies in Educational Evaluation*, 33: 87-99.

Human Rights and Equal Opportunity Commission (1992). *Disability Discrimination Act*. Accessed on 2 March, 2006 at <http://scaleplus.law.gov.au/html/pasteact/0/311/top.htm>.

Masters, G. (1982). A Rasch model for partial credit scoring. *Psychometrika*, 47, 149-174.

Contact

Email: kw@unimelb.edu.au

Autism and Asperger Syndrome: Essential Elements for Success

Professor Brenda Smith Myles
University of Kansas

Individuals with autism and Asperger Syndrome present with myriad needs and parents and educational professionals struggle to try to identify skills that will meet these needs and lead to life success for these individuals who have great potential. This session will overview essential elements for success for individuals that have a positive impact on functioning in home, school, and community. Among the strategies discussed will be the hidden curriculum and its applicability to individuals on the autism spectrum. The hidden curriculum is comprised of items that are not typically taught to neurotypical children and youth, but are assumed and expected knowledge. Despite not being directly taught, the hidden curriculum is vastly important. Violation of hidden curriculum rules can have an adverse affect on school performance and how well a student/child is able to positively relate to the community and home.

Contact

Email: brenda_myles@mac.com

Comparing the Relative Efficacy of Static, Animated and Storybook Social Stories in Developing Positive Social Skills in Children with Autistic Spectrum Disorder (ASD).

Associate Professor Heather Jenkins
Clare Clayton

Department of Education, Curtin University of Technology

The purpose of this presentation is to outline and evaluate the effectiveness of alternative methods of developing social stories for children with autistic spectrum disorders. The study investigated the development of social skills of four children with ASD with social stories in visual formats. An ABA single- subject research design was implemented. For each of the social stories, the child was observed during baseline (A), during the social story intervention (B), and observed after the withdrawal of the intervention (A). The ABA sequence was repeated three times for each of the interventions. Each social story was constructed four times, so that the four children viewed their own social story:

1st: Animated social story 'A': Being a good loser: This was captured on video-footage and displayed on a lap-top.

2nd: Static social story 'B': Answering the telephone: Digital photographs were needed for this story, and included the child's siblings, parents and home telephone.

3rd: Storybook social story 'C': Seeking help when lost in the supermarket: Photographed images within a local supermarket were taken, and the child's parents and two consenting shop workers in the shop uniform were included in the images. These were used to create a hard copy story book.

The outcomes supported the use of visual social stories as an effective method for teaching social skills. In particular, the use of animation was highly effective, and this leads to recommendations regarding presentation format when designing social story interventions. Participants will gain insights to the development of all three forms of social stories, and the impact of the animated version on the four participating children will be discussed. The feedback from the children's parents will also be considered as an important source of information regarding changes in the children's behaviour. Recommendations for developing an animated social story will be presented and methods for evaluating their efficacy will be outlined.

Contact

Email: h.jenkins@curtin.edu.au

Pre-service General Education Teacher's Perceptions of their Preparedness to Meet Diverse Needs in the Classroom.

Cathy Little
Dr Ilektra Spandagou
Associate Professor David Evans
University of Sydney, New South Wales

The AASE Position Paper *Pre-service Teacher Training*, states that the commitment toward appropriate educational services to students with special educational needs and the realisation of inclusive practices in schools will not be achieved without appropriate pre-service education for teachers. This position statement, in conjunction with international research, underpinned a research project investigating the efficacy of a new teaching framework for two mandatory special/inclusive education units of study at the University of Sydney.

Previous student formal evaluations resonated with the findings of current research in the field. That is, students find their special education training is extremely relevant, but not sufficient in preparing them to meet diverse needs in the regular classroom (Avramidis, Bayliss, & Burden, 2000). The three members of the teaching team and authors conducted a needs analysis to identify approaches of improving student learning experience. A Problem Based Learning (PBL) teaching framework was considered appropriate for integrating further the philosophical, theoretical, pedagogical, practical, and assessment elements of the course (Lambe, 2007; Van Laarhoven et al., 2006).

The PBL teaching framework is centred on case studies/scenarios. Students have the opportunity to engage individually and in groups with case studies, and to utilise the supporting material presented in lectures and tutorials in developing their inquiry-based learning and collaboration skills. Each case study/scenario is contextualised in terms of the community, the school, the available services/programs and support, the classroom teacher, the classroom environment, the composition of the class, some key pupils with additional educational needs and their families, legislation and policy framework as well as broader philosophical and theoretical issues.

This paper starts with a short overview of the Problem Based Learning (PBL) teaching framework and a discussion of its underlying theoretical framework. A presentation of the evaluation findings follows. The findings presented are based on quantitative and qualitative data collected from the participating students, including Pre/Post surveys, focus groups, and content analysis of assessment. The findings are discussed in relation to students' overall satisfaction with the PBL teaching framework, the specific aspects of the framework that they found supportive in their learning and the extent that this framework gave them an understanding of their future role in inclusive classrooms.

Resources

- Avramidis, E., Bayliss, P., & Burden, R. (2000). Student teachers attitudes towards the inclusion of children with special educational needs in the ordinary school. *Teaching and Teacher Education*, 16, 277-293.
- Lambe, J. (2007). Student teachers, special educational needs and inclusion education: reviewing the potential for problem-based, e-learning pedagogy to support practice. *Journal of Education for Teaching*, 33, 359-377.
- Van Laarhoven, T., Munk, D., Lynch, K., Wyland, S., Dorsh, N., Zurita, L., Bosma, J., & Rouse, J. (2006). Project ACCEPT: Preparing pre-service special and general educators for inclusive education. *Teacher Education and Special Education*, 29(4), 209-212.

Contact

Email: c.little@edfac.usyd.edu.au

Sifting through New Scientific Evidence about the Effectiveness of Reading Recovery

Meree Reynolds
Professor Kevin Wheldall
Dr Alison Madelaine
Macquarie University Special Education Centre

Despite the fact that it is over 25 years since it was developed, Reading Recovery has maintained its position as the most popular literacy intervention for young struggling readers. A literature review investigating the effectiveness of Reading Recovery by Reynolds and Wheldall (2007) found that, while many students have improved literacy skills as a result of the intervention, it is least effective for students in the greatest need and suggested that the program would be improved if it included synthetic phonics instruction. Since the publication of the Reynolds and Wheldall review, the What Works Clearinghouse has released a review of Reading Recovery in an wider investigation of the effectiveness of beginning reading programs (IES, 2007) and an evaluation of Reading Recovery in London schools has been published (Burroughs-Lange, 2007). This presentation will provide a summary of the findings and critical analysis of both of these recent evaluations in relation to the scientific evidence that they provide about the effectiveness of the Reading Recovery program.

The What Works Clearinghouse review found that Reading Recovery has positive effects on the alphabetics (phonemic awareness, print awareness, letter knowledge and phonics) and general reading achievement and potentially positive effects on fluency and comprehension (IES, 2007). The finding that Reading Recovery has positive effects on alphabetics appears to be at odds with previous conclusions drawn in the Reynolds and Wheldall (2007) review and has prompted a closer look by the authors at the constructs and processes used in the What Works Clearinghouse review and the studies upon which the conclusions were based. Several issues pertaining to the selection of studies, the broad definition of the alphabetics and fluency domains, the choice of measures, and the magnitude of effect sizes used to determine the effectiveness of constructs will be raised.

The conclusion will be drawn that there is scientific evidence that indicates that Reading Recovery is effective in increasing some aspects of reading achievement for many students. However, when looking more closely at the studies to determine whether Reading Recovery has significant effects on all of the crucial constructs within the alphabetics domain, the evidence is less convincing. The paper will suggest that educators maintain a cautious approach in the interpretation of research findings and will conclude with some suggestions for additional filters that educators can apply to program evaluations to determine the place of a specific program in a quality curriculum.

Resources

- Burroughs-Lange, S. (2007). *Evaluation of Reading Recovery in London schools: Every child a reader 2005-2006*, London, Institute of Education: University of London.
- Reynolds, M., & Wheldall, K. (2007). Reading Recovery twenty years down the track: Looking forward, looking back. *International Journal of Disability, Development and Education*, 54, 199-223.
- Institute of Education Sciences (2007). *What Works Clearinghouse intervention report: Reading Recovery*. US Department of Education.

Resources

Email: petemree@optusnet.com.au

Talk the Talk but Can Schools Walk the Walk: The Experience of Transitioning Adolescents with Aspergers Syndrome in Two Selective High Schools in New South Wales

Dr Roselyn M. Dixon
Kathleen Tanner

Faculty of Education, University of Wollongong

Adolescents with Aspergers Syndrome are increasingly being enrolled in mainstream high schools throughout New South Wales. However, there is concern that these students although academically able are not coping with the wider classroom and social demands of academically selective high schools. The schools are desirous of enrolling these students however there is a gap between the rhetoric and the reality. Schools are talking the talk but there are concerns that they are not able to walk the walk and provide an appropriate educational environment for adolescents with Aspergers syndrome

This paper will be a case study of two academically selective schools in New South Wales that enrol students with Aspergers Syndrome. One school will be an academically selective high school in a large regional centre the other will be an independent academically focused high school in a semi-rural setting on the outskirts of a major metropolitan centre.

The case study will involve interviews with the executive, teachers and with the students and their families to assess their involvement in the transition to high school for these students from the perspective of the school and the students themselves and their parents.

The methodology will be qualitative with semi-structured interviews being the major research tool. The results will highlight the disparity between the perceptions of the school and the students and their families.

Contact

Email: roselyn@uow.edu.au

Building Teacher Capacity to Support the Diverse needs of Students with Language Disability.

Sue Low
Helen Drummond
Danny Rankin
Diocese of Broken Bay, NSW

The aim of this paper is to provide participants with a clear outline, overview and development of an intervention for students with significant language needs. The unique aspect of this intervention is the employment of a speech pathologist to support teachers and students within the school setting. At the completion of the paper delegates will have an understanding of the processes that were followed to influence the change of direction from the Diocese to provide support for students with significant language needs. Further, participants will gain an understanding of the clearly defined roles between the health professionals, individual schools and diocesan special needs team including how teacher capacity is developed and sustained within each school. Finally, this paper will elaborate on the current strengths and future challenges of the language projects through sharing of school specific and diocesan data that influence these decisions.

Contact

Email: sue.low@dbb.org.au

TAC, TAM, TAH: Battery of Teacher Assessment Screening Tools for Therapy

Kendra Bell
Next Challenge

The Teacher Assessment of Communication (TAC) has been used successfully by teachers as a screening tool for speech pathology for the past 7 years. Last year, the Teacher Assessment of Movement (TAM) was developed as a screening tool for physiotherapy. This year, the Teacher Assessment of Handwriting (TAH) a screening tool for Occupational Therapy, will be finalised in order to complete the suite of assessments available to teachers.

These screening tools assist teachers in identifying children at risk of learning difficulties as a result of delays or gaps in early developmental skills that are considered pre requisite skills for learning and educational access.

However the emphasis is not only in identifying children needing referral for specialist assistance, but in establishing classroom objectives to progress the skills of all of the students. The screening tools are complemented by activity packs that provide teachers with a continuum of skill development in each of the developmental areas for classroom planning.

Early research on long-term effects of the TAC has indicated that there is a positive classroom/teacher impact on children's early development skills, without formal intervention following use of the tool. Research into the proportion of change on children's skills is currently being undertaken.

Contact

Email: kendra.bell@nextchallenge.com.au

An Investigation of Australian Early Intervention Programs for Children with Autism Spectrum Disorder: Initial Outcomes

Associate Professor David Evans
Professor Trevor Parmenter
Dr Jacqui Roberts
University of Sydney

Associate Professor Mark Carter
Macquarie Special Education Centre

Dr Katrina Williams
Sydney Children's Hospital

Dr Natlie Silove
Westmead Children's Hospital

Dr Trevor Clarke
Mr Anthony Warren
Ms Emma Pearce
APSECT

The Australian Federal Government has planned considerable investment into early intervention (EI) for children and students with autism over the coming three or four years. This demand for EI is being adversely influenced by a lack of empirically based evidence about program quality and effectiveness. This paper reports on an empirical study examining the effectiveness of Autism Spectrum Australia (Aspect)'s Building Blocks Program (2007 = 165 children/families) by a team of researchers at the University of Sydney.

This study specifically examined the effectiveness of the Building Blocks centre based (CB) and home based (HB) programs. The CB program provides a weekly parent training program concurrently with a structured play based program for a small groups of children. The HB program provides a fortnightly session. Both programs operate for 12 months. The results for children taking these programs will be compared with a comparison, wait list group.

Three participant groups were recruited in 2006-7 - HB (n=30), CB (n=30), and waitlist/control (n=30). All participants were administered pre and post assessment measures including: child - autism (ADOS), cognition (Griffiths), communication, (Reynell & Pragmatics Profile), independent functioning (Vineland); Parent/family - stress (PSI), Quality of life (Beach), and perception of competence. Treatment groups received intervention for 12 months.

This paper will report for the first time results of an Australian early intervention study using quality research methodology. Features of the study methodology included random assignment of subjects to treatment groups, comparison to a non-treatment group, a verification of autism diagnosis, verification of treatment fidelity and a record of additional treatments obtained during the study.

Contact

Email: d.evans@edfac.usyd.edu.au

Integration of Children with Disabilities in Singapore: The Impact on Attitudes of Regular Children in Integrated and Non-integrated Schools

Abi Tan
Roselyn M. Dixon
Irina Verenikina

Faculty of Education, University of Wollongong

Children with disabilities in Singapore are being increasingly placed in mainstream primary schools. This is consistent with the policy of educational diversity and worldwide trends in the provision of services for children with disabilities (Low, 2007; Fuchs & Fuchs, 1998; UNESCO, 1994). It was anticipated that integration would increase the knowledge and improve the attitudes of regular children towards their peers with disabilities.

This paper presents the results of a quantitative study on the impact of integration of children with disabilities in Singapore on regular students' attitudes towards peers with disabilities. The study was conducted in 5 mainstream schools with 397 students (208 boys and 189 girls) in grades 4 and 5. Three groups of students participated in the study; students from integrated classes in integrated schools (Group 1), students from non-integrated regular classes in integrated schools (Group 2) and students from regular schools with no integration program (Group 3). Participants completed a scenario-based questionnaire designed to evaluate their attitudes towards disabilities. The data was analysed using SPSS16.0™ database program.

The results demonstrated that students from integrated classes in integrated schools were less positive in their attitudes towards children with disabilities compared to their counterparts in non-integrated classrooms. The significant differences among the three groups indicate that direct contact in class with children with disabilities does not, in itself, automatically lead to the development of positive attitudes towards these children. The findings suggest that the placement of children with disabilities in mainstream classrooms with no other support structures does not always achieve the goals of integration.

Contact

Email: glat98@hotmail.com

Newstime: Explicit Instruction and Games for the Early Grades

Gail Brown
Designed Learning

Jann Price
Ferncourt Public School, NSW DET

This presentation overviews and discusses data from observations of daily news sessions in three settings, two schools and one preschool. These data, while limited to three settings, provide some evidence about the structure of news sessions and the participation of students within those sessions.

One kindergarten classroom, from inner west Sydney, is described in detail. This classroom is the setting for the reported data, prior to and after the implementation of an intervention that explicitly teaches oral question-asking and oral question-answering.

The focus of the Newstime intervention is on providing materials and instruction to support learning of talking and listening outcomes by all students within the class. Scaffolded teacher instruction, a clear scope and sequence, and formative assessments provide teachers with strategies for ensuring that a range of questions are demonstrated across a school term. Active student participation is ensured in two ways. Firstly, teacher modelling and demonstration is gradually reduced across lessons during each week. Secondly, prompt cards are provided to enable students to ask a range of questions. Anecdotal evidence from teachers, and post intervention observation data from one classroom, both support the effectiveness of the intervention and explicit teaching strategies.

A range of resources, games and classroom activities to consolidate and extend news and oral comprehension are outlined within the presentation. These resources will include DVDs and materials that can be used in classrooms and for staff professional development.

Resources

- Cunningham, J., Spadorcia, S., Erickson, K., Koppenhaver, K., Sturm, J. & Yoder, D. (2005). Investigating the instructional supportiveness of levelled texts. *Reading Research Quarterly*, 40, 410-427.
- Dickinson, D. McCabe, A., & Sprague, K. (2001) *Teacher rating of oral language and literacy (TROLL)*. Ann Arbor, MI: Center for the Improvement of Early Reading Achievement (CIERA). <http://www.ciera.org/library/reports/inquiry-3/3-016/3-016.pdf>.
- McCabe, A., Bliss, L., Barra, G. & Bennett, M. (2008). Comparison of personal versus fictional narratives of children with language impairment, *American Journal of Speech-Language Pathology*, 17, 194-206.

Contact

Email: gailbrown@motivatories.com.au

Autism and Asperger Syndrome: Quality Curriculum for All

Brenda Smith Myles
University of Kansas, USA

This session will overview a framework for teaching children and youth across the spectrum. This comprehensive, yet easy-to-use system allows educators to understand how and when to implement an instructional program for students with autism spectrum disorders (ASD). The CAPS model answers the questions (a) What supports does my student/child need in each class to be successful? (b) What goals is my student/child working on? and (c) Is there a thoughtful sequence to the student s/child s day that matches his learning style. This timely resource was designed to be used by the child s educational team, consisting of parents, general educators, special educators, paraprofessionals, speech-language pathologists, occupational therapists, physical therapists, administrators, psychologists, consultants, siblings, and others who are stakeholders in the student s education. The structure of this innovative tool ensures consistent use of supports to ensure student success as well as data collection to measure that success. In addition, CAPS fosters targeted professional development. Because CAPS identifies supports for each of the student's daily activities, it is possible for all educational professionals working with the student to readily identify the methods, supports, and structures in which they themselves need training.

Contact

Email: brenda_myles@mac.com

Moving Beyond a Functional Curriculum to Authentic Learning for Learners with Disabilities.

Carmel Blake
Deanne Boddy
Virg Summers

NT Department of Employment, Education and Training

This presentation will discuss the effective instruction of learners with disabilities (including severe disabilities) focusing teacher expectation and pedagogical practices. Through a teaching and learning framework, teachers can provide learners with opportunities to be challenged, to explore, question and engage with significant ideas and practices, moving beyond surface understanding to develop higher order flexible thinking in order to deepen their conceptual understanding of content area.

Teacher Expectation: When teachers engage in behaviours that sustain learners' and teachers' previously formed low expectations, this impacts upon and limits learner's learning and perception of self (Cotton, 1989). The challenge for teachers is to consciously and continually reflect and evaluate their own attitudes and perceptions towards learners and the content area they are teaching (Killen, 2006), in order to provide opportunities for learners with a disability to engage in authentic learning with high expectations for success. This presentation will give examples of knowledge, processes and products that reflect high expectations.

Pedagogical Practice: Most would argue that due to the nature of intellectual disability and the associated limited communication skills, such learners would not benefit from teaching practices which use instructional strategies that embed thinking tools and an inquiry process. Researchers have suggested that students with disabilities who were given more authentic tasks performed considerably better than students with disabilities who were given less demanding tasks (King, Schroeder, & Chawszczewski, 2001). In shifting our focus from the disabilities of learners to recognising the barriers inherit in the general curriculum, we come to recognise that "the burden of adaptation should be first placed on the curriculum, not the learner" (CAST, 2008). Through the use of a teaching and learning framework, teachers can be guided on the quality practices in planning, implementation and adaptation of the curriculum.

This presentation will further provide hands on exemplars of teacher practices that give learners the opportunity to engage with mainstream curriculum and promote "high-order thinking" processes for learners with severe intellectual and multiple disabilities.

Resources

CAST (2008). *Universal design for learning guidelines version 1.0*. Wakefield, MA: Author.

http://www.cast.org/publications/UDLguidelines/UDL_Guidelines_v1.0.doc

Cotton, K. (1989). Expectations and student outcomes. *School Improvement Research Series*. 7, 1-23

Killen, R. (2006). *Programming and Assessment for Quality Teaching and Learning*. Vic:Thomson

King, M., Schroeder, J., & Chawszczewski, D. (2001). Authentic Assessment and Student Performance in Inclusive Schools. *Research Institute on Secondary Reform for Youth with Disabilities*, 5, 1-15

Contact

Email: virg.summers@nt.gov.au

Young Bilingual Learners in Monolingual Classrooms: Implications for Special Educators

Irene Haining
Dr Ann Grieves
University of Strathclyde

This paper will focus on the development of bilingual learners as confident individuals and successful learners in a school where few children and no school staff share their home language. Within the field of English as an Additional Language (EAL), these pupils are described as 'isolated learners'. It is widely accepted that a positive start to primary school is a strong indicator of future success. However, good practice in supporting bilingual learners in school involves pupils communicating in and learning through their home language, whether talking to teachers, bilingual support staff or other children. This paper reports on action research that demonstrates how isolated, bilingual learners were supported to address their special needs in an English-only environment in a Scottish school.

Contact

Email: ann.grieve@strath.ac.uk