Summary

Background
The Australian Association of Special Education (AASE) is committed to advocating for the provision of quality education for children and young people with special education needs across all settings.

Issues
The goal of the provision of effective, evidence-based programs to students with disability in inclusive settings will not be achieved without appropriate pre-service and in-service education for teachers. AASE strongly supports the inclusion of a mandatory unit on the education of students with disability and special education needs within all pre-service teacher education programs. In addition, content relating to students with disability and special education needs should be included in content across the whole of the teacher education program.

AASE believes that academic staff responsible for the development, co-ordination and implementation of mandatory units on the education of students with disability and special education needs should have a post-graduate qualification in special education and significant experience teaching students with disability and special education needs.

It is critical for teacher education that pre-service teachers have a good understanding of research based practices and that these are included in all units/subjects relevant to the education of students with disability. They should also be aware of practices that have been shown to be ineffective.

Teacher Competencies Resulting from the Mandatory Pre-service Unit

Context for students with special education needs
This will include an understanding of the Disability Standards for Education, 2005 and the Disability Discrimination Act 1992, and relevant state legislation, and a knowledge of proven, effective educational programs and practices.

Curriculum and planning for learning
Pre-service teachers will be familiar with research-based developments in curriculum design and delivery for students with special education needs. They will be able to develop plans and programs for addressing the individual goals and learning requirements of students with special education needs in mainstream settings. This may involve making adjustments such as selecting curriculum objectives, adapting curriculum delivery, using differentiated teaching and assessment strategies or providing additional support.

Assessment and Evaluation
Pre-service teachers will be able to develop, administer and evaluate curriculum-based measures to assess individual learning needs, monitor student progress and evaluate the effectiveness of their teaching programs and strategies.

Pedagogy
Pre-service teachers will be able to draw from a repertoire of effective research-based instructional strategies, such as those based on the principles of applied behaviour analysis, including explicit, teacher
directed instruction in basic skills and cognitive strategies to ensure students achieve measurable learning outcomes.

Classroom and Behaviour Management
Pre-service teachers will be able to draw from a repertoire of evidence-based proactive and reactive management practices, such as positive behaviour intervention and support that promote optimum teaching time, high rates of on-task engagement, socially accepted behaviours and positive teacher/student interaction.

Environmental adjustments
Some students with disability may require adjustments to enable them physical access to the curriculum.

Evidence-Based Practice
Pre-service teachers will be able to select and implement evidence-based practices supported by empirical research and use data on student performance in an informed, purposeful and systematic way to improve student learning, to justify their selection of instructional strategies and improve their professional practice.

Collaboration
Pre-service teachers will be able to work collaboratively with partners* in the educational process to effectively plan for learning, ensure access to curriculum and assessment, develop and implement teaching or behavioural strategies and programs, and adapt the learning environment, to achieve successful educational outcomes for individual students.

*{Partners may include students, parents, carers, teachers, special educators, teacher assistant, support staff and other professionals who support the students’ education.)

Practicum and Post-Graduation Development
During their pre-service teacher education, teachers will undertake practical professional experiences in inclusive mainstream settings, ideally linked to the special education unit or course, and teach alongside experienced practitioners who are effectively addressing the learning needs of students with special education needs. They will also be given opportunities to work with trained and competent special educators, to guide the work of a teacher assistant and to actively reflect on their practice to ensure a process of continual development. They will undertake ongoing professional learning including coaching with feedback to add to and refine their pedagogical skills.

Background Information
The Australian Association of Special Education (AASE) is committed to advocating for the provision of quality education for children and young people with special education needs. Critical to the achievement of these goals is high quality pre-service teacher education delivered by people who themselves have demonstrated expertise and competence in pedagogy for students with disability and/or special education needs. While we recognise that teachers through their professional lives develop greater breadth and depth of knowledge and skills, AASE also affirms the significance of pre-service education that establishes a strong foundation for that development. The focus of this paper is on the skills, knowledge and values teachers entering the profession should have in order to cater for the diversity of students with special education needs they will encounter in their classrooms.

This position paper outlines the elements of pre-service teacher education that AASE believes are essential for all beginning teachers and the way in which they could be most effectively provided during pre-service education. It is organised around a series of competencies that we believe pre-service teacher education should develop in beginning teachers. Many of these competencies should be further developed in subjects or units in addition to the mandatory unit in special education.

An assumption underlying this position paper is that pre-service teachers are being prepared to work collaboratively in schools with special educators, families, teacher assistants and other professionals to
develop programs, adapt curricula, locate resources, differentiate teaching and make appropriate adjustments for students with special education needs.

**Issues**

**Inclusion of mandatory unit or subject on teaching students with special education needs**

AASE strongly supports the inclusion of at least one compulsory stand-alone unit (subject) in pre-service teacher education that addresses the instruction of students with disability and/or special education needs as well as content on the education of students with disability and special education needs included in all relevant units within teacher education courses. Research shows that dedicated units/subjects are more effective than an infusion approach alone in developing positive attitudes towards inclusion (Sharma, Forlin, & Loreman, 2008).

AASE believes that such units/subjects should focus strongly on evidence-based strategies for differentiation and on adjustments for curriculum adaptation, assessment and instructional practices. There should be a strong emphasis on research-based strategies for explicit instruction in basic skills and cognitive strategies that have been shown to be effective in promoting student learning. The unit/subject should take a non-categorical approach to disability and not spend valuable time on medical and aetiological issues.

AASE believes this compulsory unit/subject should focus on pedagogy and be separate to units/subjects that address issues of inclusion more generally, such as those that focus on the inclusion of other student groups (such as students for whom English is an additional language or dialect or those disadvantaged by poverty or remote locations) or focus on the philosophy and sociology of inclusion without providing content on pedagogy. In addition, if pre-service teachers are to develop an integrated knowledge of a continuum of effective assessment, programming and teaching skills, many of the competencies should be addressed in content areas (such as English and Mathematics) as well as in a special education units/subjects.

**Staffing of mandatory units/subjects**

It is critical to the achievement of high quality pre-service teacher education in the area of special needs that the unit/subject is delivered by people who themselves have demonstrated expertise and competence in pedagogy for students with disability and/or special education needs. This expertise would normally be demonstrated by the person holding a post-graduate qualification in special education, an appropriate research degree or by having several recently published research papers relevant to the education of students with special education needs and significant experience teaching students with special education needs. It is of concern to AASE that an increasing number of units/subjects addressing special education needs are being convened and taught by people without demonstrated special education expertise (Stephenson, O’Neill, & Carter, 2012; Vernon-Dotson, Floyd, Dukes & Darling, 2014).

**Unit/subject development, monitoring and evaluation**

AASE believes that formal mechanisms should be established and maintained for collaboration and cooperation between tertiary institutions, employing authorities and organisations such as AASE to not only approve units/subjects, but to monitor and evaluate them to ensure that pre-service mandatory units/subjects in special education are of the highest quality.

**Research-based practice**

AASE strongly supports use of evidence-based practices shown to be effective through scientific research, and pre-service teachers should develop skills in a wide range of effective teaching practices. It is critical that pre-service teachers be introduced to research based practices for all students, not only those with special education needs. A recent survey of final year teacher education students found that although students were confident of their ability to identify evidence-based practice, their judgements did not correlate with strength of evidence ratings. In addition, they did not regard empirical evidence as the most important
factor in educational decision-making (it was outranked by practicum experience and accommodating personal philosophy and style) (Carter, Stephenson, & Hopper, 2015). They tended to judge all practices included in the survey as evidence-based, including those that have little research support such as perceptual motor programs and modality-based learning styles instruction. These findings are in accord with other research that has indicated that pre-service and beginning teachers have limited knowledge of research-based practice (Fielding-Barnsly, 2010; Louden & Rohl, 2006; Mahar & Richdale, 2008; Main & Hammond, 2008; Meehan & Hammond, 2006).

Analysis of the content of pre-service training courses relating to teaching students with special education needs and in the area of classroom and behaviour management has shown that many units do not focus on evidence-based practice (Stephenson, O’Neill & Carter, 2012; O’Neill & Stephenson, 2012; 2014). It is clear that teacher education institutions must take the issue of evidence-based practice far more seriously and ensure that course content reflects the education research base.

Context for students with special education needs
The Disability Standards for Education (2005) (DSE) require that education providers ensure a student with disability is able to participate in learning experiences ‘on the same basis’ as students without disability. This includes the right to comparable access to curriculum, services and facilities, and the right to participate in education and training unimpeded by discrimination. Under this legislation, all schools and teachers have an obligation to reasonably accommodate the needs of a student with a disability and provide every opportunity for the student to be successful in their educational program. During pre-service teacher education, future teachers must become conversant with this legislation so they understand the implications for their own professional practice and for the practices of the schools they will work in.

In order to meet their legal obligations and to provide quality programs, teachers entering the profession must have the knowledge and skills to teach students with a diverse range of special educational needs in an inclusive context. We strongly endorse the AITSL standard that graduate teachers should “Demonstrate broad knowledge and understanding of legislative requirements and teaching strategies that support participation and learning of students with disability” (Australian Institute for Teaching and School Leadership, 2011, p. 5).

Curriculum and planning for learning
In collaboration with parents/carers and a special educator when appropriate, teachers will select curriculum objectives and design an individualised educational program that meets the identified needs of a student. Pre-service teachers should be able to:

- use the principles of universal design for learning (UDL) to proactively plan lessons to meet the individual needs of all students. Teachers using the principles of UDL are able to present information in multiple accessible formats, provide options for students to demonstrate their learning and use a range of strategies to stimulate interest and engagement (CAST 2011; Courey, Tappe, Siker, & LePage, 2012)
- utilise curriculum documents to develop a sequence of outcomes.
- identify concepts, strategies, and principles for successful student outcomes in individual and classroom programs.
- critically analyse curriculum development in relation to research outcomes.
- collaborate with parents in establishing learning priorities, as required by the education standards of the DDA.

AASE noted the importance of appropriate curriculum in its position paper on Educational Provision for Students with Special Education Needs. An appropriate curriculum, drawn from the general curriculum may be more stimulating and offer curriculum breadth while encouraging higher expectations and will potentially result in improved school performance and a decrease in inappropriate behaviour (Kern & Clements, 2007; Shaddock, 2007).
Assessment and evaluation
In collaboration with a special educator when appropriate, teachers will develop, administer and evaluate curriculum-based measures, including both specific mastery assessments and general outcome measures to plan individual programs, monitor student progress and evaluate instruction. Pre-service teachers should:

- understand the rationale behind Curriculum Based Assessment (CBA) and Curriculum Based Measurement (CBM) and the alignment of curriculum, instruction and assessment.
- be able to use results of assessment to write instructional objectives.
- be able to select curriculum content and/or teaching strategies based on the results of formative assessment.

There is a considerable research base that supports the use of CBA and CBM to place students in a curriculum sequence, to measure general progress in areas such as literacy and numeracy and to define student outcomes that are realistic and challenging (e.g., Hosp, Hosp, & Howell, 2006; Ysseldyke, Burns, Scholin, & Parker, 2010). Teachers should evaluate the effects of their instruction through regular monitoring of student progress and academic engaged time (Hosp et al., 2006; Stecker & Lembke, 2011; Rosenshine, 1995).

Pedagogy
In collaboration with a special educator where appropriate, teachers will plan and utilise effective instructional strategies to assist students achieve instructional objectives. Pre-service teachers should:

- understand the general principles of effective explicit instruction including planned review, presentation of new content and skills in small steps, monitoring of student progress in a lesson through guided and independent practice and the use of feedback and correctives.
- be familiar with a range of teaching strategies demonstrated to be effective – strategies based on the principles of applied behaviour analysis, mnemonic strategies, cognitive and metacognitive strategy instruction, peer-mediated interventions, and cooperative learning.
- be aware of the importance of practice, repetition and drill in basic academic skills.
- be aware of a range of cues, prompts, questioning procedures and physical guidance procedures.
- be able to locate, design or adjust instructional materials to meet the needs of individual students.

Critical characteristics of effective pedagogy have been described by educational researchers, and these characteristics can be embedded into a range of teaching approaches (Alberto & Troutman, 2012; Archer & Hughes, 2011; Doabler & Fien, 2013; Heward, 2003; National Autism Center, 2015; Scruggs, Mastropieri, Berkeley, & Marshak, 2010; Reid & Lieneman, 2006; Vaughn, Gersten, & Chard, 2000). Effective instruction maximises the time students spend learning and minimises inappropriate behaviour (Archer & Hughes, 2011). Strategies such as explicit instruction and mnemonics instruction should be included in teacher education courses, particularly in units related to literacy and numeracy instruction.

Classroom and Behaviour Management
Teachers will maintain a positive, orderly and efficient classroom environment that supports learning and positive social behavior. They will be able to implement research-based practices that result in maximum teaching time, high rates of task engagement, decrease disruptive behaviour and promote positive teacher/student interaction. Pre-service teachers will be able to:

- manage time and resource effectively.
- explicitly teach and reinforce social skills, classroom expectations, rules and procedures and minimise distractions.
- use a range of instructional grouping strategies and a range of strategies to maximize student engagement.
- apply the principles of applied behavior analysis to student and teacher behavior and will be familiar with the Schoolwide Positive Behaviour Intervention and Support framework.
- use a continuum of strategies to respond to inappropriate behaviour.
Direct influences in a school such as classroom management practices and classroom climate have an important impact on learning (Simonsen, Fairbanks, Briesch, Meyers, & Sugai, 2008). A positive classroom climate has a positive effect on student achievement (Marzano, Marzano, & Pickering, 2003). Teaching of appropriate behavior, including self-management, will be needed by some students with special education needs and will increase on-task behaviour and minimise disruptions (Alberto & Troutman, 2012; Simonsen et al., 2008). Peer-mediated teaching strategies such as cooperative learning and peer or cross-age tutoring can be effective for students with special needs and are alternatives to whole class teaching and independent seat work (Greenwood, Arreaga-Mayer, Utley, Gavin, & Terry, 2001).

**Environmental adjustments**

In collaboration with special educators and other personnel, teachers will be able to recommend and implement modifications to the classroom and school environment, particularly for students with physical, hearing and/or vision impairments that assist students to meet classroom and individual objectives and access the full range of school facilities. Pre-service teachers should be:

- able to modify the classroom to accommodate the needs of students when necessary. They should be aware of environmental elements such as lighting, noise levels, physical arrangements of furniture and equipment.
- able to utilise a range of resources, including assistive technology, mobile technologies, and other technologies to assist individual students.
- able to determine when and where the assistance of support staff such as teacher assistant is appropriate, and when such support is over intrusive or unnecessary.
- aware of the direct roles parents can play in flexible instructional environments to support individuals and groups of learners.

Some students with special education needs do not require modification or adaptation of curriculum content, rather they need alternative ways of accessing the curriculum and alternative ways of demonstrating their learning (CAST, 2011; Lee et al., 2006). In order to ensure an appropriate environment for students with special education needs, particularly those with vision and/or hearing impairments, pre-service teachers may need to consider environmental aspects of lighting, space, furniture and acoustics to accommodate the student, along with innovative technologies to support environments (Rekkedal, 2012; Steer, Gale & Gentle, 2007).

**Evidence-based practice**

Teachers should be able to critically evaluate and be able to justify their selection of instructional strategies in the light of empirical evidence provided by research. They should be able to adjust programs and teaching strategies in the light of information gained from regular monitoring of students learning. Pre-service teachers should be:

- familiar with recent research on special education practice and the education of students with disability and special education needs. There is an expanding research base of intervention and instructional strategies for students with special education needs which have been empirically demonstrated to be effective in promoting student learning (Alberto & Troutman, 2011; Archer & Hughes, 2011; Courtade, Test, & Cook, 2015; Gersten, Schiller, & Vaughn, 2000; Kleinheksel, 2003; National Autism Centre, 2015; Reid & Lieneman, 2006; Scruggs et al., 2010; Simonsen et al., 2008; Wexler, Reed, Pyle, Mitchell, & Barton, 2015). Some programs and practices recommended to educators have not been based on empirical research evidence (Goswami, 2006; Hess, Morrier, Heflin, & Ivey, 2008; Kearns & Fuchs, 2013; Landrum & McDuffie, 2010), so it is important for beginning teachers to be aware of the need for demonstration of the effectiveness of intervention strategies.
- able to design and use monitoring systems to provide them with information about student learning.
Effective practices may derive from a range of theoretical bases. Educators should focus on examining the evidence for effective practices, rather than on the ideological bases of practices (Heward, 2003). Further, implementation of research based practices requires sustained development and enhancement if they are to become part of a teacher’s professional knowledge (Baker, Gersten, Domino & Griffiths, 2004).

**Collaboration**

Teachers are required to collaborate with families and care-givers when making adjustments for students with disability, and so should receive preparation in the required communication skills. In addition, they will need to work in teams with other teachers and with a range of other professionals, including special educators, school counsellors and teacher assistants. Pre-service teachers should:

- be able to communicate effectively with a range of stakeholders, both orally and in writing
- have the collaborative skills to solve problems and resolve conflicts with other stakeholders.
- be able to co-teach with a special educator and to actively engage in the coaching process to develop and refine their own skills.
- be able to coach and mentor teacher assistants to ensure effective program delivery and student support.
- be able to collaborate with specialist support staff and accept, evaluate and utilise their feedback

Collaboration with families, working with teacher assistants, building their own skills and the skills of others through coaching and working as an effective team member are key skills for regular teachers and should be developed by pre-service teachers throughout their training (Blue-Banning, Summers, Frankland, Nelson, & Beegle, 2004; Giangreco, 2013; Nellis, 2010; Stormont & Reinke, 2012).

**Practicum and Post-Graduation Development**

It is not enough for pre-service teachers to know about effective practices. They must be able to demonstrate them in the classroom. Pre-service teachers must learn to apply more general principles to specific situations. Pre-service preparation should include at least one professional experience placement with a focus on the education of students with special needs, supervised by a teacher who has demonstrated competence in delivering effective programs and instruction to students with disability. Coaching and mentoring have been shown to be most effective in assisting classroom teachers to use research-based techniques, and thus should be a component of practicum experience for pre-service teachers and a means of further development of practising teachers (Baker et al., 2004; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Such practical experience could be gained by working with trained and competent special educators.

**References**


• Shadduck, A. (2007). Project to improve the learning outcomes of students with disabilities in the early, middle and post compulsory years of schooling part 1: Research objectives, methodology, analyses, outcomes and findings, and implications for classroom practice: Final research report. Canberra, ACT: Commonwealth of Australia


