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Supporting Rich Conversations with Children aged 2-5 years in Early Childhood Education and Care within Australasian Studies

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Contents

Executive Summary

Acquisition of oral language development is one of the most remarkable and significant features of development across the child's first 5 years. Strong oral language skills provide children with a platform to communicate effectively, and predict children's success in formal classroom settings and life trajectories more broadly (Girard, 2015; Law, 2000; Snowling, 2015). Adults make a difference. Research from Australia and internationally has demonstrated that young children who are exposed to rich oral language environments, at home (Cartmill, 2013; Thorpe K., 2003) and in early childhood education and care (Chambers, 2016; Golinkoff, 2019; Holmes, 2019), have increased expressive language skills (*use of words and construction of communications*) and receptive language skills (*knowledge of words and understanding of communication*). Rich oral language environments are those in which children are not only exposed to complex and varied language, but are those that engage children in sustained conversations, provide opportunities for exploration and expression (e.g. using gestures, words and sentences) and allow them to communicate their thoughts, feelings and ideas.

The summary below presents current research evidence on effective strategies for promoting rich conversations with young children aged 2-5 years in Early Childhood Education and Care within the Australasian context. This systematic review follows from that conducted by Edith Cowan University on behalf of CoLab for Evidence for Learning examining evidence of effective communication and language approaches within Australasian studies. The current review focuses specifically on evidence of *how* rich conversations with children are promoted.

Summary of Australasian Research

The current Australasian research provides evidence of a range of strategies that can be used by early childhood educators to foster rich conversations with young children. It is important to acknowledge that these studies review strategies within a specific context and are not intended to be formulas for practice. The strategies reviewed should be considered as tools to support educators in improving the quality of interactions with children in specific contexts. Further resources ('tip sheets') to support educators in applying these strategies are available on the Evidence for Learning website.

The available research evidence suggests that creating opportunities for children to contribute to conversations (i.e. *creating spaces for children's talk*) and utilising strategies to maintain educators' and children's joint attention to foster prolonged conversations about a topic (i.e. *keeping the conversation going*) support educators to foster rich conversations with children aged 2-5 years..

Three key strategies have been identified as important in creating opportunities for children to talk. The first strategy involves educators intentionally pausing to create time for children to think, process and construct a response and signals to children that it is someone else's turn to contribute to the conversation (Bateman, 2013; Bateman, Danby, & Howard, 2013; Cohrssen, Church, & Tayler, 2014b). Pausing can be employed effectively with individual and group learning experiences (Bateman, 2013; Bateman et al., 2013; Cohrssen et al., 2014b). In contrast, the absence of pauses restricts, or even prevents, children from answering or taking turns in conversations, thus reducing opportunity for practicing speech. There has been some suggestion of an "optimal" pause time (i.e. 3-5 seconds; Cohrssen, Church, & Tayler, 2014b). However, this length is based on research conducted within formal primary and secondary school classrooms (Tobin, 1980, 1987). Evidence within the Australasian literature regarding the "optimal" length of pausing for young children (2-5 years) is not currently available.

The second strategy involves educators prompting conversation through the use of different types of questions (Bateman, 2013; Bateman et al., 2013; Houen, Danby, Farrell, & Thorpe, 2016, 2018; Martucci,

2016; Paatsch, 2019; Reese, Gunn, Bateman, & Carr, 2019); including yes/no, *WH* (i.e. who, what, where, when and how); and "I wonder…" questions designs (Houen et al., 2016, 2018). Yes/no questions (e.g. "Is the sky cloudy today?") are typically considered to be closed-ended as they call for children to respond with a simple yes or no answer, restricting children's opportunities for extended turns of talk. WH questions can be considered as either open- or close- ended, depending on the situation in which the question is applied. For example, if an educator points to a dog and asks, "what is that?" the question is typically closed-ended, prompting the child to provide the answer that the educator is looking for. Alternatively, "what do you think the dog likes to do?" is an open-ended question, prompting a broader range of potential responses. "I wonder…?" statements (e.g. "I wonder what kind of butterfly it would turn into?"; Houen, Danby, Farrell, & Thorpe, 2016; page 73) have been shown to be effective in inviting, rather than expecting, children's responses and encouraging longer turns of talk by children.

Thirdly, a range of strategies work to distribute power relating to knowledge in the classroom. Traditionally, educators have been considered 'experts' who impart their knowledge to learners (ie. the children), creating a power dynamic that is unbalanced. The strategies identified in this review work to disrupt this traditional view, positioning both children as educators as knowledge holders. The strategies employed by educators focus on downplaying the educator's position as 'expert' in the classroom and *position* children with knowledge and ideas to contribute to conversations (Houen, Danby, Farrell, & Thorpe, 2018). A key example includes the use of 'problem' questions. For example, an educator may ask, "What's happened, where's the water gone?" (Bateman et al., 2013), p. 279) to elicit descriptions of problems encountered in the classroom and to initiate discussions about children's ideas relating to solving these problems. 'I wonder…' questions can also reduce the power dynamic, and invite children's thoughts and ideas about a topic (Houen et al., 2018).

While children are only able to contribute to conversations if there are spaces for them to do so, the literature emphasises the importance of fostering prolonged back and forth conversations about a topic. Two main themes were identified in the research evidence that support conversations to be ongoing. The first theme involves making *personal connections* to children's lives, and the second relates to educators' *responses to children's talk*.

Educators can foster rich and sustained conversations through linking with children's conversations to their personal experiences, lives and interests (Bateman, 2013; Bateman et al., 2013; Carr, 2011; Cohrssen, C., Niklas, F., & Tayler, C., 2016; Reese et al., 2019). For example, *visual stimuli* such as learning stories (Reese et al., 2019) and photographs of learning experiences (Carr, 2011), can encourage children's personal connections within conversations, foster shared attention (where educator and child are focused on the same object) and prolonged conversations. Other strategies such as *Second stories* and *pivoting* have also been shown to nurture extended engagement of children in conversations through personal connections (Bateman, 2013; Bateman, Danby, & Howard, 2013). Second stories are responses to an initial story offered by one person (e.g., "I went to the beach on the weekend"). When children make a personal connection to the first story, it can prompt a telling of their own story (e.g. "I also went to the beach on the weekend and I saw dolphins diving in the water"). These strategies create opportunities to talk about and co-construct narratives within conversations (Bateman, 2013).

Finally, current research evidence highlights the importance of employing a range of interactional strategies to respond to children's contributions, such as *pausing in response to children's answers*, *repeating children's answer/gesture,* and *incorporating children's responses into future questions*. These strategies may support sustained conversations within young children in early childhood services (Bateman, 2013; Bateman et al., 2013; Houen, Danby, Farrell, & Thorpe, 2018; Paatsch, 2019). However, more research of these strategies is needed.

References

Please see full list provided on page 12.

Databases searched

- Eric (via ProQuest)

- ProQuest Education Database

- A+ Education

- Scopus (education journals only)

- Campbell Collaboration

Search Terms

oral* OR spoken* OR talk* OR language* OR verbal* OR speak* OR dialog* OR convers* OR Communicat*) AND (Teacher* OR Educator* OR Carer* OR Staff*) AND (Intervention* OR Program* OR Strateg* OR Support* OR approach*) AND ("Early Education" OR "Early Years" OR "Child care" OR "Preschool" OR "Early Childhood" OR "Pre-School" OR "Kindergarten" OR "pre-K") AND LOC(Australia and "New Zealand").

Systematic Review Detailed Report

Methods

The protocol was developed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Guidelines (PRISMA; (Moher, Liberati, Tetzlaff, & Altman, 2009; Shamseer et al., 2015).

Search Strategy

A database search for relevant studies was conducted on 23 July 2019 using the following databases: Eric (via ProQuest), ProQuest Education Database, A+ Education, Scopus (education journals only), and Campbell Collaboration. The following search terms were used to extract relevant articles: (oral* OR spoken* OR talk* OR language* OR verbal* OR speak* OR dialog* OR convers* OR Communicat*) AND (Teacher* OR Educator* OR Carer* OR Staff*) AND (Intervention* OR Program* OR Strateg* OR Support* OR approach*) AND ("Early Education" OR "Early Years" OR "Child care" OR "Preschool" OR "Early Childhood" OR "Pre-School" OR "Kindergarten" OR "pre-K") AND LOC(Australia and "New Zealand"). Relevant papers found in the reference list of extracted articles were also included. A full list of search terms, limiters and number of relevant articles returned for each database can be found in Appendix 2.

Inclusion and Exclusion Criteria

Only published, peer-reviewed articles that discussed strategies to foster rich conversations, sustained shared thinking and dialogic interactions between educators and children, aged 2-5 years, in Early Childhood Education and Care (ECEC) settings were included. Strategies could be informal or formal, delivered through an education program. Accepted study designs included intervention, observational, cross-sectional and qualitative studies. Studies included were studies from Australia and New Zealand, published in English, based on direct observation (i.e. no self-reports or surveys). Studies excluded were of children in school, children with specific learning difficulties (e.g. children with a language delay, Autistic Spectrum Disorder, or in specialised support programs) and children younger than 2 years. Studies including children older than 2 years but that also included younger children were included, in which case only relevant age groups were considered in the synthesis.

Study Selection

A three-step selection process was conducted. First, the title and abstract of all extracted articles were examined by reviewers to determine whether they met the inclusion criteria. Any ambiguous abstracts were discussed with a second reviewer and decision made by consensus. Second, full text of each identified articles was independently assessed for inclusion by two reviewers. Any disagreements between reviewers were resolved in consultation with a third study author and a consensus method was applied. The final outcome and reasons for exclusion were documented (see Figure 1).

Quality Assessment

All included studies were evaluated for risk of bias and quality of evidence. For Qualitative studies the Critical Appraisal Skills Programme (CASP) Qualitative Research Critical Appraisal Checklist was applied. The CASP consists of 10 items which assess the validity and appropriateness of the methodology and design, recruitment and collection, researcher relationship, analyses, and findings. Whilst there is currently not consensus regarding the scoring of the CASP, for the current study the following cut-offs for identification of high (≥ 6 items not met), moderate (3-5 items not met) and low risk of bias (0-2 items not met) was applied. Quantitative studies were assessed via the Cochrane risk of bias assessment tool. Two teams of reviewers independently rated each study based on the relevant Cochrane or CASP tools. Any disagreements were addressed via a consensus method between the reviewer teams.

Results

Database Search and Data Extraction

The search results for each stage of the extraction process are illustrated in Figure 1. Of the 3552 records identified, 12 studies were included in the final synthesis. A description of each of the included studies is provided in Table 1.
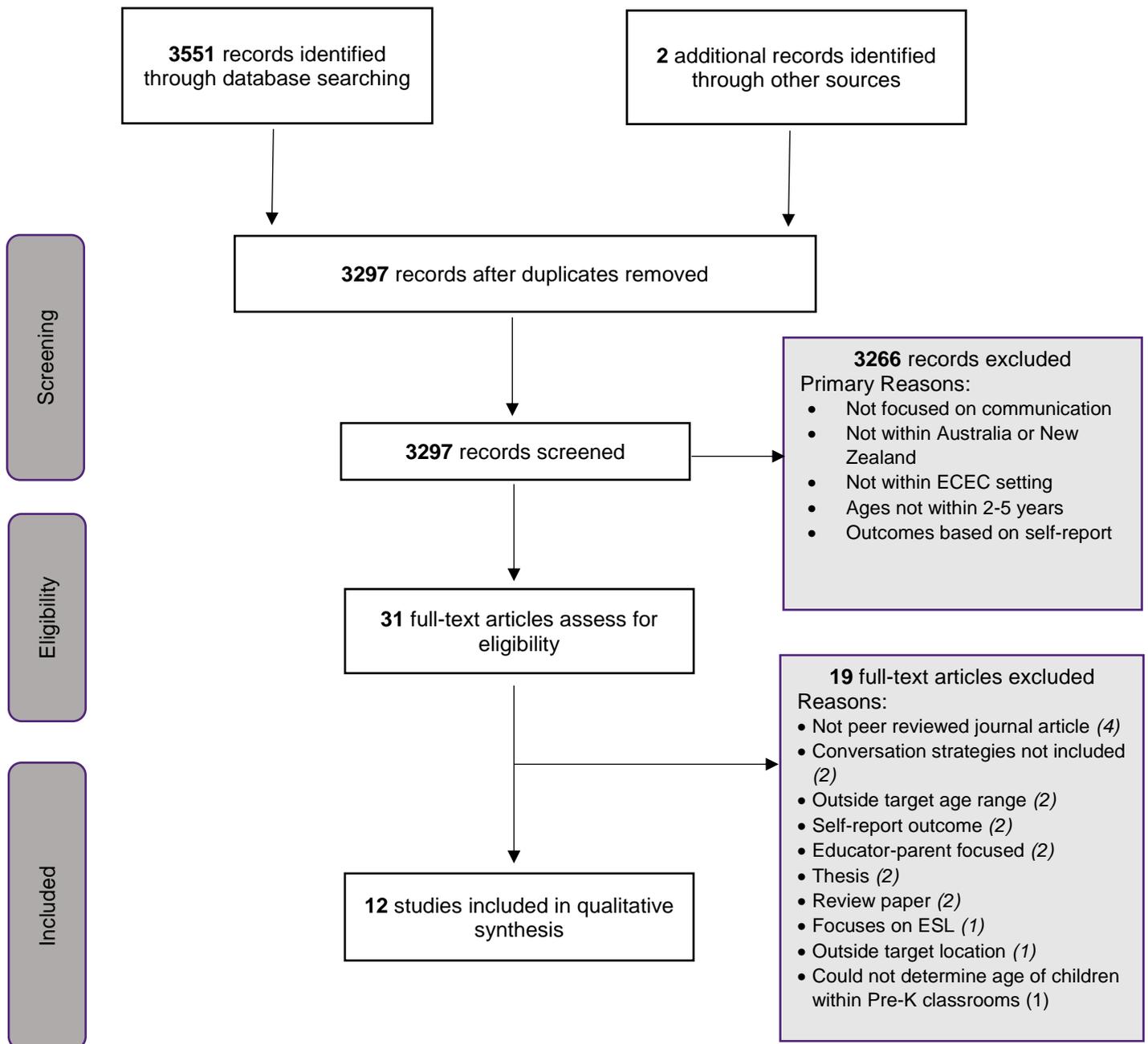

Figure 1. *PRISMA Flow Diagram*

Table 1. Summary of study characteristics and risk of bias assessment for included papers.

Author/s	Year	Country	Sample (N)	Age (Years)	Findings	Risk of Bias
Bateman, A.	2013	New Zealand	2	3	Repeating child's answer sequence without an immediate answer prompt, encourages child to hypothesise about their problem, supporting task and emotional problem solving in similar ways.	1
Bateman, A., Danby, S., Howard, J.	2013	New Zealand	52	2-4	Pivotal utterances from immediate context to personal experiences provides an interactional resource for discussing traumatic events with a therapeutic potential.	1
Carr, M.	2011	New Zealand	Unknown[a]	4	Awareness of response styles increased open ended questioning, developed opportunities for dispositional language, and supported a balance of listening and teaching.	2
Cohrssen, C., Church, A., & Tayler, C.	2014	Australia	Unknown[a]	3-5	Deliberate pausing results in quality interactions and responsive engagement. Supports higher order thinking and facilitates individualised interactions with children.	8
Cohrssen, C., Church, A., & Tayler, C.	2014	Australia	Unknown[a]	3-5	Pauses decrease the pace of activity to allow for information processing. Provides opportunity for attuned concept development.	6
Cohrssen, C., Niklas, F., & Tayler, C.,	2016	Australia	17[b]	2-5	Questioning sustained engagement and encouraged dialogue. Missed opportunities to extend conversations to lived experiences through open-ended questioning and distancing prompts.	4
de Vocht, L.	2015	New Zealand	40	3.5-5	Teachers become aware of monological teaching and power imbalances between teacher-child. Instead adopted an open-ended view of teaching, become less authoritative and more flexible.	1

Table 1 (Cont.)

Author/s	Year	Country	Sample (N)	Age Range (Years)	Findings	Risk of Bias
Houen, S., Danby, S., Thorpe, K.	2016	Australia	2	3-4	'I wonder' statements foster dialogue and interactions to support new understandings, whereas closed questioning requires additional interactional promoting by the teacher.	1
Houen, S., Danby, S., Farrell, A., & Thorpe, K.	2018	Australia	Unknown[a]	3.5-5	The use of 'I wonder…' invites students to respond and contribute to the conversation by reducing the perceived authority of the teacher. They also reduce explicit teacher assessments of contribution which prevent extended interactions.	2
Martucci, K.	2014	Australia	41	4-5	Expanded questioning rather than repeated questioning, engaged children's theory of mind reasoning. Children have expressive capacity to explain complex affect mental states involved in storybook.	3
Paatsch, L., Scull, J., & Nolan, A.	2019	Australia	Unknown[a]	3-6[d]	Teachers most often asked closed questions, which limited children's response options and engagement. Discussed situations which encouraged children to explain, predict or recall.	0
Reese, E., Gunn, A.,Bateman, A., Carr, M.	2019	New Zealand	12	3-5	A reminiscing orientation to story book reading contribute to shared memory recall and active language participation. The book reading orientation exposes children to complex speech.	0

Note. [a]Size of sample not reported. [b]Second smaller group mentioned but number not given. [c]Risk of bias based on the Critical Appraisal Skills Programme (CASP) Qualitative Research Critical Appraisal Checklist; higher scores indicated greater risk of bias (i.e. poorer quality of evidence). [d]Based on typical age of children in Melbourne preschools and first grade.

Quality of Evidence

All articles included in this synthesis used qualitative research methodologies. This likely reflects the nature of the review question, which lends itself to methodologies that apply detailed analysis of conversations and interactions. Indeed, a majority of studies identified applied *conversation analysis*. This specific methodology investigates naturally occurring data to reveal the methods and strategies used in social interaction. Such an approach is useful for explicating the interactional resources employed in educator-child interactions in order to locate and describe how strategies are used to promote rich and sustained conversations. Whilst such observational approaches are generally considered weaker evidence that experimental methodologies, such as *randomised control trials*, they arguably provide an appropriate methodology for answering the specific research question examined here. These approaches are, however, observational in nature and as such are subject to the key limitation of observational studies, i.e. the inability to assume causality.

Across the studies identified, there was large variation in the quality of evidence presented (See Table 1 and Appendix 3). Eight studies were identified as low risk, two as moderate and two as high risk of bias. The results of the quality of evidence assessment were taken into account in the synthesis and reporting of research findings.

Discussion

Strategies for Supporting Rich Conversations

All identified papers highlighted the importance of student-educator conversations for language-learning and the co-construction of meaning in early childhood (Bateman, 2013). From these papers two key themes were identified that related to the way educators facilitated oral language development. The first theme relates to how educators create opportunities for children's contributions to conversations (i.e. *creating spaces for children talk*) and the second relates to how educators respond to children's contributions to encourage rich conversations and engagement (i.e. *keeping the conversation going*). Both themes are described in more detail below.

Creating spaces for children talk

Within this theme research highlights three key strategies that work to create opportunities for children to talk and contribute to conversations.

Pausing. The first strategy involved educators intentionally pausing to create time for children to think, process and construct a response (Bateman, 2013; Bateman et al., 2013; Cohrssen, Church, & Tayler, 2014a; Cohrssen et al., 2014b). Pausing promotes the balance of speaking turns between educators and children, and has been shown to be an effective strategy to facilitate turn-taking. When educators pause or listen to children, this enables children the space and time to participate in conversations, to link conversations to personal experiences, and signals to children that it is someone else's turn to contribute to the conversation. Pausing has also been shown to enable educators to make intentional decisions about their follow-up responses to children's turns of talk (Bateman, 2013), to provide opportunities for other children to initiate turns to talk and to support the co-construction of stories between educators and children (Bateman, 2013; Bateman et al., 2013; Cohrssen et al., 2014b; de Vocht, 2015). In contrast, the absence of pauses restricts, or even prevents, children from answering or taking turns in conversations, thus reducing opportunity for practicing oral language (Cohrssen et al., 2014a). Whilst there has been some suggestion of an "optimal" pause time (i.e. 3-5 seconds; Cohrssen, Church, & Tayler, 2014b), this length is based on research conducted within formal primary and secondary school classrooms (Tobin, 1980, 1987)). Evidence within the Australasian literature regarding the "optimal" length of pausing for young children (2-5 years) is not currently available.

Prompting. The second strategy identified within the current evidence, involves educator's use of questions to co-construct shared meaning as the conversation unfolds (Bateman, 2013; Houen et al., 2016, 2018;

Martucci, 2016; Paatsch, 2019; Reese et al., 2019). Educators use a range of prompting designs including yes/no, *WH* (i.e. who, what, where, when and how); and "I wonder…" questions (Houen et al., 2016;2018). Yes/no questions (e.g. "Is the sky cloudy today?") are typically considered to be closed-ended, and call for children to respond with a yes or no answer, thus restricting children's opportunities for extended turns of talk. WH questions can be considered as either open- or close- ended, dependent on the situation in which the question is applied. For example, if an educator points to a dog and asks "what is that?" the question is typically closed-ended, prompting the child to provide the answer that the educator is looking for. Alternatively, "what do you think the dog likes to do?" is an open-ended question, prompting a broader range of potential responses. "I wonder…?" statements (e.g. "I wonder what kind of butterfly it would turn into?" (Houen et al., 2016, pg. 73) have been shown to be effective in inviting, rather than expecting, children's responses and encouraging longer turns of talk by children.

Across existing studies there is conflicting evidence about the use of "why" questions. Whilst Martucci (2016) highlights that causal questions, which often begin with "why?", are shown to enhance children's thinking skills, Bateman (2013) provides evidence that children can respond to "why" questions with "because…" or "I don't know…", signalling reluctance to continue with the conversation. Additionally, quick paced question-answer talk is often dominated by educators (Cohrssen et al., 2014b) and may reinforce power imbalances between educators and children (de Vocht, 2015). These rushed question-answer sequences are often made up of teacher questions that are responded to by children with short, yes/no or one-word answers.

It is important to note that, whilst current evidence indicated that educators ask a lot of questions (Carr, 2011), there is no guarantee that specific question designs will assure children's longer turns at talk in all contexts. That is, there is not a 'correct' formula. Rather, educators should consider the context of the unfolding interaction and select from a range of interactional strategies to foster children's extended turns (Bateman, 2013; Houen et al., 2016).

Positioning. The final approach that educators use in creating spaces for children's talk involves employing interactional strategies that position children with knowledge and ideas to contribute to conversations (Bateman, 2013; Houen et al., 2018). These strategies focus on downplaying the educator's position as 'expert' in the classroom, likely reducing children's fear of being assessed as 'correct' or 'incorrect', and thus encouraging children's contribution to conversations.

A key strategy for positioning the child with knolwdge to contribute to conversations includes the use of 'problem' questions. For example an educator may ask "What's happened, where's the water gone?" (Bateman et al., 2013, p. 279) to elicit descriptions of problems encountered in the classroom and to initiate discussions about children's ideas relating to solving these problems. In this way children are positioned as knowledgeable, recognised as having ideas regarding possible solutions and are provided with an interactional platform to share these ideas. 'I wonder…' questions are another strategy that have been shown to position educators without knowledge and work to invite children's thoughts and ideas about a topic (Houen et al., 2018). Houen et al. (2018) show that when educators' use 'I wonder…' questions in their interactions with children educators are less likely to judge a child as 'right' or 'wrong' in their follow-up responses (Houen et al., 2018).

While the strategies of pausing, prompting and positioning assist in creating spaces for children's longer turns at talk, these strategies alone do not guarantee sustained conversations. The next section synthesises research that reports on the interactional strategies used by educators to respond to children's bids for, and contributions to, talk in ways that can afford prolonged conversations.

Keeping the conversation going

Within this theme research highlights two key strategies that work to sustain and extend children's contributions to conversations.

Personal Connections. Evidence suggests that conversations that are personal to children, such as drawing on and linking to children's interests, families, knowledge, and past experiences enable extended conversations (Carr, 2011). The current Australasian research provides a range of strategies that can assist in linking of children's own experiences within conversational contexts; including the use of *visual stimuli* (Carr, 2011; Reese et al., 2019), *second stories (Bateman et al., 2013)*, and *pivoting* (Bateman et al., 2013).

Visual stimuli, such as learning stories (Reese et al., 2019) and photographs of learning experiences (Carr, 2011), have been shown to encourage children's personal connections, foster joint attention and prolonged conversations. Reese et al. (2019) compared two main approaches to interacting with children using their learning stories; *Book Reading* and *Reminiscing.* Book Reading, involves educators reading text from a learning story book word for word, much like reading a story book. Alternatively, Reminiscing, involves educators using questions to prompt children to reminisce and tell a story about the learning experience, rather than reading the text. Both approaches can afford children's opportunities for oral language development by enabling children longer turns at talk and by exposing children to educators' complex vocabulary. However, when the reminiscing approach is used, there is evidence that children speak more and produce more complex talk. Conversely, when using the book reading approach, educators take longer turns at talk and use more complex speech. Varying approaches between Book Reading and Reminiscing, thus may provide a richer oral language experience.

Second stories and *pivoting* have also been shown to nurture extended engagement of children in conversations through personal connections (Bateman, 2013; Bateman, Danby, & Howard, 2013). Second stories follow a (first) story that is offered by one person (e.g. "I went to the beach on the weekend"). When children make a personal connection to the first story, it can prompt a telling of a second story, that is, their story (e.g. "I also went to the beach on the weekend and I saw dolphins diving in the water"). *Pivoting* occurs when educators provide opportunities through prompting, storying, and pausing for children to link a story or the immediate context with their own personal experiences (Bateman et al., 2013). By describing their own experiences of an event, educators can prompt children to share their expertise and their experiences and to tell their 'second story'. Second stories and pivoting, create opportunities to talk about and co-construct narratives within conversations (Bateman, 2013). This co-construction of events is particularly useful for helping children make sense of difficult events such as natural disasters (Bateman et al., 2013).

Responding. Educators' responses are critical in enabling continued discussion about a topic (Bateman, 2013; Houen et al., 2018). Through responses to children's initiations and answers within conversations, educators thus support further talk and conversational engagement. The interaction strategies of *pausing in response to children's answers*, *repeating children's answer/gesture,* and *incorporating children's responses into future questions* provide children with (1) an interactional space to contribute to conversations, (2) a signal that educators are listening and not casting judgment on their contributions, and (3) the opportunity for their interests to drive the direction of the conversation (Bateman, 2013).

Conclusion

The current Australasian research provides evidence of a range of strategies that can be used by early childhood educators to foster rich conversations with young children aged 2-5 years. It is important to acknowledge that these studies focus on the efficacy of these strategies within a specific context and are not intended to be formulas for practice. The strategies reviewed should be considered as tools to be drawn on by educators to meet the specific purpose and context as the interaction unfolds.

Future studies, applying experimental methodologies, are needed to enable understanding of the causal relationship between the strategies identified and the promotion of rich conversation within ECEC. Finally, we would like to acknowledge that, due to the scope of the current review, strategies to promote rich conversations in younger children (<2 years) were not included. There are, however, a number of Australasian studies within this younger age range that present additional evidence of strategies for fostering rich conversation within ECEC (e.g. Degotardi, Torr, & Jan, 2018; Degotardi, Torr, & Nguyen, 2016).

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Appendices

Appendix 1. Systematic Review Protocol

Brief background[1]: The early years lay the foundation for oral language development. Strong oral language skills provide children with a platform to communicate effectively, and are an important factor for children's success in formal classroom settings and for life trajectories more broadly. From birth, children's oral language is fostered through social interaction, however the quality of those interactions influence development. Children who are exposed to rich oral language interactions in home and ECEC settings have been shown to have increased vocabulary and expressive and receptive language skills. Rich oral language approaches involve children in sustained conversations and with opportunities to use their expressive language skills (e.g. using gestures, words and sentences) to communicate their thoughts, feelings and ideas, and their receptive language skills to promote comprehension and understanding of language. Approaches that are associated with rich conversations include *sustained shared thinking*, and *dialogic* or *reciprocal* interactions.

Specific review question: What is the current evidence for programs and strategies that support educators to foster rich conversations, including sustained shared thinking and dialogic interactions with young children, aged 2-5 years, in ECEC settings?

Aim: The evidence emerging from this review will be translated into resources to support educators in promoting oral language development in young children attending ECEC.

Methods: Criteria for considering studies for this review

Population (P) - Types of Participants

Inclusion:

- Educators working in ECEC settings including stand-alone kindergartens, long day cares and similar registered service provisions for children 2-5 years.

- Children aged 2-5 years and attending an ECEC service.

- Studies only conducted within Australia and New Zealand

Exclusion:

- Children who have entered compulsory schooling, typically aged 5-6 years or above.

- Children below 2 years of age.

- Educators working in environments and services outside of the ECEC setting, including schools.

Intervention (I)

Inclusion:

- Early childhood educator focused programs and strategies aimed at encouraging or promoting rich conversations, sustained shared thinking and dialogic interactions with young children aged 2-5 years, in ECEC settings.

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[1]*A full background will be included in deliverable including summary of prior similar reviews, justification of focus and Australian versus international context.*

- Programs and strategies may include both formal (programmatic) approaches and less formal approaches such as specific teaching strategies including, but not limited to, open-ended questioning, pauses, responding to children's talk.

Exclusion:

- Strategies and programs developed for children with specific learning difficulties, such as deaf, ASD, specialised programs, language delay, ESL.

Comparison or control (C)

- Where appropriate, control groups will include, but not limited to, those a) not exposed to a program or strategy (e.g. control group without program exposure; absence of open-ended questions), b) active control group where comparison is to exposure to other types of strategies or programs (e.g. open-ended versus close-ended questioning), c) weight-list control (for specific program implementation).

Outcomes (O) - Types of outcome measures

Inclusion:

- Child level outcomes: including increased quantity (e.g. number, opportunities and length) and quality (e.g. dialogic interactions, sustained shared thinking) of interactions with educators and peers.
- Classroom level outcomes: including increased quantity (e.g. number, opportunities and length) and quality (e.g. dialogic interactions, sustained shared thinking) of educator-child and peer language interactions.
- Only outcomes based on direct observation of interactions (e.g. via in-situ standard observations, direct field notes, video and/or audio recording of classroom interactions) will be considered.

Exclusion:

- Outcomes based on report measures such as self-report or parent/educator report (e.g. surveys, interviews with educator/s or parent/s).

Types of studies

The following study designs will be included:

- Intervention studies, including randomised and non-randomised control trials and controlled clinical trials.
- Observational studies, including panel, cohort, and case-control studies.
- Cross-sectional studies.
- Qualitative studies.

Search Strategy

All peer-reviewed journal articles published in full-text in English will be included. Searches will be performed using the following data sources:

- ERIC (via ProQuest)
- ProQuest Education Database

- Scopus (narrowed to education journals only)[2]

- A+ Education

- Campbell Collaboration Library

- Citation lists from papers identified in database searches, Citation lists from grey literature sources including Education Endowment Foundation, What Works Clearinghouse, OpenGrey.

The following search terms will be used for database search:

Detailed search strategies for each of the databases will be based on the following search strategy for ERIC:

(oral* OR spoken* OR talk* OR language* OR verbal* OR speak* OR dialog* OR convers* OR Communicat*) AND (Teacher* OR Educator* OR Carer* OR Staff*) AND (Intervention* OR Program* OR Strateg* OR Support* OR approach*) AND ("Early Education" OR "Early Years" OR "Child care" OR "Preschool" OR "Early Childhood" OR "Pre-School" OR "Kindergarten" OR "pre-K") AND LOC(Australia and "New Zealand")

Limits applied [Peer reviewed, 080: Journal Articles, Language: English, Education level: Early childhood education, Kindergarten, Preschool education]

The ERIC strategy will be adapted for other databases, taking into account the indexing terms and syntax of each database searched.[3]

Data collection and analysis

Selection of studies

Review authors will review the title and abstract of published articles, research papers and findings based on the selection criteria independently. After the title and abstract review, full-text versions of relevant studies will be obtained and each reviewer will examine the details of each to determine if they meet the pre-determined criteria. Finally, reviewers will confer with each other to determine the final list of articles. Disagreement will be resolved via discussion and consensus method, and where necessary with the involvement of additional members of the research team. In the case of a potentially relevant study being excluded, the rationale for this decision will be documented.

Data extraction and management

Data will be extracted from all studies deemed to meet the inclusion criteria for the review, and will be entered into a data extraction form.

We will extract data on:

- Publication characteristics (author, title, year of publication, journal name, type [original research, review paper]).

- Study characteristics (country, number of participants, outcome measures, setting [long day care, kindergarten]).

- Study design (randomised or non-randomised control trial, clinical trial, cohort, experimental, quasi-experimental, case-control, cross-sectional, qualitative, case reports).

- Participant characteristics (age range, mean age, ratio male/female, socio-economic status).

- Analysis type.

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[2] A full list will be recorded and reported within the search strategies for individual databases table.
[3] 3A full list of search strategies and outcomes for each database will be provided within the report.

- Outcome variables including negative and positive outcomes related to children, educators and groups/classroom.

- Results and conclusions (what they found and what conclusion could be drawn).

Assessment of risk of bias in included studies

Risk of bias will be assessed by the Cochrane risk of bias assessment tool. Qualitative studies extracted for review will be assessed by the Critical Appraisal Skills Programme (CASP) Qualitative Research Critical Appraisal Checklist. Two reviewers will independently rate each study based on the relevant Cochrane or CASP tools. Any disagreements that arise will be addressed via a consensus method between the two reviewers. If they are unable to come to a mutual conclusion, the matter will be discussed and resolved with another reviewer.

Reporting

Results of the systematic review will be presented in the form of an easily read and understood report and executive summary with summary of programs and strategies tested and indication of the strength of evidence for each. The results will also inform the development of resources for ECEC educators focused on supporting oral language development in children 2-5 years (see Deliverable 2).

Appendix 2. Systematic Review Detailed Search Terms

Database Search	Search Term	Number Returned
ProQuest – Education collection: Eric and Education database	(oral* OR spoken* OR talk* OR language* OR verbal* OR speak* OR dialog* OR convers* OR Communicat*) AND (Teacher* OR Educator* OR Carer* OR Staff*) AND (Intervention* OR Program* OR Strateg* OR Support* OR approach*) AND ("Early Education" OR "Early Years" OR "Child care" OR "Preschool" OR "Early Childhood" OR "Pre-School" OR "Kindergarten" OR "pre-K") AND loc((Australia OR "New Zealand"))	**1234 (downloaded)**
A+ Education	(oral* OR spoken* OR talk* OR language* OR verbal* OR speak* OR dialog* OR convers* OR Communicat*) AND (Teacher* OR Educator* OR Carer* OR Staff*) AND (Intervention* OR Program* OR Strateg* OR Support* OR approach*) AND ("Early Education" OR "Early Years" OR "Child care" OR "Preschool" OR "Early Childhood" OR "Pre-School" OR "Kindergarten" OR "pre-K") AND (GL:Australia OR GL:"New Zealand")	**846 (downloaded)**
Scopus	(oral* OR spoken* OR talk* OR language* OR verbal* OR speak* OR dialog* OR convers* OR communicat*) AND (teacher* OR educator* OR carer* OR staff*) AND (intervention* OR program* OR strateg* OR support* OR approach*) AND ("Early Education" OR "Early Years" OR "Child care" OR "Preschool" OR "Early Childhood" OR "Pre-School" OR "Kindergarten" OR "pre-K") AND AFFILCOUNTRY (australia OR "New Zealand") AND (LIMIT-TO (EXACTSRCTITLE , "Australian Journal Of Teacher Education") OR LIMIT-TO (EXACTSRCTITLE , "Australian Journal Of Early Childhood") OR LIMIT-TO (EXACTSRCTITLE , "Early Child Development And Care") OR LIMIT-TO (EXACTSRCTITLE , "Australasian Journal Of Early Childhood") OR LIMIT-TO (EXACTSRCTITLE , "Contemporary Issues In Early Childhood") OR LIMIT-TO (EXACTSRCTITLE , "Early Years") OR LIMIT-TO (EXACTSRCTITLE , "Australian Educational Researcher") OR LIMIT-TO (EXACTSRCTITLE , "Teaching And Teacher Education") OR LIMIT-TO (EXACTSRCTITLE , "International Journal Of Early Childhood") OR LIMIT-TO (EXACTSRCTITLE , "International Journal Of Early Years Education") OR LIMIT-TO (EXACTSRCTITLE , "European Early Childhood Education Research Journal") OR LIMIT-TO (	**1471 (downloaded)**

EXACTSRCTITLE , "Journal Of Early Childhood Research") OR LIMIT-TO (EXACTSRCTITLE ,
"Australian Journal Of Indigenous Education") OR LIMIT-TO (EXACTSRCTITLE , "Child Care Health
And Development") OR LIMIT-TO (EXACTSRCTITLE , "Discourse") OR LIMIT-TO (
EXACTSRCTITLE , "Early Childhood Education Journal") OR LIMIT-TO (EXACTSRCTITLE ,
"Journal Of Early Childhood Literacy") OR LIMIT-TO (EXACTSRCTITLE , "Child Language Teaching
And Therapy") OR LIMIT-TO (EXACTSRCTITLE , "Professional Development In Education") OR
LIMIT-TO (EXACTSRCTITLE , "International Journal Of Educational Research") OR LIMIT-TO (
EXACTSRCTITLE , "Educational Philosophy And Theory") OR LIMIT-TO (EXACTSRCTITLE ,
"Australian Journal Of Education") OR LIMIT-TO (EXACTSRCTITLE , "Cambridge Journal Of
Education") OR LIMIT-TO (EXACTSRCTITLE , "Literacy") OR LIMIT-TO (EXACTSRCTITLE ,
"Teachers And Teaching Theory And Practice") OR LIMIT-TO (EXACTSRCTITLE , "Early Education
And Development") OR LIMIT-TO (EXACTSRCTITLE , "International Journal Of Qualitative Studies
In Education") OR LIMIT-TO (EXACTSRCTITLE , "Journal Of Early Childhood Teacher Education")
OR LIMIT-TO (EXACTSRCTITLE , "Learning Environments Research") OR LIMIT-TO (
EXACTSRCTITLE , "Australasian Journal Of Gifted Education") OR LIMIT-TO (EXACTSRCTITLE ,
"British Journal Of Educational Psychology") OR LIMIT-TO (EXACTSRCTITLE , "Education 3 13")
OR LIMIT-TO (EXACTSRCTITLE , "Teaching Education") OR LIMIT-TO (EXACTSRCTITLE ,
"Linguistics And Education") OR LIMIT-TO (EXACTSRCTITLE , "Childhood Education") OR LIMIT-
TO (EXACTSRCTITLE , "International Journal Of Play") OR LIMIT-TO (EXACTSRCTITLE ,
"International Journal Of Research And Method In Education") OR LIMIT-TO (EXACTSRCTITLE ,
"Journal Of Curriculum Studies") OR LIMIT-TO (EXACTSRCTITLE , "Journal Of Research In
Childhood Education") OR LIMIT-TO (EXACTSRCTITLE , "Reading Teacher") OR LIMIT-TO (
EXACTSRCTITLE , "Australian Journal Of Educational And Developmental Psychology") OR LIMIT-
TO (EXACTSRCTITLE , "Australian Review Of Applied Linguistics") OR LIMIT-TO (
EXACTSRCTITLE , "Children And Society") OR LIMIT-TO (EXACTSRCTITLE , "Children S
Geographies")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English"))
AND (LIMIT-TO (SRCTYPE , "j"))

| Campbell Collaboration | (oral* OR spoken* OR talk* OR language* OR verbal* OR speak* OR dialog* OR convers* OR Communicat*) AND (Teacher* OR Educator* OR Carer* OR Staff*) AND (Intervention* OR Program* | **0** |

OR Strateg* OR Support* OR approach*) AND ("Early Education" OR "Early Years" OR "Child care" OR "Preschool" OR "Early Childhood" OR "Pre-School" OR "Kindergarten" OR "pre-K") AND loc((Australia OR "New Zealand"))

Appendix 3. CASP Qualitative Research Critical Appraisal Checklist

Author (Date)	Was there a clear statement of the aims of the research?	Is a qualitative methodology appropriate?	Was the research design appropriate to address the aims of the research?	Was the recruitment strategy appropriate to the aims of the research?	Was the data collected in a way that addressed the research issue?	Has the relationship between researcher and participants been adequately considered?	Have ethical issues been taken into consideration?	Was the data analysis sufficiently rigorous?	Is there a clear statement of findings?
Bateman, A. (2013).	YES	YES	YES	YES	YES	Can't Tell	YES	YES	YES
Bateman, A., et al. (2013).	YES	YES	YES	YES	YES	Can't Tell	YES	YES	YES
Carr, M. (2011).	YES	YES	YES	YES	YES	YES	Can't Tell	Can't Tell	YES
Cohrssen, C., et al. (2014).	YES	NO	NO	Can't Tell	YES	Can't Tell	YES	NO	NO
Cohrssen, C., et al. (2014).	YES	NO	NO	NO	Can't Tell	Can't Tell	Can't Tell	NO	NO
Cohrssen, C., et al. (2016).	YES	YES	Can't Tell	YES	YES	Can't Tell	Can't Tell	YES	NO
de Vocht, L. (2015).	YES	YES	Can't Tell	YES	YES	YES	YES	YES	YES
Houen, S., et al. (2016).	YES	YES	YES	YES	YES	Can't Tell	YES	YES	YES
Houen, S., et al. (2018).	YES	YES	YES	Can't Tell	YES	Can't Tell	YES	YES	YES

Author (Date)	Was there a clear statement of the aims of the research?	Is a qualitative methodology appropriate?	Was the research design appropriate to address the aims of the research?	Was the recruitment strategy appropriate to the aims of the research?	Was the data collected in a way that addressed the research issue?	Has the relationship between researcher and participants been adequately considered?	Have ethical issues been taken into consideration?	Was the data analysis sufficiently rigorous?	Is there a clear statement of findings?
Martucci, K. (2016).	YES	YES	Can't Tell	YES	YES	Can't Tell	Can't Tell	YES	YES
Paatsch, L., et al. (2019)	YES	YES	YES	YES	YES	YES	YES	YES	YES
Reese, E., et al. (2019).	YES	YES	YES	YES	YES	YES	YES	YES	YES