INTERVENTIONS FOR YOUNG READERS: A LITERATURE REVIEW WITH EVIDENCE-BASED STRATEGIES TO PRACTICE

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ABSTRACT

Despite the generally highly individualised educational needs of children, when it comes to reading, three collective patterns of concern tend to arise. Research explicitly highlights the disparity that at-risk children and children with a disability may face in the classroom, as well as the longstanding ripple effects of early language and literacy disadvantage. Stemming from these foundations, the purpose of this literature review is to analyse the impact of literacy intervention strategies on early childhood students in mainstream Australian classroom settings. The paper will utilise formative classroom data in the form of teacher directed lesson observations in a student driven learning setting to obtain evidence of the effectiveness of implemented literacy interventions. Data will be collected through observational notes and a student reading level progression bar graph over a five-week period with literacy intervention lessons being run three times per week for one-hour sessions. There will be a direct emphasis on exploring the importance of primary literacy intervention in the inclusive early learning classroom, with a particular focus on the developmental process of reading in young learners. This review will also explore how the effective development of reading competence shapes learning and social development for years to come; unpacking current research literature and discussing a key selection of evidence-based intervention strategies utilised to bridge learning disparities for young readers.

Keywords: language, literacy, evidence-based intervention

INTRODUCTION

Reading proficiency is essential to the effective development of academic and social aptitude throughout a child’s life and learning career (Diamond & Powell, 2016). Lievan (2019), suggests that success in early literacy begins with a child’s initial and robust exposure to vocabulary. She states, “Although predictive relations are complex, speed and size of early vocabulary as well as the early onset of combinatorial speech have all been implicated in children’s abilities with later academic language and literacy” (p. 17). This reinforces the conjecture that reading success will require adequate language exposure from early developmental stages for a child to enter the classroom with sufficiently developed skills to succeed in reading.

The contextual focus of this literature review is targeted at students of an Early Stage One (ES1) classroom, which includes children from non-English speaking, at risk and special...
needs backgrounds. This review will firstly unpack the interconnected relationship between literacy competence and social and academic success in children’s learning development, specifically in the area of reading. The three common patterns of reading problems as outlined by Spear-Swerling (2015) will then be explored, with directed emphasis on how these suggested patterns can be supported through various practical intervention strategies.

The Relationship between Literacy Competence and Social and Academic Success

When navigating the relationship between language and early childhood literacy development, there is a suggested link between a child’s exposure to specific types of language and their ability to verbally reason as they develop (Rowe, 2019). Looking into the earliest stages of child language development, one study conducted in a sample of 41 fathers from lower socioeconomic backgrounds and their infant children demonstrated poignant findings. It was observed that the fathers who were engaging their child in language methods incorporating who, what, when, where and why questioning exemplified, “...input that elicits a verbal response from the child, relates to vocabulary ability, and likely fosters verbal reasoning abilities” (Rowe, 2019, p. 32). In conjunction, various studies undertaken with preschool aged students found substantive correlations between name writing, alphabet knowledge, phonological skills and a child’s overarching comprehension of phoneme-grapheme association and its connection to the functions and procedures of written text (Altındağ et al., 2021).

It was also found that toddlers who were exposed to a greater level of ‘wh’ questioning in the study, where more responsive and their replies where considerably more complex than their responses to other question forms (Rowe, 2019, p. 32). This clearly reiterates Diamond and Powell’s (2016) analysis that literacy skills developed during the early years provide the foundational elements required for learning to read later in the child’s academic career (p. 125). The presented samples suggest there exists a progression of foundational literacy skill development commencing at early infancy (Rowe, 2019); where a child who has had adequate exposure to specific language early on possesses a significantly higher chance of achieving academic literacy success in their future (Diamond & Powell, 2016).

Continuing into the early schooling years, Cooper et al. (2014) highlight research suggesting that a child’s on-going academic success can be directly linked to various pre-determining factors. One of these significant factors is pre-reading and early reading abilities (Cooper et al., 2014). Cooper et al. (2014) acknowledge that pre-reading skills such as, “oral language, listening comprehension, phonological awareness, print skills, and alphabet knowledge…” (p. 1249) all play a role in the provision of foundational literacy competence, therefore contributing to future academic success. They state, “Numerous studies have found that early prereading skills are predictive of later reading achievement and therefore important targets of intervention” (Cooper et al., 2014, p. 1249). In concurrence with these conjectures, an analysis of 70 longitudinal studies from 2000 measured a direct correlation between children’s reading abilities from pre-school to the second grade (Cooper, et al., 2014). It was found that children who presented lower pre-reading and reading competencies in pre-school were likely to continue progressing at a slower rate than their peers into their childhood (Cooper, et al., 2014).
In conjunction, there has also been research suggesting that there are disparities between children who have, and have not, attended preschool (Akçay & Akçay, 2020). Qualitative research conducted on a sample of 40 pre-school students demonstrated that students who had participated in a pre-school education were able to demonstrate varying verbalised conceptual explanations of the shape of the earth, whereas almost 39% of students who had not participated in a preschool education could offer no explanation or description of the shape of the earth being round (Akçay & Akçay, 2020).

Shifting to the social implications of reading competency in early childhood, Kozak and Recchia (2018) concur that there is a clear relationship between a child’s consistent exposure to reading and the development of social understandings. While it is acknowledged that research in this topic area is often correlational, there has been evidence found that displayed children between the ages of 3-6 years, who had parents and guardians that would read to them, demonstrate higher levels of empathy and an ability to understand and accept that others may think and believe differently to themselves (Kozak & Recchia, 2018).

Martucci (2016) extends these findings through exploration of the development of a child’s theory of mind based on their interactions with early learning educators. Marucci (2016) concurs that one of the most poignant influencers to a child’s theory of mind development is their connection to language and “…naturalistic language ability” (Martucci, 2016, p. 56). To test this conjecture, a case study was undertaken in an early learning setting, examining interactions between teaching staff and pre-school students over a 10-week period. Many observed interactions centred around whole class book readings and explored the “…preliminary conversations linked to the book to be read and conversations occurring at the end of the story reading…” (Martucci, 2016, p. 58). The results indicated that from the 29 recorded events, children exhibited 4227 utterances outside of the actual reading of the text (Martucci, 2016, p. 59). This indicated that a “…high level of bi-directional verbal exchange (conversations) between participants…” was present (Martucci, 2016, p. 59). It was also recognised that conversations were usually connected to the text and were initiated by both students and teachers (Martucci, 2016, p.59). This created an environment where students were granted the opportunity to connect cognitively with the texts and relate textual experiences to their own, thus building their social awareness, empathy and general theory of mind (Martucci, 2016).

Evidently, the discussed research has clearly demonstrated that there is a direct connection between the development of early literacy skills and the ways these skills shape the social and academic aptitude of young children. What is clearly reiterated throughout all presented research is the need for enriched language and adequate exposure to literacy from young ages; and the impact this exposure can have in shaping a child’s social and academic development. The necessity of early inventions is also strongly advocated for and represented as an essential element of successful reading skill expansion in children (Spear-Swerling, 2015). Continuing the discussion, the three common patterns of reading problems as outlined by Spear-Swerling (2015) and the evidence-based inventions that can be utilised to bridge these challenges will now be unpacked.
Reading Challenges and Evidence-Based Support Practices

According to Spear-Swerling (2015), current research can now segregate common reading pattern problems into three main categories. They are, Specific Word Reading Difficulties (SWRD), Mixed Reading Difficulties (MRD) and Specific Reading Comprehension Difficulties (SRCD) (p. 514). Children with SWRD are noted as possessing difficulties specifically reading words (Spear-Swerling, 2015). Children with SRCD demonstrate difficulties with reading comprehension but will usually possess moderate word reading capacity, and children with MRD present a blend of both comprehension and reading difficulty (Spear-Swerling, 2015). According to Spear-Swerling (2015) having a firm understanding of these common problems is beneficial in assisting students with many forms of reading struggles and is also inclusive of students with a disability.

As noted by Diamond and Powell (2016), the processes of developing an understanding of letter and sound relationships, as well as oral language aptitude, are the essential components that early interventions need to be fashioned around. When unpacking difficulties with word recognition, there are various evidence-based supports that can be implemented. With an explicit highlight on sight words, one strategic approach suggests that picture morphing, where a picture is presented and then morphs into its written form, can aid in developing a connection between a written word and its defined meaning (Strauber et al., 2019). Research established that out of various sight word teaching approaches, including placing a picture next to a word and text only methods; picture morphing “…resulted in greater learning than when the picture was next to the word” (Strauber et al., 2019, p. 2) and was later found to present, “greater learning than a word-alone teaching method” (Strauber et al., 2019, p.2).

The implementation of an interactive word wall can also be effective. To successfully integrate this intervention the word wall must include a discussion of the definition of the word, placing the word in context, involve students in the process of using and understanding the word and also incorporate a process of helping them to use the word in various contexts over a period of time (Jackson, 2018). When implemented correctly, interactive word walls have been found to boost student learning and confidence, as well as build their vocabulary knowledge; ultimately contributing to academic successes (Jackson, 2018).

Rostan et al. (2020) discuss the implementation of a multisensory technique to improve spelling, which involves active engagement of the senses to increase early learners’ literacy focus and active participation. A study conducted in 2015 by Jasmine and Connolly incorporated multisensory activities for second grade infants’ students to improve spelling proficiency. The activities included, “…textured writing, wiki sticks, shape writing, whisper phone, skywriting, and human typewriter (Rostan et al., 2020, p.158). Research findings showed students who participated in these activities demonstrated a significant improvement in spelling accuracy, with repetition of these activities being extremely helpful for memorising spelling words learned through these activities (Rostan et al., 2020).

When exploring reading comprehension interventions, Hjetland et al. (2020) reinforce the analysis of Diamond and Powell (2016), acknowledging that reading comprehension is a skill developed from the product of, “…word recognition (decoding) and linguistic (language) comprehension” (p. 2). When focussing on the young reader, Morrow (2015) suggests that adequate reading comprehension starts with the effective cultivation of listening comprehension in the early learning classroom. With the implementation of a read aloud text,
for example, several steps are considered best practice to engage the interest of the child and to allow opportunities for enriched discussion (Morrow, 2015).

Firstly, the teacher needs to set up a ‘preparation for listening’ (Morrow, 2015, p. 83). This includes a thorough introduction of the story and an opportunity for verbal prediction and a visual walk through of the text (Morrow, 2015). Secondly, the story should be initially read with minimal interruptions. Morrow (2015) suggests pausing two to three times and taking time to model responses that will guide the young learner’s comprehension of the text. This process is generally centred around ‘wh’ questioning processes as previously discussed and may include transitions to modelled statements to prompt the thought processes of students (Morrow, 2015).

Finally, implementing dialogue reading technique; a process which cultivates young students substantive use of language in the form of conversation about a written text, is an integral part of supporting explicit conversation, allowing the student to draw deep meaning and understanding from a text (Morrow, 2015). As acknowledged by Snell et al. (2015), “Simply reading the text of books aloud appears to be…a…insufficient strategy to building vocabulary” (p. 562). The process itself must therefore be strategically shaped to evoke enriched discussion, where students are provided opportunities to draw on and develop their vocabulary. Dialogue reading technique fulfils this criterion as it incorporates various types of strategic prompts such as recall prompts, where a student is encouraged to recollect and/or sequence events from the text (Morrow, 2015) and ‘wh’ prompting, where students are asked selective questions which encourages, “…them to retrieve words from their own vocabulary store to express their opinions” (Morrow, 2015, p. 85).

When assessing MRD difficulties, Spear-Swerling (2015) suggests a combination of phonetic intervention, decoding opportunities and targeted interventions specific to the child’s individual comprehension weaknesses. When attempting to capitalise on a student’s strengths in order to bridge learning gaps, it is also beneficial to engage them in topics of personal interest; with this approach being acknowledged as effective practice when working with students with MRD (Spear-Swerling, 2015). Lanou et al. (2012) reiterates the effectiveness of this strategic approach for learners with autism spectrum disorder. They state, “Interventions can be more motivating-and effective-when teachers remember the importance of considering individuality and choose to channel the power of each student’s natural strengths and weaknesses (p. 181).

What is evident in the discussed research is that the most effective responses to intervention (RTI) practices in an inclusive classroom capitalise on early intervention, individualised and small group approaches; as well as attention to engaging the personal interests of students throughout learning processes (Gersten et al., 2017). It is also overwhelmingly clear that early literacy cultivation is essential to the effective progression of future academic and social competence; and a key determiner of future positive and adverse outcomes in the classroom for a student (Diamond & Powell, 2016). It is therefore critical that intervention processes adopt multifaceted approaches to explicit teaching frameworks, which should consider explicit, individualised and small group approaches as an integral component of best teaching practice (Gersten et al., 2017).
Objective

The objective of this literature review is to examine the effectiveness of literature-based tiered intervention strategies on reading progression levels in an ES1 inclusive learning classroom.

METHODOLOGY

The evidence-based strategies to be discussed are intended to be applied in an inclusive mainstream kindergarten classroom context. The discussed strategies are being applied in a public school in the western regions of Sydney. An ES1 class consisting of twenty-two students with an age range of four to six years. The students of this classroom come from diverse cultural backgrounds, with three children (13%) coming from non-English speaking homes. There is male student with a level one autism diagnosis. There are six other students (26%) who come from English as a Second Language (ESL) backgrounds. The classroom also consists of students with behavioural and attendance concerns. This educational setting is situated in a lower socio-economic community, with a high rate of unemployment. Because of the diverse needs of the students within this classroom, there is the provision of a full time Student Learning Support Officer (SLSO) who can implement requested learning support interventions on a consistent basis.

The strategies which will be outlined have been implemented based on formative and diagnostic classroom data. The tiered interventions are applied with the intent of generating an enriched early learning environment that is conducive to quality early reading development skillsets; where application of small group and personalised support is thoughtfully planned out and strategically implemented. The areas of intervention focus include oral language, sight word recognition and comprehension development.

Data Analysis

A preconstructed bar graph released from the New South Wales Language, Learning and Literacy (L3) intervention division was used to record student progression over a five-week period. In conjunction, teacher observational notes were recorded on each individual student during their group reading sessions and their reading level progression was adjusted accordingly. The bar graphs reflect the student’s original week fifteen level and demonstrates the progression on their individual levels after the five-week period concludes. The two graphs demonstrate students reading progression from week fifteen to week twenty of their initial year of schooling.

Tier 1 Intervention Strategies

To aid in bridging recognised literacy gaps for identified student groups, the following strategies have been carefully selected to offer support of varying aptitudes, aiding in the effective implementation of a tier 1 intervention approach. These strategies offer a whole class generalised approach.
**Strategy 1:** As a part of a K-2 Early Action for Success (EAfS) literacy intervention, students will engage in whole class shared reading sessions with a strategically selected quality text three/four times per week (NSW Department of Education, 2014). These sessions are designed to evoke quality classroom discussion and give students ample opportunity to develop their vocabulary, oral language and comprehension skills through thoughtfully guided text analysis. As noted by Snell et al. (2015) quality reading sessions are effective in the development of language and vocabulary as a quality book provides exposure to types of language that are more complex than what is heard in everyday environments. In addition, Snell et al. (2015) identifies that exposure and discussion surrounding quality illustration also provides opportunity for drawing connections between illustration, text and meaning; as well as exposure to interesting words and thought-provoking visual narrative. Implemented shared reading sessions will be strengthened through whole class quality discussion, think, pair, share opportunities and teacher prompted direction.

**Strategy 2:** In line with the protocols of Language, Learning and Literacy (L3), the classroom is to be set up as a buildable learning space where sights words, quality texts and other related activities are available for student use and are mindful in their implementation (Department of Education, 2014). The word wall is to be added to progressively, so students can take part in the modelled processes of identifying a word, sounding it out and identifying its meaning. This process is to be consistently modelled by the teacher, ensuring students recognise the words and know how and where to access these words when required. Sight words should be included in the process. The teacher will model sounding out of the selected word, and have students repeat the process. Learning activities are to be strategically implemented during reading group rotations to assist with peer interaction and the solidification of learned concepts.

**Tier 2 Intervention Strategies**

Tier 2 intervention strategies will centre upon small guided reading group lessons in the classroom. These strategies are offered to students who may typically fall behind in general classroom instruction (Gersten et al., 2017).

**Strategy 1:** During guided reading, students will be required to participate in small group-based reading sessions with the teacher. In adherence to the suggestions of Weiss (2013), groups need to be well structured and consist of positive affirmations for students. Each student will be introduced to their levelled reader and given opportunity to ask questions about the text and make predictions about the story. The teacher will do a read through and stop to discuss selected illustrations with students. The teacher will then model the lesson goal for students. This may be pointing to each word or attempting to sound out words they do not recognise using taught strategies. Any goal introduced by the teacher must be explicitly modelled so students understand what they are trying to achieve. Goal charts are to be implemented to give students a way to track their success. Once students have read their text, the teacher will engage in strategic questions about the text and allow adequate structured response times for students (Weiss, 2013). Student’s may then solidify their understanding by completing a learning task specific to the text once they return to activity rotations. As noted in the NSW Literacy and Numeracy Action Plan (2014), guided reading as part of the Language, Learning and Literacy (L3) protocol, must be implemented by a classroom or specialist teacher and is an ample example of a Tier 2 intervention strategy.
Tier 3 Intervention Strategies

Tier 3 strategies will incorporate more intensive intervention with the implementation of individual learning plans and specialist one-to-one support with the classroom SLSO. Children receiving this type of intervention are identified as showing little progress with prior tiered intervention strategies (NSW Department of Education, 2014).

**Strategy 1:** These interventions will incorporate one-to-one support with the classroom SLSO. As noted by the NSW Department of Education (2020), part of the role of the classroom SLSO is to aid the classroom teacher in implementing ILP’s, therefore making their active role in the Tier 3 intervention process invaluable. Following guided reading groups, selected students identified as requiring additional support will be taken to complete individually assigned word work, language and comprehension-based activities. The classroom SLSO will be given individual learning programs (ILP’s) to follow for target students. The ILP’s will incorporate learning goals and will integrate topics of individual interest for each student. The SLSO will be required to record observations during these sessions to discuss with the classroom teacher. Oral language activities will consist of visual stimulus’ chosen by the teacher and the SLSO will engage select students in discussions regarding the nominated visual. Finally, comprehension activities will consist of simple levelled readers that have already been read with the classroom teacher; where the student practices strategies they have learned in guided reading to continue developing their decoding skills and engaging in vocabulary-expanding text discussions. These programs are to be carefully monitored and adapted by the classroom teacher and both the classroom teacher and SLSO will engage in regular professional liaisons to ensure individual interventions are on track and being modified appropriately.

**FINDINGS**

The following table depicts student reading levels at the commencement of the five-week intervention strategy process. According to Table 1, 95% of students are still needing to achieve the required benchmark of a level 6 which is the set standard for week 20 progression. The results also depict a baseline for the commencement of literacy interventions which will be implemented during reading group session in the coming five-week period.
Table 1
Reading Levels Week 15

Table 2 demonstrates the progression of students over a five-week period after the implementation of tier-based interventions. The table reveals 40% of students reaching their benchmark goal, with 36% one level away from the benchmark. 13% of students are below benchmark, with two of these students being flagged as attendance concerns, which can be identified as a hindrance to progression.
DISCUSSION AND IMPLICATIONS

The data demonstrates the effectiveness of tiered based literacy intervention with an individual student progression success rate of 100%; where all students increased by a minimum of one reading level. While only 40% of students reached the required benchmark, all students moved towards the benchmark, consolidating the effectiveness of the implemented strategies.

To continue to see progression, tier-based intervention should be consistently applied to consolidate student knowledges and reinforce newly learned concepts (Morrow, 2015). It was observed during the five-week period that students showed greater confidence and retention of learned concepts when reading group activities were repeated and devised to draw deep understanding from a text.

Furthermore, through teacher observation, findings showed that students were most engaged in their reading when they were offered consistent positive reinforcement and were given a clear and directed goal to work towards. Students who could actively monitor their individual progress demonstrated higher levels of engagement with the text and greater determination to achieve their individual reading goals. These goals should be discussed with the student and modelled by the teacher to the student, making progress achievable and measurable (Carmody, 2019).

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**Table 2**

*Reading Levels Week 20*

![Table Image]

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CONCLUSION

As discussed through the reviewed literature, fundamental literacy development begins long before a child enters the classroom. When adequate levels of support have not been provided to a child in their earliest years, educators can implement strategic literacy interventions within the early learning classroom to aid with the bridging of educational gaps; giving every child a revived opportunity to successfully progress and achieve literacy competence. Through consistent application of the discussed intervention strategies, each early childhood student is given access to sound pedagogical practice and provided comprehensive opportunity to progress and thrive.

REFERENCES


