

Models of Practice

To support the transition of students on the autism spectrum into and between Early and Middle Years classrooms

FINAL REPORT

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Models of Practice

To support the transition of students on the autism spectrum into and between
Early and Middle Years classrooms

Project 2.037 Models of Practice

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The Cooperative Research Centre for Living with Autism (Autism CRC)

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Executive Summary

1.1. Purpose of the study

One of the major challenges facing education sectors in Australia today is how to deliver educational programs in a way that supports the learning of students on the autism spectrum.

Many students on the autism spectrum experience significant challenges in education environments that can be barriers to accessing the curriculum. These challenges are often the result of the unique learning styles of students on the autism spectrum and schools failure to provide appropriate accommodations and adjustments for these students. The results of the Australian Autism Cooperative Research Centre Educational Needs Analysis Survey (Saggers et al., 2016) indicated that teacher knowledge about autism is limited, they are unsure how to best support students on the autism spectrum and that there is a lack of suitable resources and relevant professional development.

The aim of the project was to develop, trial and evaluate a Model of Practice (MoP) containing accessible and relevant resources and professional development material for Early Years (EY) and Middle Years (MY) mainstream educators of students on the autism spectrum in Australian schools.

The results of the evaluation of the Early and Middle Years MoP indicated that teachers found the resources provide useful strategies and that the strategies were well organised and easy to read. Ultimately, the findings showed that using the MoP increased teacher confidence in teaching students on the autism spectrum and their perceived knowledge of autism and effective classroom strategies.

The findings of this study indicate that teachers of mainstream classes benefit from accessible, relevant, evidence-based information and resources.

1.2. Study description

This research study was designed as a multistage, iterative design and implementation project based on a Design Based Research (DBR) model (Anderson & Shattuck, 2012; McKenney & Reeves, 2013). Two models of practice (EY and MY) were generated from the literature and validated for content and social relevance (Stage 1). The models were then trialled in multiple primary and secondary schools across Queensland, New South Wales and Victoria (Stage 2). Schools were assigned to one of three professional learning trial conditions (face-to-face coaching, online coaching or access to the model only on the ACRC website) in order to identify the level of support needed to facilitate the future uptake of each MoP by teachers working with students on the autism spectrum throughout Australia.

In this project, each MoP was viewed as a framework of foundational practices that empower teachers to make informed choices about the implementation of learning activities for students on the autism spectrum.

The iterative design-evaluate-redesign of the MoP prototypes (products) involved the generation and validation of empirically-supported practices. Figure 1 shows the progression of these cycles:

- practice generation and design of Prototype 1
- content validation of these practices
- practice refinement and redesign to create Prototype 2
- social validation of these practices
- practice refinement and redesign to create Prototype 3 for trial in classrooms.

The progression of design cycles resulted in an Early Years MoP (EY-MoP) comprising 29 practices for field-testing in schools. Likewise, the process yielded a Middle Years MoP (MY-MoP) comprising 36 practices for field-testing.

The Australian Standard Geographical Classification (ASGC) was used to identify schools from metropolitan, inner regional and outer regional locations in Victoria, New South Wales and Queensland. Schools in State government, Catholic and Independent education systems were invited to participate. To be eligible for participation in the Models of Practice project, teachers were required to have at least one student diagnosed with autism in their Kindergarten/Prep/Year 1 (Early Years) or Years 7/8 (Middle Years) class.

For the Middle Years stream of the project, an additional participatory role was created, referred to as an Autism Instructional Leader (AIL). The AIL was necessary in Middle Years schools as students usually have more than one teacher. The AIL served as a central point in the delivery of the Models of Practice in each school.

Three implementation conditions were embedded into the trial.

- Condition 1: Those receiving face-to-face coaching to assist with practice implementation
- Condition 2: Those receiving online coaching (e.g., Skype, FaceTime) to assist with practice implementation
- Condition 3: Those receiving only the MoP materials (MoP matrix and practice briefs) via website or email.

A convergent parallel mixed methods (Creswell, 2014) design was employed to gather quantitative survey data and qualitative interview data from teachers prior to (Time 1) and at the end (Time 2) of the 8-week trial period (see Figure 1).

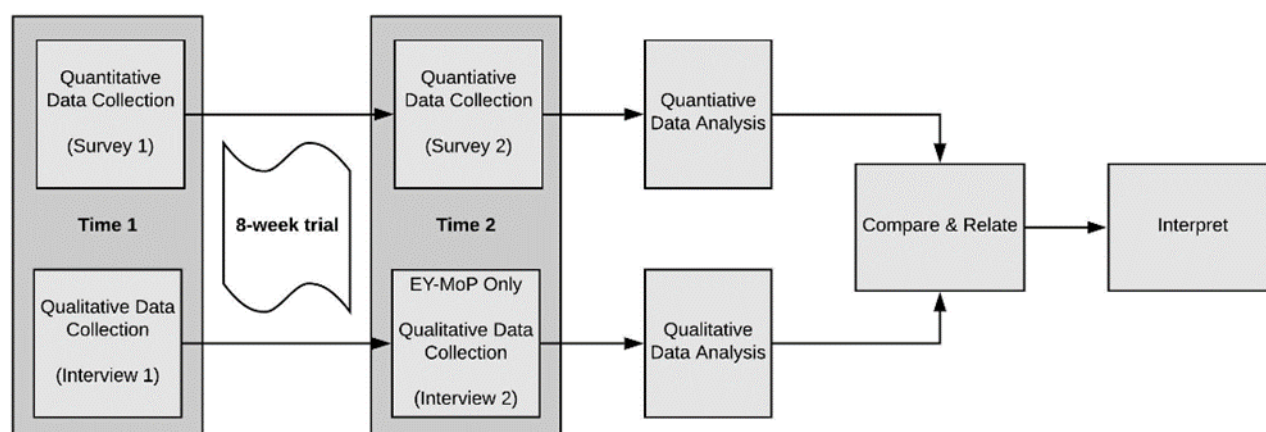


FIGURE 1 MIXED METHOD DESIGN FOR TRIAL

1.3. Data analysis

Quantitative data

Survey data were analysed using descriptive and non-parametric statistics as data screening revealed the presence of both outliers and violations of normality. Means were calculated at T1 and T2 for (a) level of use of individual practices within the model, (b) frequency of individual selected practices used during the trial, (c) teacher knowledge, (d) teacher confidence, and (e) teacher efficacy. Wilcoxon signed-rank tests (Wilcoxon, 1945) were used to determine differences between scores at T1 and T2 across the five variables.

Qualitative data

De-identified interview transcripts were analysed using QSR International's NVivo 11 qualitative data analysis software. Data in each interview were coded according to a three-step process (Bazeley & Jackson, 2013). In Step 1, responses to each interview question were linked to nodes developed from the interview guide to enable the quick retrieval of responses to each question and to facilitate comparison of responses between participants. Step 2 involved coding all mentions of the MoP organisers as well as any discussion of individual practices or practice briefs to the node, MoP. Step 3 focused on specific sections of the interview, which were thematically analysed using open coding to identify salient themes in participants' responses.

Trustworthiness of data was ensured in two key ways. Prior to data analyses, member checking (Creswell, 2014) was used to allow participants to check if data in interview transcripts aligned with what they shared during interviews. To this end, each participant was sent a copy of her transcribed interview for comment and/or revision, but no changes were requested across T1 and T2. During the analysis process, critical discussions among the research team provided an ongoing check on coding of data and specific interpretations (Cho & Trent, 2006).

1.4. Summary of findings

After eight weeks of accessing the MoP frameworks and briefs, EY and MY teachers reported a perceived statistically significant increase in their knowledge of autism and confidence in implementing practices in mainstream classes. Interviews with the teachers indicated that MoPs were well organised and easy to use.

Overall, the teachers found each MoP to be a valuable resource, not only for the students on the autism spectrum, but also for the whole class, as it offered easy-to-access and well laid out strategies. They also indicated that the resource would be extremely helpful to early career teachers. Professional support, especially face-to-face support, was highly valued.

One of the main benefits of MoPs is that they are easy to use, and in the next version, which is to be hosted on the Autism CRC inclusionEd website, the accessibility will be intuitive and contain more video material that is engaging. These modifications will enable time-poor teachers to access information on relevant practices in an efficient and timely manner.

1.5. Implications/recommendations

A range of evidence-based strategies for educating students on the autism spectrum are published in academic literature. They are generally not easily accessible to teachers and are often disseminated in a non-friendly way. Teachers who participated in the trialing of each MoP indicated that the practice framework and related briefs were not only useful for everyday planning but also as a reflective tool. It is recommended that further research be undertaken to evaluate the influence of MoP implementation on student academic and social outcomes.

Background

1.6. Project focus

This project sought to develop and trial two Models of Practice (MoPs). The MoPs were designed to support teachers in making decisions about their everyday classroom practice with students on the autism spectrum as they move through:

- Prep/Kindergarten and into Year 1 (early years)
- Year 7 and into Year 8 (middle years)

A MoP is an organisational framework comprising evidence-informed practices, with each practice being accompanied by a brief to support classroom implementation. As such, this resource has been designed to enable teachers to make informed choices about the learning activities they choose for students on the spectrum (Taylor, Beamish, Tucker, Paynter, & Walker, 2019).

1.7. Overview of the project

The *Models of Practice to support the transition of students with ASD into and between Early and Middle Years classrooms* project (referred to as the MoP project) was designed as a multistage, iterative design, implementation project based on a Design Based Research (DBR) model (Anderson & Shattuck, 2012; McKenney & Reeves, 2013). Two models of practice were generated from the literature and validated for content and social relevance (Stage 1). The models were then trialled in multiple primary and secondary schools across Queensland, New South Wales and Victoria (Stage 2). Schools were assigned to one of three professional learning conditions: face-to-face coaching, online coaching or access to the model only by the Autism CRC website or email.

In this project, each MoP was viewed as a framework of foundational practices that empower teachers to make informed choices about the structuring and implementation of learning activities for students on the autism spectrum.

1.8. Objectives of the Strategic Project Agreement

The objectives of this project were to provide two transition-focused pedagogical supports for mainstream teachers that promoted the successful transition of students with ASD (and potentially for other students with a disability), within and across early and middle years classrooms respectively.

The Strategic Project Agreement outlined six objectives. The iterative nature of the project and the issues encountered in the design and development of the project meant that the project objectives were modified as the research design progressed. For this reason, the objective outcomes varied. Table 1 shows completion status of project objectives.

TABLE 1 STRATEGIC PROJECT AGREEMENT OBJECTIVES COMPLETED

Strategic Project Agreement	Outcome
1. Design and test transition MoP for early years and middle years of schooling that support teaching staff and others working with students on the autism spectrum	Completed
2. Develop video modelling clips, to be hosted on YouTube at this stage, which will demonstrate specific elements of the MoP for teachers to supplement written materials and verbal instruction.	A Project website was developed rather than YouTube clips and contained: <ul style="list-style-type: none"> - Model of Practice introductory videos - Model of Practice Matrix for the Early Years and the Middle Years - Practice brief for each practice
3. Trial MoP in schools by investigating the extent to which practices embedded within each MoP are implemented with increased frequency and fidelity under three implementation conditions (in-class, online and information only).	Completed
4. Use data from the trial to inform the development of a multimedia resource package for each MoP that can be readily accessed and used by teaching staff, parents, and other stakeholders (incorporate revised video modelling clips that will have been trialled with 60+ teachers).	The InclusionEd website being developed will house the MoP resource package: <ul style="list-style-type: none"> - Validated practices with briefs - Video demonstrations - Additional information on practices
5. Use data from the trial to test an existing coaching model (Growth Coaching International) as a service to augment the online conferencing/materials.	Face-to-face coaching was the preferred professional learning condition. Growth Coaching International model was reported to be useful for goal setting and building rapport/connections
6. Influence teacher education programs in ways that contribute to a deeper understanding of the authentic practices related to transition, education, and students on the autism spectrum.	Participating teachers in the trial indicated that the MoPs were a valuable resource for beginning teachers. The project team plan to disseminate this information together with project resources to Australian universities with initial teacher preparation programs.

1.9. Research Questions

Research questions for Stage 1 and Stage 2 are presented in Table 2 and Table 3, respectively.

TABLE 2 RESEARCH QUESTIONS STAGE 1

Stage 1	Research Question
1	Which practices should be embedded in the MoPs to support teacher decision making in relation to the effective education of students on the autism spectrum as they move between early and middle years classrooms?

TABLE 3 RESEARCH QUESTIONS STAGE 2

Stage 2	Research Question
1	What were the teachers' initial impression of the MoP?
2	What were teachers' reported experiences in using the MoP?
3	Did the use of the MoP result in increased perceptions of teacher knowledge, confidence, and efficacy?
4	Did the coaching conditions (face-to-face, online) influence teachers' uptake of the MoP and implementation of selected practices?

1.10. Project Team

The project was undertaken by a multidisciplinary team with members being drawn from both industry partners and universities in New South Wales and Queensland (see Table 4).

TABLE 4 PROJECT TEAM

TEAM – Early Years (EY) and Middle Years (MY)	
Middle Years Team	Trevor Clark – Project Leader (Aspect) Autism CRC Vicki Gibbs – MY Team Leader (Aspect) Autism CRC Susan Bruck – Senior Research Officer MY Team (Aspect) Autism CRC Ainslie Robinson – Research Assistant MY Team (Aspect) Emma Gallagher – Research Assistant MY Team (Aspect) Rozanna Lilley – Stage 1 Contributor
Early Years Team	Wendi Beamish – EY Leader (Griffith University) Autism CRC Annalise Taylor – PhD Candidate EY Team (Griffith University) Autism CRC Libby Macdonald – Research Assistant EY Team (Griffith University) Autism CRC Will Rodgers – Research Assistant EY Team (Griffith University)
Whole Team – collaborators	Jill Ashburner – Autism Queensland Autism CRC Jessica Paynter – Griffith University Autism CRC Madonna Tucker – AEIOU Foundation Susan Walker – QUT

Research Design and Method

1.11. Design-Based Research

Design-Based Research (DBR) methodology was the overarching methodology used to develop and trial the MoPs. This approach was selected as it is typically used to address research problems in education that are “both scientifically and practically significant” (McKenney & Reeves, 2013, p. 98) and produce research outcomes that affect practice. DBR utilises an iterative cyclical process of design, evaluation, and redesign, mixed methods of data collection and involvement

from both researchers and practitioners in collaborative partnerships within real-world educational contexts (Anderson & Shattuck, 2012; McKenney & Reeves, 2013). Design principles put forward by Falconer, Finlay, and Fincher (2011) informed the development of both MoPs, including the practice briefs.

1.12. DBR cycles across stages of research

The iterative design-evaluate-redesign of MoP prototypes (products) involved the generation and validation of empirically supported practices. Figure 2 shows the progression of these cycles across:

- practice generation and design of Prototype 1
- content validation of these practices
- practice refinement and redesign to create Prototype 2
- social validation of these practices
- practice refinement and redesign to create Prototype 3 for trial in classrooms.

The progression of design cycles resulted in an Early Years MoP (EY-MoP) comprising 29 practices for field-testing in schools. Likewise, the process yielded a Middle Years MoP (MY-MoP) comprising 36 practices for field-testing.

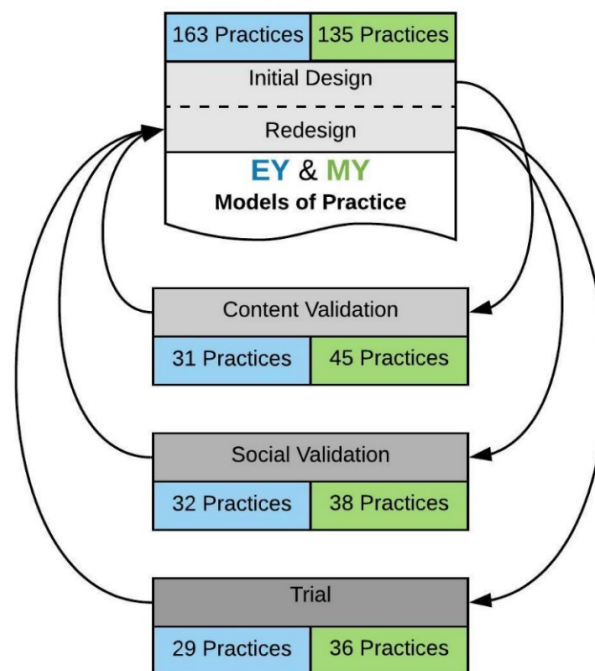


FIGURE 2 ITERATIVE CYCLES OF DESIGN-REDESIGN ACROSS RESEARCH STAGES

1.13. Stage 1 Developing and validating the Models of Practice

1.13.1. Stage 1: Research Question

Which practices should be embedded in the MoPs to support teacher decision making in relation to the effective education of students on the autism spectrum as they move between early and middle years classrooms?

1.14. Generating the practice listing

The process of generating the Early and Middle Years Models of Practice involved three key activities:

- Identifying the teaching practices to be included
- Sorting the identified practices into one of three organisers
- Refining practices to ensure that each practice was worded using teacher-friendly language.

1.14.1. Early Years

A two-step process was undertaken to identify initial teacher-based practices for inclusion in the EY-MoP.

1. Established practice listings from early childhood education and intervention were located in the literature and scrutinised for level of comprehensiveness, relevance, and empirical support. Two North American lists for young children with disabilities, the Division for Early Childhood [DEC] Recommended Practices (DEC, 2014) and the Inventory of Practice for Supporting Social Emotional Competence (Center on the Social and Emotional Foundations for Early Learning, 2013) were identified as potential sources for practices.
2. A literature search for autism-specific educational practices located five practice-based publications (Hurth, E., Izeman, Whaley, & Rogers, 1999; Iovannone, Dunlap, Huber, & Kincaid, 2003; Long & Simpson, 2017; Simpson & Crutchfield, 2013) as potential sources for practices.

From this material, a large working set of foundational practices were identified for consideration in the EY-MoP. Each practice was then scrutinised for alignment with the three MoP organisers -, Belonging, Being, and Becoming, which are key concepts themed throughout the Australian Early Years Learning Framework (EYLF; DEEWR, 2009). At the end of this process, 163 practices were retained and sorted according to the EYLF organisers to generate the 3-column MoP matrix structure.

Finally, these practices were subjected to rigorous team scrutiny, editing, and refinement. At the end of this consensus-driven process, the first prototype of the EY MoP comprised 31 empirically supported, foundational practices.

1.14.2. Middle Years

A literature search was undertaken to identify potential teacher practices. Practices were included when they met five conditions:

- Evidence-based
- Suitable for general education classroom teachers (rather than learning support teacher)
- Whole classroom strategies
- Mainstream school focused
- Single step program.

Each practice was assessed for alignment with one of three organisers using a framework of Rigour, Relevance and Relationships (Test, Smith, & Carter, 2014). Table 5 shows a definition for each organiser and the criteria used for identifying a practice. At the end of this process, 135 practices were retained.

TABLE 5 MIDDLE YEARS ORGANISER DEFINITIONS AND SELECTION CRITERIA

	Rigour	Relevance	Relationships
Framework organiser definitions	<ul style="list-style-type: none">• Evidence-informed instruction and support	<ul style="list-style-type: none">• Engaging instruction that builds on students' strengths.• Skills to achieve post school goal and be an active learner (Test et al., 2014)	<ul style="list-style-type: none">• Incorporate special interests in schoolwork• Socio-emotional capacities and skills
Practice criteria	<ul style="list-style-type: none">• Appropriate accommodations• Individualised support• Challenging learning opportunities	<ul style="list-style-type: none">• Career development• Self determination• Recreation/leisure	<ul style="list-style-type: none">• Social interaction• Strengthening supportive relationships• Social challenges• Emotional support

The MY-MoP Step 2 process, equivalent to the EY-MoP procedure, involved rigorous team scrutiny, editing, and refinement of practices. At the end of this consensus-driven process, the first prototype of the MY-MoP comprised 44 empirically supported practices.

1.15. Content validation of practices

Content validity of an item involves determining the extent to which the content is consistent with its purpose (Polit, Beck, & Owen, 2007). To gauge the content validity of the identified practices in each MoP, five autism and education experts from Queensland and New South Wales completed an online survey. All experts were qualified at the masters or doctoral level and had extensive experience in the field of autism education. In the survey they rated the relevance of each practice using a 4-point Likert scale (1 = *not relevant*, 2 = *somewhat relevant*, 3 = *quite relevant*, 4 = *highly relevant*) and commented on the importance, feasibility, sustainability, and wording of each

practice. A Content Validity Index (Cicchetti & Sparrow, 1981; Polit et al., 2007) was calculated for each practice. Only practices with a score of 0.75 or higher were retained in each MoP.

1.15.1. Early Years

Each of the 31 practices in the EY-MoP Prototype 1 had an individual Content Validity Index above the threshold of 0.75, which met the criterion for *excellent* content validity (Polit et al., 2007). Comments were provided for 12 practices and these qualitative data prompted the rewording of seven practices and one multifaceted practice being divided into two distinct practices. At the end of the content validation process, the EY-MoP Prototype 2 comprised 32 practices.

1.15.2. Middle Years

The expert reviewers commented on 44 practices. Six of the 44 practices in the MY-MoP Prototype 1 had an individual Content Validity Index below the threshold of 0.75, which did not meet the criterion for excellent content validity (Polit et al., 2007). As a result, these six practices were removed from the MY-MoP. Five practices were reworded. At the end of the content validation process, the MY-MoP Prototype 2 comprised 38 practices.

1.16. Social validation of practices

Social validity is the extent to which consumers value the purposes, procedures, and the effects of practices (Wolery & Bredekamp, 1994). To gauge the social validity of the identified practices in each MoP, early and middle year's teachers across Queensland, New South Wales and Victoria were invited to participate in online surveys. Invitations to participate were (a) e-mailed to teachers by government and non-government education systems and teacher registration bodies, and (b) posted on social media (viz., Facebook and Twitter). A Likert scale (*strongly agree*, *agree*, *disagree*, *strongly disagree*, *no opinion*, and *don't understand*) was used to find out if teachers recognised the practices as evidence-informed and whether these practices are used in classrooms. An established and stringent benchmarking convention of 80% was considered agreement (*agree* and *strongly agree*) for a practice to be socially validated (Beamish, Meadows, & Davies, 2012).

1.16.1. Early Years

Although 277 teachers responded to the invitation, only 129 surveys (47%) were deemed eligible for analysis as 148 respondents did not progress beyond the demographic information. Table 6 presents key teacher demographics ($n = 129$).

TABLE 6 DEMOGRAPHICS OF PARTICIPATING TEACHERS –SOCIAL VALIDATION

Characteristic	Count	Percent
Age		
Under-30	25	19.4
30-39	40	31.0
40-49	36	27.9

50-59	21	16.3
Over-60	6	4.7
Did not answer	1	0.8
Sector		
Catholic	16	12.4
Government	82	63.6
Independent	30	23.3
Did not answer	1	0.8
Highest qualification		
Bachelor Degree	83	64.3
Graduate Certificate	7	5.4
Graduate Diploma	15	11.6
Master Degree	22	17.1
Doctoral Degree	1	0.8
Did not answer	1	0.8
Years teaching experience		
Less than 1 year	3	2.3
2-5 years	28	21.7
6-10 years	30	23.3
11-20 years	30	23.3
More than 20 years	34	26.4
Did not answer	4	3
Years teaching 1st year of school		
Less than 1 year	19	14.7
2-5 years	45	34.9
6-10 years	13	10.1
11-20 years	14	10.9
More than 20 years	12	9.3
Did not answer	26	20.1
Years teaching students on the autism spectrum		
Less than 1 year	6	4.7
2-5 years	41	31.8
6-10 years	34	26.4

11-20 years	35	27.1
More than 20 years	11	8.5
Did not answer	2	1.5

Table 7 summarises the level of agreement (*strongly agree* and *agree*) with each practice in the MoP. The 32 practices within the EY-MoP met the stringent 80% benchmark for agreement, with 29 practices receiving levels of endorsement of over 90%, and 9 practices receiving levels of 95% or higher. The remaining three practices fell below the 90% threshold by less than 1%. At the end of the social validation process, therefore, no practices were excluded from the EY-MoP Prototype 2.

TABLE 7 LEVEL OF AGREEMENT OF PRACTICES (*n* = 32)

Number of Practices	% Agreement (strongly agree + agree)
9	95.0 - 100.0
20	90.0 - 94.9
3	89.1 - 89.9

1.16.2. Middle Years

One hundred and one teachers responded to and completed the survey. Table 8 presents key teacher demographics.

TABLE 8 DEMOGRAPHICS OF MY PARTICIPATING TEACHERS

Characteristic	Count	Percent
Age		
Under-30	19	18.8
30-39	27	26.7
40-49	36	35.6
50-59	14	13.9
Over-60	5	5
Sector		
Catholic	13	12.9
Government	67	66.3
Independent	21	20.8
Highest qualification*		
Bachelor Degree	49	48.2

Graduate Certificate	7	6.5
Graduate Diploma	20	20.1
Master Degree	24	24.5
Doctoral Degree	1	0.7
Years teaching experience		
Less than 1 year	3	3
2-5 years	23	22.8
6-10 years	19	18.8
11-20 years	28	27.7
More than 20 years	27	26.7
Did not answer	1	1
Years teaching 1st year of school		
Less than 1 year	8	7.9
2-5 years	31	30.7
6-10 years	15	14.9
11-20 years	21	20.8
More than 20 years	17	16.8
Did not answer	9	8.9
Years teaching students on the autism spectrum		
Less than 1 year	5	5
2-5 years	30	29.7
6-10 years	28	27.7
11-20 years	26	25.7
More than 20 years	8	7.9
Did not answer	4	4

*Some respondents answered more than once

Table 9 demonstrates that there was a greater than 85% agreement between the participants on individual practices

TABLE 9 LEVEL OF AGREEMENT OF PRACTICES ($n = 38$)

Number of Practices	% Agreement (strongly agree + agree)
10	95.0 - 100.0
19	90.0 - 94.9
7	85.1 - 89.9
2	<85

1.17. Consolidation of Models of Practice

A final refinement process was undertaken across each MoP to systematically re-check practice wording and clarity while considering comments made by teachers in the social validation survey. A two-page brief to guide implementation was then developed for each practice based on the work of Falconer et al. (2011). Figure 2 provides an overview of the structure used write up each practice brief.

The practice:
Re-statement of practice within the MoP

How does it help?
Outline of the issue/s to which the practice responds as well as the rationale for the practice use

What is it?
Definition of practice elements

How does it work?
A description of what is involved with practice use

How do I do it?
Implementation checklist

It works better if...
Key criteria for success

It doesn't work if...
Watchpoints for unsuitable (or undesirable) situations

How will I know it's working?
Ways to check the desired result has been achieved

Where can I go to find out more?
3-5 high-quality external, online readings or resources

Australian Professional Standards for Teachers (APST)
Identification of 1-3 APSTs that related to practice use

FIGURE 3 PRACTICE BRIEF STRUCTURE

1.17.1. Early Years

The refinement process led to 12 practices being reworded and 6 practices being combined and refined to form 3 practices. Accordingly, the third prototype of the EY-MoP comprised 29 practices (10 = *Belonging*, 9 = *Being*, 10 = *Becoming*), each with a supporting practice brief (Table 10).

TABLE 10 BELONGING, BEING, BECOMING PRACTICES

Belonging	Being	Becoming
Interact with every student	Engage with students	Assess student knowledge
Provide feedback on learning and behaviour	Model positive interactions	Provide systematic instruction
Actively supervise class	Teach friendship skills	Monitor student learning
Provide an accessible classroom	Model emotional literacy	Assess student learning outcomes
Provide an organised classroom	Teach self-regulation	Teach self-help skills
Give clear directions	Teach social problem solving	Teach communication skills
Reinforce classroom rules	Use peer-mediated instruction	Teach speaking and listening skills
Consistently use routines	Conduct an ABC analysis	Teach reading
Consistently use schedules	Modify environment to reduce behaviour	Teach writing
Prepare students for transitions		Teach numeracy

1.17.2. Middle Years

The refinement process led to five practices being reworded and eight practices being removed from the MY-MoP. As a consequence, the third prototype of the MY-MoP comprised 36 practices (13 = Rigour, 12 = Relevance, 11 = Relationships), each with a supporting practice brief. (Table 11).

TABLE 11 RIGOUR, RELEVANCE RELATIONSHIPS PRACTICES

Rigour	Relevance	Relationships
Instructional sequences	Teaching test preparation skills	Home-school communication
Active supervision	Modifications to intensity, methods or curriculum	Parent communication – homework
Supporting receptive language	Test adjustments	Home base
Task analysis	Oral assessment adjustments and alternatives	Incidental social coaching and safety
Visual supports	Exemplars	Classroom rules
Organised classroom	Technology-aided instruction	Flexible grouping strategies
Student organisational supports	Adjustments for projects and assignments	Inclusive language and incidental social coaching
Prompting	Authentic assessment	School belonging
Supporting expressive language	Choice making	Reinforcing appropriate behaviour

Visual study guidelines, planners and timelines	Special interests	Responding to inappropriate behaviour
Visual self-management tools	Self-monitoring	Peer interaction
Visual instructional supports	Sensory needs	
Routines and visual schedules		

Stage 2 Trialling the Models of Practice

The trial of each MoP took place over an 8-week period during the second semester of school (Terms 3 and 4). Participating teachers and AILS were surveyed and interviewed prior to and at the end of the trial period. Coaches were surveyed at the end of the trial.

1.18. Recruitment of schools and participants

Recruitment was conducted by the Autism CRC school liaison officer. The Australian Standard Geographical Classification (ASGC) was used to identify schools from metropolitan, inner regional and outer regional locations in Victoria, New South Wales and Queensland. Schools in State government, Catholic and Independent education systems were invited to participate.

The school liaison officer commenced recruitment by inviting primary and secondary schools from each geographic location. The Principal of each school was sent flyers advertising the project and followed up with a phone call. Principals who expressed interest in the project were then emailed an Information Statement and Informed Consent. Principals then promoted the project and invited teachers of Kindergarten/Prep/Year 1 or Years 7/8 to participate in the project. To be eligible for participation in the Models of Practice project, teachers were required to have at least one student diagnosed with autism in their class. Following informed consent by the Principal, nominated teachers were emailed Information Statements and Informed Consent forms.

In the Middle Years stream of the project, an additional participatory role was created called an Autism Instructional Leader (AIL). The AIL was necessary in Middle Years schools as students usually have more than one teacher. The purpose of the AIL was to serve as a central point in the delivery of the Models of Practice. The AIL participants received coaching in the Growth Coaching International Approach. AIL teachers mentored the participating teachers in the use of the MY-MoP and practice briefs.

A total of 32 schools were recruited across the three states; 23 schools for trialling the EY-MoP and nine schools for trialling the MY-MoP. Table 12 presents the number of schools by state and geographical location.

TABLE 12 PARTICIPATING SCHOOLS

		Metro	Regional	Rural	
VIC	EY	6	1	0	
	MY	1	1	0	
NSW	EY	2	5	2	
	MY	0	1	1	
QLD	EY	4	1	2	
	MY	2	2	1	
					Total
	Subtotal EY	12	7	4	23
	Subtotal MY	3	4	2	9

1.18.1. Early Years

The recruitment process yielded a total of 43 teachers in 23 schools across the three eastern states. A small number of teachers ($n = 5$) withdrew prior to collection of any pre-trial data due to initial delays in recruiting schools prior to the trial commencing and difficulties experienced by some in accessing and navigating the project website for trial information and the EY-MoP.

At the first data collection point of the trial, our sample of teachers comprised 38 teachers in 21 schools. Table 13 presents key demographics for this teacher group. All teachers were female, with the majority aged over 30 years (60%) and holding a Bachelor's degree (63%). The participating teachers were from Queensland schools (40%), NSW (31%) and Victoria (29%). Most were employed by state government sectors (66%) and in metropolitan locations (66%). Approximately three quarters (76%) of the teachers had more than four years of experience. Over 90% of teachers reported prior experience in teaching students on the spectrum, and over 60% signaled that they had undertaken autism-specific professional development.

TABLE 13 KEY CHARACTERISTICS OF PARTICIPATING TEACHERS (*n* = 38)

Characteristic	Count	Percent
Age		
Under-30	15	40
30-39	5	13
40-49	8	21
50-60+	10	26
State		
New South Wales (NSW)	12	31
Queensland (QLD)	15	40
Victoria (Vic.)	11	29
Geographic location		
Metropolitan	25	66
Regional	9	24
Rural	4	11
Sector		
Catholic	12	32
Government	25	66
Independent	1	3
Highest qualification		
Bachelor Degree	24	63
Graduate Certificate	2	5
Graduate Diploma	7	18
Master Degree	5	13
Years teaching experience		
<1 year	1	3
1-3 years	8	21
4-9 years	13	34
10-15 years	5	13
16+ years	11	29
Currently teaching		

Prep/Kindergarten	26	68
Year 1	10	26
Prep/Kindergarten to Year 2	2	5
Experience teaching students on the autism spectrum		
Yes	35	92
No	3	8
Undertaken autism-specific professional development		
Yes	23	61
No	15	40

Note. Percentages are rounded and therefore may sum to <100 or >100.

1.18.2. Middle Years

Table 14 provides a description of the demographics of the Middle Years participants ($n = 31$).

TABLE 14 DEMOGRAPHICS OF THE MIDDLE YEARS PARTICIPANTS

Characteristics	Count	Percent
Age		
Under-30	9	29
30-39	5	16.1
40-49	10	32.3
50-60+	6	19.4
Did not answer	1	3.2
State		
New South Wales (NSW)	5	16.1
Queensland (QLD)	18	58.1
Victoria (Vic.)	8	25.8
Geographic location		
Metropolitan	14	45.2
Regional	12	38.7
Rural	5	16.1
Sector		
Catholic	3	9.7

Government	18	58
Independent	10	32.3
Highest qualification		
Bachelor Degree	23	56.1
Graduate Certificate	1	2.4
Graduate Diploma	10	24.4
Master Degree	7	17.1
Years teaching experience		
<1 year	0	0
1-3 years	8	25.8
4-9 years	8	25.8
10-15 years	5	16.1
16+ years	10	32.3
Experience teaching students on the autism spectrum		
Yes	29	93.5
No	2	6.5
Undertaken autism-specific professional development		
Yes	19	61.3
No	12	38.7

Note. Percentages are rounded and therefore may sum to <100 or >100.

1.19. Coaching arrangements

Three implementation conditions were embedded into the trial. All secondary and primary schools in regional and remote locations were purposively clustered and assigned to one of the three conditions. As the PhD candidate in the Early Years team needed to include some component of the trial in her research, she was allocated primary schools in metropolitan locations so that these schools could be randomly assigned a condition. Figure 2 shows the three professional learning conditions.

- Condition 1: Those receiving face-to-face coaching to assist with practice implementation
- Condition 2: Those receiving online coaching (e.g., Skype, FaceTime) to assist with practice implementation
- Condition 3: Those receiving only the MoP materials (MoP matrix and practice briefs) via website or email.



FIGURE 4 TRIAL ARRANGEMENTS

Staff members from Autism Spectrum Australia (Aspect) and Autism Queensland (AQ) were invited to participate in the trial as project coaches. Nine staff were assigned to coaching roles. These staff members held qualifications in Speech Pathology, Occupational Therapy, Psychology, or Education.

Due to the nature of subject-based teaching in secondary school, the MY stream added another level to coaching aimed at improving the consistency of the MoP's implementation. Each of the participating MY schools were asked to nominate an Autism Instructional Leader (AIL), who received the coaching. These AIL's were then responsible for supporting the participating teachers implement the MY-MoP in their classes.

All coaches attended two, two-day Growth Coaching International (GCI) workshops. They also completed a one-day training workshop and an online training session with the project team to (a) familiarise them with each MoP and its respective content, and (b) introduce guidelines for the delivery of support to teachers and AILs. Coaches were encouraged to use elements of Growth Coaching in addition to their existing professional skills to support participating teachers and AILs during the trial.

Schools, participating teachers and AILs were advised by email which implementation condition they had been allocated. Participants were given a link to the Models of Practice website and invited to commence the implementation by viewing introductory videos. Coaches were instructed to contact their assigned participating teachers/AILs to introduce themselves and schedule their coaching sessions at a mutually convenient time throughout the implementation period

1.20. Mixed methods data collection procedure

A convergent parallel mixed methods (Creswell, 2014) design was employed to gather quantitative survey data and qualitative interview data from teachers prior to (Time 1) and at the end (Time 2) of the 8-week trial period (see Figure 4).

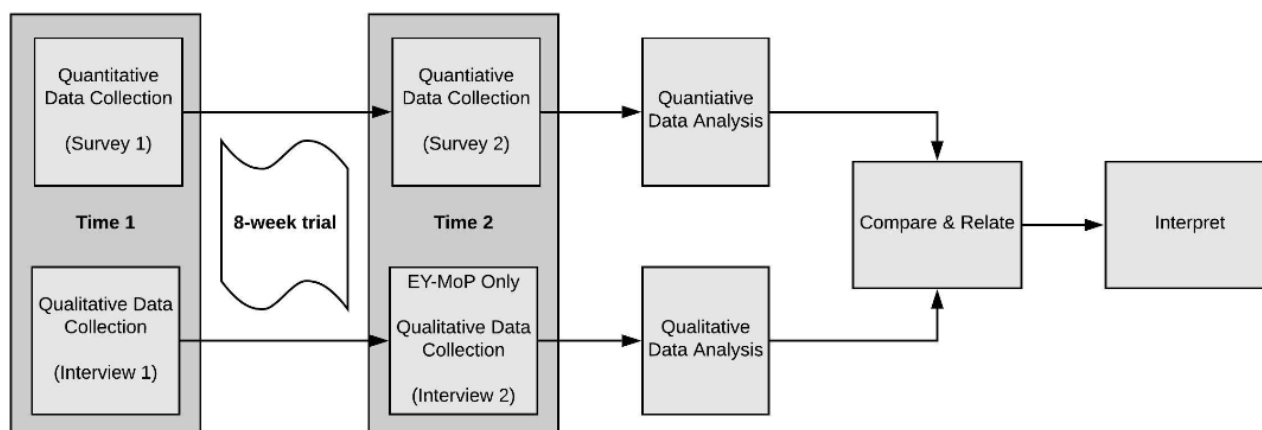


FIGURE 5 MIXED METHOD DESIGN FOR TRIAL

1.21. Measures

Measures used to gather data from teachers and coaches during the trial are briefly described below and presented according to order of use. Complete versions are available upon request.

1.21.1. Survey 1 for teachers and AILS (T1)

Survey 1 was completed by the participating teachers and AILs. It was created using the Griffith University tool, LimeSurvey, with an anticipated completion time of 30 minutes and:

- (a) collected demographic information
- (b) enabled participants to rate their knowledge and confidence in teaching students on the spectrum using 5-point Likert rating scales and self-efficacy using questions on a 10-point Likert from the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001)
- (c) gathered early thoughts on the practices within the MoP, how often practices in the model were typically used in the classroom, and how often individual practices may be used during the trial using 5-point Likert rating scales
- (d) asked an open question about what teachers hoped to gain from participating in the project.

1.21.2. Interview 1 for teachers and AILS (T1)

This measure was designed as an introductory semi-structured phone interview of approximately 30 minutes duration. The Interview Guide comprised 21 questions focused on gathering information on (a) the classroom context in which the MoP would be used, (b) initial impressions of the MoP, (c) early thoughts on how the MoP may be used during the 8-week trial period, and (d) expected outcomes from participating in the project.

Interview 1 was conducted following the completion of Survey 1.

1.21.3. Interview 2 for Early Years teachers (T2)

This measure was designed as a follow-up phone interview of approximately 20 minutes duration. The Interview Guide comprised 16 questions but was less structured than Interview 1. Different questioning sequences were generated to capture the experiences of teachers who used/did not use the MoP and did/did not receive any coaching support. For teachers who reported that they used the MoP, questions were related to how the MoP matrix and practice briefs were used in the classroom and with students, thoughts on the accessibility and relevance of the MoP, aspects that facilitated its use, and potential positive impacts on students and the class.

Interview 2 was conducted without delay at the end of the 8-week trial period while teachers' experiences with the MoP were fresh. Only early years teachers were interviewed. Middle years teachers were unable to set aside time for the interviews as it was close to the end of year and they reported being too busy.

1.21.4. Survey 2 for teachers and AILS (T2)

This measure was designed in a similar manner to Survey 1, except for the item about anticipated use of individual practices during the trial, which was changed to actual use of individual practices selected for implementation during the trial. The 'welcome' section of the survey indicated that completion of this 30-minute survey would earn a \$35 Coles-Myer eGift voucher as a token of appreciation for project participation.

Survey 2 collected information on, (a) assigned condition and the teacher's perspective on the coaching conditions (face-to-face and online) if assigned a relevant condition, (b) the teacher's experience with the MoP and practice briefs, including frequency of access data, usefulness, and areas for improvement, (c) reappraise level of knowledge, confidence, and self-efficacy using Likert ratings, (d) frequency of use data for individual practices, (e) overall perceptions of the MoP and participation in the project.

1.21.5. Survey for coaches

This measure was designed as a short online survey for coaches. This survey comprised seven open-ended questions, which gathered perceptions on the usefulness of the Growth Coaching International model, the impact of the project on staff's regular schedules, the overall value of the MoPs, including practice briefs, and the overall coaching experience with schools and teachers.

1.22. Data analysis

1.22.1. Quantitative data

Survey data were analysed using descriptive and non-parametric statistics as data screening revealed the presence of both outliers and violations of normality. Means were calculated at T1 and T2 for (a) level of use of individual practices within the model, (b) frequency of individual selected practices used during the trial, (c) teacher knowledge, (d) teacher confidence, and (e) teacher efficacy. Wilcoxon signed-rank tests were used to determine differences between scores at T1 and T2 across the five variables.

1.22.2. Qualitative data

De-identified interview transcripts were analysed using QSR International's NVivo 11 qualitative data analysis software. Data in each interview were coded according to a three-step process (Bazeley & Jackson, 2013). In Step 1, responses to each interview question were linked to nodes developed from the interview guide to enable the quick retrieval of responses to each question and to facilitate comparison of responses between participants. Step 2 involved coding all mentions of the MoP organisers as well as any discussion of individual practices or practice briefs to the node, MoP. Step 3 focused on specific sections of the interview, which were thematically analysed using open coding to identify salient themes in participants' responses.

Trustworthiness of data was ensued in two key ways. Prior to data analyses, member checking (Creswell, 2014) was used to allow participants to check if data in interview transcripts aligned with what they shared during interviews. To this end, each participant was sent a copy of her transcribed interview for comment and/or revision but no changes were requested across T1 and T2. During the analysis process, critical discussions among the research team provided an ongoing check on coding of data and specific interpretations (Cho & Trent, 2006).

1.23. The project website

The website had a landing page that served as an introduction to the MoPs project, a page each for Middle and Early Years streams of the project, as well as a Frequently Asked Questions page. The landing page included a text introduction as well as a video outlining the MoPs Project as a whole. The EY and MY pages each contained a video explaining how the trial of each MoP would be conducted. These pages also housed the relevant practice framework together with briefs which could be downloaded in PDF form. This site was hosted on the Autism CRC website.

Findings

1.24. Stage 2: Research Question 1

What were the teachers' initial impression of the MoP?

1.24.1. Early Years

At T1, 33 teachers participated in Interview 1 during which they were asked to share their initial impressions of the EY-MoP matrix and the practices associated with each of the three organisers (*Belonging*, *Being*, and *Becoming*). Two clear themes emerged in the analysis of their responses. First, many teachers related that the practices in the model were in some way familiar to them. Secondly, teachers noted the importance or usefulness of the practices in early years education.

1.24.1.1. Familiarity with the model

All participants who completed Interview 1 expressed either familiarity with the practices in the model, or that they appeared to "make sense" to them. For some teachers, the model, with its three organisers, was familiar due to their knowledge of the Early Years Learning Framework (EYLF: DEEWR, 2009). Several teachers thought that it was the same framework, making

comments such as, “I haven't viewed it in a while, so at uni we looked at it a lot, but actually working, yeah, I haven't really pulled it out until just recently.” Others noted the similarity, with remarks like, “I love that it's aligned with the Early Years Learning Framework.” By comparison, some teachers recognised that the EY-MoP was a new practice framework but the practices themselves were familiar or made sense. Typical responses included: “It's quite familiar, all the descriptions, but I've never seen it laid out like that, under Belonging, Being, and Becoming,” and, “It was all quite familiar, I thought: ‘yeah, that makes common sense; yep, you need to do that; yep.’”

1.24.1.2. Importance of the practices

The second notable theme evident in teachers' initial responses to the EY-MoP concerned the common view that the individual practices were important. A majority of respondents remarked on the importance of practices in *Belonging* and *Being*. Comments included, for example: “I really think that the class rules and those class schedules and everything are just so important”; “I just think the social-emotional learning is very important to me and my kids”; and, “I agree with all the practices that are mentioned there. I think they're all as you know, equally as important as each other.” Fewer teachers mentioned the importance of *Becoming* practices, with some expressing the view that practices in this organiser were secondary to those in the other two organisers. As one teacher put it, “...in order for them to be calm, I think they need to have to be able to have that feeling of Being and Belonging, so I do feel like that's third in line to the other things, because... I think the Becoming part has to come as a result of the other things being in place.” Moreover, approximately one third of the teachers forwarded the view that the EY-MoP practices were useful not only for students on the spectrum, but for all students. One teacher remarked, “I thought it sort of comprises everything we want for, not just, I guess, ASD students, but also for any student in a class.”

1.24.2. Middle Years

At T1, 31 teachers participated in Interview 1 during which they were asked to share their initial impressions of the MY-MoP matrix and the practices associated with each of the three organisers (*Rigour*, *Relevance*, and *Relationships*). Similar to the Early Years stream, two clear themes emerged in the analysis of their responses. Firstly, many teachers related that the practices were familiar to them. Secondly, teachers noted that the practices included in the MY-MoP were good teaching practice.

1.24.2.1. Familiarity with practices

The majority of participants who completed Interview 1 communicated familiarity with the teaching practices in the MY-MoP, and several communicated that they already utilised some of these practices in their classroom. Some participants noted that whilst many of the practices in the MY-MoP were familiar, it prompted them in areas that they feel they could develop further, making comments such as “when I was reading over these things I said, “I do that, I do that”.....I think I said that I need to do a few of those better”.

1.24.2.2. Good teaching practice

The second theme that emerged in relation to participant's initial response to the MY-MoP was the observation that the MY-MoP represents good teaching practice in general. Many participants also

commented that the MY-MoP was presented in an accessible, user-friendly format that made sense to teachers, with one participant commenting “I really liked it. I think that it just makes sense”.

Some participants described the *Relationships* section of the MY-MoP as being an area that is important and should be an area of focus for their teachers’ development. One teacher expressed “we also need to make sure that we have a good relationship not just with the students, but the family and even the community.”

1.25. Stage 2: Research Question 2

What were teachers’ reported experiences in using the MoP?

1.25.1. Early Years

At T2, 27 teachers participated in Interview 2 and every teacher went on to complete Survey 2.

During Interview 2, teachers were asked to share their experiences with the EY-MoP. Of these, 15 were considered to have actively used the EY-MoP by referring to the model and practice briefs to plan or reflect on teaching practice on at least two occasions and implementing at least one or more practices in their classrooms over the eight-week trial period. Four teachers were classified as superficial users as they only used the model to reflect on their classroom practice during the trial. Eight teachers were considered non-users as there was no evidence that they had either reflected on or used practices within the model. Comments from teachers who had used the model (i.e., active and superficial users) provided insights into enablers associated with the uptake of the model and in some cases, implementation of selected practices. Comments from many teachers, including non-users, identified factors that prevented or constrained the use of the model during the trial period. Interview comments about individual practices selected for implementation across the eight weeks were augmented by frequency-of-use data collected via Survey 2.

1.25.1.1. Enablers

Teacher perceptions about aspects that helped to facilitate use of the EY-MoP were clustered around four key themes. First, many teachers who used the model practices expressed the view that the model was a valuable resource. As one teacher said, “It’s benefited the children, it’s benefited me, and I’ve got a great resource that’s here, that’s self-explanatory, easy to read.” Second, many teachers reiterated that the practices were beneficial not just for their student/s on the spectrum, but for the whole class. As one teacher said, “those routines help all preps, especially, you know, my boy with the autism, but, yeah, it sort of benefitted the whole class.” Third, several teachers felt that the model with its foundational practices was particularly suitable for early career teachers, recent graduates, or preservice teachers. One teacher commented, “I hope all new teachers can get their hands on it,” and another said, “I actually showed my student teacher, and she found it really helpful.” Finally, several teachers placed high value on the professional support that they received from coaches. In addition, there was a close association between active use of the EY-MoP and the professional support teachers received, with all those who received face-to-face support going on to implement parts of the model in their classrooms. This association is addressed further in response to Research Question 4 below.

1.25.1.2. Constraints

Teachers overwhelmingly cited a lack of time or a lack of support when discussing challenges in implementing the practices in the model, or reasons why they were not active users of the model. Typical remarks about the problem of not having enough time included: “It wasn’t the fact that I actually thought about not going back to it... It’s just... it was just time constraints... with so much stuff happening with work...”; and, “I think it was a bit of the time restraints, and trying to get everything done also with our everyday teaching and commitments, and assessments, and reporting... Just everything of the everyday teaching world, I think, made it quite difficult.” Lack of support or guidance in using the model was identified as a barrier to using the model by some of the teachers who had not been assigned to receive this type of professional support. “I think the model itself is fantastic,” one teacher noted, “but it would be good to have someone come out and explain it to us... actually someone coming out and explaining it to us is much better than us reading it and trying to implement it ourselves.”

1.25.1.3. Practice use

Figure 6 displays the practices within the EY-MoP that were assigned the highest frequency-of-use scores (range 5–8 occasions). The eight practices are distributed somewhat evenly across the three organisers (*Belonging*, *Being*, and *Becoming*), with practices related to “*consistently use schedules, teach self-regulation, and teach social problem solving*” reported as being implemented most frequently across the trial period.

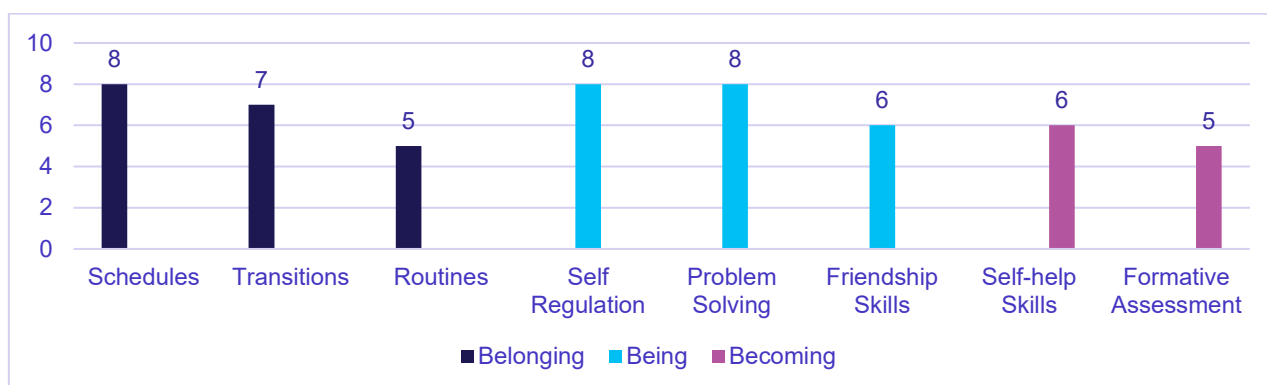


FIGURE 6 REPORTED FREQUENCY OF PRACTICE USE DURING TRIAL

1.25.2. Middle Years

The teachers who reported using the practice briefs, found them to be useful and would share them with their colleagues.

Thirty-one teachers completed Survey 1 about their expectations of using the MY-MoP and in Survey 2, teachers shared their experience of using the MY-MoP. Fifteen teachers completed Survey 2 (six AIL’s and nine teachers) representing approximately a 50% attrition.

Interview 2 was not conducted due to participants stating they did not have time at the end of term to set aside for the scheduled interview. (see ‘Limitations’ section).

1.25.2.1. Enablers

Participants described three key themes as to what helped to facilitate the use of the MY-MoP. First, many teachers articulated that the MY-MoP offered good strategies, presented in a well laid out, accessible brief. As one teacher reported “the three areas are well named with the three R’s - a good memory hook. When I discovered the practice briefs, they made a lot more sense to me. Colour coding was helpful. Spoken in everyday language. Addressed many facets of practice. Layout great not over crowded”. Second, teachers described the support provided by AILs/coaches as extremely useful when accessing the MY-MoP, as noted by one teacher who commented “face-to-face dialogue is the most effective way to learn and be guided”. Last of all, some teachers described the MY-MoP as a great reflective tool. Whilst most participating teachers advised that they were familiar with many of the practises, the MY-MoP often served as a reminder to reflect back on their practice and think about what they were doing well and what strategies they could focus on to further their practices. As one teacher described, “it allows the teacher to reflect on their own practices to ensure they cater for all students”.

1.25.2.2. Constraints

Similar to the Early Years stream, teachers described lack of time and support as the biggest challenge to actively engaging with the MY-MoP. The majority of participants were not given release time to participate in the project and as a result used their own time. When asked what arrangements were made for teachers to be released to attend coaching sessions, teachers responded “there wasn’t” or that coaching was conducted during “lunchtime meetings”. One of the better supported teachers noted that the “Principal took class”. Participants also commented that by the time the MY-MoP was rolled out in participating schools, the project felt quite rushed with a fair amount of data collection and not much time to implement the intervention. One teacher commented “information/session were too spread out. I would constantly need to be reminded what it was and re-explained some things like when we started it.”

Teachers, particularly those who did not receive coaching, also commented that there was not enough explicit instruction on how to use the Model of Practice or use the project website. One teacher noted that they “felt a little at sea with some things especially in the beginning an expert would have been helpful to give a big picture or summary of the practices and briefs and how they work together.”

1.25.2.3. Practice use

Figure 7 presents the practices within the MY-MoP that were assigned the highest frequency-of-use scores (range 5–8 occasions). Of the nine most used practices, the practices within the organiser of Rigour were used slightly more frequently, than those in Relevance and Relationships. Practices related to instructional sequences, task analysis and organised classroom were reported as being implemented most frequently across the trial period.

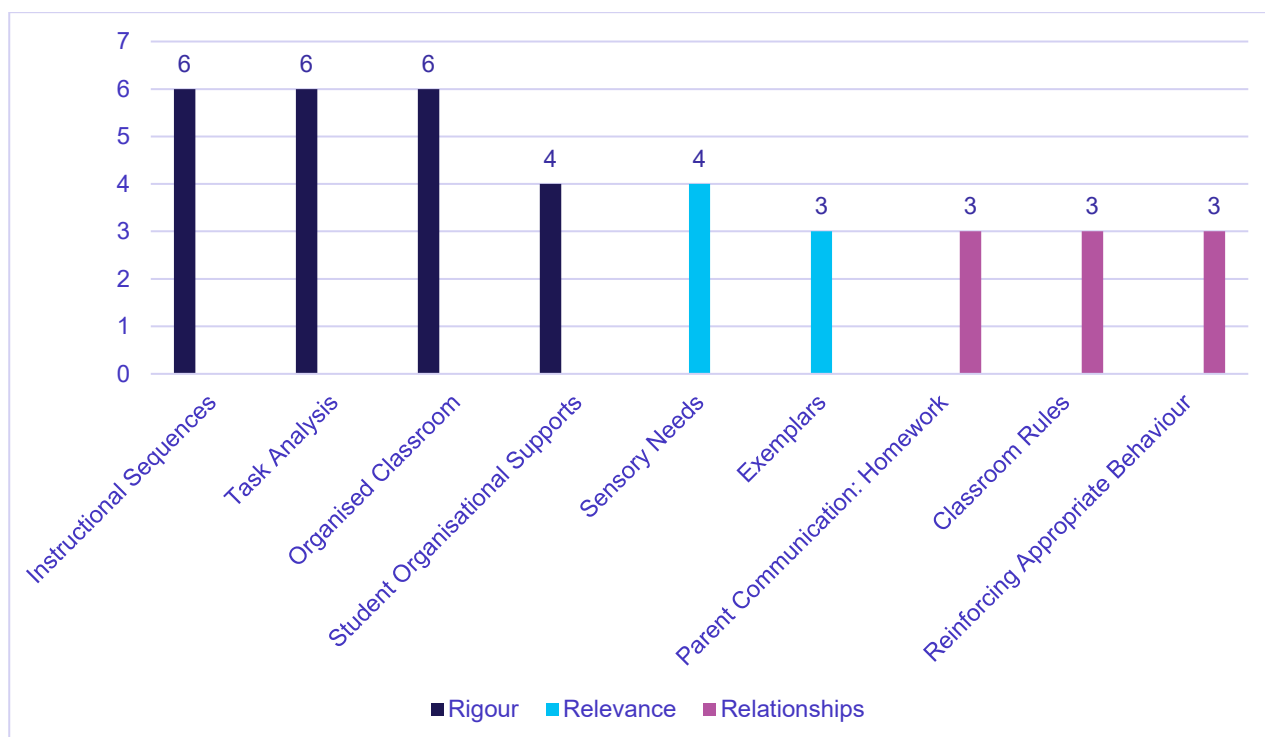


FIGURE 7 MOST FOCUSED ON PRACTICES

1.26. Stage 2: Research Question 3

Did the use of the MoP result in increased perceptions of teacher knowledge, confidence, and efficacy?

1.26.1. Early Years

At both T1 and T2, survey and interview measures were used to question participating teachers ($n = 27$) about their feelings of knowledge, confidence, and capability related to teaching young students on the autism spectrum. In Surveys 1 and 2, teachers not only rated their knowledge and confidence but also completed items from the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001). Analyses of T1 and T2 survey data revealed statistically significant changes in the three areas. In Interview 1, teachers commented generally on their knowledge and confidence with this specific student group whereas in Interview 2 they were questioned about whether they felt that their implementation of the practices within the EY-MoP enhanced their knowledge and skills, and whether they now felt more capable to teach students on the spectrum.

1.26.1.1. Reported change in level of knowledge

Figure 8 presents teacher ratings expressed as percentages across knowledge level categories (*very low* = 1 to *very high* = 5) at T1 and T2. A Wilcoxon signed-rank test determined that there was a medium statistically significant increase in knowledge ($Mdn = 1.00$) following access to the practice model at T2 ($Mdn = 4.00$) compared to T1 ($Mdn = 3.00$), $z = 4.347$, $p < .001$, $r = 0.592$.

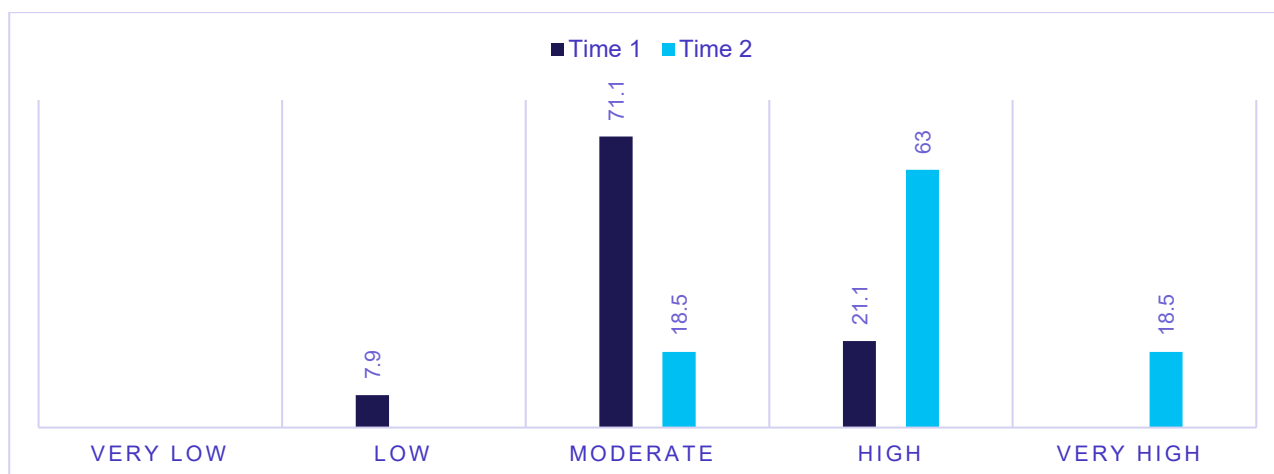


FIGURE 8 CHANGE IN LEVEL OF KNOWLEDGE (%) RELATED TO TEACHING YOUNG STUDENTS ON THE SPECTRUM

1.26.1.2. Reported change in level of confidence

Figure 9 presents teacher ratings expressed as percentages across confidence level categories (*very low* = 1 to *very high* = 5) at T1 and T2. A Wilcoxon signed-rank test determined that there was a medium statistically significant increase teacher confidence ($Mdn = 1.00$) following access to the practice model at T2 ($Mdn = 4.00$) compared to T1 ($Mdn = 3.00$), $z = 4.234$, $p < .001$, $r = 0.576$.

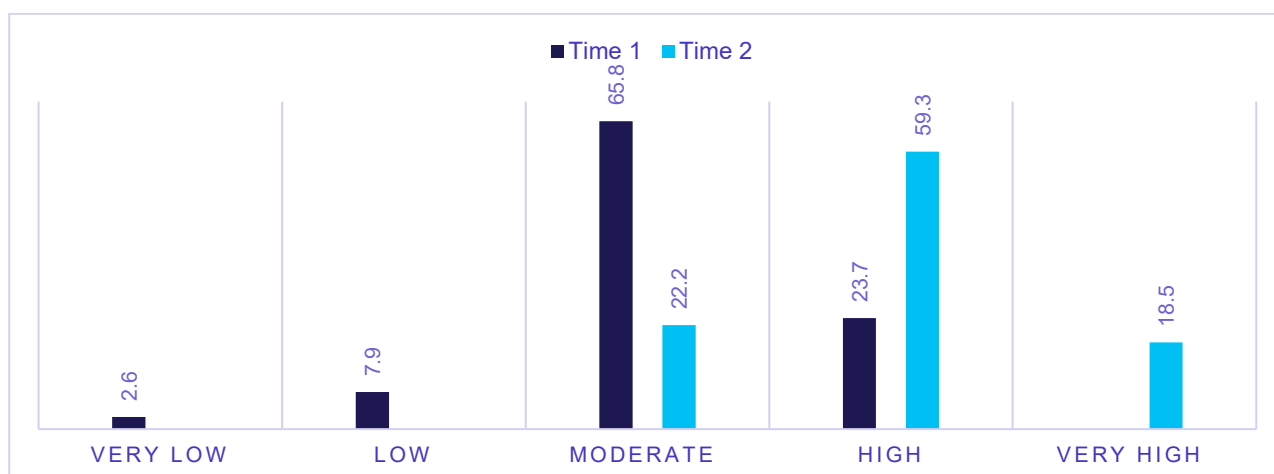


FIGURE 9 CHANGE IN LEVEL OF CONFIDENCE (%) RELATED TO TEACHING YOUNG STUDENTS ON THE SPECTRUM

1.26.1.3. Reported change in level of efficacy

Figure 10 presents teacher mean scores expressed as percentages across efficacy levels (1 = *nothing* to 9 = *a great deal*) for the student engagement, instructional strategies, and classroom management subscales at T1 and T2. A Wilcoxon signed-rank test determined that there was a medium statistically significant increase in total efficacy scores ($Mdn = 0.50$) following access to the practice model at T2 ($Mdn = 7.67$) compared to T1 ($Mdn = 7.02$), $z = 3.996$, $p < .001$, $r = 0.544$.

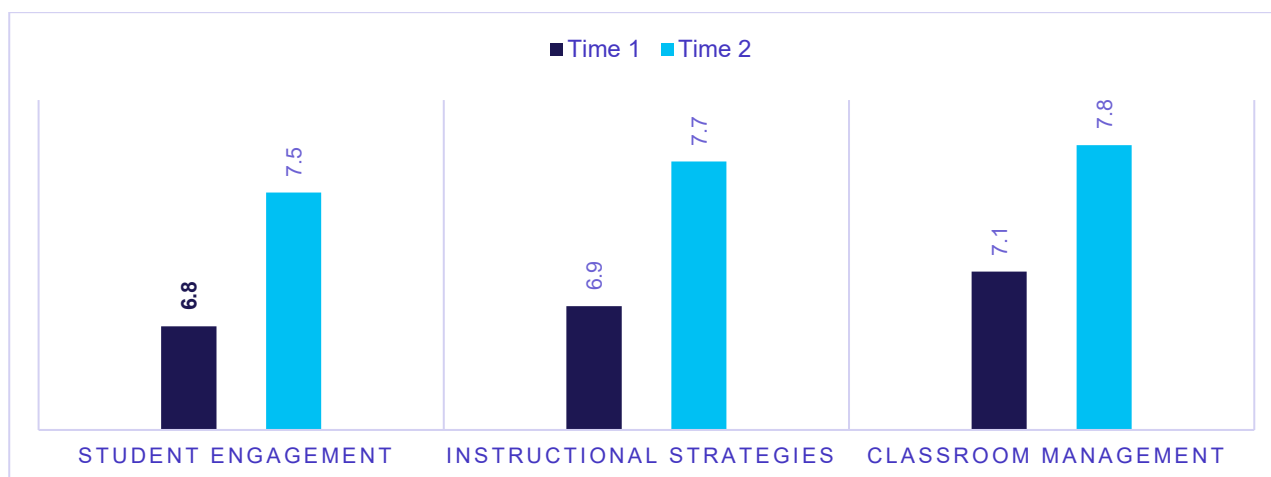


FIGURE 10 CHANGE IN LEVEL OF EFFICACY (%) RELATED TO TEACHING YOUNG STUDENTS ON THE SPECTRUM

1.26.1.4. Comments regarding knowledge, confidence, and capability

In Interview 1, teachers said they had rated their knowledge and confidence in Survey 1 as moderate or higher, with around two thirds placing themselves somewhere around the middle. For example: “I probably would have just put average, I’d say... I don’t feel panicked about it, but I know that there’s still a lot to learn about it, for me”; and, “some days I feel like, yup, I’ve made a positive impact, and other days I’m like ‘Oh my God,’ just like ‘What have I done?’... I guess it’s up and down all the time.” In general, comments aligned well with knowledge and confidence data presented in Figures 11 and 12.

In Interview 2, all the teachers who were active users of the EY-MoP reported that implementation of the model led to some increase to knowledge, skills, or feelings of capability. Some typical comments included: “just by accessing the model and the practice briefs has maintained what I already knew, but it’s also deepened my knowledge.... And the hyperlinks to outside sources extends that even further”; and, “I think because being able to identify why things weren’t working has really helped. So, it’s certainly improved my confidence, but also not being so hard on myself with a few things as well.”

1.26.2. Middle Years

At both T1 and T2, surveys were used to question participating teachers ($T1\ n=31$, $T2\ n=15$) about their knowledge and confidence related to teaching students on the autism spectrum. In Surveys 1 and 2, teachers were asked to rate their knowledge and confidence when educating students on the spectrum, with analysis of this data revealing statistically significant changes in knowledge and confidence.

1.26.2.1. Reported change in level of knowledge

Of 15 responses nine teachers reported an increase in the knowledge of educating children on the spectrum with no teachers rating their knowledge as lower than before the intervention.

Change in Level of Knowledge (%) related to teaching students on the spectrum

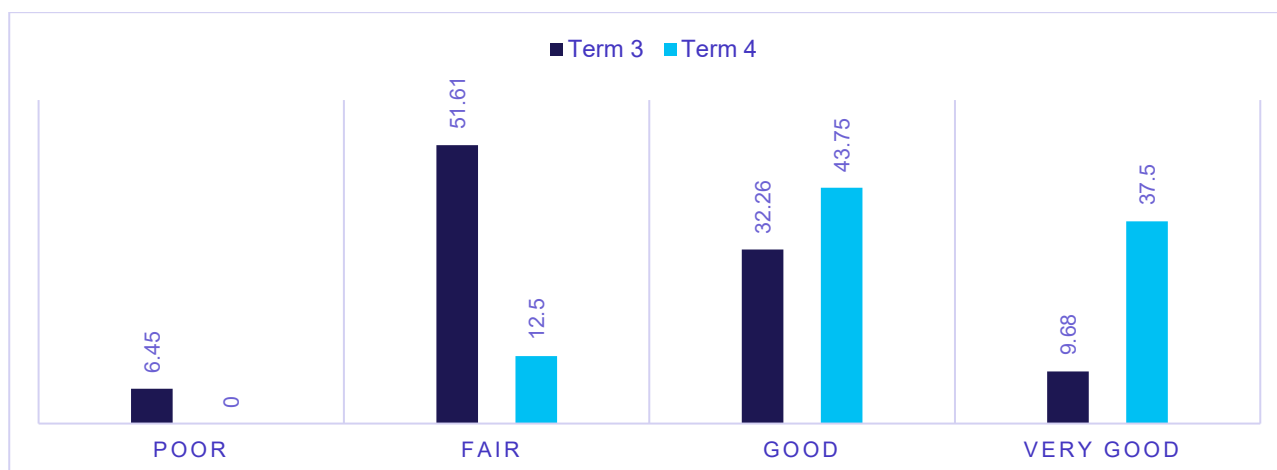


FIGURE 11 REPORTED CHANGE IN LEVEL OF KNOWLEDGE

1.26.2.2. Reported change in level of confidence

Of 15 responses 12 teachers indicated a positive increase in their confidence when educating students on the spectrum with none of the teachers rating their confidence decreasing.

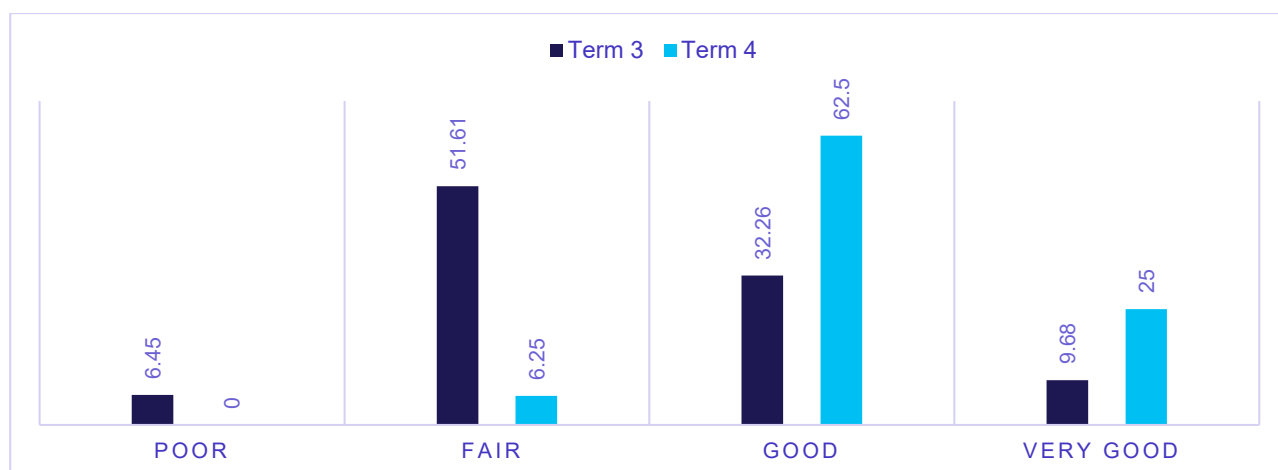


FIGURE 12 CHANGE IN LEVEL OF CONFIDENCE (%) RELATED TO TEACHING STUDENTS ON THE SPECTRUM

1.26.2.3. Comments regarding teacher confidence

At the commencement of the project, teachers reported limited confidence in teaching children on the autism spectrum because they struggled to balance the various needs in the class, lacked support, had little experience with managing behaviours or students with additional needs, and did not have enough time to spend with the student.

Post-implementation of the MY-MoP, teachers reported that the aspects that increased their confidence included; having a relationship with the student, engagement with families/carers; structured classrooms, working collaboratively with peers, and support from the school.

1.27. Stage 2: Research Question 4

Did the coaching conditions (face-to-face, online) influence teachers' uptake of the MoP and implementation of selected practices?

1.27.1. Early Years

Receiving professional support from coaches in accessing the EY-MoP and selecting and implementing practices was closely correlated to the uptake of the model. Of the 27 teachers who completed Interview 2, nine received face-to-face support, two received support online (via Skype or Facetime), two were supported over the phone, and 14 accessed the EY-MoP without additional guidance. As mentioned above, all the early years teachers receiving face-to-face support as part of the trial went on to implement practices in their classrooms. Only one teacher who had received support (over the phone) did not go on to implement selected practices.

Feedback on the value of the support received was largely positive. “I think if I was purely looking at it on my own,” said one teacher, “I don’t know whether I would have got as much out of it.” Another teacher similarly identified the professional support as valuable for accessing and using the model: “we just unpacked the briefs a lot more. I think we were, yeah, we were quite lost before we had the coach... it was very valuable having her coming out. I think we were just trying to focus on too many briefs at once.” Additionally, some of the teachers who had not received professional support identified this as something that would have been helpful. “I think the model itself is fantastic,” said one, “but it would be good to have someone come out and explain it to us.”

1.27.2. Middle Years

In the MY-MoP only AILs were surveyed about their coaching experience. The quantitative data from the survey indicated that the AILs were completely satisfied with the communication, collaborative style of coaching and found the time spent with the AILs to be effective, productivity and was useful in building their capacity to implement MoPs as shown in Table 15.

The interest of the AILs in mentoring the teachers is also likely to have some effect on the engagement of the teachers in accessing and implementing the MoPs.

TABLE 15 COACH AND AIL

Questions	Coaching to AIL (n = 4)	AIL mentoring to teachers (n = 8)
The coach/AIL communicated effectively	5	4.5
The coach/AIL and I worked together collaboratively	5	4.375
The time spent working with the coach/AIL was effective and productive	4.75	4.125
The coach/AIL helped build my capacity to build MoP practices	4.75	3.75
The coaching increased my knowledge of the practices	4.5	3.625
The coach/AIL provided me with practical and useful feedback and strategies	4.25	3.75
I had enough time available to participate in the coaching process	3.25	3

The coach/AIL provided helpful information	5	3
I would recommend the coaching to another teacher	4.75	3.875
My overall reaction to the coaching was positive	4.75	4

Scale: 1=Never, 2=Seldom, 3=Sometimes, 4=Often, 5=Always

1.27.3. Coaches

Following the implementation of the MoPs, the project coaches ($n = 9$) were surveyed about their experience about Growth Coaching, the MoPs and their overall coaching experience.

1.27.3.1. Growth Coaching

All nine coaches confirmed that they used at least some elements of 'Growth Coaching' when providing professional support to the participating teachers/AILs. Many coaches described using Growth Coaching as a holistic tool, whilst others cited goal setting and building rapport/connections as the most useful elements.

Whilst two coaches reported mostly using the strategies from Growth Coaching, most described also using other techniques such as Positive Behaviour Support (PBS), existing mentoring experience, visual supports and SWOT analysis.

1.27.3.2. Coaching experience

Most of the coaches reported encountering difficulties fitting coaching into their existing schedules. In some instances, this was due to the inability to find a mutually convenient time with a teacher. Several coaches also described finding it difficult for teachers to commit to attending sessions as a result of competing priorities. In addition, some coaches described travelling to remote schools as being challenging in terms of time and safety.

1.27.3.3. Coaches perceptions of MoPs

All coaches responded positively to both the EY and MY MoPs. They described the MoPs as comprehensive resources that were well laid out and represented best practice in teaching students on the autism spectrum. When asked for further feedback on the MoPs, coaches noted that the experienced teachers commented that some of the practices may have been considered as just being good teaching practice. It was also suggested that the practices be organised into a hierarchy that identified foundational through to advanced practices.

Summary of Stage 2 Findings

1.28. Viability of the Models of Practice

1.28.1. Enablers

Five key strengths of the MoPs were identified.

- MoPs are well laid out and easy to understand
- Practice briefs provide relevant and contained comprehensive information and resources
- MoP is a useful reflective tool
- MoP is valuable resource for early career teachers
- MoP is applicable for whole class.

1.28.2. Barriers

Five key barriers for teacher engagement with the MoPs were identified.

- Not sufficient time to use the MoP in the classroom
- Lack of support to engage with the MoP
- Some experienced teachers were less likely to engage with the MoP
- Resources were difficult to find on the project website
- Some terminology differences across education systems.

1.29. Suggestion for improvements to the Models of Practice

Teachers offered valuable suggestions for improving the uptake of the MoPs in two areas: educational and technical.

Educational

- Provide more practical examples
- Align terminology more with education systems
- Update regularly to include new practices
- Give all teachers access to the MoP
- Introduce face-to-face support for all teachers.

Technical

- Include interactive features
- Improve the functionality of the website.

1.30. Impact on teacher capability and confidence

Teacher knowledge and confidence improved after using the MoP. The early career teachers reported greater gains than the more experienced of the teachers.

Limitations and Problems

1.31. Recruitment and sample size

- Ethics approval from NSW and QLD Departments of Education was delayed which held up the recruitment of schools.
- Recruitment of participating schools was a slow process, with very little interest initially from potential schools.
- Schools that had signed on for the project early on were contacted regularly to update them on the progress; following lengthy periods of no communication, some schools became disengaged and withdrew from the project.
- Taken together, these issues contributed to the samples of participating teachers in both early years (EY) and middle years (MY) streams of the project being small. Further, both samples were biased as it was highly probable that only teachers interested in improving their practice with students on the spectrum completed surveys at T1 and T2 (i.e., 27 EY and 15 MY teachers).

1.32. Technology

- Difficulties accessing and navigating the website
 - Due to the layout of the website in the initial phases, some participants had not seen the practice briefs, and believed the introductory sentence was the entire content of the practice brief.
 - Some participants did not engage with the material at all and either withdrew from the project by non-completion of survey tools or completed the survey and indicated they had not seen the material.
 - A “how to use the MoP website” guide for all participating teachers was created to address difficulties experienced by participating teachers.

1.33. Teacher workload

- Few teachers were given release time to engage with the MoPs project.
- The trial took place at the end of the year, which is recognised as an extremely busy time for teachers, particularly in regards to parent reporting and reviewing the profiles of incoming students for the following year.
- Middle Years also encountered a 50% drop out rate of participants with only 15 of 31 participants completing the second survey. Participants did not withdraw by contacting the research team but failed to complete the final survey.

1.34. Timeframes and data collection measures

- Delays in recruitment led to the implementation of the MoPs commencing in Term 3 leading to a compressed (8-week) implementation window.
- Scheduling and completing data collection and coaching within this timeframe became onerous for some teachers.

- The MY project team removed one data collection tool (Interview 2) to relieve some of the time pressure on participants.
- Data collection measures for teachers were restricted to online surveys and phone interviews. Both measures provided self-reported data, which may have resulted in some inaccuracies in actual levels of knowledge, confidence and use of practices. However, these data do provide insight into what participating teachers believed about their practice in relation to the respective MoPs, prior to the trial (T1) and at the end of the eight-week period (T2).

1.35. Concerns related to coaching

- Most coaches found scheduling coaching sessions difficult because of their own professional schedule or trying to organise a time that worked with participating teachers.
- Some coaches found the travel involved in face-to-face coaching to be onerous.
- Some coaches reported finding it difficult to fit the coaching into the shortened timeframe.

Implications for Practice and Research

Numerous evidence-based strategies for educating students on the autism spectrum are reported in the academic literature. However, there is limited translation of these strategies into accessible and easy-to-implement formats or supports for busy classroom teachers. Given the number of children diagnosed with autism is increasing in Australia and worldwide (Baio et al., 2018), these circumstances are concerning.

As a direct result of the MoP research trial, Australian teachers (early and middle years) and mainstream schools across all education sectors now have an evidence-based, teacher-friendly 'Model of Practice' to support the education of students on the autism spectrum as these students enter primary and secondary schools. The MoP provides a framework of foundational practices that empower teachers to make informed choices about the structuring and implementation of learning activities for this student group. These practice frameworks and briefs give teachers access to practice-based solutions that are simple to read, understand, and implement in today's classrooms.

Specific outcomes of the Stage 2 trial include:

- multimedia on-line educational resource package (MoP) for early years and middle years teachers, parents and other stakeholders available on inclusion Ed
- the MoP includes practices validated by teachers as being useful for daily planning, and reflection on practice.

Recommendations for Future Research

This project included an initial trial of each MoP in a limited number of schools with a small sample of interested teachers. Future studies should be undertaken to trial each MoP in a more in-depth manner. For example:

- over a longer trial period than the eight weeks afforded in MoP project to reduce workload impact and increase the quality of collected data
- across a broader range of mainstream schools in other states and territories to verify key findings
- in schools and across relevant year levels within particular districts to better address notions of professional and collegial support and examine the value of the MoP as students transition to the next class.

Further, research that seeks to evaluate the influence of MoP implementation on student academic and social outcomes should be considered.

Key Outputs

1.36. Materials for inclusionEd

The Early and Middle Years streams of the MoPs project has contributed content consisting of 52 validated teaching practices to be included in the inclusionEd online resource.

1.37. Publications

Published

Taylor, A., Beamish, W., Tucker, M., Paynter, J., & Walker, S. (2019, early online). Designing a model of practice for Australian teachers of young school-age children on the autism spectrum. *Journal of International Special Needs Education*, 1-13.

Submitted

Beamish, W., Macdonald, L., Hay, S., Taylor, A., Tucker, M. & Paynter, J. (2019, submitted.) A model of practice for educating young school-age children with autism: Teacher perspectives. *International Journal of Disability, Development, and Education*.

In preparation

Beamish et al. (manuscript in preparation). Trialling a Model of Practice for educating young school-age children with autism. Targeted journal is *Research in Autism Spectrum Disorders*.

Costley et al. (manuscript in preparation). Developing of a Model of Practice for middle year's teachers that promotes individualised support for children on the autism spectrum.

Clark et al. (manuscript in preparation). Developing a toolbox for mainstream teachers of middle years students on the autism spectrum in Australia.

1.38. Conference Presentations

2019

Beamish, W. & Taylor, A. (2019, December). *The Early Years Model of Practice: Supporting the inclusive education of prep/kindergarten students on the autism spectrum*. Paper to be presented at the Enhancing learning and teaching: Students on the autism spectrum Symposium, Australian Association for Research in Education Conference, Brisbane, Australia.

Beamish, W. & Taylor, A. (2019, October). *Supporting the social emotional learning of young children on the autism spectrum: Trialling practices within an Australian model*. Paper to be presented at the Social & Emotional Learning Exchange, Chicago, USA.

Clark, T. & Beamish, W. (2019, June). *Educating for success. A Model of Practice for Australian teachers of students on the autism spectrum*. Paper presented at the Asia Pacific Autism Conference, Singapore.

Robinson, A. (2019, June). *A model for success: Designing a Model of Practice to support teachers – a Design-Based Research Approach*. Paper presented at the Asia Pacific Autism Conference, Singapore.

Gibbs, V., Clark, T., Beamish, W., Taylor, A., Robinson, A., Gallagher, E., Bruck, S. & Paynter, J. (2019, May). *Models of Practice for teachers of students with ASD in Australian schools: Early and middle Years Classrooms*. Poster presented at International Society for Autism Research (INSAR) Annual Meeting, Montreal, Canada.

2018

Clark, T. & Beamish, W. (2018, December). *Educating for success. A Model of Practice for Australian teachers of students on the autism spectrum*. Paper presented at the Aspect Autism in Education Conference, Gold Coast, Australia.

Robinson, A. (2018, December). *Developing a model of practice to support mainstream teachers of students on the autism spectrum*. Paper presented at the Australasian Society for Autism Research Conference, Gold Coast, Australia.

Taylor, A. (2018, December). *The Early Years Model of Practice: Initial evaluation by metropolitan prep/kindergarten teachers*. Paper presented at the Australasian Society for Autism Research Conference, Gold Coast, Australia.

Taylor, A. (2018, September). *The Early Years Model of Practice: Translating knowledge for Australian prep/kindergarten teachers working in metropolitan schools*. Paper presented at the Griffith University and University of Queensland Postgraduate Research Community Conference, Brisbane, Australia.

Clark, T. & Beamish, W. (2018, August). *Educating for success. A Model of Practice for Australian teachers of students on the autism spectrum*. Paper presented at the Aspect Autism in Education Conference, Brisbane, Australia.

Robinson, A. (2018, August). *Models of Practice – Development of Practice Briefs*. Paper presented at the Aspect Autism in Education Conference, Brisbane, Australia.

Taylor, A. (2018, August). *Preliminary evaluation of the Early Years Model of Practice by prep/kindergarten teachers from metropolitan schools across the eastern states of Australia*. Paper presented at the Aspect Autism in Education Conference, Brisbane, Australia.

Taylor, A. (2018, July). *The Early Years Model of Practice: Supporting the social emotional learning by Being*. Paper presented at the Australian Association of Special Education National Conference, Cairns, Australia.

Beamish, W. (2018, March). *Models of practice for teachers of students on the autism spectrum entering primary and secondary schools*. Paper presented at the Queensland Diverse Learners Conference, Brisbane, Australia.

2017

Taylor, A. (2017, November). *The Early Years Model of Practice: Development and validation*. Paper presented at the Griffith University, School of Education and Professional Studies Research Student Conference, Brisbane, Australia.

Taylor, A. (2017, July). *A Model of Practice to enhance the transition through Prep and into Year 1*. Paper presented as part of Autism Queensland's Research to Practice Seminar Series, Brisbane, Australia.

Taylor, A. (2017, April). *Developing and validating a Model of Practice for Australian prep/kindergarten teachers educating students on the autism spectrum in inclusive classrooms*. Paper presented at the Australian Association of Special Education National Conference, Darwin, Australia.

2016

Taylor, A. (2016, December). *The Early Years Model of Practice: Translating research into practice*. Paper presented at The Australasian Society for Autism Research Conference, Perth, Australia.

Taylor, A. (2016, October). *The Early Years Model of Practice: Translating research into practice*. Paper presented at Griffith University, School of Education and Professional Studies Research Student Conference, Brisbane, Australia.

References

- Anderson, T. & Shattuck, J. (2012). Design-based research: A decade of progress in education research? *Educational Researcher*, 41(1), 16-25.
- Baio, J., Wiggins, L., Christensen, D. L., Maenner, M. J., Daniels, J., Warren, Z., . . . White, T. (2018). Prevalence of Autism Spectrum Disorder among children aged 8 years. *Autism and Developmental Disabilities*, 67(6), 1.
- Bazeley, P. & Jackson, K. (2013). *Qualitative data analysis with NVivo* (2nd ed.). London: Sage Publications.
- Beamish, W., Meadows, D. & Davies, M. (2012). Benchmarking teacher practice in Queensland transition programs for youth with intellectual disability and autism. *The Journal of Special Education*, 45(4), 227-241.
- Cho, J. & Trent, A. (2006). Validity in qualitative research revisited. *Qualitative Research*, 6(3), 319-340.
- Cicchetti, D. V. & Sparrow, S. A. (1981). Developing criteria for establishing interrater reliability of specific items: applications to assessment of adaptive behavior. *American Journal of Mental Deficiency*, 86(2), 127-137.
- Costley, D., Keane, E., Clark, T. & Lane, K. (2012). *A practical guide for students with an autism spectrum disorder in secondary school*. London: Jessica Kingsley.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Los Angeles, CA: Sage.
- Falconer, I., Finlay, J. & Fincher, S. (2011). Representing practice: practice models, patterns, bundles. *Learning, Media and Technology*, 36(2), 101-127.
- Fleury, V. P., Hedges, S., Hume, K., Browder, D. M., Thompson, J. L., Fallin, K., & Vaughn, S. (2014). Addressing the academic needs of adolescents with autism spectrum disorder in secondary education. *Remedial and Special Education*, 35(2), 68-79.
- Hume, K., Wong, C., Plavnick, J. & Schultz, T. (2014). Use of visual supports with young children with autism spectrum disorders. In *Handbook of early intervention for Autism Spectrum Disorders* (pp. 375-402). Singapore: Springer.
- Hurth, J., E., S., Izeman, S., Whaley, K., & Rogers, S. (1999). Areas of agreement about effective practices among programs serving young children with autism spectrum disorders. *Infants and Young Children*, 12(2), 17-26.
- Iovannone, R., Dunlap, G., Huber, H. & Kincaid, D. (2003). Effective educational practices for students with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 18(3), 150-165.
- Long, J. L. & Simpson, R. L. (2017). Practitioners' recommendations for foundational educational supports for elementary-age learners with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 32(4), 269-278.
- Mandy, W., Murin, M., Baykaner, O., Staunton, S., Cobb, R., Hellriegel, J., . . . Skuse, D. (2016). Easing the transition to secondary education for children with autism spectrum disorder: An

evaluation of the Systemic Transition in Education Programme for Autism Spectrum Disorder (STEP-ASD). *Autism*, 20(5), 580-590.

Mandy, W., Murin, M., Baykaner, O., Staunton, S., Hellriegel, J., Anderson, S., & Skuse, D. (2015). The transition from primary to secondary school in mainstream education for children with autism spectrum disorder. *Autism*, 20(1), 5-13

McKenney, S., & Reeves, T. C. (2013). Systematic review of design-based research progress: Is a little knowledge a dangerous thing? *Educational Researcher*, 42(2), 97-100.

Mesibov, G. B., Shea, V., & Adams, L. W. (2006). *Understanding Asperger syndrome and high functioning autism* (Vol. 1). Singapore: Springer.

Murin, M., Hellriegel, J., & Mandy, W. (2016). *Autism Spectrum Disorder and the transition into secondary school: A handbook for implementing strategies in the mainstream school setting*. London: Jessica Kingsley.

Odom, S., Boyd, B. A., Hall, L. J. & Hume, K. (2010). Evaluation of comprehensive treatment models for individuals with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 40(4), 425-426.

Odom, S., Collet-Klingenberg, L., Rogers, S. J. & Hatton, D. D. (2010). Evidence-based practices in interventions for children and youth with autism spectrum disorders. *Preventing School Failure*, 54(4), 275-282.

Polit, D. F., Beck, C. T. & Owen, S. V. (2007). Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. *Research in Nursing & Health*, 30(4), 459-467.

Prizant, B. M., Wetherby, A. M., Rubin, E., Laurent, A. C. & Rydell, P. J. (2005). The SCERTS [TM] Model: A comprehensive educational approach for children with Autism Spectrum Disorders. (ERIC Document Number: ED491802)

Saggers, B., Klug, D., Harper-Hill, K., Ashburner, J., Costley, D., Clark, T., Carrington, S. (2016). *Australian autism educational needs analysis – What are the needs of schools, parents and students on the autism spectrum? Full report*. Brisbane, Australia: Autism CRC.

Simpson, R. & Crutchfield, S. (2013). Effective educational practices for children and youth with autism spectrum disorders: Issues, recommendations, and trends. In B. G. Cook, M. Tankersley, & T. J. Landrum (Eds.), *Evidence-based practices* (Advances in Learning and Behavioral Disabilities, Vol. 26, pp. 197-220): Emerald Group.

Taylor, A., Beamish, W., Tucker, M., Paynter, J. & Walker, S. (2019, early online). Designing a model of practice for Australian teachers of young school-age children on the autism spectrum. *Journal of International Special Needs Education*, 1-13.

Test, D. W., Smith, L. E. & Carter, E. W. (2014). Equipping youth with autism spectrum disorders for adulthood: Promoting rigor, relevance, and relationships. *Remedial and Special Education*, 35(2) 80–90.

Tschannen-Moran, M. & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783-805.

Wilcoxon, F. (1945). Individual Comparisons by Ranking Methods. *Biometrics Bulletin*, 1(6), 80-83.

Wolery, M. & Bredekamp, S. (1994). Developmentally appropriate practices and young children with disabilities: Contextual issues in the discussion. *Journal of Early Intervention*, 18(4), 331-341.

Wong, C., Odom, S., Hume, K., Cox, A., Fetting, A., Kucharczyk, S., Schultz, T. (2014). *Evidence-based practices for children, youth and young adults with autism spectrum disorder*. Retrieved from <http://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/2014-EBP-Report.pdf>



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