

# Story Time

Providing early literacy sessions in libraries to preschoolers on the autism spectrum and their parents

## FINAL REPORT

A/Prof Marleen Westerveld

Dr Jessica Paynter

Dr Kate Simpson

Mr David McCartney

Ms Andrea Hurley

Ms Kathryn O'Leary

June 2020



Australian Government  
Department of Industry, Science,  
Energy and Resources

**Business**  
Cooperative Research  
Centres Program

---

# Story Time: Providing early literacy sessions in libraries to preschoolers on the autism spectrum and their parents

Final report

**A/Prof Marleen Westerveld**

Griffith University | Autism CRC

**Dr Jessica Paynter**

Griffith University | Menzies Health Institute Queensland | Autism CRC

**Dr Kate Simpson**

Griffith University | Autism CRC

**David McCartney**

Autism Queensland (AQ) | Autism CRC

**Andrea Hurley**

Brisbane City Council

**Kathryn O'Leary**

Griffith University | Autism CRC

**ISBN:** 978-1-922365-10-1

**Citation:** Westerveld, M., Paynter, J., Simpson, K., McCartney, D., Hurley, A., & O'Leary, K. (2020). *Story Time: Providing early literacy sessions in libraries to preschoolers on the autism spectrum and their parents. Final Report. Brisbane: Cooperative Research Centre for Living with Autism*

Copies of this report can be downloaded from the Autism CRC website [autismcrc.com.au](http://autismcrc.com.au).

---

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

The Cooperative Research Centre for Living with Autism (Autism CRC) is the world's first national, cooperative research effort focused on autism. Taking a whole-of-life approach to autism focusing on diagnosis, education and adult life, Autism CRC researchers are working with end-users to provide evidence-based outcomes which can be translated into practical solutions for governments, service providers, education and health professionals, families and people on the autism spectrum.

[autismcrc.com.au](http://autismcrc.com.au)

### **Copyright and disclaimer**

The information contained in this report has been published by the Autism CRC to assist public knowledge and discussion to improve the outcomes for people with autism through end-user driven research. To this end, Autism CRC grants permission for the general use of any or all of this information provided due acknowledgement is given to its source. Copyright in this report and all the information it contains vests in Autism CRC. You should seek independent professional, technical or legal (as required) advice before acting on any opinion, advice or information contained in this report. Autism CRC makes no warranties or assurances with respect to this report. Autism CRC and all persons associated with it exclude all liability (including liability for negligence) in relation to any opinion, advice or information contained in this report or for any consequences arising from the use of such opinion, advice or information.

---

## Acknowledgements

This project would not have been possible without the vision of the late Professor Sylvia Rodger (AM) (Email Feb 2015).

*“Our vision would be to see kids with ASD and families accessing libraries regularly as a fun appropriate sensory and quiet learning and playful environment and a space we could encourage they engage with” [...] Can’t you just see it now – within 2-3 years we could have research evidence informed joint CRC/BCC workshops for parents/librarians/EC teachers re emergent literacy; joint branded modules on both websites; and possibility of rolling this out to other library systems nationally once the model is up and running”.*

Thank you, Sylvia, for introducing us to the wonderful First 5 Forever team at BCC. We dedicate this report to you.

The authors acknowledge the financial support of the Cooperative Research Centre for Living with Autism (Autism CRC), established and supported under the Australian Government's Cooperative Research Centre Program. We also received financial assistance from the Queensland Government through the State Library of Queensland and the First 5 Forever program. Staff and non-staff in kind were provided by Autism CRC participants Griffith University, Autism Queensland and the Brisbane City Council.

The authors wish to acknowledge Mrs Nadia Ruttle, Coordinator Reading / Library Services at the Brisbane City Council for her commitment to this project from our very first meeting (in 2015) and for sharing her passion about inclusive practises especially when it comes to literacy and reading. Finally, we would like to acknowledge the invaluable work of the following people in assisting with data collection and film production for this study:

- Anthony Stone, Studio G
- David Noonan, Griffith University
- Shaun Charles, Griffith University
- Elizabeth Wheeley, Griffith University

---

# Table of contents

<b>1. Literature review .....</b>	<b>6</b>
1.1 Introduction.....	6
1.2 The current project.....	7
<b>2. Research design.....</b>	<b>8</b>
<b>3. Phase 1: Face-to-face professional development.....</b>	<b>9</b>
3.1 Phase 1 Participants.....	9
3.2 Phase 1 Measures.....	9
3.3 Phase 1 Procedure .....	9
3.4 Phase 1 Results.....	11
3.4.1 Changes in knowledge .....	11
3.4.2 Social validity.....	13
3.5 Phase 1 Discussion .....	13
<b>4. Phase 2: Implementation.....</b>	<b>14</b>
4.1 Phase 2 Participants.....	14
4.2 Phase 2 Measures.....	15
4.2.1 Survey .....	15
4.2.2 Interview.....	15
4.3 Phase 2 Procedure .....	15
4.3.1 Pilot program .....	15
4.3.2 Independent implementation .....	16
4.4 Phase 2 Results.....	16
4.4.1 Survey results.....	16

4.4.2 Interview results .....	17
4.5 Phase 2 Discussion .....	18
<b>5. Phase 3: Online training and implementation.....</b>	<b>19</b>
5.1 Phase 3 Participants.....	19
5.2 Phase 3 Procedure .....	20
5.3 Phase 3 Measures.....	21
5.3.1 Pre/post measures .....	21
5.3.2 Follow-up survey .....	22
5.4 Phase 3 Findings .....	22
5.4.1 Feedback on the online PD .....	22
5.4.2 Follow-up survey of librarians implementing the Story Time following training .....	23
5.5 Phase 3 Discussion .....	24
<b>6. Phase 4: Broader Stakeholder Consultation.....</b>	<b>25</b>
6.1 Phase 4 Participants.....	25
6.2 Phase 4 Procedure .....	25
6.3 Phase 4 Measures.....	25
6.4 Phase 4 Findings .....	26
6.4.1 Phase 4 data screening and analysis .....	26
6.4.2 Feedback from the broader stakeholder group .....	26
6.5 Phase 4 Discussion .....	28
<b>7. Limitations and future directions.....</b>	<b>29</b>
<b>8. References .....</b>	<b>30</b>
<b>Appendices .....</b>	<b>32</b>

---

# 1. Literature review

## 1.1 Introduction

Children begin their literacy development in their first years of life through a variety of activities including shared book reading with their parents or caregivers. These early experiences enhance the *emergent literacy* skills of children, such as understanding what books and stories are about, learning new words, and learning letter names or sounds (for a review see Dickinson, Griffith, Michnick Golinkoff, & Hirsh-Pasek, 2012). Recent research (Westerveld, Paynter, O'Leary, & Trembath, 2018; Westerveld et al., 2017) suggests, however, that children, diagnosed with Autism Spectrum Disorder (ASD) are not reaping the rewards of such experiences to the same degree as their non-autistic counterparts. With an estimated 30 to 50% of school-aged children on the autism spectrum demonstrating challenges with literacy (e.g., Nation, Clarke, Wright, & Williams, 2006), providing early literacy learning opportunities is of key importance.

To investigate the relatively poor literacy achievements of some school-age children on the autism spectrum, Westerveld et al. (2017) explored the trajectory of emergent and early literacy development prior to formal schooling (See Autism CRC Projects *Emergent Literacy* and *Predicting optimal literacy outcomes in children with ASD in the first year of schooling*). Findings of this research suggest relatively rich home literacy environments; most parents (87%) started reading to their child before the age of one; all families owned at least 20 children's books; and 66% of parents reported reading to their child 'often' or 'very often'. Despite this, children showed significant difficulties in emergent literacy skills, particularly skills linked to future reading comprehension (Westerveld et al., 2017). Characteristic social communication challenges in autism may limit the benefits derived from home literacy environments, for example through reduced engagement. In support of this theory, it was found that preschoolers on the autism spectrum were less interested in shared book reading than their peers with other developmental disabilities (Westerveld & van Bysterveldt, 2017).

To increase benefits from shared book-reading for children on the autism spectrum, the current authors developed and piloted a parental shared book reading intervention (For a full report visit <https://www.autismcrc.com.au/knowledge-centre/reports/shared-book-reading-intervention-autistic-preschoolers>). Results were promising with increases in child interest in SBR as shown through an increase in spontaneous child utterances, and time spent sharing books. Further, parents improved their use of book reading strategies that are known to positively influence children's early language development (e.g., explaining word meanings and using low frequency words).

---

## 1.2 The current project

For this project we partnered with the First 5 Forever team in Brisbane City Council (BCC) Libraries. Currently, more than 160 early literacy sessions, sometimes referred to as Story Time sessions, are conducted in BCC libraries each week, with more than 300,000 adults and children attending annually. To prepare for the study, we conducted an online survey on home literacy practices (as used in our previous projects *Shared book reading intervention* and *Predicting optimal literacy outcomes in children with ASD in the first year of schooling*) of families of children with typical development (TD) as well as parents of children with disabilities, including autism (Simpson, Paynter, Wicks, & Westerveld, 2020). This study aimed to understand parents' /caregivers' expectations/beliefs/views on literacy, book selection, visits to library, child interests and home literacy practices. Results indicated that the frequency of shared book reading was significantly higher in the TD group than in the group of preschoolers on the autism spectrum. Similarly, the frequency with which parents and children accessed their local library and attended early literacy sessions was reported to be higher in the TD group than in families with a child on the autism spectrum. Whilst the range of reasons for not attending early literacy sessions at the local library were mixed across groups, a lack of child interest and unsuitability of the environment was reported by a significantly higher proportion of parents with children on the autism spectrum than those with typically developing preschoolers. Results of this survey were used to justify the need for autism-friendly Story Time sessions in Brisbane City Council libraries as well as inform library staff of the current literacy practices of families living in the BCC catchment.

To enable more inclusive participation of children on the autism spectrum in Story Time sessions, the BCC libraries team was keen to learn how to provide more 'autism-friendly' sessions. The current project aimed to address this by:

1. building knowledge of:
  - a. i) autism (diagnosis and cognitive characteristics that may influence literacy development);
  - b. ii) emergent literacy development in preschoolers on the autism spectrum;
  - c. iii) specific strategies for working with children on the autism spectrum; through provision of professional development for librarians involved in children's early literacy sessions.
2. collaborating with library staff, to developing an 'autism-friendly Story Time' program for parents of preschoolers on the spectrum, and delivered by library staff; and
3. embedding the autism-friendly Story Time program into community practice through development of a multimedia professional development package for ongoing use.



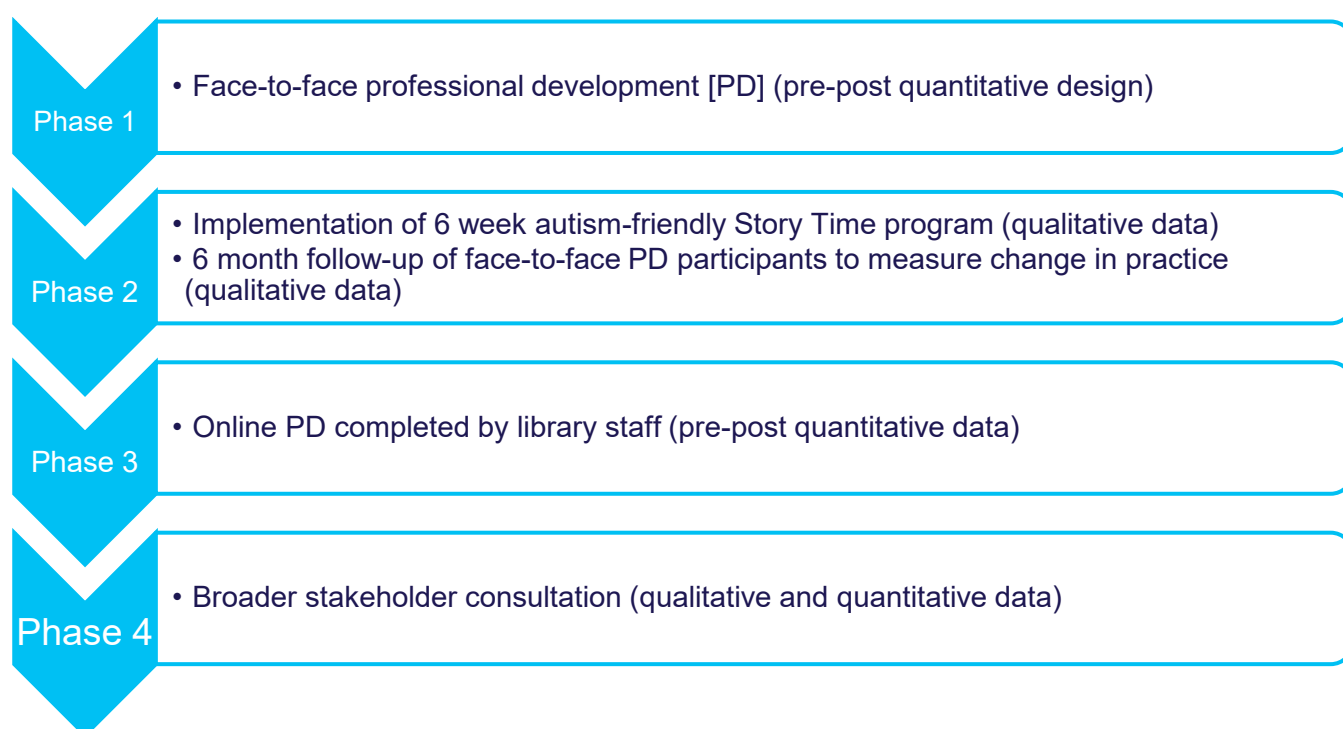
## 2. Research design

This project utilised a Design-Based Research (DBR) methodology in the development of an autism-friendly Story Time program. DBR was selected as the preferred approach as it 1) focuses on the design, implementation and testing of interventions, and 2) emphasises a partnership between researchers and practitioners in order to effect change in practice (McKenney & Reeves, 2013). There were four phases with the following key research questions addressed in each phase:

- 1) Was the professional development considered socially valid?
- 2) What modifications of the professional development were recommended (i.e. feedback for refinement)?
- 3) Did the professional development increase participant knowledge and self-efficacy?

This DBR methodology was implemented in four phases, as shown in Figure 1.

**Figure 1: Schematic diagram of the multiphase layout of the project**



Ethical approval for this project was granted by the Griffith University Human Ethics Committee (GU Ref No: 2017/720).

---

## 3. Phase 1: Face-to-face professional development

### 3.1 Phase 1 Participants

The First 5 Forever team of the Brisbane City council libraries directly contacted team leaders across all Brisbane City Council libraries informing them of an upcoming PD opportunity for staff. Names of interested staff members were then forwarded on to the research team in preparation for the face-to-face PD event. A total of 22 library staff (20 Female, 2 Male) from across 17 Brisbane City Council libraries attended the face-to-face PD. Staff roles included Library Assistant, Library Technician, Team Leader, and Outreach Librarian.

### 3.2 Phase 1 Measures

As per our research aims, the measures included within the pre/post-PD quiz were selected to determine changes in participant knowledge and the perceived social validity. There were three scales:

1. *Confidence to include children on the spectrum in Story Times*: included 8 questions.
2. *Knowledge of autism and emergent literacy*: included 21 items
3. *Knowledge of ways to make Story Times more autism-friendly*: included 10 items

*These autism knowledge and confidence scales were adapted from the Autism Inclusion Questionnaire sections 2 (Knowledge of Autism Spectrum Disorders) and 3 (Opinions about Inclusive Education) respectively (Segall, 2008). All scales used a five-point Likert Scale (Strongly Disagree to Strongly Agree) to capture greater variability in responses, consistent with other autism knowledge measures (Stone, 1987). All showed acceptable internal consistency at both pre- and post-test time points.*

### 3.3 Phase 1 Procedure

In Phase 1 the research team disseminated knowledge of the development of emergent literacy in preschoolers on the autism spectrum through the provision of a face-to-face PD day, conducted over eight hours by four members of the research team. The content presented sought to increase librarian knowledge of the following four areas:

- 1) What is autism: This topic provided participants with an introduction to what an Autism Spectrum Disorder is, including diagnosis, causes, prevalence, and characteristics under the DSM-5.
- 2) (Emergent) literacy development in children on the autism spectrum: In this topic participants were provided with a brief recap on what emergent literacy development entails. Current research was also presented regarding the (emergent) literacy development of children on the spectrum and how this might differ from their non-autistic peers.
- 3) Strategies for working with children on the autism spectrum: This topic introduced participants to the ABCs of behaviour and outlined simple strategies that could be used in Story Time sessions to encourage engagement for children on the spectrum. These strategies included visual schedules (see Appendix A) and supports, social stories (see Appendix B) and monitoring the environment for stimuli which may be confronting or distracting for children on the spectrum (see Appendix C).
- 4) Adapted shared book reading for preschool children on the autism spectrum: The final topic introduced participants to adapted dialogic reading strategies to promote language and literacy development in preschool children (Sim, Nicholson, Walker, Berthelsen, & Fielding-Barnsley, 2014; Whitehurst, 1994; Whitehurst et al., 1988). Areas covered included the use of well-structured narratives to promote story comprehension, targeted vocabulary instruction, asking a range of questions to encourage engagement, pointing out letters and sounds, discussing print concepts, and discussing key components of the story (e.g. characters, setting, problem, resolution) to assist understanding. Librarians were provided with a six-week Story Time program to systematically introduce the strategies. An overview of the program is provided in table 1.

**Table 1: Structure of the six-week Story Time program.**

Week	Story Time Strategy	Description	Main book
1	Narratives	Select narrative stories to promote reading comprehension.	<i>The Gruffalo</i> (Donaldson & Scheffler, 1999)
2	Asking questions	Ask a variety of questions to promote engagement and learning.	<i>The very cranky bear</i> (Bland, 2011)
3	Words words words	Point out and define new words to build the child's vocabulary.	<i>The three little pigs</i> (Moore, 2014b)
4	What's in the story?	Discuss the story content + retell the story to promote story comprehension.	<i>Pip and Posy: The big balloon</i> , (Scheffler, 2012)

5	Letters and Sounds	Point out letters, sounds, syllables & rhymes to promote early literacy development.	<i>The very hungry bear</i> (Bland, 2012)
6	Bringing it all together	Review all previous strategies and demonstrate how they can be used in one shared reading session.	Jack and the beanstalk (Moore, 2014a)

### 3.4 Phase 1 Results

We investigated the success of our PD in increasing knowledge of the emergent literacy needs of children on the autism spectrum. Results of pre/post-training scales indicated an increase in overall knowledge of autism spectrum disorders, emergent literacy development in children on the autism spectrum, and ways to make Story Time sessions more autism-friendly. In addition, librarians reported feeling more confident in their ability to include children on the autism spectrum in their Story Time sessions following the training.

#### 3.4.1 Changes in knowledge

##### Knowledge of autism and emergent literacy

Following the PD, librarians demonstrated an increased knowledge in the areas outlined in Table 2.

**Table 2: Number and percentage of participants who answered questions correctly.**

Question	Pre-training N (%)	Post-training N (%)
All children with autism display poor eye contact (False)	15 (68.2)	19 (86.4)
Children with autism are usually good at comprehending stories (False)	4 (18.2)	22 (100)
Children with autism don't need phonological awareness and learn to read through sight words (False)	15 (68.2)	21 (95.5)
Children with autism show relative strengths in reading words (True)	3 (13.6)	10 (45.5)
It is not possible to assess early literacy skills in preschoolers with autism (False)	17 (77.3)	22 (100)
The home literacy environment (e.g., books available) is an important influence on early literacy development for all children (True)	20 (90.9)	22 (100)

Note: Correct answer in brackets.

---

## Knowledge of ways to make Story Times more autism-friendly

Prior to the PD librarians showed some existing knowledge about how they could make Story Times more autism-friendly, however results suggested that they were uncertain about aspects including:

- Providing a social story to prepare (31.8%)
- Using shorter sentences in instructions (27.3%)
- Holding sessions in afternoons (81.8%)
- Providing lots of sensory input (e.g., extra noise, visual stimulation, and/or physical input) (31.8%)

After the PD, the participants showed an increase in knowledge regarding how to make Story Time sessions more autism-friendly with most agreeing that avoiding spontaneity/routine changes (72.8% correct), providing a social story to prepare (95.5% correct), using shorter sentences in instructions (86.4% correct) and reducing sensory input (e.g., extra noise, visual stimulation, and/or physical input) (81.8% correct) were appropriate strategies for ensuring a more inclusive Story Time experience for children on the autism spectrum.

## Confidence in including children on the spectrum in Story Times

We also investigated library staff attitudes towards including children on the autism spectrum in Story Time sessions. Before participating in the PD, the majority of librarians (90.9%) believed that 1) children on the spectrum should be included in Story Time sessions, and 2) encouraging children on the autism spectrum to visit the library is important to support their literacy development. However 45.4% of librarians felt they did not have the knowledge and skills to support children on the spectrum to engage in Story Time Sessions; 31.8% were unsure whether only librarians with extensive training should be expected to include children on the spectrum in Story Time sessions; and 13.6% did not feel confident including children on the spectrum at their library, while 36.4% were unsure. After participating in the workshop 100% of librarians felt they had the knowledge and skills to support children on the spectrum to engage in Story Time Sessions, most disagreed (90.9%) that only librarians with extensive training should be expected to include children on the spectrum in Story Time sessions and 100% felt confident including children on the spectrum at their library.

---

### 3.4.2 Social validity

Following the face-to-face training day, librarians were asked for feedback using a 5-point-likert scale (with 5 indicating higher satisfaction). When asked if the overall training was beneficial, responses ranged from 4-5 (Mean 4.77). Open-ended feedback included some of the following comments:

- *Really useful - I am excited to incorporate many of the strategies into all my Story Time sessions (not just those children with autism).*
- *Well-paced and suited to audience and our role requirements.*
- *Great session - knowledgeable presenters, clear demonstrations and concrete ideas and strategies.*

Suggestions for improvements to the PD included greater opportunities for group problem-solving activities and more examples of the implementation of strategies into Story Time sessions.

### 3.5 Phase 1 Discussion

Results from Phase 1 indicated that librarian participation in a face-to-face professional development presentation led to increased knowledge of autism, emergent literacy, and strategies to make Story Time sessions more autism-friendly. Staff also reported greater confidence in including children on the spectrum in Story Times. Feedback from librarians was used to inform the next iteration of training (e.g. online discussion board, more examples added to materials), described in Phase 3. The social validity of the PD was highly rated across all domains with qualitative data similarly expressing participant support for the PD. In Phase 2, as outlined below, we sought to investigate whether training was subsequently implemented in practice, either with support from the research team to implement a series of Story Times, or without further supports.

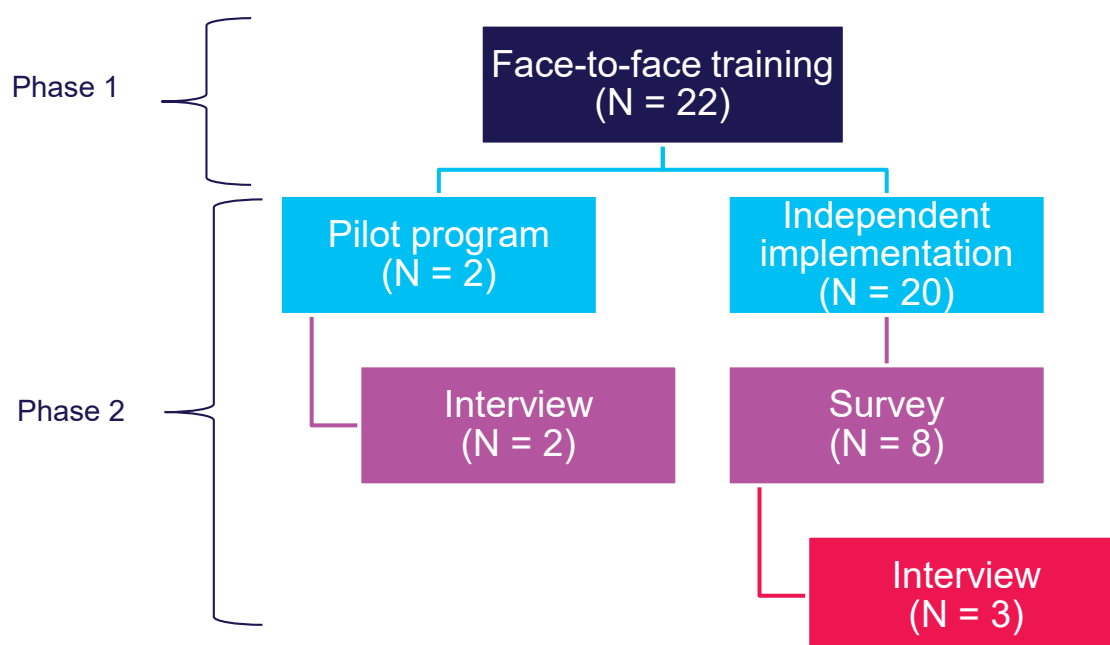
## 4. Phase 2: Implementation

### 4.1 Phase 2 Participants

Participants were drawn from the 22 librarians who completed the Phase 1 face-to-face PD. These included:

- 1) Eight (8F) participants who completed an online, follow-up survey (36% response rate) approximately 6 months post-PD.
- 2) At the time of the survey, these respondents were asked to indicate their willingness to participate in a follow-up phone interview to further discuss the comments shared in the online survey. This resulted in three participants agreeing to an interview.
- 3) Two (2F) librarians who implemented the program with support from the research team. Interviews were conducted with these two librarians upon completion of the six-week Story Time program. The five interviewed participants were library assistants but one was also a team leader.

Figure 2. Schematic diagram of the Phase 2 sample sizes



---

## 4.2 Phase 2 Measures

### 4.2.1 Survey

This survey consisted of four questions and took approximately five minutes to complete. The questions included both multiple choice and open-ended questions to evaluate whether librarians perceived that the face-to-face PD influenced their practice. If yes, how?; if not, why not?.

### 4.2.2 Interview

Interview questions consisted of nine open-ended questions with follow-up questions provided as necessary to clarify or extend the participants response. These questions were designed to gauge participants' experiences in implementing autism-friendly Story Time sessions, the information provided in the PD, and the influence (if any) that the PD had on the participants' approach to Story Time sessions in their library. These interviews were on average 24 minutes in length and were conducted by a qualified and experienced research assistant or member of the research team. Interviews were audio recorded and later transcribed for qualitative analysis.

## 4.3 Phase 2 Procedure

### 4.3.1 Pilot program

Two library staff, who attended the Phase 1 Professional Development, implemented the weekly Story Time sessions for parents of preschool children on the autism spectrum. These sessions involved 1) direct training of parents in strategies for enhancing language and literacy outcomes through shared book reading; and 2) adapting an existing BCC Story Time session specifically for preschoolers on the spectrum. Each week the librarians introduced a new Story Time strategy (see table 1 for session structure), demonstrated this strategy in the session, and provided parents with handouts (see Appendix D) and bookmarks (see Appendix E) outlining how to implement this strategy in shared reading with their child at home. General strategies for promoting inclusion, such as using a visual schedule to outline the activities within each session (see example in Appendix A), using simpler language, and reducing distractions within the room, were included in every session. To ensure fidelity of strategy implementation, library staff were observed by members of the research team each week with feedback provided as required. Staff were also encouraged to self-monitor their performance by reviewing video footage of their Story Time sessions with a member of the research team. Family participation was variable, ranging from two to six children;



---

only one child on the autism spectrum attended with his sister and caregivers for the entire six-week program.

Following the completion of the six Story Time sessions, the two staff members were invited to participate in semi-formal interviews. These interviews were completed in person with a member of the research team who had not attended any of the Story Time sessions. Interview questions asked participants to describe their experience in implementing autism-friendly Story Time sessions including what did/did not work well, how the training influenced their delivery of the Story Time sessions and how they felt about conducting autism-friendly Story Time sessions now. Participants were also asked to reflect on the training session itself and provide feedback on which aspects were most useful for implementing autism-friendly Story Time sessions and what (if any) further information should be included. Interviews were audio recorded and later transcribed for qualitative analysis.

Feedback on the feasibility and relevance of the Story Time sessions was also obtained through monitoring of group attendance and retention. Verbal and/or written feedback was also provided by parents/caregivers attending the Story Time sessions.

### **4.3.2 Independent implementation**

The remaining participants from the face-to face PD were encouraged to implement practices at their own libraries. No further support or coaching was provided. Feedback was sought from these participants six months post-PD to determine whether the training had influenced their Story Time practice.

## **4.4 Phase 2 Results**

### **4.4.1 Survey results**

Results of the online survey indicated that 87% (7/8) of participants had changed their story-time practice following the PD. The final participant cited not participating in Story Time sessions in her library as the reason she was unsure of any changes post-PD. Three key ideas were expressed in the comments of the remaining participants, these were

- 1) increased knowledge of autism spectrum disorders
- 2) increased confidence in working with children on the autism spectrum
- 3) changes to the structure or environment of the Story Time sessions.

---

These ideas are reflected in the following comments:

- *I have become more aware of needs and difficulties of children on the autism spectrum.*
- *I feel more confident in assisting parents of children on the autism spectrum with information and book choices.*
- *I include more narrative stories.*
- *I blue-tac song words to the whiteboard in the sequence that we will do them to give people an outline of how the session will run.*
- *Informing participants of the sequence of events, providing a chill out zone when required.*
- *Being more mindful of children that may be sensitive to noise, lights, etc.*

#### 4.4.2 Interview results

Interviews were analysed by two members of the research team. Each person read through the transcripts and generated initial codes. The two team members then worked collaboratively to refine these codes and identify emerging themes. The codes were then grouped under these themes and the transcripts revised to ensure that the themes comprehensively reflected the interview data.

Consistent with the survey results, interviews suggested that the PD increased participant knowledge of autism and led to greater confidence in supporting those on the spectrum and their families. Analysis of the interviews revealed three key themes, these were:

- 1) *Confidence in providing a more supportive environment:* participants described having increased confidence in providing a more supportive environment for children on the spectrum. This led to a change in attitude towards a child's behaviour, with Julia describing that she was now "not as quick to judge" when a challenging behaviour occurred in her Story Time session. Similarly, participants felt more confident in approaching families to offer support and seek information as how to best adapt their sessions to suit the child's needs.
- 2) *Valuing the Story Time session as an early literacy learning experience:* Following the PD, librarians described how their view of Story Time sessions changed from a "performance" to "facilitating early literacy for parents and children before they get to school". This led librarians to become more selective of the stories, songs, and props used in the Story Time session, with several librarians sharing that they now included more stories with a strong narrative structure and made sure to retell stories using a variety of props. The advantages of this approach were recognised by two librarians, who felt that

---

these strategies benefitted all children, not just those on the spectrum. This is reflected in the comment “I can use what I’ve learned in those sessions outside as well”.

- 3) *Developing skills:* The librarians suggested improvements to the training to support inexperienced librarians in providing autism-friendly Story Time sessions. Examples included simpler scripts for communicating messages to parents and providing a booklist of appropriate narrative stories. These suggestions were incorporated into the training materials for Phase 3.

## 4.5 Phase 2 Discussion

Although the response rate to our follow-up survey six months post-PD was lower than anticipated (8/22), most of these librarians (7/8) felt that the PD positively influenced their practice. They reported increased understanding of autism and appropriate modifications to the structure and content of their session, increased confidence in including children on the spectrum, and greater consideration of the environment. The final participant clarified that she was “unsure” if her practice had changed as she had not been involved in any Story Time sessions since the PD.

Feedback from the interviews was incorporated into the Phase 3 online professional development package. In particular, examples of resources used in the pilot study were shared with participants, example videos were added which demonstrated the use of resources, and a simplified script was included in the printable resources to allow librarians to share messages with families.

# 5. Phase 3: Online training and implementation

## 5.1 Phase 3 Participants

A flyer advertising the online professional development training was sent to all Brisbane City Council libraries. Participants and libraries were also contacted directly by members of the First 5 Forever team to gauge their interest in completing the online PD. Inclusion criteria were as follows (a) participants were currently employed by Brisbane City Council Libraries, (b) participants had access to the internet to complete the online training, (c) participants completed the online training within the allocated timeframe (8 weeks). Participants were provided with a Griffith University visitor number and password to access the online training via BlackBoard. At the time of enrolment participants were notified that their progress would be saved should they wish to leave the site and return at another time.

A total of 22 participants (22F) from 11 different libraries completed the online multimedia training entitled “Story Time for preschoolers on the autism spectrum”. Fifty percent of participants reported having some experience with autism spectrum disorders prior to the training, most due to knowing a family member or child of a friend on the spectrum, with only four participants (18%) reporting having worked with someone on the autism spectrum. Following the online training, four participants (4F) completed the six-weekly Story Time program (see table 1) in their library. Family participation in these sessions was promoted through flyers on display in the library and directly contacting parents in the library at the time or who had expressed an interest in the Phase 2 sessions. See Table 3 for participant characteristics.

**Table 3. Phase 3 participant characteristics (with % in brackets)**

<b>Gender</b>	<b>22 F (100%)</b>
<b>Age range (n=20)</b>	
<25	1 (5)
26-35	6 (30)
36-45	4 (20)
46-55	8 (40)
56-65	1 (5)

Highest level of education (n=20)	
TAFE certificate/diploma	7 (35)
Bachelor's degree	4 (20)
Post-graduate study	7 (35)
Other	2 (10)
Job title (n=19)	
Library technician	3 (16)
Library assistant	12 (63)
Team leader	3 (16)
First 5 forever coordinator	1 (5)

## 5.2 Phase 3 Procedure

Brisbane City Council library staff were invited to participate in a free, online PD entitled “Story Time for Preschoolers on the Autism Spectrum”. This training consisted of the same four modules covered in the face-to-face training, with reading material and videos provided to educate participants. Participants were informed that the training would take approximately four hours to complete, however they were able to close the site and return to it as required over the course of eight weeks.

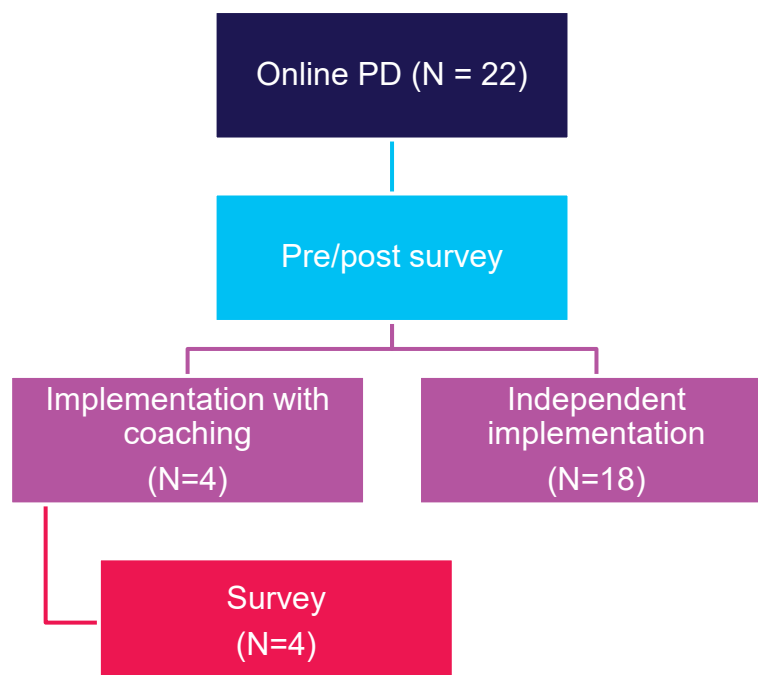
Data collection for the online PD occurred through the completion of pre- and post-training surveys designed to measure 1) changes in participant knowledge, and 2) attitudes towards autism and inclusion of children on the autism spectrum, in response to PD. These surveys reflected those used in the Phase 1 training (as described in section 2.4.2) however were provided in electronic form as opposed to paper. Participants were also encouraged to complete a final feedback survey to share their views of the training including the relevance of the strategies described to their practice, areas they enjoyed, and any areas requiring improvement.

Following the completion of the online PD program, four participants from a library in an outer-southern suburb of Brisbane implemented the six week autism-friendly Story Time program together in their library. As in Phase 2, these sessions were run once weekly for six weeks and followed a very similar structure; using one-two books each week, supplemented with songs. New shared book reading strategies were introduced each week (as per Table 1) with parents also receiving handouts describing how best to implement these strategies with their child at home. A member of the research team attended the Story Time sessions and provided feedback as

necessary. This role aligned with her position within the First 5 Forever team which includes supporting and mentoring staff in the delivery of Story Time sessions.

Upon completion of the six Story Time sessions, the four librarians were invited to share their experiences through an online survey. This survey consisted of nine questions which were similar to those asked in the phase 2 interviews. A range of open-ended questions, multiple-choice questions and rating scales were included. This survey aimed to capture participant experiences in implementing autism-friendly Story Time sessions at the library after completing the online PD.

**Figure 3. Schematic diagram of Phase 3 procedure**



## 5.3 Phase 3 Measures

### 5.3.1 Pre/post measures

Data collection occurred through the completion of pre- and post-training surveys in the online learning platform designed to measure 1) changes in participant knowledge, and 2) attitudes towards autism and inclusion of children on the autism spectrum, in response to PD. These surveys reflected those used in the Phase 1 training (as described in 2.4.2) however were provided in electronic form. Participants were also encouraged to complete a final feedback survey to share their views of the training including the relevance of the strategies described to their practice, areas they enjoyed, and any areas requiring improvement.

---

### 5.3.2 Follow-up survey

Upon completion of the six Story Time sessions the four librarians were invited to share their experiences through an online survey. The survey aimed to evaluate participant experiences and provide suggestions for future improvements of the online learning platform. Questions consisted of 33-items, including what strategies worked well and were considered useful (13-item Likert scales), feedback on the relevance and usefulness of the training elements (10-item Likert scales and “other”), and self-efficacy (5-point Likert scale). Open-ended questions were informed by the Phase 2 interviews but were adapted for a survey format to better suit the needs and availability of the librarians. The survey took approximately 15 minutes to complete.

## 5.4 Phase 3 Findings

### 5.4.1 Feedback on the online PD

#### Pre/post PD knowledge

Post-PD survey results indicate that librarians increased their knowledge in the areas of autism and emergent literacy (pre-test:  $M = 83.84$ ,  $SD = 5.73$ ; post-test:  $M = 86.75$ ,  $SD = 6.15$ ) and ways to make Story Time sessions more autism-friendly (pre-test:  $M = 40.41$ ,  $SD = 3.74$ ; post-test:  $M = 43.05$ ,  $SD = 3.38$ ). Librarians also reported greater confidence in their inclusive practice of preschoolers on the spectrum into Story Time sessions (pre-test:  $M = 32.23$ ,  $SD = 3.50$ ; post-test:  $M = 35.25$ ,  $SD = 2.81$ ).

#### Social validity

Overall, most participants ( $n = 19$ ) felt that the training was socially valid with some expressing that they felt it would “benefit most children”. Table 4 outlines participants’ responses when asked to elaborate through open-ended questions. Participant recommendations primarily focused on providing further examples on specific areas of difficulty, such as handling challenging behaviours or rephrasing instructions (see table 4 below).

**Table 4. Participant feedback on the online learning platform**

Areas of the online PD participants were satisfied with:
I have learned a lot, understanding what autism is, the effects of environment on the child, triggers, and how to make story time sessions an effective literacy tool for children with autism.
I would recommend this training to all library staff.
With the increase in prevalence of children on the autism spectrum I can see that it is timely that I understand how I can contribute to development of their literacy skills as well as support them and their parents.
It was great to have more clear strategies for assisting parents with incorporating stories into their home routine.
I believe that if I implement the training I have received it will benefit most children.
It's wonderful that this kind of training is becoming available so that more people have a better understanding of autism and how they can include autistic children in story times.
The training is very applicable to any story time. At no time should we assume there isn't a child with autism in our story time. If we plan our sessions as if it is likely we have a child on the spectrum, we are only going to improve the session for everyone and ensure all children (and parents) have an opportunity to enjoy the library
The training was easy to consume, through the videos provided, and supplied lots of techniques to make story time more autism-friendly.
All the resources within blackboard are fantastic, I hope that people use them!
Areas of the online PD needing improvements:
Some of the questions in the quizzes can be interpreted a couple of different ways
A couple of videos showing a librarian conducting autism-friendly story time would be helpful.
Need more specific help about how to handle difficult behaviours during the session
Need more examples about their inflexibility and rigidity in their thinking, and how that might play out in a story time session and result in a meltdown.
More information about Theory of Mind issues
Examples of how the librarian might need to rephrase/explain sentences in a story where there were implications not specifically spelled out in the text
It was not clear to me whether the Autism-friendly strategies are meant to be used in a story time session that is advertised as "Autism-friendly" or all our usual story times from now on?

#### 5.4.2 Follow-up survey of librarians implementing the Story Time program following the online training

The follow-up survey was completed by all four participating librarians. Analysis of the qualitative data indicated that participants found the experience helpful and interesting, and that it furthered their knowledge gained through previous PD. They also stated it helped them to better understand how children on the autism spectrum might view the world. Three of the four participants reported that their Story Time sessions had changed in pace following the PD (i.e. much slower) and that



---

they now emphasised the narrative structure of stories to a greater extent. One participant said that even though her approach had not changed significantly, she felt she had a better understanding of certain child behaviours, which she had found frustrating in the past. As a result she felt more skilled in helping the child or their parent engage in the Story Time session. Feedback for future training and implementation included ensuring more wide-spread advertising of the Story Time program to facilitate greater community engagement.

## 5.5 Phase 3 Discussion

The transition of the face-to-face PD to an online learning platform was viewed as socially valid and the four librarians who implemented the Story Time program within their library reported that most elements were useful. Use of a coaching model with the First 5 Forever team member was viewed as valuable in supporting librarian practice. These results indicate implementation following online training is a viable option for librarians, when combined with existing internal resources.

---

## 6. Phase 4: Broader Stakeholder Consultation

The final phase focussed on evaluating whether the PD would be viewed as useful/socially valid for broader professional groups who may also work with young children on the autism spectrum and emergent literacy including speech pathologists, psychologists, and (early childhood) educators. The aim of this phase was to evaluate whether further refinements or changes would be required to make the training useful/applicable to a broader stakeholder group.

### 6.1 Phase 4 Participants

Participants were recruited via purposive sampling to ensure that professionals across the education and allied health fields were included. Participants were contacted directly by research staff and invited to participate in a review of the online PD.

Participants included eight professionals (1 male, and 7 females) who had experience working with children on the autism spectrum across early learning and care and/or allied health. Their experienced ranged from under one year to over 10 years. Participants had qualifications in Psychology ( $n = 2$ ), Speech Pathology ( $n = 2$ ), Education ( $n = 3$ ), and Occupational Therapy ( $n = 1$ ). Two were currently studying for PhD qualifications in clinical psychology, while the remaining six were engaged in professional employment in their field. Five were aged 25-34, one was between 35-44 years, and one was between 45-54 years of age. Participants were drawn from Queensland and New South Wales, Australia.

### 6.2 Phase 4 Procedure

Participants were asked to review the Phase 2 online PD in their own time. They reported varying amounts of time needed to complete the online training, ranging from under two hours ( $n = 1$ ), 2-3 hours ( $n = 3$ ), or 3-4 hours ( $n = 4$ ). Upon completion of the training, participants were sent the online feedback survey.

### 6.3 Phase 4 Measures

The online feedback survey consisted of 18 questions including demographics, self-reported time to complete the module; 5-point Likert scales for an overall rating of whether the training was

---

beneficial, whether they thought it would be useful for others in their workplace or profession, how useful each component of the training was for either their work or study, the strategies they would use in their role. It also included open-ended questions about their experience with conducting Story Times, reasons for their rating of whether the training was beneficial, whether they had incorporated strategies from training into their practice, and suggested changes to make the training more suitable for someone in their role. The same elements of training and strategies included in the online training were included as per Phase 3. The survey took an average of 19 minutes to complete.

## 6.4 Phase 4 Findings

### 6.4.1 Phase 4 data screening and analysis

There were no missing values on quantitative items and no outliers. Quantitative data were analysed using descriptive statistics. The open-ended responses were coded based on response to content provided and recommendations for practices. The data on content is converged with the quantitative data to provide a more nuanced evaluation of the training package. Recommendations were summarised separately.

### 6.4.2 Feedback from the broader stakeholder group

Overall, seven of the eight participants strongly agreed ( $n = 4$ ) or agreed ( $n = 3$ ) that the training was beneficial. When asked to elaborate, three participants provided responses including that, “The content was excellent and the progression of information was helpful,” “I think the information on ASD, proactive managing behaviour, emergent literacy and shared book reading was great and pitched at the right level” and “It was good to see this information presented in one place.”

Although stakeholders felt the information was specific to library sessions, they did feel this would be useful content for other professionals, in particular new graduates. In the other comments, one participant highlighted that the “videos are excellent” and information presented clearly. One participant strongly disagreed the content was useful, but did not elaborate and rated all elements 3-5 with 5 a more positive score so it was interpreted that this response may have been due to misreading the direction of the response scale.

As shown in Table 5 below, all components showed means of 4.25 (out of 5) or higher indicating components of the online training as well as the strategies embedded within the training were viewed as useful by the broader stakeholder group. Responses to open-ended questions regarding whether participants had subsequently used the strategies following review of training indicated most had not yet had the opportunity as they had completed the post-survey immediately

afterwards. Two participants reported they were going to use the parent handouts in their practice, one reported the online training, “confirmed strategies I use” (environment, social stories, questions, and vocabulary). One reported they had printed the parent handouts, shared the ABC and environmental audit with educators, and the words words words and narrative information, as well as adding the story props and social stories to their resources.

**Table 5. Broader Stakeholder Feedback ( $n = 8$ ) on Usefulness for Current Role of Training Components and Likelihood to Use Strategies in Current Role**

	Range	Mean
<b>Useful for current role</b>		
Module 1: What is autism	3-5	4.38 (.92)
Module 2: Emergent literacy	4-5	4.50 (.53)
Module 3: Strategies for including children on the autism spectrum	4-5	4.88 (.35)
Module 4: Shared book reading strategies	4-5	4.63 (.52)
Story Time session plans	3-5	4.25 (.89)
Parent handouts	3-5	4.63 (.74)
Visual schedule template	3-5	4.50 (.76)
Props	4-5	4.50 (.53)
Social stories	4-5	4.88 (.35)
Whole body listening	4-5	4.75 (.46)
<b>Would use strategy</b>		
Analysing behaviour (ABCs of behaviour)	4-5	4.88 (.35)
Analysing the environment (environmental audit)	4-5	4.88 (.35)
Social stories	4-5	4.88 (.35)
Using narratives	5-5	5.00 (0)
Asking questions	5-5	5.00 (0)
Words words words (promoting vocabulary development)	4-5	4.88 (.35)

What's in the story? (encouraging an understanding of story elements)	4-5	4.88 (.35)
Letters and sounds (introducing phonological awareness, print awareness and letter/sound knowledge)	4-5	4.88 (.35)
Visual schedule	5-5	5.00 (0)
Parent handouts	4-5	4.75 (.46)
Props	4-5	4.63 (.52)
Whole body listening	4-5	4.88 (.35)

Stakeholders' recommendations primarily focused on how the information could be adapted to address specific discipline areas. For example, including additional resources for incorporating the components into therapy sessions and/or assessments; for teachers including the information into a term planner, providing links to the Australian Curriculum, and adjusting the resources for older children; and tailoring it for parents so that information could be shared with parent clients in therapy sessions. Additional resources were suggested in the form of videos demonstrating the use of strategies to address behaviours viewed as challenging.

## 6.5 Phase 4 Discussion

Results from phase 4 indicated this broader stakeholder group drawn from allied health and education viewed the online training components and training as useful and indicated suggestions for refinements to align more closely with their discipline needs.

---

## 7. Limitations and future directions

In this project we have provided an overview of the development and refinement of an online professional development package to support autism-friendly Story Time sessions delivered by librarians in the community libraries. One limitation of this project is the need for validation and refinement of our pre- and post-test measures to determine a change in knowledge and confidence following PD completion. Further, we asked the participants to self-report regarding changes in practice and it is not clear if these reported changes in practice influenced the children's early literacy skills. We were not able to track if, as a result of our project, parents of preschoolers on the autism spectrum were more likely to attend Story Time sessions at their local libraries. These are all potential avenues for further investigation.

At a practical level, the BCC is now offering this online PD to librarians across the BCC region, with almost 50 librarians currently enrolled to complete the training. We were pleased to obtain positive feedback from the broader stakeholder group, including allied health professionals and educators who completed the online professional development package. Refining the online PD for use by other professionals involved with children on the autism spectrum, including undergraduate students in speech pathology, education or psychology, will be an important next step.

We will continue to raise awareness of the importance of early literacy success to participate in daily activities, at home and at school, and highlight the significant challenges in early literacy development many children on the autism spectrum experience. Providing children with accessible early literacy experiences at home and in the community is a crucial first step in ensuring literacy success for all children, including those on the autism spectrum.

---

## 8. References

- Bland, N. (2011). *The very cranky bear*. Linfield, N.S.W: Scholastic Press.
- Bland, N. (2012). *The Very Hungry Bear* Lindfield, NSW: Scholastic Press.
- Dickinson, D. K., Griffith, J. A., Michnick Golinkoff, R., & Hirsh-Pasek, K. (2012). How reading books fosters language development around the world. *Child development research*, 2012(1), 1-15.
- Donaldson, J., & Scheffler, A. (1999). *The gruffalo*. London: Macmillan Children's Books.
- McKenney, S., & Reeves, T. C. (2013). Systematic review of design-based research progress: Is a little knowledge a dangerous thing? *Educational Researcher*, 42(2), 97-100. doi:10.3102/0013189x12463781
- Moore, M. (2014a). *Jack and the Beanstalk*. Sydney, NSW: Franklin Watts Australia.
- Moore, M. (2014b). *The Three Little Pigs*. Sydney, NSQ: Franklin Watts Australia.
- Nation, K., Clarke, P., Wright, B., & Williams, C. (2006). Patterns of reading ability in children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 36(7), 911-919. doi:10.1007/s10803-006-0130-1
- Scheffler, A. (2012). *Pip and Posy: The big balloon*. London: Nosy Crow.
- Segall, M. J. (2008). *Inclusion of students with autism spectrum disorder: Educator experience, knowledge, and attitudes*. Athens, GA: University of Georgia.
- Sim, S. S. H., Nicholson, J. M., Walker, S., Berthelsen, D., & Fielding-Barnsley, R. (2014). A shared reading intervention with parents to enhance young children's early literacy skills. *Early Child Development and Care*, 184(11), 1531-1549. doi:10.1080/03004430.2013.862532
- Simpson, K., Paynter, J., Wicks, R. T., & Westerveld, M. F. (2020). Early literacy learning experiences across home and community libraries for young children who have autism. *Advances in Neurodevelopmental Disorders*, 4(1), 74-84. doi:10.1007/s41252-019-00145-7
- Stone, W. L. (1987). Cross-disciplinary perspectives on autism. *Journal of Pediatric Psychology*, 12(4), 615-630.
- Westerveld, M. F., Paynter, J., O'Leary, K., & Trembath, D. (2018). Preschool predictors of reading ability in the first year of schooling in children with ASD *Autism Research*, 11, 1332-1344. doi:10.1002/aur.1999
- Westerveld, M. F., Paynter, J., Trembath, D., Webster, A. A., Hodge, A. M., & Roberts, J. (2017). The emergent literacy skills of preschool children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 47(2), 424-438. doi:10.1007/s10803-016-2964-5
- Westerveld, M. F., & van Bysterveldt, A. K. (2017). The home literacy environment of preschool-age children with autism or Down syndrome. *Folia Phoniatrica Et Logopaedica*, 69, 43-53. doi:10.1159/000475840

---

Whitehurst, G. J., Arnold, D. S., Epstein, J. N., Angell, A. L., Smith, M., & Fischel, J. E. . (1994). A picture book reading intervention in day care and home for children from low-income families. *Developmental Psychology*, 30(5), 679-689. doi:10.1037/0012-1649.30.5.679

Whitehurst, G. J., Falco, F. L., Lonigan, C. J., Fischel, J. E., DeBaryshe, B. D., Valdez-Menchaca, M. C., & Caulfield, M. (1988). Accelerating language development through picture book reading. *Developmental Psychology*, 24(4), 552-559.



# Appendices

## Appendix A: Visual schedule





# Going to the library

Written by Kate O'Leary



## How to use this social story

### What are social stories?

- Social stories are short stories which can be used to describe a new situation or skill.
- Social stories teach children appropriate responses to help them to manage their behaviour in the new situation.
- Social stories should be written at the level of the child and outline where, when, and with whom the activity will take place, how the child should behave and why.
- Although social stories are designed for children on the autism spectrum, they can also be helpful for anyone who has difficulties adapting to new situations or managing their behaviour.

### How to use this social story:

- This social story provides a general overview of what a child on the autism spectrum can expect from a visit to the library. For a more specific story addressing participation in a Story Time session please see our "Story Time" story.
- Print the pages relevant to your child and/or local library. You might also like to change the photos within the story to make them more specific to the library you will be visiting.
- Read the story to your child several times prior to your library visit and, if possible, ask them questions to determine their understanding.



The library is a place with lots of books.



People might visit the library to



borrow books, read or use the computers

I can look at stories or borrow some books and take them home for a couple of weeks.



There might also be DVDs and CDs that I can borrow.





When I'm finished with my books I'll bring them back so that other kids can enjoy them too.



If I need help I can ask the librarians, they're friendly people who work at the library.



There may be other people in the library so I will try and use my quiet voice so that they can read.



Sometimes there might be a story to listen to with other children.



There might be an area where I can play.



There's also a toilet in the library that I can use if I need to.



When I visit the library there might be...



Sliding doors

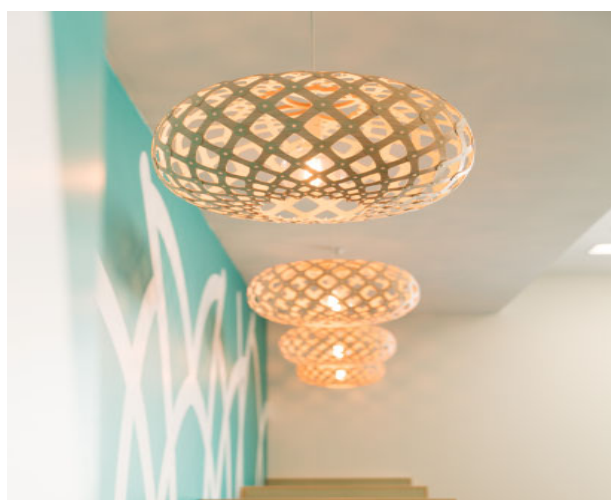




## Interactive displays



## Different shapes and decorations



Or bright lights



I can tell mum or dad if I want to leave.



This is my local library:



Going to the library can be lots of fun!





# Story time at my library

Written by Kate O'Leary

Insert a picture of your local library here

## How to use this social story

### What are social stories?

- Social stories are short stories which can be used to describe a new situation or skill.
- Social stories teach children appropriate responses to help them to manage their behaviour in the new situation.
- Social stories should be written at the level of the child and outline where, when, and with whom the activity will take place, how the child should behave and why.
- Although social stories are designed for children on the autism spectrum, they can also be helpful for anyone who has difficulties adapting to new situations or managing their behaviour.

### How to use this social story:

- This social story outlines what a child on the autism spectrum can expect from attending a Story Time session at their local library. For children new to their local library please also see our "Visiting the Library" story.
- Print the pages relevant to your child and/or local library. You might also like to change the photos within the story to make them more specific to the library you will be visiting.
- Read the story to your child several times prior to your library visit and, if possible, ask them questions to determine their understanding.



Sometimes I might visit the library to listen to stories with other children.



This will usually happen in a special area of the library.





I can sit on the floor and listen if I want to.



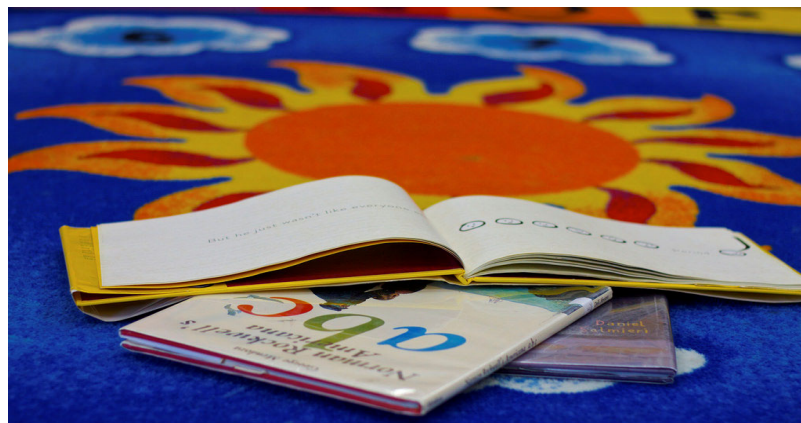
Or I can sit with mum or dad.



There might be cushions or mats for me to sit on.



We might read a few books.



We might also sing songs, dance, play with puppets or draw.



The librarian might ask us questions. I don't have to answer if I don't know.





I'll try and use my calm body around other children so that they can enjoy the story too.



If I want a break from the story I can go to a special quiet area.



Or I can go and look at books in the rest of the library.



Story time can be lots of fun!



## Appendix C: Environmental audit

### Checklist for story time

Accessibility	Current situation	Possible action (if required)	N/A
<p>Consider access to the room.</p> <ul style="list-style-type: none"> <li>Is the room easy to access, clearly identifiable e.g. a clearly defined pathway to the room?</li> <li>Does the child have to navigate steps, kerbs, stairs?</li> <li>Are there optional entries to the room? If so, is one entry more accessible and identifiable?</li> </ul>			
<b>Room organisation</b> <i>Positioning the story teller</i>			
<p>Consider the effect of lighting (e.g. sunlight from windows or skylights, and room lighting).</p> <ul style="list-style-type: none"> <li>Does the lighting coming into the room through blinds create distracting patterns?</li> <li>Does the lighting reflect of surfaces e.g. book pages, story easel, surfaces in the room?</li> <li>Are fluorescent lights regularly checked e.g. flickering lights can be disturbing?</li> </ul>			
<p>Consider what is happening behind the story teller.</p> <ul style="list-style-type: none"> <li>Are there busy areas behind the story teller e.g. main library, cafe, playground?</li> <li>Are there visual distractions within the room e.g. room clutter, visual displays?</li> </ul>			
<p>Consider the level of noise.</p> <ul style="list-style-type: none"> <li>Are there obvious competing noises occurring during the story time e.g. kitchen, cafe, classes?</li> <li>Are there less obvious competing noises occurring during the story time e.g. entry door beeper</li> <li>Have you considered the pitch of noises as well as the level of noise?</li> </ul>			

<b>Seating area</b>			
Consider the story book reading space. <ul style="list-style-type: none"> <li>Is there a clearly defined story book area e.g. floor mat.</li> </ul>			
Consider seating options for the children. <ul style="list-style-type: none"> <li>Are there cushions/carpet squares available if the child likes/requires a defined seating space?</li> <li>If desired, are there areas the child can sit away from the group but still listen to the story?</li> <li>If desired, is there an area the child and parent can go to calm down?</li> </ul>			
<b>Activity area</b>			
Consider the position of the craft activity area. <ul style="list-style-type: none"> <li>If space allows, can this be arranged in a defined separate area?</li> <li>Are children provided an appropriate surface to complete the activity?</li> </ul>			
Consider the presentation of materials within the craft activity area. <ul style="list-style-type: none"> <li>Are resources labelled?</li> <li>Are their sufficient resources for all the children?</li> </ul>			
<b>Story book session</b>			
<b>Session plan</b>			
Consider the structure of the session <ul style="list-style-type: none"> <li>Does the session follow the same structure each time?</li> <li>Is there a clear commencement of the session?</li> <li>Do children know what is going to happen next e.g. schedule board?</li> <li>Does the sequence of activities accommodate different levels of attention e.g. alternate between reading, movement.</li> <li>Are strategies consistently used within and across sessions e.g. schedule board?</li> <li>Is there a clear finish to the story book reading time?</li> <li>Is there a clear transition from the story book reading to the craft activity?</li> </ul>			

<b><i>Delivery the story time</i></b>			
Consider how to support teaching, learning and communication <ul style="list-style-type: none"> <li>• Are a variety of concrete objects used to support the story?</li> <li>• Are the key points supported using symbols, pictures, photos or objects?</li> <li>• Are children provided time to respond to the questions?</li> <li>• Are instructions/directions presented one step at a time?</li> </ul>			
Consider the position of the resources <ul style="list-style-type: none"> <li>• Is there a designated area where the visual supports can be placed during programs?</li> <li>• Are there redundant visuals displays e.g. posters, visuals from the previous session?</li> </ul>			
<b>Additional information</b>			

## Week 1: Narratives

### 1. What is a narrative?

A book with a narrative structure has a clear sequence of events including:

- A beginning, in which the **characters** and **setting** are introduced.
- A **problem** or main event of the story.
- **Actions taken** by the characters to fix the problem.
- A **resolution** or ending to the story.

### 2. Why read narratives to your child?

Many children on the autism spectrum present with difficulties in reading comprehension in the school years. Promoting an understanding of story content through early exposure to narrative stories is therefore essential to promote later literacy success.

### 3. What to look for in a book:

- a. A clear narrative structure i.e. with a beginning, problem, resolution and ending. Try to avoid books with multiple problems, if possible e.g. Goldilocks and the three bears.
- b. Bright, colourful pictures.

A story that is not too long (in books with lots of text, don't feel that you have to read it all. Engaging your child is more important than reading every word).



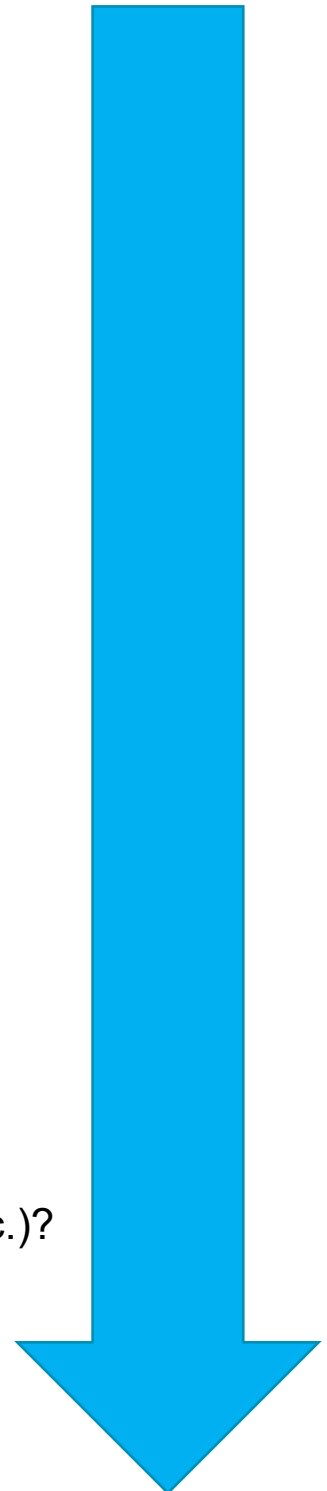
## Week 2: Asking questions

### Easy questions:

- Find one like this.
- What can you see?
- What is he/she doing?
- Who is that?
- Point to...
- Where is ...?
- What size/shape/colour?
- How many?
- Show me something yellow.
- Show me what we use for eating.

### Harder questions:

- How are these the same/different?
- What will happen next?
- Can you think of another type of (category)?
- Find one that is not yellow.
- What might he say?
- How could they fix the problem?
- What will happen if...
- Why did that happen?
- How can we tell that (it's night-time, he's cranky etc.)?
- What could we use to fix the problem?
- Why can't he....?



Adapted from Blank, M., Rose, S.A., & Berlin, L.J. (1978). *The language of learning: the preschool years*. Grune & Stratton, New York



## Week 3: Words, words, words

1. **Point out new words** in the pictures and text and provide simple definitions when necessary. E.g. *yank means to pull hard*. Make sure to point out a **variety of words** including names (dinosaur, propeller, inventor), descriptions (scaly, swiftly) and action words (chomped, scampered). **Start with everyday words** (dog, wet, rain, big) and then build up to more sophisticated and less frequently encountered words (soggy, drenched, poured, tugged, gasped).
2. **Use facial expressions or gestures** to demonstrate the meaning of the word.
3. **Relate** the new word to common life experiences. E.g. *This one looks like your dinosaur. That man looks like your grandpa, I wonder if he's cuddly like grandpa! Wow, this girl is going to the circus, just like you did with daddy!*
4. **Copy** what your child says so that he/she knows that you have understood.
5. **Repeat, repeat, repeat.** Try to use the new word multiple times in the shared book reading session.





## Week 4: What's in the Story?

1. Help your child understand the **Characters, Setting, Problem, Actions, and Resolution** by pointing to pictures in the book as you comment on them and/or asking questions at the end of the story. For example: *Look, here's Bear. He's a character in the story. Can you remember what happened at the beginning of the story? Uh oh, Bear ran out of honey, that's a big problem! I wonder how he could get more. The witch made a new and better broom, the problem is fixed!*
2. **Discuss the story** before you start reading by looking at the front cover together, commenting on the pictures, asking simple questions about the story, and predicting what might happen. For example: *This story is called...I wonder what this story is about...I can see...Look, a... He has his backpack and lunchbox, where could he be going? I wonder what would happen if....*
3. **Summarise the story** once you've finished reading and discuss your child's favourite parts. For example: *This story was about...Can you tell me the story using the pictures? How did they fix their problem? I liked the part where...Why did you like that part? What else do you think that they could've done to solve the problem? I wonder what would've happened if....*



## Week 5: Letters and sounds

1. **Ask questions** and make comments about the book itself e.g. *where should I start reading? Do I read this page or this page first?*
2. **Point to significant words** in the text. E.g. *Bang! Hooray!*
3. **Label words** e.g. this word says *Yank*.
4. **Discuss letters and sounds** e.g. *what sound does 'pop' start with? I see the letter 'b' that makes a /b/ sound. Who has a /b/ sound in their name?*
5. **Point out rhyming words in the text** e.g. *ham and Sam are rhyming words, they have the same ending.*
6. **Count syllables** e.g. *caterpillar is a long word! How many beats can we count in caterpillar?*
7. **Make mistakes and comment on them** e.g. hold the book upside down. *Is this the way it goes?*



## Week 6: Bringing it together

### 1. Before reading:

- Discuss the pictures on the front cover and predict what might happen in the story.

### 2. During reading:

- Ask questions.
- Discuss the story elements (the characters, problem, actions etc.).
- Point out new words and define these using words or gestures.
- Point to significant words in the text e.g. BANG! YANK! Hooray!
- Discuss letters, sounds and rhyming words.
- Discuss aspects of the book structure e.g. where we start to read, point out the author.

### 3. After reading:

- Ask story comprehension questions, if possible.
- Summarise the story.

### 4. Have fun!

- Make fun noises: *vroom. BANG! Pop! Splash! Use silly voices!*
- Lots of praise: *Great talking. Beautiful sitting. Thanks for helping.*
- Act out the story or actions in the book.
- Use big gestures and expressions.
- Follow your child's lead: Encourage him/her to turn the pages, lift the flaps, name objects, ask questions, have a conversation or go back to his/her favourite pictures.

## Appendix E: Bookmarks

### THE VERY CRANKY BEAR

#### Week 2: Asking questions

**Simple:**

Where is the sheep?

What are the animals doing?

What animals do you see?

What colour is...?

What do we do with a pillow?

Find something that is yellow.

Where are Zebra's stripes?

**Harder:**

What will happen next?

Why can't they play outside?

How do you know the bear is cranky?

How are the animals feeling?

Why are they running away?

What would happen if the animals  
had to stay outside in the rain?

Find something that is not...



### THE THREE LITTLE PIGS

#### Week 3: Words Words Words

**Point out new words:** bundled,  
grinned, furious, crept, galloping.

**Provide word definitions:** *furious*  
means very angry, *grinned* means a  
big smile.

**Use gestures and facial expressions**  
to demonstrate word meanings e.g.  
make a scared face, demonstrate  
*huffing and puffing*, gesture with your  
fingers how to *creep*.

**Relate the word** to your child's life  
experiences e.g. *Our house is made of*  
*bricks too! That wolf looks a bit like*  
*our dog.*

**Copy** what your child says so that  
he/she knows that you understand.

**Repeat** new words throughout the  
book so that your child hears them  
often.





## PIP AND POSY: THE BIG BALLOON

### Week 4: What's in the story?

**Discuss the story** before you start reading: *What can you see in the picture? I wonder what this story could be about! The title tells me that this story is about a big balloon.*

**Discuss the characters, story beginning, problem, resolution and ending as you read:** *This story is about Pip and Posy. What happened in the beginning of the story? Oh no, Pip's balloon burst! That is a problem! How could they fix the problem? The bubbles made everyone happy, and that's the end of the story.*

**Summarise the story after reading:**  
*This story was*

*about Pip and Posy. Pip had a balloon that he loved but he let it go and it floated away and popped. Pip was very sad but then Posy had a great idea to blow bubbles. It made Pip happy again.*



## THE VERY HUNGRY BEAR

### Week 5: Letters and sounds

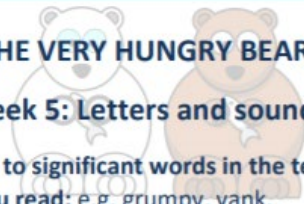
**Point to significant words in the text as you read:** e.g. grumpy, yank, melting.

**Ask questions and make comments about how to read:** e.g. *where should I start? Which way should I hold the book? I'm going to start reading here (point).* You can also **make mistakes** and see if your child comments e.g. hold the book upside down.

**Count syllables:** e.g. *incredibly... that's a long word, I wonder how many beats are in incredibly, let's count them.*

**Point out rhyming words:** e.g. *smile and pile are rhyming words; they have the same ending. Can you think of another word that rhymes with smile?*

**Discuss letters and sounds:** *smile starts with the letter S, can you see another S on this page? I hear a B sounds in this word, just like in your name! What sound can you hear at the start of wave?*



## JACK AND THE BEANSTALK

### Week 6: Bring it together

- **Discuss the story before you start reading:** e.g. *It looks like this book is about a boy and a big beanstalk. What do you think will happen in the book? I wonder what he'll find at the top.*
- **Ask questions:** *Who is this? What is he doing? Why is Jack's mother angry? Where could Jack hide? Find something big. How are a boy and a giant the same/different?*
- **Point out new words in the text and provide definitions:** e.g. *ear-splitting means very loud. Use gestures and facial expressions to help you when needed.*
- **Discuss the story elements:** e.g. *Oh no, Jack and his mother are very poor! They need money to buy some food. What a problem.*
- **Point out letters and sounds:** e.g. *beanstalk starts with a B sound, can you make that sound?*
- **Discuss rhyming words and count syllables:** e.g. *Horried is a long word, how many beats in horried?*
- **Summarise the story after reading:** *This story was about... What happened in the beginning of the story?*

**Autism CRC**

The University of Queensland  
Long Pocket Precinct  
Level 3, Foxtail Building  
80 Meiers Road  
Indooroopilly Qld 4068  
**T** +61 7 3377 0600  
**E** [info@autismcrc.com.au](mailto:info@autismcrc.com.au)  
**W** [autismcrc.com.au](http://autismcrc.com.au)



@autismcrc

## Our values

**Inclusion**

Working together with those with the lived experience of autism in all we do

**Innovation**

New solutions for long term challenges

**Independence**

Guided by evidence based research, integrity and peer review

**Cooperation**

Bringing benefits to our partners; capturing opportunities they cannot capture alone



Australian Government  
Department of Industry, Science,  
Energy and Resources

**Business**  
Cooperative Research  
Centres Program