Outcomes and Indicators of a Positive Start to School: Development of Framework and Tools

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Executive Summary

Introduction

Outcomes and Indicators of a Positive Start to School is world-leading research. It provides the first evidence to support an understanding of how to measure the outcomes and indicators of a positive transition to school.

The Department of Education and Early Childhood Development (DEECD) commissioned this research to examine the application of an outcomes measurement of a positive transition to school and build upon the findings of an earlier project that identified these outcomes for children, their families and educators (Nolan, Hamm, McCartin and Hunt, 2009). The evidence is clear that children's readiness, transition and initial adjustment to school is critical for their development, wellbeing and progress throughout the school years. This evidence has informed a number of Victorian State Government policies and initiatives and much has been learnt about transition processes. However, until recently, little research had examined what a positive start to school looks like for children, families and educators.

By committing to the development and trialling of tools to measure the outcomes and indicators of a positive start to school for children, parents/families, early childhood educators and school teachers in Victoria, DEECD has contributed to the body of knowledge about the critical nature of transition to school.

The project was undertaken by the Centre for Community Child Health (Murdoch Childrens Research Institute and the Royal Children's Hospital) in partnership with Victoria University (authors of the 'Outcomes and Indicators of a Positive Start to School 2010' report) and the Clinical Epidemiological and Biostatistics Unit (CEBU) of the Royal Children's Hospital (RCH).

Project objectives

The specific objectives of the project were to:

- Develop outcome-focused data collection and monitoring tools to measure the outcomes and indicators of a positive start to school for children, parents/families and early childhood and school educators. The project developed four tools: an Early Childhood

Educator Survey (ECES), a Prep Teacher Survey (PTS), a Parent Survey (PS) and a Child Survey (CS).

- Test the validity of these newly developed data collection tools, including an investigation of whether these tools will be applicable and inclusive of all children. In particular, families with an Indigenous or Culturally and Linguistically Diverse (CALD) background or who have a child with a disability.

- Make recommendations to DEECD on the further development and utilisation of these data collection tools (also referred to as surveys throughout the document).

Methodology

The research methodology was designed to inform:

Content validity: Ensuring the measures are theoretically sound and representative of the transition experience.

Face validity: The tools developed appear to measure what they are designed to measure, therefore are perceived as valuable to the respondent.

Reliability and internal consistency: To ensure the surveys can be interpreted consistently across different situations.

Inclusivity: The survey items represent families with an Indigenous or CALD background or who have a child with a disability.

Accessibility: The tools are understandable to the respondent, easy to complete and able to be completed in a timely way without burdening respondents.

Expert endorsed: A reference group of experts has provided advice on the logic map and the selection of measures and survey items.

An additional task of the project was to trial the administration of the survey tools, examining the logistics of engaging respondents, the best time of year for the survey to be undertaken and overall administration and co-ordination strategies for a complex data collection process.

On that basis the project methodology involved three stages:

- **Stage 1:** Tool development with theoretical input and expert endorsement.
- **Stage 2:** Trialing the tools with children, parents and educators across Victoria.

- **Stage 3:** Analysis of trial results to build on the psychometric properties, inclusiveness, accessibility and administration of the tools.

Key findings

Content and face validity

The findings indicate the four surveys developed have a degree of face and content validity. Specifically, the project found:

- All four surveys appeared to be appropriate measures of the transition experience.
- Respondents perceived the information collected by the surveys to be useful.
- The information collected by the surveys was largely comprehensive of the transition experience.

Reliability and internal consistency

The findings provide support for the use of the ECES, PTS, and PS as consistent measures of a positive transition to school and provide evidence for changes to improve the survey tools for further trialling. The internal consistency of the CS was found to be unacceptable; however across-survey comparisons evidenced a degree of reliability, thus provided grounds for modification of the rating scale to allow for further trialling.

Inclusivity

The findings showed that the four surveys were overwhelmingly perceived to be inclusive of the general population. However, questions were raised around how inclusive they were of CALD families, Indigenous families, families with low literacy and families of children with a disability. Minor modifications, such as simplifying the wording of questions, will increase the inclusivity of the surveys for most of these groups. Further work is needed to determine which questions to modify and how to modify them in order to increase the accessibility for these groups.

Accessibility

The accessibility of the tools was analysed to provide an indication of the utility of the tools. The findings indicate that:

- The survey instructions were clear to the majority of the participants.
- The surveys were reported as easy to complete by almost all participants.

- CALD and Indigenous parents found the surveys easy to complete but the concepts behind the questions were not well understand by some.
- Child engagement in the CS was high.
- The average time taken to complete each survey was 10 – 20 minutes and was not considered burdensome.

The project identified an opportunity to include the school focused items in the PTS in the Mid Year School Supplementary Census[1] (Section 16: Transition to School).

Implementation

The project evaluated the process of implementing the four tools and identified improvements and refinements for future implementation. The findings suggest that, in particular, the difficulty gaining participation from early childhood educators presented a significant barrier to implementation of the current trial. The complex consent process and the time of year during which the ECES was rolled out were cited as the key factors preventing participation. Additional implementation findings include that:

- The provision of online versions of the tools as an alternative to hard copies will reduce the burden for many respondents.
- CALD and low literacy families need assistance to understand and complete the PS.
- Indigenous families will be supported by a more culturally appropriate form of invitation and administration.
- The use of props during the administration of the CS helps sustain children's concentration and increase their engagement in the survey (e.g. provide a tactile bead frame for them to play with while the survey is being administered).

Conclusion and recommendations

The project findings provide support for the use of the ECES, PTS and PS as appropriate and accurate measures of a positive transition to school and provide insight to inform improvements to the tools. Additionally, the results provide insights that will support future implementation of the tools. Together, these findings point to important considerations for the ongoing development of these tools.

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[1] DEECD Annual school data collection tool.

Recommendation 1: Modify the four outcome measurement tools

When considered individually, all of the surveys were found to have statistical merit for collecting data against the outcomes. Despite some difficulties, the surveys were found to be applicable and inclusive of all children and did not place undue burden on those who participated. Revision of each tool is recommended based on the findings of this research (full details of the proposed modified tools are included in Appendices 26, 28, 29 and 30), in order to:

- increase validity and reliability
- improve the accessibility of the tools to all participant groups
- increase inclusivity
- increase ease of completion by respondents.

Recommendation 2: Trial the modified tools

Once modified, the four tools will require further testing to understand how well they operate. Specifically, it is important that the psychometric properties of validity and reliability of the four modified tools are established. This will provide further support for the accuracy and generalizability of the four tools as measures of a positive transition to school, in turn endorsing the use of the data yielded by the four tools.

Specific analyses recommended include:

- Recalculation of Cronbach's alpha to inform internal consistency of the modified tools.
- Across-survey comparisons by outcome to determine whether there is a reliable pattern of responding to questions mapped to an outcome across the four respondent groups.

Recommendation 3: Refine implementation

The findings point to a number of important considerations to support successful administration and completion of future data collections. In particular, it is essential that the process is both feasible and does not place undue burden on participants. Recommended refinements to the implementation process include:

- Conduct the ECES as early in the year as possible with the other data collections occurring around the end of Term 1 and the start of Term 2.

- Provide online versions of the surveys as an alternative to hard copies to increase the ease of completion by respondents.
- Provided support for CALD and families with low literacy to assist them to understand and complete the PS.
- Develop a more culturally appropriate form of invitation and administration to successfully engage Indigenous families.
- Consider redesign methodology to capture children's views/voices. This may involve using multiple strategies and tools such as observation of children's play, conversational narratives, simplified surveys, stories or photos to prompt discussion.

An important question to be answered for future implementation relates to how the tools can be administered by schools in the future and how the data can be used to improve transition to school programs at a local level.

Recommendation 4: Test the utility of the data

Understanding *how to measure* the outcomes and indicators of a positive transition to school has been the focus of the current project. However, successful indicators need to be more than technically sound: they need to produce data that is useful for the end user. It is therefore recommended that data collected in a trial of the revised tools, be provided to participating schools in user friendly format and in a timeframe that supports schools to make adjustments (if needed) to orientation processes for children beginning school the following year. Monitoring this process and an evaluation of the utility of the data will help the ongoing tool development process.

Recommendation 5: Disseminate the research findings

This project reports on world first research; that is: it provides the first evidence to support an understanding of how to measure the outcomes and indicators of a positive transition to school. Although the survey tools to measure these outcomes will be improved in the next trial, the project is, nonetheless, an important piece of work from a policy perspective and from a research perspective. Transition to school is of interest and importance to a range of audiences nationally and internationally, including academics, policy makers, educators, and parents. The following strategies for disseminating the results to these audiences are recommended:

- Provide a summary report to study participants.

- Make the summary report available to early childhood and school sectors via the DEECD website.
- Present the research at academic and practitioner conferences.
- Seek to publish the research in peer-reviewed journals, with international reach.

Abbreviations

AEDI	Australian Early Development Index
CALD	Culturally and Linguistically Diverse
CCCH	Centre for Community Child Health
CEBU	Clinical Epidemiological and Biostatistics Unit
CEIEC	Centre for Equity and Innovation in Early Childhood
CRT	Casual Relief Teacher
CS	Child Survey
DEECD	Department of Education and Early Childhood Development
ECES	Early Childhood Educator Survey
EMA	Education Maintenance Allowance
KESO	Koorie Engagement Support Officer
POS	Parent Opinion Survey (DEECD)
PS	Parent Survey
PTS	Prep Teacher Survey
QILT	Quality Improvement Learning and Transition
RCH	Royal Children's Hospital
RNL	Regional Network Leader
SEIFA	Socio-Economic Index for Areas
SES	Socio-Economic Status

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1. Introduction

The evidence is clear – children's readiness, transition and initial adjustment to school is critical for their development, wellbeing and progress throughout the school years (Margetts, 2007; Smart, Sanson, Baxter, Edwards, & Hayes, 2008). This evidence has informed a number of Victorian State Government policies and initiatives and much has been learnt about transition processes. However, until recently, little research had examined what a positive start to school looks like for children, families and educators. In response to this knowledge gap, the Department of Education and Early Childhood Development (DEECD) commissioned a research project to identify the outcomes of a positive transition to school for children, their families and educators by reflecting the intended impact of participating in transition activities or processes. The project report (Nolan, Hamm, McCartin & Hunt, 2009), described in more detail in section 1.3 below, proposed a suite of indicators and corresponding measures, as well as instruments for data collection, for the consideration of DEECD. As a result, DEECD commissioned further work to examine the application of an outcomes measurement approach.

1.1 Project objectives

This project aimed to develop and test tools for measuring the outcomes and indicators of a positive transition to school for children, parents/families, early childhood educators and school teachers in Victoria.

The specific objectives were:

a) Develop outcome-focused data collection and monitoring tools to measure the outcomes and indicators of a positive start to school for children, parents/families and early childhood and school educators.

b) Test the validity of these newly developed data collection tools, including an investigation of whether these tools will be applicable and inclusive of all children. In particular, families with an Indigenous or Culturally and Linguistically Diverse (CALD) background or who have a child with a disability.

c) Make recommendations to DEECD on the further development and utilisation of these new data collection tools.

The intention of this project is to enable educators to measure how well children have transitioned into school and to determine what, if any, changes and supports are needed for schools to be ready for children and families.

1.2 Project team

The Centre for Community Child Health (CCCH) was engaged by DEECD to lead this project. In order to deliver on the project objectives, the CCCH established a project team that included a partnership with Victoria University (authors of the 'Outcomes and Indicators of a Positive Start to School 2010' report) as well as statisticians from the Clinical Epidemiological and Biostatistics Unit (CEBU) of the Royal Children's Hospital (RCH).

Additionally, the project team sought advice from experts in the field of early childhood development through an Expert Reference Group (see Appendix 1 for the Terms of Reference). The Expert Reference Group comprised representatives from school and early years services, services supporting families with an Indigenous or CALD background or with a child with a disability, and academics in the field of transition to school and social research. The group met on two occasions during the life of the project to provide feedback on the tools as they were being developed.

1.3 Background

The *Transition: A Positive Start to School* initiative (the Initiative) was launched for state-wide implementation in August 2009. The Initiative aimed to improve children's experience of starting school by strengthening the development and delivery of transition programs, and to provide a consistent and inclusive approach to transition to school.

The Initiative recognises that:

- every child learns and develops differently and that transition planning is an effective way to help prepare and support children's entry to school and to provide continuity of learning for children from birth to eight years.
- for all children, and especially those with additional needs, the exchange of information between parents, early childhood services and schools is particularly important to optimise success at school.

The Initiative was developed on:

- a strong evidence base of the critical nature of early learning and development.
- the importance of supporting periods of transition to provide continuity of learning.
- the desire to establish a foundation for future positive outcomes for children – socially and academically – and their level of engagement and attendance at school.
- the understanding that transition is a process—not a point in time event. It starts well before and extends far beyond the first day of school and involves and affects children, families, early childhood services and schools.

A key component of the Initiative was the introduction of the Transition Learning and Development Statement (the Statement). The Statement is a tool to enable consistent sharing and transfer of information about a child's learning and development in the early years, irrespective of the setting to or from which the child is transitioning, and supports the continuity of the child's early learning.

In order to support children and families to manage this transition well, early childhood services and schools offer transition to school programs and activities. Many services and schools across Victoria have well-established and effective programs and activities to support a positive start to school. The Initiative builds on these 'local' successes and identifies best practices and strategies for facilitating and supporting children's adjustment to the changes they will experience, and creates a common planning approach for families, services and schools to access and adapt to local contexts.

In 2009, a research project titled *Outcomes and Indicators of a Positive Start to School* (2009)[2] was completed by Victoria University. The purpose of the project was to provide a coherent description of what a positive start to school looks like for children, families and educators.

Nolan et al. (2009) identified 15 outcomes of a positive start to school for children, families and educators, with 22 corresponding indicators and possible measures for these outcomes. The outcomes and indicators reflected the need to be sensitive to the diverse nature of Victorian families and communities (e.g. CALD, Indigenous, refugee, low or high SES). However, they also identified a lack of tools to measure some of the indicators and argued that new measures were needed to reflect a comprehensive, ecological view of transition to school (such an approach incorporates all stakeholders including the child, their family and social networks, the

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[2] Nolan, Hamm, McCartin & Hunt, *Outcomes and Indicators of a Positive Start to School* (2009), Victoria University
http://www.education.vic.gov.au/earlylearning/transitionschool/research.htm

school and the community as well as constructs, such as the child's disposition for learning, social/emotional characteristics and experience).

The authors recommended the following:

- development of a Prep Teacher Survey (PTS) and an Early Childhood Educator[3] Survey (ECES)
- refinement of the DEECD Parent Opinion Survey (POS)
- development of a Child Opinion Survey4 (CS).

This report responds to recommendations identified by Nolan et al. (2009).

1.4 Responding to the evidence

The evidence informing this project falls into two key areas: transition to school and measuring indicators.

Transition to school

According to research (Margetts, 2007; Smart et al. 2008) children's readiness, transition and initial adjustment to school is critical for the child's development, wellbeing and progress throughout their school years. Much of the research highlights the importance of seamless transitions between early childhood services and schools however, there is clear evidence that children vary in their 'readiness' for this transition, with marked differences visible in children's cognitive and social/emotional skills on school entry (Smart et al. 2008).

Dockett and Perry (2006) argue that being ready for school means different things to different people but refrain from formulating a picture of a good start to school because a child 'could well be ready for one school and not another … people in different communities have different expectations of readiness' (p. 46). They stress that school readiness is not only about children; it is about families, schools and communities and promote the theme of 'working together' where they envisage the involvement of a range of stakeholders, the formation of positive

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[3] Early Childhood Educators are defined in the Early Years Learning Framework for Australia as all 'early childhood practitioners who work directly with children in early childhood settings' (DEECD Victorian Early Years Learning and Development Framework Professional Support Program) www.cccvic.org.au/content.cfm?content=107

[4] Child Opinion Survey has been titled Child Survey in the current trial

relationships, mutual trust and reciprocal communication as a starting point for children having a good start at school.

A study by Wai Ling Chan (2010) emphasised the importance of a continual, developmental and transactional process involving experiencing primary school life, welcoming programs, lengthening transition periods, joint activities and responsive two-way communication. A community approach to children's transition to school is also advocated by Rous and Hallam (2006). They identify communication, cooperation, coordination and collaboration as part of the process of developing effective transition programs. Ongoing communication between educators in early childhood services and schools, the preparation of children for the transition, and the continuing involvement of families are essential components of a successful transition.

Increasingly, the importance of congruence between home, community, and school philosophies and experiences is being recognised. This is supported by Hare and Anderson (2010) who recognise the importance of open lines of communication between educators in kindergartens, primary schools and families. Successful transitions to school are more likely when such partnerships exist, ensuring a balance between continuity and new experiences (Ashton, Woodrow, Johnston, Wangmann & Singh, 2008).

Attendance in formal childcare settings is recognised as beneficial in preparing children for school (Sanagavarapu, 2010). How easy or difficult children find the transition between early childhood settings and school partly depends upon the degree of discontinuity they have to negotiate (Margetts, 2002).

Discontinuities include changes in the physical environment of buildings, classrooms, a difference in pedagogy and teaching strategies, a difference in the number, gender and role of staff, a change to the peer group, and changes in the relationships between children and the adults responsible for their care and education.

A number of studies suggest that children from ethnic and racial minority groups may find transition to school challenging because of mismatches between home and school language and culture (Bowman, 1999 cited in la Paro, Pianta & Cox, 2000; Pianta & Cox, 2002; Sauvau, 1998 cited in Yeboah, 2002). In a study of Bangladeshi parents in Sydney, Sanagavarapu (2010) found that friendships with peers who share a similar or cultural linguistic background supported a positive transition to school. Thomasson (2010) found that relatively few numbers of schools specifically cater for children and families from diverse socio-cultural backgrounds and recommends that schools consider the needs of these children and families.

The aspirational Transition to School Position Statement (2011) positions transition within a human rights framework, which is based on national and international understanding of the importance of transition to school and, as such, calls on governments, organisations and individuals to strive for policies and practices to provide the best start to school for all children. The position statement reconceptualises transition to school in the context of social justice, human rights, educational reform and ethical agendas and the established impact of transition to school on children's ongoing wellbeing, learning and development.

It has been suggested (Margetts, 2007) that transition programs should be flexible, inclusive and responsive to the complexity of local communities and demonstrate respect for, and acceptance of cultural and linguistic diversity and the requirements of all stakeholders. A review of literature undertaken by the Centre for Equity and Innovation in Early Childhood (CEIEC; 2008) found there was 'no substantial long-term evidence that any specific transition to school program was better than any other …' and that there were, instead, 'a number of promising practices' that could be identified as being of proven value. These promising practices were summarised and grouped according to children's perspectives, families' perspectives, and the perspectives of educators and have been used to inform the development of the outcomes and indicators of a positive start to school.

Measuring transition to school

Much of the literature around measuring transition to school focuses on skills-based measurements of individual children's readiness for school, rather than focusing on whether transition to school programs have been successful. Tools to measure individual children's readiness for school (e.g. measuring their social competence or functional skills) have been widely criticised because they have been considered ineffectual (Maley & Bond, 2007), limited in their scope (Bagnato, 2007), and inappropriate in their application (Kagan & Kauerz, 2007). An observation from the literature, mostly coming from the USA, is that school readiness tests have had 'very mixed successes' in predicting school outcomes (Snow, 2007, p.197).

From the emphasis in the literature on the importance of roles and relationships of parents, early childhood educators and schools (described above) it can be inferred that the key informants for measuring transitions to school are parents, early childhood staff and teachers. This view is supported by Seefeldt and Wasik (2006a) who argue for the development of comprehensive tools applying authentic techniques, with best practice positioned as involving 'those individuals that know the child best, their parents and teachers' (Bagnato, 2007, p.246).

This view is also supported by leading researchers internationally (Dockett et al. 2011), who further call for children themselves, as active agents in the transition process, to be consulted on their experiences (rather than assessed for skill level). The current project responds to this call through the inclusion of measurement tools for children, parents/families and early childhood and school educators.

2 Methodology

A key goal of this project was to develop survey tools that effectively measure the indicators of a positive transition to school. Accordingly, the methodology below outlines a process of drawing on evidence as well as accumulating evidence to ensure the measures developed are accurate, appropriate, meaningful and useful.

The research methodology was designed to inform:

- **Content validity**: Ensuring the measures are theoretically sound and representative of the transition experience. The outcomes, indicators and measures have been selected with reference to theoretical considerations and existing survey tools. A logic map links outcomes to indicators and measures.
- **Face validity**: The tools developed appear to measure what they are designed to measure, therefore are perceived as valuable to the respondent.
- **Reliability and internal consistency**: To ensure the surveys can be interpreted consistently across different situations.
- **Inclusivity**: The survey items represent families with an Indigenous or CALD background or who have a child with a disability.
- **Accessibility**: The tools are understandable to the respondent, easy to complete and able to be completed in a timely way without burdening respondents.
- **Expert endorsed**: A reference group of experts has provided advice on the logic map and the selection of measures and survey items.

An additional task of the project was to trial the administration of the survey tools, examining the logistics of engaging respondents, the best time of year for the survey to be undertaken and overall administration and co-ordination strategies for a complex data collection process.

On that basis the project methodology involved three stages:

- **Stage 1:** Tool development with theoretical input and expert endorsement.
- **Stage 2:** Trialing the tools with children, parents and educators across Victoria.
- **Stage 3:** Analysis of trial results to build on the psychometric properties, inclusiveness, accessibility and administration of the tools.

2.1 Tool development

There were three phases involved in the tool development stage of the project.

2.1.1 Phase 1 – Preparation

The preparation phase included a comprehensive review and update of the recommendations, outcomes and indicators previously developed by Nolan et al. (2009).

Due to copyright, the DEECD Parent Opinion Survey (POS) was unable to be revised as originally recommended by the Nolan et al. (2009) study, resulting in the need for a new Parent Survey (PS) to be developed as part of this project.

Preparation also involved a reflection on how to report against these outcomes using the indicators originally proposed by Nolan et al. (2009). During consultation among the project team it became apparent that some outcomes would be better positioned as indicators. Outcomes and indicators were therefore realigned and, as a result, the original 15 outcomes and 22 indicators were reduced to 11 outcomes and 34 indicators (see Appendix 2).

Finally, preparation involved an audit of existing Australian and international data collection tools currently used to measure child and family outcomes and transition to school. These included:

- Australian Early Development Index (AEDI)
- DEECD Parent Opinion Survey
- DEECD Staff Opinion Survey
- DEECD Student Attitudes to School Survey
- South Australian Department of Education, Training and Employment Reflect Tool
- Linking Schools and Early Years consultations and questionnaires
- Emotionality, Adaptability and Sociability Temperament Survey: Parent and Teacher Ratings
- DEECD School Entrant Health Questionnaire 2010
- Victorian Child Health and Wellbeing Survey.

The purpose of the audit was twofold: to ensure that survey items weren't duplicated; and to ascertain whether existing Victorian surveys could be extended to include new questions relevant to transition to school.

2.1.2 Phase 2 – Tool development

The second phase involved preparation of an initial draft of the tools, and feedback from the Expert Reference Group.

The first step was to map at least one survey item to each indicator from the perspective of each of the four stakeholders: child, parent, prep teacher and early childhood educator. Using the existing measures, discrete survey items (questions) were selected and mapped to one or more of the indicators (see Appendix 3). Items selected from an existing tool in relation to a specific stakeholder were rephrased in order to measure the same indicator from the perspectives of the other stakeholders. These new items were also mapped to the transition indicators. This methodology promoted validity in two ways: using items from tools known to be validated; and the use of triangulation of data from the parent, child, prep teacher and early childhood educator to report to each indicator. Where no survey item had been identified to report on an indicator, a new item was created and also mapped to the transition indicators.

The tools were then presented to the Expert Reference Group. Initial feedback concerned several survey items on the CS and the PS. Some items in the CS appeared to place a burden on the child. For example, the question 'I have friends at school' may make children feel judged or pressured to answer in a certain way. In response to these concerns, survey items were rephrased. For example, the question 'I have friends at school' was amended to read: 'I have at least one good friend at school'.

The Expert Reference Group also expressed concerns that some elements of the PS may be open to interpretation. For example, the question 'I am actively engaged with the school in supporting my child's learning' could be interpreted in different ways as 'actively engaged' may mean very different things to different families. The project team modified this question so that parents could choose from a list of suggestions about what active engagement activities they have been involved in, as well as giving them an option to comment on other activities that were not listed.

The Expert Reference Group was also concerned with the inclusivity and applicability of the new tools to children from Indigenous, CALD families or children with a disability. There was a suggestion to create separate surveys for these groups of children. However, considering the primary purpose of this project was to develop and trial new tools and not to measure the

difference between various groups of children, it was decided that every child and family use the same survey.

The Expert Reference Group explored the implications in the instance when a child had not attended an early childhood service prior to starting school. Each of the four surveys assumed that a child had spent time in an early childhood setting. In response, the project team included a 'not applicable' response to individual survey items and considered that the credibility and validity would not be significantly compromised when triangulating data from three surveys as opposed to four.

2.1.3 Phase 3 – Tool review

After the tools were revised, they were again presented to the Expert Reference Group for review. During the second review, the Expert Reference Group expressed a number of concerns that were discussed and responded to in Phase three.

The Expert Reference Group expressed concern that the survey format may not elicit an authentic and truthful response from a child and explored more appropriate 'non-verbal' options.

One option explored was including an image to represent 'yes', 'no', or 'sometimes' that the child could point to when read the question. However, there wasn't consensus among the Group about what images represent 'yes', 'no', and 'sometimes'.

Another option discussed was providing images of scenarios to enable the child to point to the scenario that they felt best portrayed their experience or to provide the child with an opportunity to draw a picture representing their transition to school. Providing the child with an opportunity to draw a picture representing their own experience was considered to be valuable because it would allow the child time and space to think about their transition experience using a medium that was familiar and comfortable.

All the options discussed by the Expert Reference Group were considered by the project team. However, the extent to which these suggestions could be implemented was limited by the time and resources available to undertake the project. Furthermore, modification of the response scale would limit the team's ability to triangulate the data.[5] In response, the project team reviewed each of the CS items to ensure the language used was 'child friendly'. It was decided

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[5]All other surveys used a Likert scale.

that the original format of the child data collection tool would be maintained, with a possible recommendation of the project being that future research explore more appropriate methods of collecting data from children.

The Expert Reference Group also expressed concern about the length of the surveys and queried the need for reverse order questions[6]. The Group discussed the need to include reverse order questions to test the level of acquiescence. For example, acquiescence occurs when a participant answers 'agree' to all questions where it would be expected they would answer 'disagree' to the negatively posed questions.

Importantly, the Expert Reference Group examined the notion of *when* transition has occurred and reflected upon the best time to administer the survey. There was little consensus on an exact transition point, although most agreed that if a child had not transitioned successfully by early March then their particular transition was probably not successful. In response to this advice, the project team decided that for the purpose of the trial the tools would be administered in March. It was also decided that feedback from children, parents, prep teachers and early childhood educators would be sought in the evaluation section of the surveys to inform recommendations for future implementation.

2.2 Trialling the tools

After the tools had undergone intensive review and modification by the project team, they were ready to be trialled[7].

2.2.1 New tools and evaluation surveys

The final surveys were configured as demonstrated in Table 1. All survey items were mapped against the revised indicators of a positive start to school for all surveys (see Appendix 3). For a copy of each of the four surveys see Appendices 4, 5, 6 & 7.

Table 1: Configuration of the final version of new tools

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[6]With the exception of the CS which contained no negative questions, each survey comprised a number of questions that sought the same information, one seeking positive or present behaviours and one seeking negative or absent behaviours. Negative questions seeking the same information were included in the surveys to assess internal validity.

[7]Although development of these tools is evidence-based, outcomes-focused and rigorously reviewed by experts in the field, the project team considers that the process of validation is still in its infancy. The new tools do have a degree of face, content and criterion validity but have not been developed with respect to having sound psychometric properties of construct and convergent validity.

Survey	Number of questions	Likert Scale of questions	Completed by
Child Survey (CS)	22	3 point[8]	Administered by an adult at the school familiar to the child e.g. welfare officer
Parent Survey (PS)	43	5 point[9]	The parent
Prep Teacher Survey (PTS)	35	5 point	The prep teacher
Early Childhood Educator Survey (ECES)	50	5 point	The early childhood educator

In addition to the aforementioned surveys, the project team developed four evaluation surveys to accompany each of the four new tools. The evaluation surveys gathered information on whether there were items that were difficult to understand, unclear or ambiguous; how long it took to complete; or (for the CS) whether children became fatigued or lost interest.

The evaluation surveys also identified participants' views on the logistics of implementing the tools in the future. Therefore, they were asked about issues such as the timing of administering the tools in the school calendar, who should co-ordinate and manage the data collection and who should administer the CS. The evaluation surveys were completed by the parent, the prep teacher, the early childhood educator and the person who administered the CS.

The next step in the process was to trial the tools with children, parents and educators across Victoria.

2.2.2 Trial participants

Two cohorts of participants were selected and invited to participate in the project. Participants in cohorts 1 and 2 were selected to represent diversity in many areas (described below) and hence are not representative of a specific population.

Cohort 1 included children and the adults associated with those children (e.g. parents and educators). The purpose of including this cohort was to use the individual responses from both the tool and the evaluation survey to inform reliability, face validity, inclusiveness, accessibility and future implementation. The aim was to receive responses from up to 270 prep children and

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[8] 'Yes', 'No', 'Sometimes' and 'Don't know/Unsure'

[9] 'Strongly disagree', 'Disagree', 'Neutral', 'Agree', 'Strongly Agree' and 'Not applicable/Don't know'

their parents (270), 36 prep teachers and 45 early childhood educators for this first cohort of participants.

Cohort 2 consisted of adult educators not associated with the child. The purpose of including this cohort was to further inform the evaluation of the surveys. The aim was to invite up to 45 prep teachers and 45 early childhood educators for this second cohort of participants.

Figure 1 provides an outline of the process of recruitment for both cohorts. The following discussion provides information about each step in this recruitment process.

Figure 1: Study design for cohorts 1 and 2
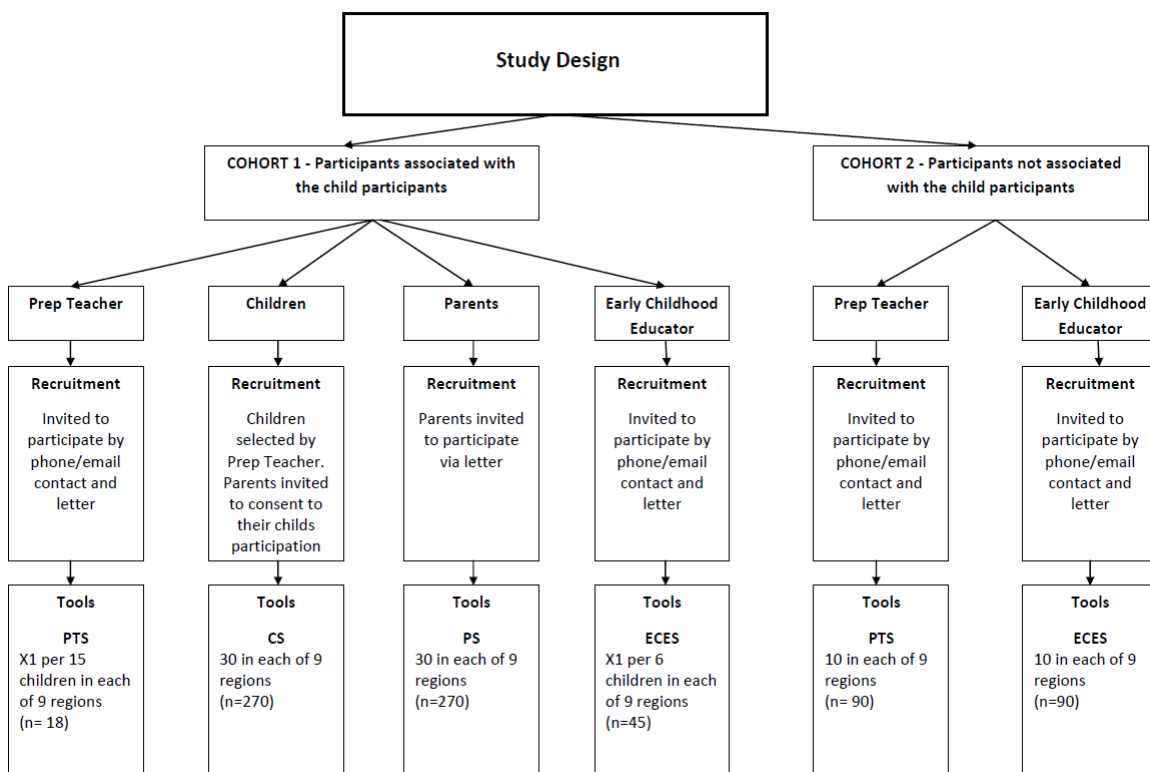
2.2.3 Cohort 1 – Selection and recruitment

The design of the recruitment process was complicated as it required the consent and involvement of many stakeholders. The project team was available by phone and email to support schools and early childhood centres through this process. The project team also successfully applied for Casual Relief Teacher (CRT) funding on behalf the participating schools.

The process of recruitment began with selecting the schools in November 2010. This was followed by identification of the prep teacher participants by February 2011, followed by the identification of the child and parent participants in first few weeks of Term 2 and lastly, identifying the early childhood educator participants by end of Term 2.

Selection and recruitment of the schools (cohort 1)

The first step in the recruitment of cohort 1 was to recruit schools to the trial. Schools were selected to participate through consultation with the Quality Improvement Learning Transitions (QILT[10]) managers and Regional Network Leaders (RNL[11]) from the DEECD.

Twenty-five schools were invited by the project team to participate, approximately two from each of the nine education regions. Schools were selected to represent diversity in the following domains:[12]

- at least one school represented in each of the nine education regions of Victoria
- location classification (urban/regional/rural/remote)
- proportion of children vulnerable on one or two AEDI domains
- CALD population
- Socio-Economic Index for Areas (SEIFA).

The principal of each school was contacted and, if they were interested, provided with a Principal Pack that included an introduction letter, an information letter, a consent form and a copy of each of the four new tools (see Appendix 10).

Written consent from the principal was required prior to the next phase of recruitment. The principals who consented then indicated which prep teacher/s could be invited to participate and provided advice regarding the logistics of administering the CS, advertising the project, and organising additional supports such as the Koorie Engagement Support Officer (KESO) and interpreting services.

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[10] A QILT manager is responsible for implementing new reforms aimed at driving quality improvement in early childhood education and care services.

[11] The role of an RNL is to lead the development of school improvements within regional networks of schools by developing leadership capacity and the quality of teacher practice, deploying network resources, creating a culture of collaboration and collective accountability and facilitating partnerships with community, business and other agencies.

[12] See Appendix 9 for an overview of how each participating school met these criteria.

Selection and recruitment of prep teachers, parents and children (cohort 1)

The prep teachers identified by their principal as being able to participate were invited by the project team to participate in the study. The prep teachers were contacted and provided with a Prep Teacher Pack that included an introduction letter, an information letter, a copy of the PTS and guidelines for selecting the child participants from their class (see Appendix 11).

Once a prep teacher agreed to participate, they then selected approximately eight children from their 2011 class. They were then asked to complete a PTS for each participating child in their class and one Prep Teacher Evaluation Survey.

The parents of children identified by the prep teacher for possible inclusion in the trial were then invited by the project team to participate in the study. The prep teacher provided children with a Parent Pack to take home to their parents. The Parent Pack included an introduction letter, an information letter, a consent form for both their child and themselves to participate and a copy of the CS and the PS (see Appendix 12). Parents were asked to complete the PS and the Parent Evaluation Survey and consent form and return it to the project team.

Written consent from the parents was required by the project team for the parent and their child to participate in the study. The parent was asked to indicate on the consent form the name of the early childhood educator and the centre where their child had attended if appropriate.

A 'neutral' adult familiar to the child participants (e.g. welfare officer) administered a CS for each respective child and completed an Evaluation Survey.

Recruitment of the Early Childhood Centres (cohort 1)

The early childhood centres and early childhood educators were recruited in a similar manner to the schools and prep teachers. The director of the early childhood centre identified by the parent was contacted and provided with a Director Pack that included an introduction letter, an information letter, a consent form and a copy of each of the four tools. Written consent from the director was required prior to contact with the early childhood educator.

When written consent from the early childhood centre director had been provided, the early childhood educators were contacted and provided with an Early Childhood Educator Pack that included a letter of introduction, a letter of information and a copy of the ECES (see Appendix 13). The early childhood educators were asked to complete an ECES for each participating child from their 2010 class and one Early Childhood Educator Evaluation Survey and return it to the project team.

2.2.4 Cohort 2 – Selection and recruitment

In cohort 2, the criteria for selecting prep teachers and early childhood educators to participate were similar to the educators from cohort 1, although the manner of recruitment varied. The criteria required that they were not participating in cohort 1. The participants were identified from schools or early childhood centres where other educators were participating in cohort 1 and in consultation with the RNL or QILT managers, principals and early childhood professional organisations such as Early Childhood Australia.

The prep teachers and early childhood educator participants were invited to participate in the study in a similar manner to educators in cohort 1. If the school or early childhood service was already participating in cohort 1, the principal or director identified the prep teachers or early childhood educators to participate and then passed on the Prep Teacher or Early Childhood Educator Packs (see Appendices 13 & 14).

In other sites, the principal or director of the early childhood service was contacted to discuss the project. If they expressed an interest, they were sent the relevant information packs. If this principal or director agreed to participate they were required to provide written consent and pass on the information packs to the teachers/educators they had identified. The participating prep teachers and early childhood educators were asked to complete a PTS or ECES and the respective Evaluation Survey and return them to the project team.

2.3 Project enhancement

Two additional components were added to the project during the implementation phase. The intention of this was to increase the validity of the tools and build upon data from the evaluation surveys to better understand the applicability of the tools to specific populations of children for future use.

Firstly, further statistical analysis was conducted by the CEBU team with data gathered from the trial of the newly developed tools. The purpose of this was to build upon the analyses of the project team and confirm the validity of the tools. Specifically, the purpose was to increase the psychometric qualities of the four newly developed tools by measuring the structure of each survey. The unidentified quantitative survey data from cohort 1 was provided to CEBU for analysis.

Secondly, the project team sought to test the inclusiveness and accessibility of the survey items. In contrast to the non-specific populations in cohorts 1 and 2, the focus group consultations

sought to gather data from specific population groups e.g. Indigenous families, CALD families and families with a child who has a disability. Focus group consultations were undertaken to gather further information on the issues addressed in the evaluation survey (e.g. how the survey operated, how long it took to compete etc).

The aim was to facilitate six focus groups in total (two for each specific population) with six to ten parents in each group (see Figure 2). Key stakeholders involved in the governance or provision of early years services (e.g. DEECD; Early Childhood Australia and Gippsland and East Gippsland Aboriginal Co-Operative) were consulted to provide recommendations on how to invite the participation of parents from these specific groups.

Parents were required to provide written consent prior to participating and those who did participate were given a $20 gift voucher on completion of the focus group (see Appendix 15). During the focus group each parent was first asked to complete the Parent Survey and then the group was guided through a series of semi-structured questions on the applicability of the survey items, and of their understanding of the survey items and of transition to school (see Appendix 16 - focus group questions).

Figure 2: Focus group methodology design

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                    │  Study Design: Focus Group │
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Indigenous Families	Families who are culturally and linguistically diverse	Families with a Child with a disability
Tools Parent Survey and Parent Evaluation Survey	**Tools** Parent Survey and Parent Evaluation Survey	**Tools** Parent Survey and Parent Evaluation Survey
Recruitment – Key stakeholders Seek guidance from Reference Group, who to contact, e.g. Wannik Unit, KESO, VAEAI	**Recruitment – Key stakeholders** Seek guidance from Reference Group, who to contact e.g. Free Kinder Association	**Recruitment – Key stakeholders** Seek guidance from Reference Group, who to contact e.g. Uncle Bob's group and Mytime
Recruitment – Families Engage with parents of Indigenous Children 1 group of 6-10 parents	**Recruitment - Families** Engage with parents of Children of CALD background 1 group of 6-10 parents	**Recruitment - Families** Engage with parents of children with a disability 1 group of 6-10 parents

2.4 Analysis of tools

As described above, data gathered for this project came from three sources:

- four new tools (ECES, PS, CS, PTS)
- four evaluation surveys
- six focus group consultations.

Both the quantitative and qualitative data were analysed by the project team and the methods of analyses are described below.

Preliminary statistical analysis of internal validity and reliability was performed by the project team. For this analysis the data from the ECES, PS, and PTS was considered ordinal (i.e. where the response options are ordered, but the distance between each option is not fixed, in contrast to measurement scales like kilograms). Spearman's correlation coefficient is an

appropriate method for examining associations between ordinal variables, and hence was used here to examine the relationships between items for these surveys (Field, 2009).

Data from the CS was treated as categorical (response options were limited to 'yes', 'no', 'sometimes', or 'don't know'). Accordingly when across survey comparisons were conducted, ordinal data from the ECES, PTS and PS was re-coded and Chi square tests were used to examine associations between items for this survey (Field, 2009).

Given the number of analyses performed in this study, the likelihood of finding a significant relationship between variables by chance alone, where no actual relationship exists, is heightened. To address this, we designated findings with a probability value of less than .001 (i.e. that had a very low probability of being due to chance rather than a real difference) as statistically significant.

There were three separate, but interrelated analyses of the data.

- **Internal validity**: The surveys (excluding the CS) included pairs of items that were identical except in being positively or negatively worded. If participants were responding accurately and consistently, we would expect these pairs of items to be highly related. To test this, correlations between the negatively and positively worded pairs of questions were examined.

- **Outcome reliability**: The questions within each survey were grouped to measure 11 different 'positive start to school' outcomes or underlying constructs (see Appendix 3 - list of the outcomes and indicators). Each outcome was measured by a number of survey items. Using correlations, we assessed the consistency of responses across items that were assumed to measure the same outcome.

- **Across survey comparisons**: Each of the surveys contained questions that measured the same information from the perspectives of the four informants. Chi-square analysis was used to examine how consistent the four informants were when responding to the matched questions.

Further statistical analysis of the quantitative responses from the PS, PTS, ECES and CS was conducted by the project team and the CEBU of the Royal Children's Hospital, Melbourne. Calculations were made using STATA 11 software.

The statistical analysis aimed to further determine the psychometric properties of the four individual outcomes and indicators measures by examining the structure of each survey. This

would provide evidence of the reliability of the four newly developed tools, supplementary to qualitative and preliminary quantitative analysis.

Cronbach's alpha is a widely drawn on measure of internal consistency, that is, how closely related a set of items are as a group. With respect to the current study, it provides a unique estimate of the reliability for each outcome (Gliem & Gliem, 2003). A 'high' value of alpha is often used as evidence that the items measure an underlying (or latent) construct. For the purpose of this project a Cronbach's alpha > 0.7 is considered to be a sufficient indicator of internal consistency.

Most items in the questionnaires (excluding all items in the child questionnaire) used Likert scales. In order to include the non-Likert scale questions in the analyses, Cronbach's alpha has been calculated using standardised scores.

For the Cronbach's alpha, including non-Likert items, questions such as the example below were regarded as six separate questions, and each was coded as '1' if selected and '0' if not.

27. I am actively engaged with the school in supporting my child's learning, I do this by (choose as many as appropriate)

○ Reading with my child
○ Asking them about their day
○ Asking about what they are learning at school
○ Helping with homework/projects
○ Speaking to the teacher about my child's learning
○ Other

For each outcome/indicator in each questionnaire, the contribution of each question to the overall Cronbach's alpha for that outcome/indicator, and possible redundancy of items, was investigated as follows:

  i.   Cronbach's alpha and the average inter-item correlation when all items were included was calculated.
  ii.   For every included item, the value of Cronbach's alpha if that item were to be omitted was calculated.
  iii. The item for which Cronbach's alpha would be greatest if it were omitted was identified.
  iv.   Cronbach's alpha (and average inter-item correlation) was recalculated omitting this item.
  v.   Steps (ii) to (iv) were repeated dropping one extra questionnaire item each time until there were only two questionnaire items left.

Finally, qualitative data gathered from the evaluation surveys and the focus groups were analysed by the project team using qualitative methods to explore emerging themes regarding the applicability, useability and future use of the newly developed tools.

2.5 Project limitations

The project team identified two main limitations impacting the project.

2.5.1 Use of the survey results

The indicator literature strongly supports the notion that whilst successful indicators are *technically sound* (the focus of the current project), it is equally important that they are developed with potential data users in mind (Holden, 2009). This ensures surveys produce data that are useful and useable in a policy and practice context. This view is supported by a review of indicator projects in the United States undertaken by Dluhy and Swartz (2006) which found that a key factor for successful indicator projects is being able to link indicator projects with the policy and decision making processes (Dluhy & Swartz, 2006). Future piloting should include testing of the use of data with surveyed communities.

2.5.2 Including the voices of children

The project team recognises that children are active agents in their transition to school and that their experiences of the transition to school should be given 'voice' in a project that measures the outcomes and indicators of a positive transition to school. However, this brings with it significant challenges such as ensuring the methodology is participatory and children-centred (Barker & Weller, 2003), seen as relevant, meaningful and an important task by the child, attempts to overcome the unequal power relations between an adult and a child (Einarsdottir, 2007), and that the data produced is an authentic representation of the child's perspective (Dockett & Perry, 2005). Surveying children has been noted as at risk of being tokenistic if it is the only strategy that allows a young child to convey their views and experiences (Clark, 2005), and questionable as a strategy as it does not allow children to have influence or some form of control over the method like they may be able to exert in a more conversational style approach or a drawing activity (Dockett & Perry, 2005).

3 Participation rates

The section below details the participation rate of schools and ECE centres as well as the number of respondents to each of the surveys. Participation rates have been reported to inform the power of the inferences drawn from the data. That is, consideration has been given to whether the sample is of sufficient size and representative of the diversity in the Victorian population. A secondary cause for reporting participation rates is in relation to the purpose of the study, which was to develop and examine data collection tools that draw on the perspectives of parents, prep teachers, early childhood educators and the child. Given gaining participation from all four respondent groups was complex and dependent on the voluntary support and participation of many stakeholders, the achievability of collecting the data was unknown. By examining the participation rates we are able to better understand the feasibility of collecting such data as well as where focus is needed to boost participation rates in the future.

3.1 Schools and early childhood services

The project team invited 25 schools to participate in cohort 1, with a total of 19 schools participating in the data collection phase.

Table 2: Participation of schools by DEECD region

	Schools		
Region	Invited	Unable	Participated
Northern Metropolitan	2	0	2
Southern Metropolitan	3	1	2
Eastern Metropolitan	2	0	2
Western Metropolitan	6	3	3
Hume	2	0	2
Grampians	2	0	2
Loddon Mallee	2	0	2
Barwon South West	2	0	2
Gippsland	4	2	2
Total	**25**	**6**	**19**

Ninety-six early childhood services were invited to participate by the project team. Of these, three declined the initial invitation, while a further 49 either failed to return completed surveys or indicated they were unable to complete surveys despite agreeing to participate. In total, 44 early childhood services participated.

3.2 Cohort 1 and 2

CS, PS, PTS and ECES response rate

The project team invited 340 child participants in cohort 1 with the aim of receiving at least 270 sets of all four surveys completed. Of those invited to participate, 95 complete sets of all the four tools (CS, PS, PTS and ECES) were returned to the project team (Table 5).

Table 3: Cohort 1 response rate for respective tools

Tools	Cohort 1
Parent (PS)	227
Prep Teacher (PTS)	210
Child (CS)	208
Early Childhood Educator (ECES)	95

Evaluation survey response rate

Of the participants in cohort 1 who completed or administered of the new tools, 367 also returned an evaluation survey and of the participants invited to participate in cohort 2, 37 people completed an evaluation survey.

Table 4: Evaluation survey response rate for cohorts 1 and 2

Evaluation questionnaire	Cohort 1	Cohort 2	Total
Early childhood educator	91	26	117
Prep teacher	35	11	46
Administrator of Child Survey	16	N/A	16
Parent	225	N/A	225

3.3 Focus groups

Two focus group consultations were held for each specific population: Indigenous, CALD and children with a disability. It was anticipated that a total of 36 parents would participate in the

focus groups (e.g. six parents in each of the six focus groups). A total of 28 parents participated in the focus groups, with the lowest participation rates being Indigenous parents.

Table 5: Focus group participation by specific population

Specific population group	Total number of participants
Parents of Culturally and Linguistically Diverse children	12
Parents of Indigenous children	4
Parents of children with a disability/developmental delay	12
Total	28

3.4 Implications of participation rates

The overall participation rates across the four stakeholder groups of children, parents, prep teachers and early childhood educators were sufficient to enable key inferences to be drawn from the data. However, it must be recognised that substantially fewer ECES were received when compared to the PTS, PS and CS; that is, although prep teachers, parents and children tended to respond to surveys for most children that participated, a significant proportion of data about these children was unavailable from early childhood educators. For example for a total of 208 children that responded to the survey, 226 parent surveys were received, 206 prep teacher surveys were returned, but only 95 early childhood educator surveys were obtained. This means that we do not have data from early childhood educators for around 113 children. Whenever we try and compare the early childhood educator survey with any of the other surveys we must remember that we are only really comparing data from the early childhood educators for 95 children out of a possible 208. While this has little to no impact for the majority of the inferences drawn from the sample data, the most important implication of this low response rate is when we make comparisons across the surveys. As a result, when responses from each of the four surveys are compared, for half of the responses comparison can only be made for three or less surveys. This impacts on the strength of the inferences we are able to make from these comparisons.

The lower response rates for the ECES indicate additional support may be required for early childhood educators to complete the survey in order to measure transition from an ecological perspective. The barriers to participation discussed in section 7, provide some insight as to what such supports might include.

Missing data is less of a concern for data drawn from the evaluation surveys and the within-survey comparisons; however the results still need to be interpreted with the differences in the sample make-up in mind.

Schools

The schools invited to participate in the data collection phase were selected so as to enable the tools to be trialled on a sample that was sensitive to the diversity across Victorian population. For example, local classification (urban/regional/rural/remote) and the Socio-Economic Index for Areas were taken into account when selecting schools. While a number of the invited schools were unable to participate, those that did participate represented the intended domains of diversity (see Appendix 9 – Primary School Site Selection Criteria). The findings and implications detailed throughout this report are therefore drawn from data that is responsive to the opinions of specific and diverse subgroups in the population that may have been lost in a more generalised sample of the Victorian population.

Early Childhood Services

A low response rate was noted for early childhood services, with over half the centres invited to participate in cohort 1 failing to return surveys. This is reflective of the low response rate recorded for the ECES discussed above.

Focus groups

Whilst overall participation rates in the focus groups were sufficient to draw qualitative findings, insufficient participation by Indigenous parents means that the perspective of Indigenous families remains under-reported in the findings.

4 Psychometric properties

The psychometric properties, namely the validity and reliability of the four newly developed tools were investigated to determine the quality of the inferences drawn from the data they provide. While validity was largely informed by drawing on qualitative feedback, a number of statistical analyses were conducted to determine the reliability of each survey. It is important to note that although a number of implications can be drawn from these analyses, establishing the validity and reliability of any measure is a process of accumulating evidence overtime. Findings and implications presented below are therefore not considered as definitive.

4.1 Validity

In order to provide support for the inferences drawn from the four newly developed tools, the validity of each tool as a measure of a positive transition to school was considered. That is, a specific methodology and number of data sources were drawn on to establish the extent to which the surveys accurately and appropriately measured the transition experience. The degree to which the four surveys demonstrated face validity was examined, as was feedback on the content validity of the PS and PTS. An additional consideration was given to when the most accurate, and therefore valid, time of year to assess the transition would be. Data drawn on to demonstrate the validity of the four surveys was provided by specific questions included in the evaluation surveys.

4.1.1 Face validity

The perceived value of completing a survey can influence the attention and consideration given to the responses provided. In turn, this can impact on the accuracy of the measure and the implications made. Whether respondents perceived the surveys to be accurate and appropriate measures of a successful transition, or the face validity, was therefore an important condition for consideration when trialling the tools. Participant responses to the question: 'In your opinion does the survey collect appropriate information to the transition experience?', as well as data pertaining to the value and potential use of the information provided by the surveys were examined.

Almost all participants agreed the survey they completed collected information appropriate to the transition experience (early childhood educator 95%, prep teacher 93%, parent 94%, CS

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administrator 93%). This provides evidence to suggest that all four surveys appear to measure the transition experience as intended, thus demonstrating a degree of face validity. With the exception of parents of children with a disability, focus group participants also agreed the information collected by the PS was relevant to the transition experience. This suggests that the questions may also be valid for use with CALD and Indigenous children and families.

An additional question was posed to prep teachers and parents about the value of collecting the information yielded by the four newly developed tools. These participants were asked to specify how the information collected from the surveys could be used for planning and practices that support the transition to school. The data drawn from this question was considered so as to supplement the findings in regards to face validity. That is, if participants perceived the information yielded by the survey to be of value, this would provide further evidence that the survey appears to measuring the transition experience effectively.

Survey respondents could see the value of the information collected, with all participant groups providing a variety of suggestions as to how the data could be applied (see section 7.1). Similarly, the majority of focus group participants also indicated the data could be useful in planning and practices that support the transition. Parents of children with a disability, however, expressed concern that results that included data drawn from children with special needs or a disability would sway overall findings and therefore impact on the accuracy and usefulness of the data. The survey would need to be amended to be valid for children with a disability.

4.1.2 Content validity

The questions that comprised the four surveys were developed in accordance with the previous work by Nolan et al. (2009). The theoretical concepts behind the outcomes and indicators were drawn on to ensure the surveys comprehensively measured a positive start to school, thus provided evidence of content validity. In order to supplement the methodology and strengthen the content validity, respondents were asked if there was anything they would add to the survey they completed.

The majority of respondents did not indicate additional questions should be added to the four tools (see Table 6). This suggests the tools are a comprehensive measure of what a successful transition to school looks like. However, there were some valuable suggestions made in regards to additional factors to consider when measuring the transition experience.

Table 6: Participant responses to the question: 'Is there anything that you believe should be added (to the survey)?'

	Yes	No
Early childhood educator	34%	66%
Prep teacher	15%	85%
Parent	9%	91%
Child	14%	86%

Early childhood educators were the cohort most likely to indicate further information should be collected, with comments almost exclusively relating to the lack of any direct reference to Transition Statements. That is, early childhood educators suggested examining whether teachers drew on the information provided in the transition statements and the correspondence that occurs as a result of the Transition Statement exchange would add value to the understanding of the transition experience drawn from the surveys.

Prep teacher responses also highlighted the importance of including Transition Statements into the measurement of a successful transition, with several teachers suggesting it would be useful to include on the PTS whether a child has a Transition Statement. Information regarding what type of early childhood service the child attended (e.g. kindergarten or day care) was also identified as valuable, as was demographic information about the school (e.g. socio-economic status of children/families, Education Maintenance Allowance (EMA) and whether it is in an urban, regional or rural area). Given the transition process is not standardised across schools, two teachers also recommended gaining 'specific information' on what the transition process entails at each school.

The CS administrators suggested that due to the eagerness of the child participants to elaborate on the questions that more space could be provided to record this information. The addition of a question asking the child to recall some transition experiences was also proposed as useful.

While less than one in ten parents suggested further information could be collected as a part of the PS (9%), a variety of suggestions were provided as to what this additional information could be. This included:

- Information about age in months of school commencement and if [the child] completed one or two years of 4 year old preschool.
- Did the child transition with other children they knew prior to school?

- Has your child made new friends outside of those they previously knew at the early years service they attended?
- Satisfaction rating of early childhood provider.
- Whether the transition had been a positive or negative experience.

Parents from all focus groups stated that they believed the child's position in the family was an important factor to assess, that is,, whether the child has an older sibling that has already made the transition to school.

4.1.3 Validity and timing of data collection

The time of year that the data is collected is also considered to have an impact on the validity of the results. That is, the best time to accurately assess whether the transition has been successful is dependent on when the transition occurs and for how long it lasts. Accordingly, participant opinions on when the information collected by the surveys would be most valid were examined. Table 9 illustrates the breakdown of responses from the cohorts 1 and 2 participants in relation to the question: When would be the best time to administer the survey? As can be seen, the most popular preference was late Term 1. This correlates with comments from other participants who were concerned that too much time had passed since the transition had taken place once the survey was undertaken in the current study (during Term 2).

Table 7: Participant perception of best time to administer the survey[13]

	Early Childhood Educator	Prep Teacher	Parent	Child Survey administrator	Overall Average
Early Term 1	22%	12%	13%	12%	15%
Late Term 1	38%	57%	20%	63%	45%
Early Term 2	14%	26%	37%	6%	21%
Late Term 2	2%	5%	20%	13%	10%
Early Term 3	3%	-	4%	6%	3%
Late Term 3	4%	-	1%	-	1%
Early Term 4	7%	-	2%	-	2%
Late Term 4	10%	-	3%	-	3%

[13] Evaluation survey responses of participants in cohorts 1 and 2, n= 375

Focus group participants had a range of views regarding when the transition period had finished and hence when the survey should be conducted. Indigenous parents believed transition can occur at different times for different children. One participant in the Indigenous focus group stated, "Some children may fit right in; others may take a year to settle."

On the other hand, parents of children with a disability believed transition began early. One parent indicated transition started at three years of age. Parents of children with a disability believed the survey should be implemented at different points throughout the year based on the individual child's progress. Participants in the CALD parent focus group had differing opinions on the timing of the survey implementation. Many stated it should be implemented in the last Term of kindergarten and others stated that late Term 1 of prep is the most appropriate time.[14]

4.2 Statistical analysis of validity and reliability

While validity is a necessary condition of any measure it is not a sufficient condition. An additional consideration in tool development is reliability. This refers to whether a tool can be interpreted consistently across varying situations. In this case, we want to know whether the four surveys provide a consistent measure of a positive start to school. Accordingly, a number of statistical analyses were conducted to further investigate the validity and reliability of the tools. These included:

- **Internal validity**: The extent to which participants responded consistently to the positively and negatively worded questions.
- Preliminary analysis or **reliability**:
    - Outcome reliability: the strength of the relationship between items mapped to each outcome.
    - Consistency of responses across the four surveys.
- **Internal consistency**: How closely related a set of items are as a group.

4.2.1 Internal validity

With the exception of the CS, each survey comprised a number of questions that sought the same information, but where one question was worded positively (e.g. 'My child has friends at

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[14] It is believed the CALD participants understood kinder to mean prep year.

school') and the other was worded negatively ('My child has no friends at school'). If participants were responding consistently, we would expect these pairs of items to be highly related. For example, we would expect parents who agreed with the statement 'My child has friends at school' to disagree with the statement 'My child has no friends at school'.

Negatively worded questions were reverse-scored before statistical analysis so as to highlight the comparison with positively worded questions. Spearman correlations were performed to examine the level of agreement between these pairs of positively and negatively worded questions. Correlations here and in the subsequent analyses were considered to be either strong, moderate or weak based on the following criteria:

- Strong rs ≥ .50 were considered to be strong.
- Moderate rs = .30 to .49 were considered to be moderate.
- Weak rs ≤ .29 were considered to be weak.

The results revealed that there were mostly strong negative correlations between these pairs of items for the parent, prep teacher, and early childhood educator surveys, indicating a high level of consistency in participant responses for these items (see Appendices 17, 18 & 19 – Internal validity of each survey). For example, where parents agreed that the child 'separates easily from me at school', they tended to disagree that the child 'does not separate easily from me at school'. While, there were also some item pairs that shared a weaker than expected association (defined here as <.5; these are bolded in the accompanying tables), as the negatively worded items were included only as a means of evaluating the consistency of participant responses, and the information they provide is the same as the positively worded items. *The negatively phrased counterparts of each pair of questions can therefore be considered redundant.*

4.2.2 Preliminary analysis of reliability

A number of preliminary analyses of reliability were conducted to investigate whether each of the surveys demonstrated some degree of reliability as well as to identify questions that may be redundant. Specifically, the relationship between items underlying each of the constructs was examined as was the consistency of the responses to the same information across the surveys.

Outcome reliability

The questions within each survey were grouped to measure 11 different 'positive start to school' outcomes or underlying constructs (see Appendix 3). Each outcome was measured by a number of survey items. For example, in the PS, outcome 1 'Children feel safe, secure and

supported in the school environment' was measured by 11 items, such as 'My child looks forward to going to school' and 'My child separates easily from parent/caregiver' (e.g. does not cry; is not clingy). If these survey items are assessing the same underlying construct of 'Children feel safe, secure and supported in the school environment', then we would expect to find that these items are all related to one another. For example, when parents agree that the child looks forward to school, they also tend to agree that their child separates easily. To assess this level of agreement, correlations between items that were assumed to measure the same outcome were examined.

Additionally, if participants tend to respond in exactly the same way to all of the items measuring an outcome, then there is redundancy in the items. That is, if respondents answer the same way to two questions, we could ask them only one of these questions and still have the same amount of information. This issue (when the relationships between items are very high) is referred to as multicollinearity. An example would be if parents who agreed that their child looks forward to school always agreed that their child also separates easily. Multicollinearity is considered likely to be a problem when correlations between a pair of items is close to $r_s=0.8$, or $r_s=0.7$ if the items appeared very similar on face value (Tabachnick & Fidell, 2007).

Note that this analysis could not be conducted for the Child Survey as responses were considered categorical rather than ordinal. That is, categorical data can only be sorted according to category and cannot be ranked. Ordinal data on the other hand, allows responses to be ranked according to a natural order.

Results showed that while a number of items correlated weakly with other items or were multicollinear, most inter-item correlations were moderate to high (see Appendices 20, 21 & 22 – Survey inter-item correlations). This finding suggests the majority of questions mapped to an outcome are sufficiently related to be considered consistent measures of the respective outcome. Those items found to be weakly correlated or mulitcollinear, are therefore considered for removal.

Consistency of responses across the four surveys

Some of the survey questions were consistent across all four surveys (with appropriate changes to wording, see Appendix 23). For example, children were asked 'Do you like going to school?', the parent was asked 'My child looks forward to going to school', the teacher was asked 'The child looks forward to coming to school', and the early years educator answered the question 'The child looked forward to coming to this early childhood service'. The way in which children,

parents, prep teachers and early childhood educators responded to these questions was examined to see if it was consistent between each of the respondent groups. For example if a child responded that they were happy at school, did the parent, prep teacher and early childhood educator respond the same way? If the surveys are reliable we would expect the four different participant groups to be responding in the same (or similar) way as each other. The cross-survey items comparison uses Chi square to answer this question.

Chi square works out if the proportions are similar within these responses. However, in order to perform this analysis some of the data needed to be re-coded to make the responses to each survey comparable. This is because the child responses were rated categorically; whereas the three 'adult' surveys were rated on an ordinal scale. To make the response comparable across all four surveys the data for the prep teacher, parent and early childhood educator surveys were first re-coded as Strongly Agree and Agree = 'Yes', and Strongly Disagree and Disagree = 'No'; 'Don't Know' and 'Neutral' responses were excluded from this analysis.

Results of the analysis revealed that for the majority of the questions informants tended to provide similar responses. Furthermore, for the responses that were found to be significantly different across the four surveys, this difference was minimal once percentages were examined. For example, parents and prep teachers had different perceptions about the quality of communication between the staff and parents at schools (x^2=7.33, p<.01): 100% of prep teachers agreed that communication with parents was good, while 92% of parents agreed with this statement. That is, although the difference was considered statistically different, over 90% of teachers and parents agreed with this statement. Appendix 23 shows each category of question, the surveys in which they appear, and the Chi square result.

4.2.3 Internal consistency

The combined findings of the preliminary analysis provide evidence that the ECES, PTS and PS may be operating reliably and that specific questions can be considered for removal. Furthermore the across-survey comparisons suggest that the respondents to the ECES, PTS and PS are responding in a similar way to children on the CS. On this basis, work to establish the internal consistency of each survey, and provide a further indication of the questions that may be redundant, was conducted.

The internal consistency of the questions measuring each of the outcomes was indicated by Cronbach's alpha. The tables presented below (Tables 10, 11, 12 & 13) show the effect on

Cronbach's alpha and the average inter-item correlation (rho) as successive questions are omitted from the analysis for each outcome/indicator on each of the surveys. For example, when question 20 is omitted from the analysis for outcome 1 on the ECES (Table 10), Cronbach's alpha increases from 0.85 to 0.86, and the average inter-item correlation increases from 0.35 to 0.40. Please note, for each outcome/indicator, the combination of questions which give the highest Cronbach's alpha and average inter-item correlation with the smallest number of questions has been highlighted in yellow in each of the tables.

Early Childhood Educator Survey

When all survey items were included, Cronbach's alpha and average inter-item correlation were very high for outcomes 1, 2, 3, 4, 5, 6 and 11 (see Table 10). Cronbach's alpha was low for outcomes 7 and 10 suggesting that the questions in each of these outcomes may not be measuring the desired outcome. Please note that although the level of internal consistency is acceptable for outcome 10 when specific questions are omitted, the result for outcome 7 remains poor. Therefore, with the exception of outcome 7, acceptable internal consistency is evident for all outcomes measured by the ECES.

Table 8: Early Childhood Educator Survey – Different combinations of survey items and the effect on Cronbach's alpha and inter-item correlation

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
Outcome 1	10	1,2,3,5,6,9,12,15,17,20	.85	.35
	9	1,2,3,5,6,9,12,15,17,	.86	.40
	8	1,3,5,6,9,12,15,17,	.86	.43
	7	3,5,6,9,12,15,17,	.86	.48
	6	3,5,9,12,15,17,	.87	.52
	5	3,5,9,12,17,	.87	.58
	4	3,5,9,17,	.88	.64
	3	3,5,9,	.86	.68
	2	3,9,	.84	.73
Outcome 2	9	3,4,7,8,9,10,11,12,16	.90	.49
	8	3,4,7,8,9,10,11,16	.90	.52
	7	3,4,7,9,10,11,16	.89	.54
	6	3,4,9,10,11,16	.89	.56

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
	5	3,9,10,11,16	.87	.58
	4	3,9,10,11,	.86	.60
	3	3,9,10,	.85	.66
	2	3,9,	.84	.73
Outcome 3	9	3,4,5,8,9,11,12,16,17	.90	.50
	8	3,4,5,8,9,11,16,17	.90	.53
	7	3,4,5,9,11,16,17	.90	.56
	6	3,5,9,11,16,17	.89	.57
	5	3,5,9,11,17	.88	.60
	4	3,5,9,17	.88	.64
	3	3,5,9,	.86	.68
	2	3,9,	.84	.73
Outcome 4	13	1,2,3,4,7,8,9,10,11,12,13,14,16	.90	.41
	12	2,3,4,7,8,9,10,11,12,13,14,16	.90	.43
	11	3,4,7,8,9,10,11,12,13,14,16	.91	.47
	10	3,4,7,8,9,10,11,13,14,16	.91	.49
	9	3,4,7,9,10,11,13,14,16	.90	.51
	8	3,4,7,9,10,11,13,16	.90	.52
	7	3,4,7,9,10,11,16	.89	.54
	6	3,4,9,10,11,16	.89	.56
	5	3,9,10,11,16	.87	.58
	4	3,9,10,11,	.86	.60
	3	3,9,10,	.85	.66
	2	3,9,	.84	.73
Outcome 5	5	5,7,10,17,19	.86	.54
	4	5,7,10,17,	.87	.63
	3	5,10,17,	.87	.70
	2	5,17,	.86	.75
Outcome 6	10	1,3,5,6,7,10,12,17,18,19	.88	.43
	9	3,5,6,7,10,12,17,18,19	.89	.47
	8	3,5,6,7,10,17,18,19	.89	.51
	7	3,5,7,10,17,18,19	.89	.53

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
	6	3,5,7,10,17,18,	.88	.55
	5	3,5,7,10,17,	.89	.61
	4	3,5,10,17,	.88	.65
	3	5,10,17,	.87	.70
	2	5,17,	.86	.75
Outcome 7*	2	21,27	.50	.33
Outcome 10	5	20,21,22,27,34	.69	.30
	4	20,21,22,34	.73	.40
	3	20,21,22,	.70	.44
	2	20,21,	.66	.49
Outcome 11	11	24,25,26,28,29,30,31,32,33,35,23	.89	.42
	10	24,26,28,29,30,31,32,33,35,23	.89	.46
	9	24,26,28,29,30,31,33,35,23	.90	.49
	8	24,26,28,29,30,31,35,23	.89	.51
	7	24,28,29,30,31,35,23	.89	.54
	6	24,28,29,30,31,23	.89	.58
	5	28,29,30,31,23	.89	.62
	4	28,29,30,31,	.90	.68
	3	28,29,31,	.88	.71
	2	28,31,	.84	.73

denotes Cronbach's alpha for this outcome is unsatisfactory

Prep Teacher Survey

When all survey items were included, Cronbach's alpha and average inter-item correlation were satisfactory for outcomes 1, 2, 3, 4, 5, 6, 8, 9 and 11 (see Table 11). Cronbach's alpha was low for outcomes 7 and 10 when all the questions underlying this construct were included suggesting that the questions in this outcome may not be measuring the desired outcome. However, the alpha for these outcomes can be improved by omitting some questions. Therefore, an acceptable level of internal consistency can be demonstrated for all outcomes measured by the PTS.

Table 9: Prep Teacher Survey – Different combinations of survey items and the effect on Cronbach's alpha and inter-item correlation

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
Outcome 1	15	1,2,3,5,6,8,11,12,15,18,20,21,43,47,48	.89	.34
	14	1,2,3,5,6,8,11,12,15,18,20,21,43,48	.90	.38
	13	2,3,5,6,8,11,12,15,18,20,21,43,48	.90	.41
	12	2,3,5,6,8,11,12,15,18,20,21,48	.90	.44
	11	2,3,5,6,8,11,12,15,18,20,21,	.91	.48
	10	2,3,5,6,8,12,15,18,20,21,	.91	.51
	9	3,5,6,8,12,15,18,20,21,	.92	.56
	8	3,5,8,12,15,18,20,21,	.92	.59
	7	3,5,8,12,15,20,21,	.92	.62
	6	3,5,8,12,20,21,	.92	.64
	5	3,5,12,20,21,	.91	.67
	4	3,5,12,20,	.90	.70
	3	3,12,20,	.89	.72
	2	3,12,	.93	.86
Outcome 2	12	3,4,7,9,10,12,13,14,15,19,22,23	.92	.49
	11	3,4,7,9,10,12,13,14,15,19,23	.92	.50
	10	3,4,7,9,10,12,13,14,15,19,	.91	.51
	9	3,4,7,9,10,12,13,14,19,	.91	.52
	8	3,4,7,9,10,12,13,19,	.90	.53
	7	3,4,7,9,12,13,19,	.89	.55
	6	3,4,7,12,13,19,	.89	.57
	5	3,4,7,12,13,	.89	.62
	4	3,7,12,13,	.90	.69
	3	3,12,13,	.89	.73
	2	3,12,	.93	.86
Outcome 3	10	4,5,7,9,10,13,14,19,21,24	.91	.51
	9	4,5,7,9,10,13,14,19,21,	.91	.53
	8	4,5,7,9,10,13,19,21,	.91	.55
	7	4,5,7,10,13,19,21,	.90	.56
	6	4,5,7,13,19,21,	.89	.58

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
	5	4,5,7,13,21,	.88	.60
	4	5,7,13,21,	.88	.66
	3	5,13,21,	.87	.68
	2	13,21,	.82	.70
Outcome 4	15	1,2,3,4,7,9,10,11,12,13,14,15,16,17,19	.91	.42
	14	2,3,4,7,9,10,11,12,13,14,15,16,17,19	.92	.45
	13	3,4,7,9,10,11,12,13,14,15,16,17,19	.92	.47
	12	3,4,7,9,10,12,13,14,15,16,17,19	.92	.50
	11	3,4,7,9,10,12,13,14,15,16,19	.92	.51
	10	3,4,7,9,10,12,13,14,16,19	.92	.53
	9	3,4,7,9,10,12,13,16,19	.91	.54
	8	3,4,7,9,12,13,16,19	.91	.55
	7	3,4,7,12,13,16,19	.90	.58
	6	3,4,7,12,13,16,	.90	.60
	5	3,7,12,13,16,	.91	.66
	4	3,7,12,13,	.90	.69
	3	3,12,13,	.89	.73
	2	3,12,	.93	.86
Outcome 5	5	5,7,13,20,25	.88	.60
	4	5,7,13,20,	.89	.67
	3	5,13,20,	.89	.72
	2	5,20,	.88	.78
Outcome 6	17	1,3,5,6,7,8,12,13,15,20,21,22,24,25,26_1,26_2,26_3	.92	.42
	16	3,5,6,7,8,12,13,15,20,21,22,24,25,26_1,26_2,26_3	.93	.45
	15	3,5,6,7,8,12,13,15,20,21,22,24,25,26_1,26_3	.93	.48
	14	3,5,6,7,8,12,13,15,20,21,22,24,25,26_3	.94	.51
	13	3,5,6,7,8,12,13,15,20,21,22,24,25,	.94	.55
	12	3,5,6,7,8,12,13,15,20,21,24,25,	.94	.56
	11	3,5,6,7,8,12,13,15,20,21,25,	.94	.58
	10	3,5,6,7,8,12,13,15,20,21,	.94	.60

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
	9	3,5,7,8,12,13,15,20,21,	.94	.62
	8	3,5,7,8,12,13,20,21,	.94	.64
	7	3,5,7,12,13,20,21,	.93	.66
	6	3,5,12,13,20,21,	.93	.67
	5	3,5,12,13,20,	.92	.69
	4	3,12,13,20,	.90	.70
	3	3,12,13,	.89	.73
	2	3,12,	.93	.86
Outcome 7	5	27,31,32,33,37	.66	.28
	4	27,31,32,33,	.64	.31
	3	27,32,33,	.67	.41
	2	27,32,	.85	.74
Outcome 8	2	28,29	.76	.61
Outcome 9	7	33,34,35,36,37,40,50	.81	.38
	6	33,34,35,36,37,50	.84	.47
	5	33,34,35,36,50	.86	.54
	4	33,35,36,50	.85	.59
	3	35,36,50	.85	.66
	2	35,36,	.89	.81
Outcome 10	14	27,31,32,42,43,48,41_1,41_2,41_3,41_4,41_5,41_6,41_7,41_8	.59	.09
	13	27,31,32,42,43,48,41_1,41_2,41_3,41_4,41_5,41_6,41_8	.62	.11
	12	27,31,32,42,43,48,41_1,41_3,41_4,41_5,41_6,41_8	.64	.13
	11	27,31,32,42,43,48,41_1,41_3,41_4,41_6,41_8	.66	.15
	10	27,31,32,42,43,48,41_1,41_3,41_4,41_8	.68	.17
	9	27,32,42,43,48,41_1,41_3,41_4,41_8	.70	.20
	8	27,32,42,43,48,41_1,41_3,41_4,	.71	.23
	7	27,32,42,43,48,41_1,41_3,	.72	.26
	6	32,42,43,48,41_1,41_3,	.72	.30
	5	32,42,43,41_1,41_3,	.73	.35
	4	32,42,41_1,41_3,	.72	.39

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
	3	32,42,41_1,	.70	.44
	2	42,41_1,	.68	.51
Outcome 11	7	38,44,45,46,47,49,39	.85	.44
	6	38,44,45,46,47,39	.89	.56
	5	38,44,45,46,47,	.89	.62
	4	38,44,46,47,	.88	.64
	3	38,46,47,	.86	.68
	2	38,47,	.83	.71

Parent Survey

When all survey items were included, Cronbach's alpha and average inter-item correlation were satisfactory for outcomes 1, 2, 3, 4, 6, 7, and 9 (see Table 10). Cronbach's alpha was somewhat poor for outcomes 8 and 10 and very low for outcome 5, suggesting that when all the questions are included these outcomes may not be measuring the desired outcome. However, with the exception of outcome 5 the alpha for these outcomes can be improved sufficiently by omitting some questions resulting in an acceptable level of internal consistency can be demonstrated for all other outcomes measured by the PS.

Table 10: Parent Survey – Different combinations of survey items and the effect on Cronbach's alpha and inter-item correlation

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
Outcome 1	12	1,2,4,6,7,10,13,14,15,18,19,41	.79	.24
	11	1,2,4,6,7,10,13,14,18,19,41	.81	.28
	10	1,2,4,6,7,10,14,18,19,41	.82	.32
	9	1,2,4,6,7,10,14,19,41	.83	.34
	8	1,2,4,7,10,14,19,41	.83	.38
	7	1,2,4,7,14,19,41	.82	.40
	6	1,2,7,14,19,41	.83	.44
	5	1,2,7,14,41	.82	.48
	4	1,2,7,14,	.81	.51
	3	1,2,14,	.79	.56

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
	2	1,14,	.77	.62
Outcome 2	12	3,4,5,8,9,10,11,12,13,15,20,21	.82	.27
	11	3,4,5,8,9,10,11,12,13,20,21	.83	.31
	10	3,4,8,9,10,11,12,13,20,21	.85	.36
	9	3,4,8,9,10,11,12,20,21	.86	.41
	8	4,8,9,10,11,12,20,21	.86	.43
	7	8,9,10,11,12,20,21	.86	.46
	6	8,9,10,11,12,20,	.86	.50
	5	8,9,11,12,20,	.87	.56
	4	8,9,11,20,	.86	.61
	3	8,9,11,	.87	.70
	2	8,9,	.90	.81
Outcome 3	9	3,5,8,9,11,12,13,19,22	.81	.33
	8	3,8,9,11,12,13,19,22	.83	.38
	7	3,8,9,11,12,19,22	.85	.45
	6	3,8,9,11,12,19,	.85	.49
	5	3,8,9,11,12,	.85	.53
	4	3,8,9,11,	.86	.61
	3	8,9,11,	.87	.70
	2	8,9,	.90	.81
Outcome 4	15	1,2,3,4,5,8,9,10,11,12,13,15,16,17,18	.84	.26
	14	1,2,3,4,5,8,9,10,11,12,13,16,17,18	.85	.29
	13	1,2,3,4,8,9,10,11,12,13,16,17,18	.86	.32
	12	1,2,3,4,8,9,10,11,12,16,17,18	.87	.35
	11	1,2,3,4,8,9,10,11,12,16,17,	.87	.38
	10	1,3,4,8,9,10,11,12,16,17,	.87	.39
	9	1,4,8,9,10,11,12,16,17,	.86	.41
	8	4,8,9,10,11,12,16,17,	.86	.43
	7	8,9,10,11,12,16,17,	.85	.45
	6	8,9,11,12,16,17,	.85	.48
	5	8,9,11,12,16,	.85	.53
	4	8,9,11,12,	.85	.59

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
	3	8,9,11,	.87	.70
	2	8,9,	.90	.81
Outcome 5	3	5,12,23	.45	.21
	2	12,23	.63	.46
Outcome 6	11	1,4,5,7,10,12,15,19,20,22,23	.82	.29
	10	1,4,5,7,10,12,19,20,22,23	.84	.35
	9	1,4,7,10,12,19,20,22,23	.87	.42
	8	4,7,10,12,19,20,22,23	.86	.44
	7	7,10,12,19,20,22,23	.86	.46
	6	7,12,19,20,22,23	.85	.49
	5	7,12,19,20,23	.84	.51
	4	7,19,20,23	.83	.55
	3	19,20,23	.80	.57
	2	19,20,	.77	.63
Outcome 7	6	24,25,28,30,31,35	.75	.33
	5	24,25,30,31,35	.74	.36
	4	24,30,31,35	.76	.44
	3	24,31,35	.74	.49
	2	24,31,	.74	.59
Outcome 8	15	26,29,27_1,27_2,27_3,27_4,27_5,27_6,43_1,43_2,43_3,43_4, 43_5,43_6,43_7	.71	.14
	14	26,29,27_1,27_2,27_3,27_4,27_5,43_1,43_2,43_3,43_4,43_5, 43_6,43_7	.72	.15
	13	26,29,27_1,27_2,27_3,27_4,27_5,43_1,43_2,43_3,43_4,43_5, 43_6,	.72	.17
	12	26,29,27_2,27_3,27_4,27_5, 43_1,43_2,43_3,43_4,43_5, 43_6,	.72	.18
	11	26,29,27_2,27_4,27_5,43_1,43_2,43_3,43_4,43_5,43_6,	.72	.19
	10	26,29,27_2,27_5,43_1,43_2,43_3,43_4,43_5,43_6,	.71	.20
	9	26,29,27_2,43_1,43_2,43_3,43_4,43_5,43_6,	.70	.21
	8	26,29,43_1,43_2,43_3,43_4,43_5,43_6,	.69	.22
	7	29,43_1,43_2,43_3,43_4,43_5,43_6,	.67	.23

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
	6	43_1,43_2,43_3,43_4,43_5,43_6,	.66	.25
	5	43_2,43_3,43_4,43_5,43_6,	.67	.29
	4	43_2,43_3,43_4,43_6,	.64	.31
	3	43_2,43_3,43_4,	.64	.37
	2	43_3,43_4,	.67	.51
Outcome 9	13	31,32,34,35,36,37,42,33a1,33a2,33a3,33a4,33a5,33a6	.86	.32
	12	31,32,34,35,36,37,42,33a1,33a2,33a3,33a4,33a5,	.88	.38
	11	31,32,34,35,36,37,42,33a2,33a3,33a4,33a5,	.89	.41
	10	31,32,34,35,36,37,42,33a2,33a4,33a5,	.88	.43
	9	31,32,34,35,36,37,42,33a4,33a5,	.88	.46
	8	31,32,34,35,36,37,42,33a5,	.89	.50
	7	31,32,34,35,36,37,42,	.89	.54
	6	31,32,34,36,37,42,	.90	.59
	5	31,32,34,36,37,	.90	.63
	4	31,32,34,37,	.88	.65
	3	31,32,34,	.87	.68
	2	31,32,	.85	.74
Outcome 10	6	24,25,28,30,38,39	.70	.28
	5	24,25,28,30,38,	.68	.30
	4	24,25,28,30,	.67	.34
	3	25,28,30,	.62	.35
	2	25,28,	.65	.49

Child Survey

When all survey items were included, Cronbach's alpha and average inter-item correlation were unacceptable for all outcomes (see Table 11). When questions were omitted, results for all outcomes remained unacceptable, except for outcome 1 which demonstrates an acceptable level of internal consistency when only questions 1 and 6 contribute to its measurement.

Table 11: Child Survey – Different combinations of survey items and the effect on Cronbach's alpha and inter-item correlation

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
Outcome 1	9	1,2,4,5,6,7,8,12,22	.58	.13
	8	1,2,4,6,7,8,12,22	.59	.15
	7	1,2,4,6,7,12,22	.61	.18
	6	1,2,4,6,7,22	.61	.21
	5	1,2,6,7,22	.60	.23
	4	1,2,6,22	.63	.30
	3	1,2,6,	.63	.36
	2	1,6,	.73	.58
Outcome 2	8	4,9,10,11,12,13,14,15	.15	.02
	7	9,10,11,12,13,14,15	.25	.05
	6	9,10,11,13,14,15	.26	.06
	5	9,10,11,14,15	.27	.07
	4	9,11,14,15	.28	.09
	3	9,14,15	.28	.11
	2	9,14,	.31	.18
Outcome 3	7	5,9,10,11,15,16,17	.34	.07
	6	5,9,10,11,15,16,	.38	.09
	5	5,10,11,15,16,	.40	.12
	4	5,10,11,15,	.36	.12
	3	5,10,11,	.34	.15
	2	5,10,	.33	.19
Outcome 4	9	1,2,4,9,10,11,12,15,17	.39	.07
	8	1,2,4,10,11,12,15,17	.42	.08
	7	1,2,4,11,12,15,17	.44	.10
	6	1,2,4,12,15,17	.43	.11
	5	1,2,4,15,17	.43	.13
	4	1,2,4,17	.42	.16
	3	1,2,17	.41	.19
	2	1,2,	.41	.26
Outcome 5	3	5,15,18	.33	.14

Outcome	Number of questions	Questions used to measure this outcome	Cronbach's alpha	Average inter-item correlation
	2	15,18	.32	.19
Outcome 6	8	3,4,5,6,12,13,15,18	.48	.10
	7	3,4,5,6,12,15,18	.52	.13
	6	3,4,6,12,15,18	.53	.16
	5	3,6,12,15,18	.54	.19
	4	3,6,15,18	.53	.22
	3	3,6,18	.56	.30
	2	3,18	.60	.43
Outcome 10	2	20,21	.29	.17

4.3 Implications

Validity

Findings indicate all four of the surveys have a degree of face validity, while further evidence was provided in regard to the content validity. Specifically, the findings suggest:

- All four surveys appear to be accurate measures of the transition experience.
- Respondents perceive the information collected by the surveys to be useful.
- The information collected by the surveys was largely comprehensive of the transition experience.

These findings provide support for the use of the ECES, PTS, PS and CS as accurate measures of a positive transition to school.

Suggestions made by some respondents as to additional information that could be collected by the surveys and therefore increase the content validity, were also considered. *Given early childhood educators and prep teachers consistently indicated Transition Statements to be relevant to the measurement of a positive transition, questions in regard to Transition Statements should be included in the ECES and PTS.* However, further work needs to be done to examine the wording of such questions as well as the outcomes to which these questions would be mapped. Additional questions proposed for inclusion by participants were not considered for inclusion on a number of grounds:

- Information collected by proposed questions does not underscore the outcomes.
- Information provided by proposed question is available to public, therefore can be considered in conjunction with the data resulting from the four tools.
- Questions yielding similar information are included in the survey, thus inclusion of the proposed questions is unlikely to significantly contribute to the measurement of transition.
- The information such a question would provide is not reflected in the research, therefore is unlikely to contribute to the content validity.

Important information was also provided by participants in regards to an appropriate time of year for data collection. The majority of participants indicated late in Term 1 or early in Term 2 as the most valid time to collect information on the transition experience, therefore in order to collect information to accurately reflect a positive transition to school, data collection should occur at these times.

A question for future research is whether the timing of transition varies for CALD and Indigenous children when compared to the general population.

It is important to note the difference in timing of data collection suggested by focus group participants. These participants illustrated limited understanding of the measurement of transition outcomes, confusing it with individual child assessment. In turn, this impacted on their views about the most valid time to measure whether a positive transition had taken place. A number of focus group participants suggested that multiple surveys occur across the year to monitor the changes occurring for the individual child.

Also noteworthy is that although the surveys were deemed appropriate for use among the general population as well as Indigenous and CALD groups, parents of children with a disability disagreed that the PS collected information that accurately reflected the transition experience of children with a disability. Given a number of questions were common across all four of the surveys this may imply that each of the surveys would need to be amended to be valid for children with a disability making the transition to school. One option is to include an additional set of questions specifically for children with a disability, that measure the supports and experience that are identified as crucial to these children experiencing a positive transition to school. *This would also provide the opportunity to develop data on how these children are transitioning and the additional supports schools, early childhood services and parents could provide.*

Statistical analysis

Findings of the statistical analysis provided some insight into the psychometric properties of the four newly developed tools.

The examination of internal validity indicates participants are responding consistently to the negatively and positively worded questions included on the ECES, PTS and PS. Given the negatively worded questions provide the same information as their positively worded counterparts these questions are therefore redundant and can be removed from the analysis.

As mentioned previously, the preliminary analysis of reliability provides evidence that the questions underlying each outcome on the ECES, PTS and PS to be consistent and therefore likely to be measuring the same outcomes. This examination also provides some indication that specific questions could be considered for removal. By comparing the responses to questions that are the same or similar across the four surveys, another aspect of reliability has been demonstrated.

The incorporation of the child survey into the analysis of across survey comparisons allowed for a degree of reliability to be established for this survey. However, as this was largely based on the responses to the three adult surveys, it is important to note the impact of the low response rate to the ECES (as discussed in section 2). That is, given that only 95 ECES were returned, over half of these comparisons are based on only two adult surveys (or less when a comparable question was not included in the respective survey). While the inferences drawn from the cross-survey comparisons nonetheless provide an indication of the degree to which participants are responding consistently, the broader inferences drawn from this analysis are less robust.

Further analysis of reliability, namely internal consistency, was drawn on to build on the preliminary demonstration of reliability and provide more conclusive advice on which questions can be considered for removal. With the exception of the CS, findings from this analysis of internal consistency were largely consistent with the preliminary analysis. That is, questions underlying most of the outcomes were found to be reliable measures of that outcome, however, differences as to which questions to remove were noted.

The implications drawn from these findings are presented below.

Early Childhood Educator Survey

- Analysis of the data provided by the ECES found that the combination of survey items was sufficiently different to distinguish each outcome.

- The most reliable combination and the smallest combination of questions per outcome is highlighted in yellow in Table 8. These questions are therefore the questions recommended for inclusion in the ECES.

- While negatively posed questions Q4, Q11, Q17 were found to contribute to a higher level of internal consistency, deleting these questions does not substantially compromise the internal consistency of the questions underlying any outcome. Given they do not provide any unique information due to the inclusion of their positive counterparts, the inclusion of these questions in the ECES is not recommended.

- The survey items that currently map to outcome 7 have low internal consistency, which indicate that Q21 and Q27 may not be reliable measures of outcome 7. In the future, new questions to collect data against outcome 7 will therefore need to be developed.

Prep Teacher Survey

- Analysis of the data provided by the PTS found that the combination of survey items was sufficiently different to distinguish each outcome.

- The most reliable combination and the smallest combination of questions per outcome are highlighted in yellow in Table 9. These questions are recommended for inclusion in the PTS.

- While Q20, a negatively posed question, contributed to a higher level of internal consistency, deleting all the negatively posed questions will not substantially compromise the internal consistency of the questions for any outcome.

Parent Survey

- Analysis of the PS data found that the most reliable combination of survey items was the same for outcomes 2, 3 and 4. This may indicate that parents had difficulty distinguishing between the concepts of outcomes 2, 3 and 4. Alternatively, the questions mapped to these outcomes may not be an accurate measure of the three individual outcomes. It will be important to differentiate data collected to these outcomes. Retaining Q20 for outcome 2, Q19 for outcome 3 and Q16 for outcome 4 will not substantially

compromise the internal consistency. In order to ensure the combination of survey items are sufficiently different to distinguish each outcome, these questions are recommended for inclusion (as shown in Table 10).

- The survey items that currently map to outcome 5 were found to have unacceptable internal consistency. This indicates the respective current survey items are not reliable measures of outcome 5. In the future, new questions will need to be developed to collect data against this outcome.

- While Q35 was found to contribute to a higher level of internal consistency, deleting all the negatively posed questions will not substantially compromise the internal consistency of the questions for any outcome and are therefore recommended for removal.

Child Survey

- Calculation of Cronbach's alpha found that the only combination of survey items that reliably measured an outcome was those mapped to outcome 1, as shown in Table 13. While this finding indicates the CS may not be a reliable measure of a positive transition to school, the across survey comparisons indicate that children are showing similar patterns of responding as respondents to the three adult surveys (bearing in mind the low response rate from early childhood educators discussed in Section 2). This provides evidence of across survey reliability.

- Further work is required to develop this survey. An immediate improvement would be to change the response options in the CS to the same scale as the adult surveys e.g. the 5 point Likert scale. This would support stronger comparison analysis and may increase the internal consistency of the CS.

Given the surveys were developed to be outcome based-measures of transition, it will be important for future analysis to be focused on across survey comparisons according to outcome. Making the suggested change to the CS response scale, that is child responses are rated on a 5 point Likert scale, will strengthen such an analysis and the data provided by the adult surveys would not require recoding. Furthermore, an outcomes analysis is likely to provide a more accurate appraisal of the responses provided because the wording of the questions vary slightly across surveys, where as the outcomes are identical for each survey.

Lastly, it is important to note that if the questions identified as redundant (within each of the adult surveys) are removed in the modified version of the tools, each of the adult surveys would lose the ability to generate data for a number of the indicators (see Appendix 24). However, the remaining list of survey items will continue to be mapped to each of the outcomes shown to be reliably measured in the current trial.

5 Inclusivity

In accordance with recommendations put forward by Nolan et al (2009) foundational work on measuring outcomes and indicators of a positive start to school, consideration was given to ensure the four surveys were sensitive to the diversity of children and their families. That is, whether the surveys were inclusive of families and children that are under-represented in the general Victorian population, such as those from CALD backgrounds or an Indigenous background as well as families of children with a disability. Feedback from the evaluation surveys and the focus groups was drawn on to inform whether the tools were appropriate for use across all groups, with particular reference to those mentioned above.

5.1 Survey responses

Respondents to the evaluation surveys were asked to indicate whether 'questions in the survey were inclusive of all children and families?' While specific reference to CALD families, Indigenous families as well as families of children with a disability was made, the question was posed so as to allow participants to also specify groups outside of these that may not be represented by the survey questions.

On average, 93% of participants in cohort 1 and 2 reported that the survey was inclusive of all children/families, with the breakdown of agreement according to participant group demonstrated in Table 12. Those participants who did not feel the survey was inclusive reported that it was not inclusive of families from CALD backgrounds, children with additional needs as well as families with low literacy levels.

Suggestions made by participants to address issues of inclusivity included:

- Asking about 'special needs' children in particular 'because they usually have better or more transition and more meetings and reports'.
- Adding a question reflecting the fact that children with additional needs require additional strategies with transition.
- Allowing space so responses can be qualified, especially for children with diverse needs, which will allow additional information to be recorded (i.e. speech pathology).
- Consideration given to how a child with specific conditions can engage with the survey (ability of child to communicate, express feelings and understand what is being asked).

- Simplifying the language for CALD background and low literacy families.
- Acknowledge / reflect multicultural understandings / perspectives.

Table 12: Participant responses to the question: 'Are the questions on the survey inclusive of all children and families?'

	Yes	No
Early childhood educator	96%	4%
Prep teacher	91%	9%
Parent	97%	3%
Child	88%	12%

5.2 Focus group feedback

Focus group participants were asked whether the survey was inclusive of all children, however considerable focus was placed on whether it was applicable and representative of their own child's transition experience. Parents of children with a disability were the most vocal about and the least likely to agree that the survey was inclusive. An overwhelming majority of these parents believed that the survey was not inclusive of children with a disability or developmental delay. Parents believed that many questions were not relevant to their child's experience of transition. Accordingly, these parents expressed concern about how the data drawn from the surveys would be used. More specifically, parents were concerned that any data that included the responses in regards to children with a disability would not be representative of the broad population. The participants made suggestions to rectify this, including:

- Provide an opportunity for survey participants to identify, at the beginning of the survey, the child's disability or additional need.
- Include comment boxes next to each question in order to qualify responses.
- Develop a specific survey targeted towards children with additional needs.

The participants in the CALD focus group believed that the survey was inclusive and representative in content of their own child's transition experience. However, these parents suggest the PS would be more inclusive of CALD families if the survey was available to them in their first language.

Although the participants in the Indigenous focus group did not explicitly identify that the survey was not inclusive, the project workers' observation of the difficulties some experienced

completing the survey suggest that it could be modified to make it more accessible to Indigenous families. For example, one participant indicated drawing on a more conversational or story-telling method might be a more effective method for engaging Indigenous families in the surveys.

5.3 Implications

Overwhelmingly the four surveys were perceived to be inclusive of the general population. However, questions were raised around how inclusive they were of CALD families, Indigenous families, families with low literacy and families of children with a disability. Minor modifications, such as simplifying the wording of questions, will increase the inclusivity of the surveys for most of these groups. However, participants did not indicate which questions in particular these modifications referred to. Therefore, further work is needed to determine which questions to modify as well as how to modify them, in order to increase the accessibility for these sub-populations.

Additionally, consideration should be given to engaging Indigenous families in the PS via a more culturally appropriate approach. This could include drawing or story-telling as a prelude to the survey being administered, to provide Indigenous families with an understanding as to why transition is important as well as the relevance of the questions. In addition to engaging Indigenous groups in the surveys, such an approach would have the added benefit of allowing the data based on Indigenous children to be included in the data from the general population as it does not require modification of the questions. Given the transition experience is so different for children with a disability, modifying the surveys to make them accessible for these children was considered to be more problematic.

Based on the discrepancies highlighted by parents of children with a disability, a number of changes would need to be made to ensure the surveys reflect what a positive transition looks like for these children. For example questions regarding their child's relationships with educators and other children such as 'my child has friends at school' were highlighted as inapplicable as they were note relevant to their child's transition. While these parents provided suggestions as to how the surveys could be made more inclusive, many would limit the ability of the data based on children with a disability to be included with findings drawn from the children without a disability. For instance, most parents agreed providing a space to qualify their responses to the questions would ease the anxiety felt during survey completion as well as make the information

yielded by the questions more relevant to their child's transition. Incorporating such changes however, would limit the extent to which the data can be analysed and reported on at a local level. Alternatively, a data set for children with a disability across communities will help build an understanding of the different transition experience for this particular group. As such, any changes to the survey, in response to the issues raised about the inclusion of the experience of children with a disability, should be made with reference to the intended use of the data.

6 Accessibility

In order to assess whether the tools were accessible to all participant groups, responses from the evaluation surveys as well as feedback from the focus groups were drawn on. The data analysed in this section provide an indication of the utility of the tools in regards to:

- The clarity of instructions.
- Child engagement in the Child Survey.
- Difficulties encountered when completing the tools for:
  - Survey respondents
  - CALD parents
  - Indigenous parents
  - Parents of children with a disability.
- Time taken to complete the surveys.

6.1 Instructions

Instruction as to the administration and completion of the survey were provided with each of the four surveys. The clarity of the instruction was considered so as to ensure the surveys could be administered and completed with ease, to maximise the consistency in which the data was collected and to highlight any additional support that may be required.

When asked about the administration instructions for the survey, 97% of participants considered these to be clear and detailed (Table 13).

Table 13: Clarity of instructions regarding survey administration by participant group[15]

	Yes	No
Early childhood educator	99%	1%
Prep teacher	98%	2%
Parent	97%	3%
Child	94%	6%

[15] Evaluation survey responses of participants in cohorts 1 and 2, n=390

6.2 Child engagement in the Child Survey

Given the method used to gain the perspective of the child in the CS was a relatively untested (i.e. self-report on closed ended questions and the use of the administrator), the extent to which children engaged in the survey was important to gauge. CS administrators were asked to indicate whether children became fatigued during the survey as well as provide comment.

When asked if any of the child participants lost interest or focus at any stage of the survey or became fatigued, 81% of CS administrators gave a 'No' response. The comments that participants made in regards to this question included:

- *A couple [of child participants] found it hard to sit still for 10 minutes without fidgeting or moving.*
- *Some less able students were easily distracted.*
- *The children had the option of playing with a tactile bead frame while we chatted.*

6.3 Difficulties encountered when completing surveys

All respondents to the evaluation surveys as well as the focus group participants were asked how easy it was to complete the survey and if they encountered any difficulties. The reasons for asking these questions were two-fold. One reason was to determine the burden of completing the survey on the four respondents groups as this would impact on the likelihood of them finishing the survey. The second reason was to assess whether participants experienced particular difficulties with any questions that could have impacted on their ability to respond to the survey correctly. The data provided by these questions was examined to inform whether specific questions needed to be clarified, rephrased or removed to ensure ease and accuracy of completion.

6.3.1 Survey respondents

Most participants in cohort 1 and 2 stated that the tool was easy to use (see Table 14). Ease of completion was associated with the survey being straightforward, unambiguous, easy to understand, and questions that flowed well. One educator participant mentioned that being familiar with the child and family aided in completion of the survey: *'Working in a small rural kinder I feel I know this child and their family reasonably well'*.

Table 14: Participant responses to the question: 'Was this survey easy to complete?'

	Yes	No
Early childhood educator	96%	4%
Prep Teacher	100%	0%
Parent	98%	2%
Administrator of CS	100%	0%

Interestingly, all four groups in cohorts 1 and 2 (i.e. early childhood educators, prep teachers, parents and child survey administrators) also reported some difficulties completing the survey (see Table 15). The group that most commonly reported difficulties was the child survey administrators (19%), with the parent participant group the least likely to report difficulties (6%).

Table 15: Participant responses to the question: 'Did you encounter any difficulties when completing this survey?'

	Yes	No
Early childhood educator	12%	88%
Prep teacher	18%	82%
Parent	6%	94%
Child	19%	81%

Difficulties completing the survey fall into three categories: specificity/ambiguity; elaborating on responses, and knowledge. Each is discussed below.

Specificity/Ambiguity

A total of seven participants reported that the questions were not specific enough or were ambiguous. Two prep teachers and two parents reported confusion about some of the questions because they were not sufficiently specific however, they did not provide detail as to whether this was in regards to certain questions or the whole survey. Clarification of terms such as 'Early Childhood Service' was also suggested by some parents, with responses indicating that they were confused when asked about early childhood services as they did not know whether this referred to kindergarten or prep teachers.

Three early childhood educators reported that questions explicitly regarding relationships with schools (i.e. Q30) were difficult to answer because relationships with schools varied depending upon the school. For example, one early childhood educator stated: *'Some questions could not be answered simply. They needed more opportunity to clarify e.g. We have good transition*

contact with some schools but not all the schools our children go to. Our children can go to 5 to 10 different schools'.

Clarification of terms such as 'Local Transition Network' was also suggested by early childhood educators.

For those completing the CS, issues regarding specificity related to those questions that asked about 'friends' and 'play' (Q9, Q10, Q11 & Q20). One participant administering the survey asked: *'Children mainly played with children in class. Is this 'other' children or was it implying children in other classes?'* Another stated: *'[I wasn't] sure if [in relation to questions about play] you mean planned, structured play or if you mean all the time'.*

One CS administrator stated*: 'Some children hesitated because play-like activities are referred to as learning not play'.*

Asking children what teachers do (Q14) was also identified as causing confusion for some children as it was reported that very few children were able to articulate that the teacher was 'there to teach them'. It was suggested that this question could be presented in two parts, i.e. teacher's name and what does the teacher do.

Elaborating on responses

Four participants reported they would have liked more space/greater opportunity to elaborate on their responses and/or provide more information. For example, one early childhood educator participant stated: *'the 'project child' had additional needs and I would have appreciated space to qualify some answers.'* One CS administrator noted that child participants were keen to elaborate upon their responses.

Knowledge

Two parent participants reported that they didn't have the required information to respond to some survey questions. For example one parent participant stated: *'[It's] frustrating when you don't know the answer [to the question], i.e. how much child asks for help at school.'*

Some parents (14 responses) felt that they were unable to comment on aspects such as: similarities between the early childhood service and the school programs (Q39); opportunities to be involved in planning and deciding things at the school if they wished (Q29); and whether there was good and clear two-way communication between the staff and parents at the school (Q31 and Q35).

6.3.2 CALD parents

Much like the general population, the CALD focus group participants varied in their level of English fluency and literacy. In some circumstances an interpreter was required for the entire survey. The feedback from these participants was therefore valuable in gauging the extent to which the surveys could be understood and used by certain CALD groups.

While participants in the CALD focus groups generally agreed the PS asked questions relevant to their child's transition, those with poor English fluency or no English struggled most with understanding reverse order questions. Additional questions that were identified by participants as difficult to answer are outlined in Table 16.

Table 16: Questions identified as difficult and/or problematic for CALD participants[16]

Question	Difficulty
Q7: My child is making good progress in adapting to the structure and learning environment of school	The wording was unclear. 'Structure' and 'learning environment' were not well understood.
Q24: The school provided information about transition to school in ways suited to us as parents/caregivers	Did not understand this question well. Didn't understand what kind of information they would provide. Simply said that at the end of kindergarten they are told whether their child needs to repeat another year of kindergarten.
Q29: I have the opportunity to get involved in planning and deciding things at the school if I wish	Asked what was meant by 'planning and deciding'.
Q33: The school values our input as parents/caregivers	The word 'value' and use of 'input' did not translate in this sense.

6.3.3 Indigenous parents

Indigenous participants also provided feedback in regards to any difficulties encountered when completing the PS. While these parents did not identify any difficulties with PS questions and stated the survey was generally easy to complete, they did note that the survey may be easier to complete if there was more space to comment in order to qualify their responses. This aligns with the common theme regarding elaboration noted above.

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[16] Source focus group consultations, n=12

Despite the direct feedback received from the Indigenous participants, project workers facilitating the focus group noted that they took a relatively long period of time to answer the questions when compared with other participants, and some looked puzzled and unconfident when answering some questions. Upon further discussion during the focus group one participant stated that: *'Parents in the [Indigenous] community would struggle with the survey and the whole idea of transition. Some people just don't understand the importance or the concept [of school transition].'*

It may be that a lack of appreciation and understanding around transition to school among the Indigenous population results in confusion, not only about specific questions in the PS, but also in regards to the purpose and completion of the entire survey. As one participant pointed out *'(Indigenous) families would struggle to complete the survey if not given any support in how transition works and what transition is',* and that if no support is offered, Indigenous parents would only make a 'half-hearted attempt' to complete the survey.

6.3.4 Parents of children with a disability

Parents of children with a disability generally indicated that the survey was very difficult to complete. The difficulty encountered by these parents was for a number of reasons:

- The survey would not accurately reflect their child's transition to school as it differed vastly from transition experienced by children without a disability.
- Completing the PS was 'anxiety producing' and made many of the parents feel sad. They elaborated on this saying:
  - It could be perceived as judgemental.
  - It highlights what their children cannot do.
  - It makes parents feel they should know more about their child than they are actually able to given the disability, in turn reflecting badly on them as parents.
  - The survey highlights all the things that they could be offered to make the transition better for everyone: For example, more visits to the Prep classroom during kindergarten and better communication between schools, kindergartens and early intervention services and schools.
- In accordance with the survey respondents, parents of children with a disability highlighted a lack of knowledge as a major barrier to answering many questions. This was especially problematic and more frequent for parents of children with a disability as

many reported their children were non-verbal therefore their knowledge of the child's experiences at school was limited to what they were told by teachers. For example, many participants indicating questions such as Q1 '*My child looks forward to going to school'*, Q5 '*My child tells me that he/she rarely speaks to his/her teachers*' and Q6 '*My child shares information about their day at school'* to be problematic to answer*.*

- Similar to the feedback provided by survey respondents and Indigenous parents, a lack of room to comment/elaborate was specified for many questions. This was due to the transition experience being so different for children with a disability, rendering many of the answers irrelevant without further comment.

- The survey did not probe around factors specific to the special needs of their child that would ease the transition to primary school. This included the availability or opportunity to use specific tools and the school's understanding of, and ability to cater for, the child's needs. For example, use of sign language, provision of a sensory break as well as the provision and number of teacher's aides.

Based on the above points the participants collectively suggested a number of improvements and/or changes that could be made:

- The PS could be more focused on strengths.

- An additional page of questions specific to the needs of children with a disability be provided. This page would also include space to comment on the questions included in the survey that are not specific to children with special needs.

- Provide room to elaborate on each of the questions or the option to indicate when a question is not applicable.

For a list of all the questions parents of children with a disability found problematic refer to Appendix 25.

6.4 Time taken to complete survey

The time required to complete each of the four surveys was also reported on via the evaluation surveys. This was considered so as to determine the time burden completing the survey placed on each of the participants as well as the feasibility of using these surveys in the future.

The majority of general survey participants across all four groups were able to complete the survey in 10 to 20 minutes. Overall, 90% completed the survey within 20 minutes, while only 8.5% took between 20 to 30 minutes.

Table 17: Time taken to complete the survey[17]

	10-20 Minutes	20-30 minutes	30-40 minutes	40-50 minutes	60 + minutes
Early childhood educator	98%	2%			
Prep teacher	80%	16%		4%	
Parent	89%	10%	0.5%		0.5%
Child	94%	6%			

6.5 Implications for accessibility

Instructions

Findings indicate the survey instructions were clear to the majority of the participants and, therefore, don't need amendment.

Child engagement in the CS

A large majority of children were reported to remain engaged in the CS during its administration. The closed-ended questions that comprise the CS, as well as the length of the survey therefore make the CS an effective method of including the voice of the child. However it is important to note, fewer than 20 per cent of the children were reported to lose focus or start 'fidgeting' when completing the CS—additional supports could increase the engagement for these children. For example, one CS administrator reported children were given the option of playing with a tactile bead frame while the survey was being administered. There are several reasons which may contribute to this observation, including the length of time required to complete the survey and the methodology used. Future implementation of the CS should additional tools designed to authentically capture the child's voice.

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[17] Source: Evaluation survey responses of participants in cohorts 1 and 2, n=390

Difficulties

The surveys were reported as easy to complete by almost all participants. Although this indicates that completing the surveys places minimal burden on respondents, addressing the difficulties identified by a small number of participant groups may increase the accessibility of the surveys as well as the accuracy of the responses provided. In order to address the difficulties reported, the following changes need to be made:

- Clarify what the term 'early childhood service' means in the PS by providing brief introductory explanation of the term and/or further explanation of the term where it is utilised within the ECES questions.
- Provide a list of terms and definitions at the beginning of the ECES e.g. 'local transition network'.
- Rephrase questions that probe around relationships with multiple schools in the ECES, for example 'I liaise with MOST local school educators throughout the school year'.
- Clarify what is meant by 'play' on the CS by providing examples with the questions about form of play being referred to.
- Present Q14 as two distinct questions: 'What is the teacher's name?' and 'What does the teacher do?'
- Rephrase specific questions on the PS to be more strength-based, such as including 'to the best of my knowledge' at the beginning of the question. This will help to reduce the frustration parent's experience when they do not have the knowledge to respond to a question.
- Remove negatively worded questions to enhance the ability of CALD groups to comprehend and complete the survey.
- Further research to determine how to effectively rephrase the questions highlighted as difficult by CALD groups (as outlined in Table 18).

Given the extent of difficulties and anxiety experienced by parents of children with a disability when completing the survey, the use of the surveys among this population is again questionable. While the suggested amendments provided by parents of children with a disability may work to increase the accessibility of the surveys to these children, they would limit the ability of the data to be reported in conjunction with that of children without a disability.

Time taken to complete surveys

The average time taken to complete each survey was 10 to 20 minutes. While this is a relatively non-burdensome length of time for parents who are required to only complete one survey, it could place a considerable burden on prep teachers and early childhood educators who, in many cases, completed multiple surveys. For the current trial CRT funding was received to allow prep teachers sufficient time to complete the surveys. Consideration for future implementation should be given to strategies that minimise the impact of completing the surveys on the prep teachers and early childhood educators. While one intended outcome of this trial is to consider the removal of unnecessary and inaccurate questions, in turn decreasing the time taken to complete the survey, an additional way to reduce the survey length is by separating the child centric questions from the questions that probe around school/early childhood centre transition process. That way questions specific to the children would still require multiple responses, while questions specific to the school would only require one response.

One option is to include the school focused items in the Mid Year School Supplementary Census (Section 16: Transition to School). The Census is undertaken each year by Victorian schools and captures school level data. By including school focused items from the PS, DEECD could collect school related data for all children in one survey. Individual child focused surveys would then be completed by the prep teacher for each child. Similarly, a service level survey could be developed from the ECES for early childhood services.

This has the added benefit of producing data that provides a stronger measure of a successful transition. That is, currently the data produced by a survey is specific to one child; however several questions within the survey pertain to the school the child attends. The responses to the questions that are specific to the school will be the same for all children attending the same school. Therefore when responses to multiple surveys are combined, the information provided by the school centred questions is repeated, while the child centric questions offer a unique response every time. As a result the data specific to how children at the school are transitioning is filtered or soften by the data provided via the repeated school specific responses based on the school processes. By separating out the child centric questions from the school centric questions, we are therefore able to get a stronger measure of successful transition. The same filtering of data will occur for responses to the ECES as several questions on the ECES are specific to the centre.

7   Lessons from implementation

Many of the processes involved in the data collection were relatively complex and untested, as research into measuring the outcomes and indicators of a positive start to school, is new. By drawing on feedback from those involved in the implementation and administration of the trial (most commonly teachers and child administrators), the project team sought to understand how the surveys could best be implemented in the future. Observations and anecdotal evidence provided by the project team was drawn on to guide the implementation findings. Factors considered to inform the future implementation of the surveys are:

- barriers to participation
- the best way to administer surveys within schools
- the potential to and value of implementing the surveys twice in one year.

7.1 Early Childhood Educator Survey

As discussed in section 3, the lowest response rate was recorded for the ECES which impacts dramatically on the ability to provide an ecological measure of a positive transition to school. Accordingly, a number of barriers to participation were noted.

Table 18: Participant barriers to participation cohort 1[18]

Survey type and reasons	Number
ECES not returned	74
PS returned too late to ask prep teacher and early childhood educator to complete	12
Early childhood educator unavailable	16
Did not attend kindergarten[19]	7
Returned PS without consent form	7
Does not consent	1
No early childhood educator information provided	10
Total	**132**

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[18] Source: project team observations and conversations with principals, prep teachers, directors and early educators.

[19] Source: parent consent form

The methodology drawn on to engage respondents in the trial relied on a cascade of consent that resulted in logistical barriers to the participation of early childhood educators. That is, consent (which included providing information about the child's early childhood education) was required from parents before teachers, children, and early childhood educators could be invited to participate. Inviting early childhood educators to participate was therefore dependant on receiving completed consent forms from parents.

The barriers associated with this method of engaging participants were two-fold. Firstly, a proportion of consent forms from parents were received late in the trialling phase. This allowed for little time to provide early childhood educators with a survey, let alone sufficient time for educators to complete and return the surveys. Secondly, in many cases parents failed to provide adequate, accurate, or in some cases, any information about the child's early childhood education. This limited the project team's ability to locate, contact and in turn invite early childhood educators to participate in the trial. While follow-up requests were made to the school to provide the early childhood service details of children whose parents had provided consent (but not the education details), this information again came too late to administer and return the ECES. An associated complication was if the director of the early childhood service was delayed in providing their consent for the centre to participate.

Despite being provided with sufficient information in a timely manner, locating and contacting early childhood educators was further problematic in 16 instances. For example, some early childhood educators were on extended leave or no longer working at the centre specified by the parent. Additional efforts by the project team to trace educators that had moved centres were unsuccessful. Similarly, in the weeks following the roll out of the ECES several attempts were made to boost the ECES response rate by following up on the surveys that had not been returned. Despite this, a further 74 ECES surveys were not returned by the close of trial. Feedback provided directly to the project team provided further insight into the barriers to participation for early childhood educators. These barriers included:

- lack of staff/time
- could not recall child
- could not distinguish child from another child based on the initials provided
- surveys not received/did not check mail
- surveys misplaced

- timing of data collection was impractical e.g. late in term when educators are already under pressure to complete other task by holidays
- miscommunication between staff e.g. staff member did inform colleagues of project or pass on surveys to specified educator.

An enabler to participation noted by the project team was communication with potential ECES respondents in late Term 4, prior to the roll out of the trial. That is, early childhood services were identified by principals at participating schools as services that children at the school had commonly transitioned from in the past. The project team then contacted the service to alert them to the trial and, if selected, what their participation would require. This allowed for early childhood services to make known potential barriers to participation e.g. a lack of staff/resources or if an educators was moving on to another service. Discussing the trial prior to the roll out of the ECES also allowed centres to prepare for the time and administration required to complete the surveys e.g. check the mail regularly as well as make requests for copies of parent consent.

7.2 Prep Teacher Survey

Although, a relatively high response rate was recorded for the PTS, prep teachers also reported barriers to participation. Capacity and resources available was a major issue at both the school and teacher level. For example, one school had newly amalgamated with four other schools, had in excess of 20 new teachers and did not have the capacity to undertake research at their school in 2011.Successful application of CRT funding at the end of Term 1 allowed schools that were keen to be involved to participate, however the capacity of the prep teacher then became a barrier to participation. Factors impacting on the capacity of teachers to be involved included if the teacher was a new graduate or their normal teaching workload did not allow time to incorporate the tasks associated with this project.

Furthermore, despite the support participating schools received through CRT funding, school report writing conflicted with the roll out (timing) of the PTS in the current trial. That is, many teachers said it was difficult to juggle their workload as well as find the time to complete the surveys at a time when school reports are due. Although, the majority of teachers received the PTS earlier in Term 2, this conflict became a particular barrier when completing the PTS for the children whose participation was not secured (via parent consent) until late in the term. The time of year during which the data is collected, therefore, impacts on teacher's ability to complete the survey.

The project team also noted that communication with and between schools hindered the smooth roll out of the PTS in schools. For example, despite securing consent from principals as well as attempts to discuss the trial directly with participating teachers, once the PTS was rolled out several teachers indicated they had not been informed of the trial and therefore were unaware of what their participation in the trial required. While the support from the project team quickly clarified any confusion, such instances highlighted communication with and within schools created challenges when rolling out the PTS in schools.

7.3 Parent Survey

While the contact details of the project team were made available to parents invited to participate, the project team did not speak directly to these parents, nor were parents provided with an opportunity to advise on the barriers to participation specific to them. Prep teachers did, however, observe some challenges to gaining the participation of parents. Anecdotal feedback given from many prep teachers (who had the task of handing out the Parent Pack and recruiting parents to the project) suggested that parents are 'time poor' and did not see the survey as a priority, mainly because the survey provided no *direct* benefit to their child. One particular teacher commented: *"The school faces challenges in receiving consent forms from parents for 'vital' programs, e.g. consent forms for children to receive free fruit and lunches, let alone for things the parent sees as an extra task for them to complete with no benefit."*

Further feedback indicates some parent's literacy levels also contributed to a lack of parent responses as did the capacity of schools to assist in organising supports (e.g. KESO or interpreting services) for parents completing the survey.

7.4 Child Survey

In addition to securing consent for each child to participate in the trial, barriers to completing the CS were noted for children who did have consent. For example, teachers indicated some children were absent due to illness, on holiday, attending sports carnivals or on school excursions when the CS was scheduled to be completed. This became particularly problematic when consent for a particular child was received late in the term leaving little opportunity to administer the CS at a busy time of year.

7.5 Suggestions for implementation

As outlined in the methodology section of this report, the process for engaging participants in the pilot was inherently complicated. While the project team provided support via email and telephone, the success of the pilot to engage participants and collect sufficient and accurate data was highly dependent on the staff at schools. Prep teachers were therefore asked '*If this survey were to be implemented at your school in the future, how would this best occur?*' as well as '*Who would/should coordinate the data collection and how?*'

A variety of responses were received as to what the best process of implementation would be. Principals and vice principals were nominated as possible people to oversee the process. Having the surveys returned to classroom teachers was noted as a way to know which families have not responded, thereby making it easier for teachers to follow up. Utilising paid evaluators or releasing classroom teachers from other duties in order to complete the survey were provided as suggested processes to follow. Three prep teachers in cohort 1 further suggested that the implementation process should be online to make it more streamlined and efficient.

When asked *who* should coordinate the data collection, the two most common suggestions were prep teacher (12 responses), closely followed by the person in charge of the transition program (9 responses).

Given, the CS required an administrator to complete, the opinion of the administrators as to who would be the best person to administer the child survey was also requested. A neutral person known to the child, such as a well-known relief teacher or specialist teacher at the school, transition coordinator, assistant principal or the class teacher were all suggested.

Lastly, focus group participants were asked what the most effective way to implement the PTS would be. While few suggestions were provided, the Indigenous parent focus group agreed that the most effective way to implement the survey was in a conversational format, as one participant described: *"Talked [it] through with the parent during the first term parent interview."*

Two participants stated that the response rate would be significantly higher from parents if the parents were supported to complete the survey by a staff member at the school, e.g. during a parent teacher interview.

7.6 Timing of data collection

The possibility of measuring the transition twice, and thereby tracking the outcomes of transition over time, was considered but not supported for this trial. The Expert Reference Group did not support dual measurement in one year on the grounds of feasibility. Additionally, administration of the survey again later in the year was not considered to be an accurate reflection of transition. However, the idea was tested through the inclusion of a question in the evaluation survey probing the value and feasibility of administering the survey more than once. Responses indicated the majority of the focus group participants believed that the survey should only be administered once (Table 19). Participants of cohorts 1 and 2 cited a range of reasons why the survey should not be administered more than once, including time constraints and the heavy workloads of teachers. A prep teacher noted the difficulty of getting some parents to complete the survey once, let alone asking them to complete it more often.

Table 19: Administering the surveys more than once[20]

	Yes	No
Early childhood educator	17%	83%
Prep teacher	12%	88%
Parent	28%	72%
Child	31%	69%

7.7 Implications of the lessons from implementation

The implementation lessons learnt from trialling the four newly developed tools have a number of implications for a future data collection strategy measuring the outcomes a positive start to school.

Early Childhood Educator Survey

Given the low number of responses to the ECES as well as the barriers to participation observed, additional support is required in order to engage early childhood educators in the data collection.

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[20] Source: evaluation survey responses of participants in cohorts 1 and 2, n=363

Accessing early childhood educators presented as a major barrier to gaining their participation. For example, the methodology for inviting early childhood educators in the current trial relied on information about their contact details being provided by parents via a consent form. However, despite providing consent, many parents failed to provide the details of the early childhood service. Getting consent from parents and then attaining the details of the early childhood service from schools may work to overcome such a barrier. Furthermore, the method of making a phone call late in Term 4 to discuss the trial with early childhood educators worked to engage a number of educators in the survey, future implementation of the data collection would be supported by adopting a similar communication process.

The time of year during which the ECES is rolled out seems to have a considerable impact on the educator's ability to complete the survey. Feedback provided by the evaluation survey respondents, as well as anecdotal evidence noted by the project team during the administration of the surveys, suggests data collection of the ECES should occur as close as possible to when the transition occurs. Given the ECES does not require educators to complete the survey after the transition has been completed, an option may be for early childhood educators to complete the ECES when the transition statement exchange occurs. This would allow educators to complete the ECES during a time when they have a clearer picture of the child's transition experience in mind as well as the added benefit of overcoming barriers such as the impractical timing noted for the current trial.

Lastly, consideration should be given to administering the survey online. This would address the issues of misplaced surveys, minimise paper work associated with participation (e.g. returning the surveys) and overcome the barrier of not checking/receiving mail. An additional benefit of such an approach would be an earlier return of ECES and ease the process of data collation and analysis.

Prep Teacher Survey

Despite the relatively high response rate to the PTS, a number of changes can be made to support the future implementation of the PTS. An enabler of school and prep teacher participation was provision of CRT funding by the DEECD to allow prep teachers adequate time release.

According to the advice provided by participants, the principal or vice-principal should oversee the process of implementing the PTS in future rollouts, with prep teachers or the Transition Leaders within the school coordinating the process of data collection in each participating class.

Establishing clear lines of responsibility overcomes the communication barrier noted by several teachers in the current trial. Like early childhood educators, timing of data collection was a problem for many prep teachers. Future PTS implementation should avoid periods of high work load such as report writing time.

Parent Survey

Changes to support a more successful rollout of the PS in the future include parents returning the PS to schools rather than back to the research team enabling teachers to more readily monitor parent participation and determine who may require additional support. For CALD families and parents with low literacy levels, additional support (interpreter service, verbal participation in favour of written participation) may be made required to facilitate parent participation. In order to successfully engage Indigenous families in the PS a more culturally appropriate form of invitation and administration is required, for instance, story telling or a more conversational format.

Child Survey

Anecdotal feedback from teachers and coordinators of the survey rollout in schools, suggested providing more time for parents to return consent forms and for the CS to be administered. This would allow children who may absent to participate, thereby increasing the number of surveys completed. As recommended by CS administrators, a neutral adult known to the child such as a relief or specialist teacher, assistant principal or another teacher should administer the CS.

8 Use of data collected

Data collected on the perceived value of the information provided in the survey, was drawn on to inform validity. Similarly, information gathered was used to examine how survey information could be used to most effectively support parents and teachers to maximise a positive transition.

8.1 Participant feedback

Overwhelmingly parents could see the value of this information in assisting with transition programs. Much of the focus was on improving transition programs for the futurein accordance with the survey findings, as well as checking that '*current practices are at their optimum*' and in doing so gaining a better understanding of '*how children really cope [with school transition]*'.

Similar to the parents, prep teachers could see the data collected as useful in driving improvement in transition programs from an evidence informed perspective. In relation to local planning, these teachers noted that the information could be used to improve communication and relationships between early childhood organisations and schools about best processes for transitioning children. One teacher suggested that using these tools across a region could lead to more collaborative practice and transition outcomes.

In terms of professional practice, prep teachers noted the value of the survey for adjusting programs to ensure a smoother transition to school for parents and children. A number of prep teachers also noted that the survey data could be used to plan for the following year from a more informed perspective and coordinate this process with preschools.

Amongst the focus group participants who were also asked how the information could best be used, one participant from the Indigenous parent focus group stated the information should be collated and developed locally so: *"Koori teachers have an understanding of where the child is at."* The data may provide evidence as to how many children are attending or have attended kindergarten, how it affects the transition to school and what the children liked/gained from attending kindergarten. This would allow the benefits of kindergarten to be promoted throughout the Indigenous community and encourage participation.

8.2 Implications

The importance of clear communication about the purpose of data collection is seen as a critical implication to the way the final tool could be designed and the information used. That is, the trial tools were developed to measure the outcomes of a positive start to school and most relevant to the school at a local level. Participants intimated that the survey could also be of value as an individual child assessment. Any implementation of the four surveys in the future needs to be accompanied with a clear message of the purpose of data collected and its intended use.

9 Conclusion and recommendations

This project successfully developed and trialled tools to measure transition to school outcomes from the perspective of parents, early childhood educators, school teachers and children. It was both ambitious and ground breaking. The findings establish aspects of validity and reliability of the tools and the extent to which the tools were inclusive and easily completed by respondents. Specifically, the findings indicate that:

- The surveys comprehensively measured the transition experience.
- The surveys appear to be accurate and reliable measures of the transition experience, with the exception of the CS which, despite its validity, requires further work to determine the reliability.
- Respondents perceive the information collected by the surveys to be useful.

These findings provide support for the use of the ECES, PTS and PS as appropriate and accurate measures of a positive transition to school and provide insight to inform improvements to the tools. Additionally, the results provide insights that will support future implementation of the tools. Together, these findings point to important considerations for the ongoing development of these tools.

Recommendation 1: Modify the four outcome measurement tools

When considered individually, all of the surveys were found to have statistical merit for collecting data against the outcomes. Despite some difficulties, the surveys were found to be applicable and inclusive of all children and did not place undue burden on those who participated. Considerations from the findings to refine the four tools are outlined below, in order to:

- increase validity and reliability
- improve the accessibility of the tools to all participant groups
- increase inclusivity
- increase ease of completion by respondents.

Early Childhood Educator Survey

The ECES appears to include appropriate measures of the transition experience and respondents perceived the information collected by the surveys to be useful. The most

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significant issue for the ECES related to participation levels and this is addressed in section ==**Error! Reference source not found.**==. The following specific changes to the survey items are ecommended:

- Separate the ECE-centred questions from the child-centric questions and create a service level survey to collect data common to all children.
- Remove the negatively posed questions.
- Remove the questions based on the findings of the analysis of internal consistency.
- Develop new questions to measure outcome 7.
- Revise wording of some questions based on feedback from participants.
- Add spaces after some questions to allow explanations for children with a disability.
- Addition of question related to whether a transition statement was provided for the child.

See Appendix 26 for the recommended ECES.

Prep Teacher Survey

The findings suggest a number of changes to the PTS will improve the statistical validity and accessibility of the survey. One change includes separating the school-focused questions from the child-centric questions. The school-focused questions (listed in Appendix 27), common to all children in a prep cohort, should be considered for inclusion in the Mid Year School Supplementary Census (Section 16: Transition to School). This would develop a stronger measure of what a successful transition looks like as the repeated information provided by the school-centric questions (responses will the same for every child at that school) will no longer dilute the information provided by the child-centric questions (unique response for every child).

The following additional changes to the survey items are recommended:

- Remove the negatively posed questions.
- Remove the questions based on the findings of the analysis of internal consistency.
- Revise wording of some questions based on feedback from participants.
- Add spaces after some questions to allow explanations for children with a disability.
- Addition of question related to transition statement available for the child.

See Appendix 28 for the recommended PTS.

Parent Survey

Parents agree that it is important to measure transition to school outcomes and, their engagement in the survey was very high. However, the findings suggest that some of the concepts in the PS were unclear to them. It is apparent that rephrasing some questions will increase parent understanding. The following specific changes to the survey items are recommended:

- Remove the negatively posed questions.
- Remove the questions based on the findings of the analysis of internal consistency.
- Revise wording of some questions based on feedback from participants.
- Develop new questions to measure outcome 5.
- Add spaces after some questions to allow explanations for children with a disability.
- Include questions related to transition statements.

See Appendix 29 for the recommended PS. Prior to finalisation it will be important to give additional consideration to understanding how the survey can work better for Indigenous families. Specific consultation with the Wannik Unit of the DEECD will assist this process.

Child Survey

The project team initially noted the limitations of conducting a quantitative survey for capturing the experience of children. The findings showed that this was indeed a challenge however they also showed that many aspects of the survey worked well. The qualitative findings further suggested that children were eager to participate in the research and wanted to provide additional information in response to the questions. Given the importance of the child's experience of the transition to school, and the role this knowledge has for informing improvements (Dockett et al. 2011), there is value in striving for ways that the child's voice can be captured. On that basis we recommend the following changes to the Child Survey:

- Change the items from categorical to ordinal responses.
- Remove the negatively posed questions.
- Inclusion of spaces for children to make additional comments.
- Change the wording of some questions.
- Inclusion of additional questions.

See Appendix 30 for the recommended CS.

Recommendation 2: Trial the modified tools

Once modified, the four tools will require further testing in order to understand how well they operate. Specifically, it is important that the psychometric properties of validity and reliability of the four modified tools are established. This will provide further support for the accuracy and generalizability of the four tools as measures of a positive transition to school, in turn endorsing the use of the data yielded by the four tools.

Specific analyses recommended include:

- Recalculation of Cronbach's alpha to inform internal consistency of the modified tools.
- Across survey comparisons by outcome to determine whether there is a reliable pattern of responding to questions mapped to an outcome across the four respondent groups.

Recommendation 3: Refine implementation

The findings point to a number of important considerations to support successful administration and completion of future data collections. In particular, it is essential that the process is both feasible and does not place undue burden on participants. Recommended refinements to the implementation process include:

- Conduct the ECES as early in the year as possible with the other data collections occurring around the end of Term 1 and the start of Term 2.
- Provide online versions of the surveys as an alternative to hard copies to increase the ease of completion by respondents.
- Provide support for CALD families and families with low literacy to assist them to understand and complete the PS.
- Develop a more culturally appropriate form of invitation and administration to successfully engage Indigenous families.
- Consider redesigning the methodology to capture children's views/voices. This may involve using multiple strategies and tools such as observation of children's play, conversational narratives, simplified surveys, stories or photos to prompt discussion.

An important question to be answered for future implementation relates to how the tools can be administered by schools in the future and how the data can be used to improve transition to school programming at a local level.

Recommendation 4: Test the utility of the data

Understanding *how to measure* the outcomes and indicators of a positive transition to school has been the focus of the current project. However, successful indicators need to be more than technically sound: they need to produce data that is useful for the end user. It is therefore recommended that data collected in a trial of the revised tools, be provided to participating schools in a format and timeframe that supports schools to make adjustments (if needed) to orientation processes for children beginning school the following year. Monitoring this process and an evaluation of the utility of the data will help the ongoing tool development process.

Recommendation 5: Disseminate the research findings

This project reports on world first research; that is: it provides the first evidence to support an understanding of how to measure the outcomes and indicators of a positive transition to school. Although the survey tools to measure these outcomes will be improved in the next trial, the project is, nonetheless, an important piece of work from a policy perspective and from a research perspective. Transition to school is of interest and importance to a range of audiences nationally and internationally, including academics, policy makers, educators, and parents. The following strategies for disseminating the results to these audiences are recommended:

- Provide a summary report to study participants.
- Make the summary report available to early childhood and school sectors via the DEECD website.
- Present the research at academic and practitioner conferences.
- Seek to publish the research in peer-reviewed journals, with international reach.

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