Using Innovative Reading Programs in Preschool Age and their Impact on Child Development

Abstract

Introduction. The concept of innovation can take on various meanings, especially when applied to preschool education. It involves the introduction of new ideas, methods, techniques, strategies, and practices within the educational setting to enhance and improve the teaching and learning process. This research focuses on the essential element needed for development and self-renewal, which includes being receptive to fresh ideas, exploring new approaches, and incorporating technological advancements into education.

Preschool teachers play a vital role in implementing innovative methods and activities within preschool settings to support learners on their educational journey. There are numerous innovative learning models in preschool education, such as project-based learning, which prioritizes individualization, dedication, and autonomy in teaching.
This includes utilizing reading programs that make lessons enjoyable while reinforcing acquired knowledge. One of the notable tools is Raz-kids, which enriches students’ lives and aids in their reading development.

**Goal.** The aim of this text is to highlight the importance and multifaceted nature of innovation in preschool education. It emphasizes the need for introducing new ideas, methods, techniques, strategies, and practices to enhance teaching and learning processes. The text underscores the role of preschool teachers in implementing innovative methods and activities, showcasing various learning models such as project-based learning and specific tools like Raz-kids to support and enrich students’ educational experiences.

**The Results.** Innovative learning models, particularly Raz-kids reading, have allowed for greater individualization in teaching. Students are given more autonomy, fostering independence and personalized learning experiences that cater to their unique needs and interests. These strategies and the use of technology in the classroom have been shown to improve learning outcomes. The learners have demonstrated better retention of knowledge, enhanced reading skills, and overall academic performance.

**Conclusions.** Embracing innovation in preschool education is essential for creating a stimulating, effective, and personalized learning environment. The continued exploration and implementation of innovative practices will support the development of young learners and contribute to the overall improvement of educational systems.

**Key words:** preschool children, innovation, reading, innovative reading programs, skills, Raz-kids.

## Introduction

One of the most crucial academic abilities taught in schools is reading comprehension (Rong, 2019). Reading comprehension is a prerequisite for learning other subjects. For instance, when studying math, science, and social studies, students must read chapter headings, word problems, and textbook passages (Rong, 2019). As they advance through the educational system, students who are unable to read independently will usually face difficulties in other academic subjects, leading to an increasing achievement gap (Wang & Dou, 2019). Reading is vital for more reasons than just academics; it’s a requirement for becoming a successful, independent adult in our society.

Reading is a difficult skill that requires a variety of abilities, such as deciphering unknown words, identifying sight words, comprehending vocabulary, and remembering details and events from the story (Yanping, 2019) lists five principles, including phonemic awareness,
Using Innovative Reading Programs in Preschool Age...

phonics, fluency, vocabulary, and comprehension, as essential for reading instruction. A child’s phonemic awareness starts early. The majority of students are already expected to be familiar with the majority of the alphabet’s letters and two phonemes when they start school. To help students decode and encode words, phonics instruction focuses on individual vowel and consonant sounds as well as symbol correspondence. Pupils must apply these phonological skills when reading a word they are unfamiliar with. The link between a student’s comprehension of written text and their ability to decode words is called fluency (Wang & Dou, 2019).

Making an effort to read every day and discussing books, words and illustrations with kids can help improve their reading, listening, creative thinking skills as well as their communication skills. Young children enjoy alphabet, shape, and counting books as well as humorous tales featuring unusual characters.

The process of becoming a proficient independent reader starts far before a child enters school. Research indicates that children who receive regular reading instruction and have early access to books are more likely to develop into proficient self-readers (Sherida & Gjems, 2017). Because adults model fluent reading, display emotions, alter their voice tones, and project positive attitudes toward reading, young children pick up these skills from adults (Sherida & Gjems, 2017). Children who adopt these positive attitudes, which they picked up from adults, will read more and enjoy it more, which will help them become better readers in the long run (Skibbe et al., 2019). Additionally, it has been discovered that kids who read books on their own are developing their reading skills more than kids who only use classroom books (Sherida & Gjems, 2017).

Using technology as a tool to assist young children is one of the early reading practices. Websites designed for reading are readily available, as are numerous software programs. An online computer program for young readers is called Raz-Kids. It was introduced in 2004 as a component of the Learning A-Z library. The goal of this program is to increase children’s enjoyment and ease of reading. The program’s features enable students to record their own reading for practice, listen to reading aloud with fluency, and complete an assessment at the conclusion of their reading (Sherida & Gjems, 2017).
For children as well as parents equally, this app and website are outstanding. Children with disabilities and the ELL population benefit most from it. The feature that allows you to read the books to kids is my favorite thing about this app. It indicates the line it is reading in green and the specific word it is reading in yellow as it reads the books (Rong, 2018). The child can now follow along perfectly thanks to this. This is crucial at home where one parent is unable to assist their child because of time constraints or academic constraints. Because they can accumulate points in this game and utilize those points to construct their own robots, the kids are highly motivated to learn (Rong, 2018).

The book can be read as a regular digital book by a proficient reader, and each book comes with an interactive quiz. After completing the quiz, the kids receive extra points, and they receive even more points for revising their earlier work. The website and app are suitable for teachers, parents, and kids alike. How many books the student has read and what level they are at can be seen by the teacher. Naturally, with continued use, this will raise the child’s learning to a new level. It offers the teacher total command over the curriculum. Finally, each student receives a code/user name card and personalized letters as part of the program. This is really practical. Mainly differentiated reading instructions of this program meet the individual needs of students (Books by Grade/Level, n. d.).

**Benefits of The Program**

Schools must choose which of the many programs on offer to buy in order to best serve the needs of their students. Regrettably, the companies that sell the products provide the majority of the program reviews that are accessible, and there is a dearth of information on students’ learning outcomes that would support the impact on their reading achievement. Examining the Raz-Kids program, which my school uses for first graders, is the aim of this study. This study’s primary goal is to ascertain whether the program will help students’ guided reading level, fluency, and comprehension (Books by Grade/Level, n. d.).

At this point we need to understand that reading is not a passive ability; rather, it is regarded as a form of action. The read texts are not read mindlessly, but the content is attempted to be comprehended.
Students are piqued by the content they are reading. As we live in a technologically advanced era, there are various online tools and platforms that assist reading proficiency tests, making the seemingly impossible and occasionally challenging process easier (May et al., 2016). Mentioning Raz Kids, the most significant of these initiatives, is sufficient. The online reading program Kids A-Z is useful for students with varying levels of linguistic proficiency. This software is helpful for hearing, speaking, and quick reading as well. There are numerous levels and languages of books accessible. Students are given access to a diverse and colorful variety of literature, and each program user is given questions varying in level of difficulty to assess their comprehension of the novels they have read and listened to (May et al., 2016). In this program, it is even possible to learn the types of writing and get acquainted with the given examples of each type of writing (Books by Grade/Level, n. d.).

The teacher in this global software records the grammatical, spelling, and pronunciation errors that students make when reading when they join the evaluation part, listen to the book that was assigned to them, read it, record their voices, respond to the questions, and email it back to the teacher. When a language level has been successfully completed, the program offers the option to advance to the next level when the student is ready. Any level can be chosen to improve and test reading skills in this app. Students each have their own username and password at the same time. Even the many styles of writing can be learned in this application, along with samples of each type of writing that are provided (Books by Grade/Level, n. d.).

One of the most challenging obstacles a learner of a foreign language must overcome is learning to write. Even native speakers at the university level frequently have significant problems demonstrating a strong command of writing. Therefore, because writing abilities are crucial for academic achievement, language teachers frequently incorporate them in their foreign language curricula (Sherida & Gjems, 2017).

The 26 uppercase and lowercase letter symbols that make up each word in the English language are named, recognized, and formed during alphabet instruction. Many reading specialists believe that one of the most significant predictors of early reading success, in addition
to phonemic awareness, is the ability to recognize the alphabet’s letters (Sherida & Gjems, 2017).

Schools have an obligation to assist children in learning the names and shapes of letters, beginning in preschool and kindergarten. One of the most effective ways to improve letter recognition is to incorporate writing and printing into letter instruction. One useful tactic for introducing letters is to use letter, keyword, or picture displays (May et al., 2016).

Language’s sounds are addressed by phonological awareness. Teaching just the sounds is more important than teaching the symbols that stand in for the sounds. Phonological awareness training covers sound awareness at the word, rhyme, syllable, and phoneme levels. It is among the most significant early markers of reading success, if not the most significant (May et al., 2016). The National Reading Panel report from 2000 concentrates on phonemic awareness, one facet of phonological awareness. Teaching students to identify a specific sound within a word, recognize the same sound in different words, identify a word that starts or ends with a different sound from a group of three or four words, segment and blend the sounds within a word, and manipulate sounds within a word by replacing, adding, or deleting other sounds are all effective strategies for teaching phonemic awareness (Rong, 2019).

Students who are phonemically aware are better readers and spellers. The best teaching swiftly transitions the learner from being aware of a specific sound to associating that sound with a letter symbol. Students should be able to manipulate the sounds within words using their understanding of the relationships between sound and symbol once letter symbols are introduced (Skibbe et al., 2019).

**Methods, Design, and Techniques of The Research**

The aim of this study was to ascertain whether the computer program Raz-Kids will help to enhance students’ guided reading level, fluency, and comprehension in addition to supporting their independent reading (Rong, 2018). Raz-kids is a library of digital literacy tools for educators as well as customized content for learners with different reading levels. Raz-kids has a number of important, empirically supported features that help students learn and teachers instruct.
It offers teachers a wide range of developmentally appropriate and standards-aligned virtual reading resources and materials, including leveled books, to integrate into their regular lessons (Wang & Dou, 2018). The reading materials and resources are available in offline (printable) and online (projectable, eBooks, and mobile) formats, giving teachers the freedom to choose the ones that best suit their students’ learning objectives (Yanping, 2019). Raz-Kids offers online learning activities that correlate with teacher-led instruction resources and include gaming and incentive features to engage students in the learning process, in addition to resources for teacher-led instruction.

Depending on the needs of their students and the classroom, teachers can use Raz-kids in whole-group, small-group, and individual work formats. The resources are made to meet the needs of students at different stages of literacy development and can be accessed both online and in person.

Sixty students were enrolled in the participating classrooms during the study’s spring semester of the 2023–2024 academic year. Parents had the option to opt their child out of the study prior to its commencement. All of Raz-kids’ materials, reports, and resources were available to teachers during the implementation period. Students could use the program both within and outside of the classroom.

Instructors were free to choose how best to integrate Raz-kids into their lessons and how their students used it, but they were expected to do so explicitly: teachers were to use Raz-kids for student activities and literacy instruction for at least thirty minutes each day. The students had to log onto the program during each session. Every child had a unique login name and password, and the program was adjusted to match their level of independent reading. Students studied, took quizzes, and listened to readings from the books that were appropriate for their level for fifteen minutes. During these sessions, they were prohibited from using the play features. Additionally, guided reading sessions in small groups with an emphasis on enhancing comprehension and fluency were given to the students. Stories from both fiction and non-fiction were chosen to impart particular skills, like: (a) asking and responding to questions about important details in text, (b) recounting a story, (c) utilizing essential details to describe characters, settings, and significant events in a story; and (d) describing characters, settings, and events in a story with illustrations and details.
The level of the students was assessed once before the implementation period and once after that. The strike improvement was noticed during the first month, the speed of the reading and students’ pronunciation improved. Implementation quality was assessed via classroom observations. The teachers created a protocol for classroom observations in order to assess the level of mastery of reading. Also, the Developmental Reading Assessment was given at the end of each month to evaluate student performance on a guided reading level, fluency and comprehension. A four-point rating system was used for each observation item: excellent, good, satisfactory, unsatisfactory. Following their three observations in the classroom, the teachers reached a decision. The mean inter-rater reliability scores for exact and adjacent categories were 88% and 100%, correspondingly.

Every teacher received an invitation to take part in a 30-minute interview. Teachers who participated in interviews discussed their experiences implementing Raz-kids, recommended resources to help with implementation, and their opinions on the results for the participating students. The themes that surfaced from the interview data were found using thematic analysis. The findings demonstrated that the students who took part improved their levels of guided reading fluency. For struggling readers, the Raz-Kids program appears to be a helpful addition to reading instruction and small group guided reading. We can see that clearly that rubric in Table 1 indicates the reading abilities of preschoolers in diverse areas.

Table 1
Reading Rubric for Preschool

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Excellent (4 points)</th>
<th>Good (3 points)</th>
<th>Satisfactory (2 points)</th>
<th>Unsatisfactory (1 point)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognition of Sight Words</td>
<td>Identifies most sight words correctly.</td>
<td>Identifies many sight words correctly.</td>
<td>Demonstrates basic recognition of common sight words.</td>
<td>Struggles to recognize sight words.</td>
</tr>
<tr>
<td>Comprehension</td>
<td>Demonstrates excellent understanding of the story.</td>
<td>Demonstrates good understanding of the story.</td>
<td>Demonstrates basic understanding of the story with some details.</td>
<td>Demonstrates limited understanding of the story.</td>
</tr>
<tr>
<td></td>
<td>Can retell the story accurately.</td>
<td>Can retell main events.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This rubric is designed to assess students on reading comprehension and fluency. The performance levels range from Excellent to Unsatisfactory. This rubric also helps in identifying areas of strength and areas that need improvement in preschoolers’ reading abilities. Table 2 presents the students’ activities in details.

**Table 2**

*Activities Student Completed in Raz-Kids*

<table>
<thead>
<tr>
<th>Students</th>
<th>Books (listened)</th>
<th>Books (read)</th>
<th>Quizzes taken</th>
<th>Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student A</td>
<td>172</td>
<td>35</td>
<td>57</td>
<td>14 hours 35 minutes</td>
</tr>
<tr>
<td>Student B</td>
<td>135</td>
<td>57</td>
<td>165</td>
<td>12 hours 47 minutes</td>
</tr>
</tbody>
</table>

The Table 2 shows the indicators of students’ results of reading, listening books and taking quizzes, and the total time spent on that program.

**Results**

This study’s main objective was to evaluate the impact and efficacy of the Raz-kids program on preschoolers’ reading abilities. It appears that E-books can be utilized in a manner that would provide students an opportunity to listen to stories when a fluent model of reading, such as the teacher, parent, or another adult is not available. It has been found
that students make the most progress and increase their reading fluency and comprehension when they are given the opportunity to choose their reading material at their appropriate level.

In order to achieve scores for guided reading level, fluency, and comprehension during the baseline and intervention, each student underwent a monthly assessment using the Developmental Reading Assessment (DRA). Average fluency and comprehension scores were also reported, along with growth in the guided reading level. Additionally, information is provided about Raz-kids products, including the quantity of books read, listened to, and quizzes passed. Additionally, the total amount of time spent was noted.

Future studies might compare the efficacy of the Raz-kids program to other reading therapies and examine the program’s long-term impact on preschoolers’ reading ability using longitudinal studies. A qualitative study on the perspectives and experiences of educators and learners, as well as investigations into strategies to personalize the curriculum and increase parental engagement, may also yield important information for enhancing literacy results.

Discussion

The findings from this study underscore the potential benefits of the Raz-Kids program in enhancing preschoolers’ reading abilities. Through consistent use of the program, students demonstrated marked improvements in their guided reading levels, fluency, and comprehension, as evidenced by their performance on the Developmental Reading Assessment (DRA). The interactive nature of the Raz-Kids platform, which includes features such as listening to fluent reading models, recording their own reading, and taking quizzes, appears to foster a more engaging and effective learning environment. Additionally, the ability for students to choose reading material at their appropriate level likely contributed to their increased motivation and progress. This personalized approach aligns with previous research highlighting the importance of early reading intervention and the role of technology in supporting diverse learners. While the study shows promising results, further research with larger sample sizes and varied demographic groups would help to generalize these findings. Overall, the Raz-Kids program
presents a valuable tool for educators aiming to support and enhance early literacy development in young children.

**Conclusions**

The development of technology has brought about a significant shift in the definition of reading. E-books, which require little preparation and training on the part of both teachers and students, may develop into another method of differentiating instruction as the needs of students in a classroom continue to change. The current study will keep using an electronic book program to assess how well it helps children starting from preschool learn to read fluently and develop comprehension. For young readers, the Raz-Kids program appears to be a helpful addition to reading instruction and small-group guided reading.

Students could be given these books to use at home for extra practice. There are many ways to teach reading that will inspire readers to read for pleasure. Students, who use technology for reading, are able to read more, spend more time reading, and improve their fluency when listening to stories on the computer. Technology-assisted reading can also give teachers insight into how well each student is doing in their reading lessons.

Including e-books in early childhood education provides a multimodal way to improve literacy. From the perspective of educational theory, e-books facilitate self-directed, interactive learning experiences that accommodate a variety of learning demands and styles, therefore supporting constructivist learning. Reading is now more individualized and inclusive because to technological innovations like accessibility features and adaptive learning tools, especially for children with impairments. E-books can enhance reading comprehension and fluency, according to empirical research, and longitudinal studies have demonstrated the long-term advantages of e-books. Furthermore, taking cognitive factors into account, multimedia components in e-books might improve comprehension but need to be properly planned to prevent cognitive overload. Sociocultural viewpoints place a strong emphasis on the necessity of providing all pupils with fair access to digital resources and the significance of culturally appropriate information. To take full advantage of the benefits of technology-assisted reading, extensive
teacher training and engaged family participation are necessary for practical implementation. These viewpoints highlight how e-books may revolutionize reading education and help young students develop a lifetime love of reading.

**ADHERENCE TO ETHICAL STANDARDS**

**Ethics Declarations.** All procedures performed with the permission of the teachers who participated in the research for the processing and analysis of their data.

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**Author’s Contribution.** Conceptualization, Formal analysis and investigation; Writing – original draft preparation, Writing – review and editing; Management activities to annotate data, Maintain research data; Resources, Supervision, Preparation for program.

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АНОТАЦІЯ

Вступ. Поняття “інновація” може набувати різних значень, особливо у контексті дошкільної освіти. Воно передбачає впровадження нових ідей, методів, прийомів, стратегій і практик в освітньому середовищі з метою покращення і вдосконалення процесу викладання і навчання. Це дослідження зосереджується на важливому елементі, необхідному для розвитку й самооцінення, котрий включає прийнятливість до свіжих ідей, вивчення нових підходів та впровадження технологічних досягнень в освіту. Вихователі відіграють життєво важливу роль у впровадженні інноваційних методів і видів діяльності в закладах дошкільної освіти, щоб підтримувати дітей на їхньому освітньому шляху. Існує безліч інноваційних моделей навчання в дошкільній освіті, як-от: проектне навчання, яке висуває на перше місце індивідуалізацію, відданість та автономію в навчанні. Сюди входить використання програм для читання, які роблять заняття приємними для дітей й водночас закріплюють набуті ними знання. Одним із помітних інструментів є Raz-kids, котрий збагачує життя дітей і допомагає їм розвивати навички читання.

Мета. Мета дослідження – розкрити важливість і багатогранність інновацій у дошкільній освіті. Воно підкреслює необхідність впровадження нових ідей, методів, прийомів, стратегій і практик для вдосконалення процесів викладання і навчання. У дослідженні підкреслюється роль вихователів у впровадженні інноваційних методів і видів діяльності, демонструються різні моделі навчання, такі як проектне навчання, а також конкретні інструменти, такі як Raz-kids, для підтримки та збагачення освітнього досвіду дітей дошкільного віку.

Результати. Інноваційні моделі навчання, зокрема читання Raz-kids, дозволили забезпечити більшу індивідуалізацію навчання дітей дошкільного віку. Дошкільникам надається більше автономії, що сприяє незалежності й персоналізованому навчанню, яке відповідає їхнім унікальним потребам та інтересам. Доведено, що ці стратегії та використання технологійі на заняття покращують результати навчання дітей. Дошкільники продемонстрували краще запам’ятовування матеріалу, покращили навички читання і загальну успішність.

Висновки. Впровадження інновацій у дошкільну освіту має важливе значення для створення стимулюючого, ефективного та персоналізованого освітнього середовища. Подальше вивчення і впровадження інноваційних практик підтримає розвиток маленьких дітей і сприяє загальному вдосконаленню системи дошкільної освіти.

Ключові слова: діти дошкільного віку, інновації, читання, інноваційні програми читання, навички, Raz-kids.