Volume: 11 Issues: 83 [June, 2026] pp. 85 - 91
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: academicinspired.com/jised
DOI: 10.55573/JISED.118307

EXPLORING TEACHERS' ACCEPTANCE OF PHONICS LEARNING APPLICATIONS IN PRESCHOOL EDUCATION: AN EDUCATIONAL PSYCHOLOGY NARRATIVE REVIEW

Halimatussaadiah Abd Latiff [1]
Tajul Rosli Shuib [2*]

[1]Faculty of Human Development,Sultan Idris Education University, Malaysia
(Email: p20241000056@siswa.upsi.edu.my)
[2]Faculty of Human Development,Sultan Idris Education University, Malaysia
(Email: tajulrosli@fpm.upsi.edu.my)
*Corresponding author: tajulrosli@fpm.upsi.edu.my

Article history
Received date : 3-3-2026
Revised date : 4-3-2026
Accepted date : 8-6-2026
Published date : 9-6-2026

To cite this document:
Abd Latiff, H., & Shuib, T. R. (2026). Exploring teachers' acceptance of phonics learning applications in preschool education: An educational psychology narrative review. *Journal of Islamic, Social, Economics and Development (JISED),* 11 (83), 85 - 91

Abstract: *The purpose of this narrative review is to examine the factors that contribute to teacher's acceptance of phonics applications for preschool education from an educational psychologist's viewpoint, specifically examining the factors which influence teacher's decision to accept and utilize these tools. Phonics applications are being utilized more frequently in order to support early literacy; however, acceptance of these tools by teachers varies. Factors influencing teachers' acceptance include concerns about the developmental appropriateness of technology in preschool settings, the potential for overuse of screen time during preschool, the lack of confidence among teachers in utilizing technology, and their belief in play-based pedagogy. Although there is extensive literature regarding technology acceptance, there is limited research on educational psychology factors in preschool phonics settings. As a result, a narrative review of existing empirical and theoretical literature in education, educational psychology, and educational technology databases was conducted along with a screening of reference lists. Teacher acceptance of phonics applications is a fourth-order process comprising five factors: the perceived usefulness of phonics application to teachers' teaching practices; perceived ease of use for the teachers; pedagogical beliefs concerning the phonics application and its implementation into their instructional practices; self-efficacy as a phonics application user; and emotional reaction to technology use. The ideas behind phonics apps (that they could be more engaging than traditional methods, and could allow for more personalized instruction) could be a boon in the classroom, but there still is some contention over preschool development and further long-term research is needed on these issues as well. The current review synthesizes the intersection of educational psychology and early literacy technology research by providing timely information needed by researchers and policy makers to develop policies and programs to help equip early childhood educators with the necessary skills to incorporate phonics applications into the early childhood curriculum.*

Keywords: *Teachers' acceptance, Phonics learning applications, Preschool education, Educational psychology, Early literacy*

Volume: 11 Issues: 83 [June, 2026] pp. 85 - 91
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: academicinspired.com/jised
DOI: 10.55573/JISED.118307

Introduction

The aim of this narrative review is to explore the different factors affecting preschool referred to henceforth as "early" though it may have a wider definition, teacher acceptance of applications purporting to teach phonics in light of some common educational psychology theories and models, focusing on the factors which can act as barriers to the decision to accept and use the applications and some of the influences on this process. Although phonics apps are increasingly being used to support early literacy, their acceptance by teachers is mixed. Factors that influenced teachers' acceptance included the potential developmental inappropriatness of technology in preschool, the risk of excessive screen time in preschool, teachers' lack of confidence to use technology, and the belief that play-based pedagogy is more important than technology.

While technology acceptance has been well documented, few studies have focused on educational psychology factors in preschool phonics contexts. To this end, we performed a narrative review of existing empirical and theoretical literature available in education, educational psychology, and educational technology databases as well as screening reference lists. Teacher acceptance of phonics application is a fourth order construct with five dimensions: perceived usefulness the degree to which a teacher believes that using a phonics application will enhance his or her teaching performance, perceived ease of use the degree to which a teacher believes that using a phonics application will be free from effort, pedagogical beliefs about the phonics application and its integration into their classrooms, phonics application user self-efficacy, and emotional reaction to technology use.

The ideas behind app-based phonics instruction that it might be more engaging than traditional methods, and that it might enable more tailored instruction could attract serious attention in the classroom, but there is some debate about preschool development, and more longitudinal research on both these issues will be needed as well. The current review combines the available educational psychology and early literacy technology research into a timely summary that offers researchers and policy makers specific information regarding the organization of technology-based talking-words phonics applications for use in the early childhood curriculum, which is needed in order to articulate policy and develop programs for the equipping of early childhood educators with the requisite skills to implement phonics applications into the early childhood curriculum.

Method

The purpose of this narrative review was to integrate existing research on how teachers perceive phonics learning applications in preschool education (Sarkar & Bhatia, 2021; Greenhalgh et al., 2023), in order to provide an interpretation of the evidence based on an educational psychology perspective. The authors employed a flexible yet comprehensive strategy to identify literature consistent with that of a narrative review (Turnbull et al., 2023). The authors electronically searched several prominent databases of scholarly publications in education, psychology and educational technology, namely Scopus, Web of Science, ERIC, PsycINFO, and Google Scholar (Tondeur et al., 2023; Scherer et al., 2021). The authors also manually reviewed reference lists of key studies and reviews to find additional studies (Snyder, 2022).

The search terms were developed through an iterative process and included some combinations of the keywords below (Neumann & Neumann, 2023; Scherer & Teo, 2023): Phonics Learning Applications, Phonics Apps, Early Literacy Technology, Preschool or Early Childhood

Volume: 11 Issues: 83 [June, 2026] pp. 85 - 91
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: academicinspired.com/jised
DOI: 10.55573/JISED.118307

Education Teachers Acceptance, Technology Acceptance, Educational Psychology, Teacher Beliefs, Self Efficacy.

Searches were limited using the Boolean operators (AND/OR). Filters were applied to include only peer-reviewed articles published from 2020 and written in English since these were expected to reflect the most up-to-date research information relevant to digital learning technologies. Articles could either be qualitative, quantitative, or conceptual/theoretical in nature (Howard et al., 2022; Scherer & Siddiqi, 2024). Inclusion of Articles were only eligible if they met all the following criteria (Scherer et al., 2021; Neumann, 2022): published in the preschool, early childhood context; referred to phonics or early literacy technologies; and referred to teachers such as acceptance, perception or psychological variables related to their use of technology.

Articles were excluded if they were limited to the outcomes of students and did not refer to teachers; If they focused on learner populations over the age of five; or if they were irrelevant to the instruction of phonics. By employing a moderate level of inclusivity and exclusivity, the authors were able to create a unified synthesis of the literature while preventing too many articles being included (Turnbull et al., 2023; Greenhalgh et al., 2023).

Discussion

Synthesis Analysis

1. Conceptualizing Teachers' Acceptance of Phonics Learning Applications

In the literature, teachers' acceptance is mostly defined as teachers' willingness to use, integrate and maintain the other new digital tools in their professional practices (Marulitua et al., 2019; Tondeur et al., 2023). With respect to phonics learning applications, acceptance is not only about their adoption at the beginning, but also on the basis of beliefs around their pedagogical value, developmental appropriateness and alignment with early literacy goals (Neumann & Neumann, 2023). A great number of research turn to the technology acceptance model, focusing on perceived usefulness and ease-of-use as major factors (Scherer & Teo, 2023). Yet education psychology scholarship complicates this picture by pointing out cognitive and affective dimensions of the construct, including teachers' beliefs concerning how young children learn, self-efficacy handling technology, and general inclination toward innovation (Howard et al., 2022; Scherer & Siddiq, 2024). Although acceptance is universally recognized to be multidimensional, whereas integrating psychological constructs with early literacy–specific practices is a challenge across these fields of study, there is value in developing more integrated theoretical models for preschool settings.

2. Benefits and Drawbacks of Phonics Learning Apps

Throughout the literature, phonics teaching applications are commonly linked to benefits such as enhanced child engagement, multimodal learning experiences, instant feedback provision and personalised learning rates (Neumann 2022; Hirsh-Pasek et al. Educators who report positive acceptance often see the apps being used as additional resources that can assist in differentiation of instruction and reinforce letter sound associations (Castles et al., 2022). Conversely, there are concerns about too much screen time and less teacher–child interaction as well as about the fit between app-based instruction and play-based pedagogies that are core to early childhood education (Pyle et al., 2023). Some scholars believe that well-designed phonics apps can supplement traditional teaching, while others fear that becoming overly

Volume: 11 Issues: 83 [June, 2026] pp. 85 - 91
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: academicinspired.com/jised
DOI: 10.55573/JISED.118307

dependent on technology may detract from the goal of holistic development (Hirsh-Pasek et al., 2022; Neumann & Neumann, 2023). This tension mirrors an unresolved policy debate about how digital phonics tools ought to fit in preschool curricula, and underscores the importance of articulating stronger pedagogical guidance and evidence-driven pedagogical design considerations.

3. Educational Psychology Factors Influencing Teachers' Acceptance

Educational Psychology has consistently demonstrated that teacher beliefs, teacher self-efficacy, and their attitudes towards teaching and learning are all important factors that influence the adoption of educational technology, specifically phonics learning applications. The stronger the teacher's literacy pedagogical knowledge and the greater their technological self-efficacy, the more they believe phonics learning applications can be used effectively and with ease (Scherer & Siddiq, 2024; Tondeur et al., 2023). On the other hand, the teacher who holds more constructivist or play oriented beliefs may have more reservations about using structured skill based digital tools (Pyle et al., 2023). Previous research also indicated that emotional reactions (i.e. anxiety or confidence) would serve as a mediator to the use of educational technology by those with less experience using educational technology, including teachers (Howard et al., 2022). Even though researchers appear to be reaching a consensus regarding the importance of psychological factors related to technology adoption, there is still an imbalance in the empirical research regarding this area, as there is a dearth of longitudinal studies that investigate the progression of beliefs and acceptance regarding educational technology usage.

4. Practice, Policy, and Research Implications

As previously mentioned, numerous implications exist in practice and policy related to this study. In particular, educators and policy makers need to press for professional development that would allow teachers not only to become proficient in using phonics related technology applications but also come to an understanding of educational psychology that underpins the integration of technology into their teaching (Tondeur et al., 2023; Scherer & Teo, 2023). In addition, both policymakers and curriculum developers should consider educators' psychological readiness while planning and implementing new digital literacy initiative, as well as techno-pedagogical support provided (Scherer et al., 2021). Finally, in order to further investigate into the topic of teacher adoption of phonics learning software, there needs to be further longitudinal research centered on variations in the adoption of technologies across different cultural, institutional and policy environments (Neumann & Neumann, 2023; Scherer & Siddiq, 2024). These research will supply the insights needed to ensure that phonics apps are being developed and used in pedagogically and developmentally appropriate ways for young children, while also promoting the psychological health of early childhood educators.

Volume: 11 Issues: 83 [June, 2026] pp. 85 - 91
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: academicinspired.com/jised
DOI: 10.55573/JISED.118307

Limitations

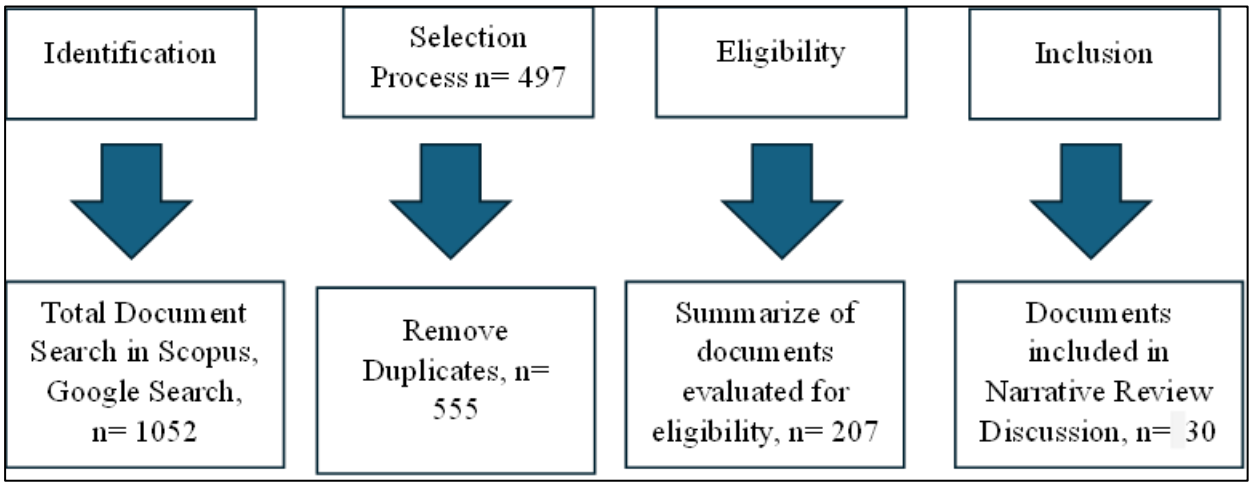

Figure 1: PRISMA-based Flow Diagram of Document Selection Process for Narrative Review

Eight distinctive search strategies were applied to obtain a wide variety of views regarding teacher acceptance of phonics learning apps.

Our narrative review has several weaknesses that need to be kept in mind when interpreting its results. The narrative format: as a narrative review, the methodology is not entirely systematic or reproducible (including pre-specified guidance for data extraction and synthesis). Despite searching several databases and reference lists, the search strategy was not comprehensive, and there is always a possibility that some pertinent papers were unintentionally missed. This flexibility is an advantage for conceptual synthesis, but is problematic in terms of introducing selection bias and hampering replicability of the review (Sarkar & Bhatia, 2021; Greenhalgh et al., 2023).

A second limitation concerns the evidence base itself. A substantial proportion of current research on teachers' use of phonics-based learning applications utilises self-reported data, which can be subject to social desirability biases or individual responses options as pertain to technology usage (Scherer et al., 2021). Furthermore, as many studies use cross-sectional design, we are unable to capture the change of teachers' acceptance and psychological factors (Howard et al., 2022). A further imbalance exists in the literature with adherence to technology acceptance models rather than theories of educational psychology in preschool phonics (Neumann & Neumann, 2023).

Third, synthesis issues are due to the diversity of included studies. Variations in instruction, culture, what is considered a phonics application and assessment instruments hinder direct comparison and amalgamation of results (Scherer & Siddiq, 2024). Lastly, search terms were restricted to English language and date of publication, which may have excluded relevant non-English articles or older seminal studies. These limitations could be overcome by future work through the use of longitudinal and mixed-methods designs, clearer theoretical integration, and more transparent hybrid or systematic-narrative review methods to enhance rigor and generalizability (Turnbull et al., 2023; Greenhalgh et al., 2023).

Volume: 11 Issues: 83 [June, 2026] pp. 85 - 91
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: academicinspired.com/jised
DOI: 10.55573/JISED.118307

Conclusion

This review sought to synthesize evidence from both theory and practice to understand the dimensions of teacher acceptance of phonics applications in preschool classrooms, specifically within the framework of educational psychology, because existing literature is fractured, focused on technology, and has a number of gaps. Teachers' acceptance of these applications was found to be a multi-dimensional phenomenon; it is influenced by teachers' perceptions of the utility and ease of use of the application, as well as their psychological constructs (i.e., beliefs about early childhood learning, their pedagogical orientation, their confidence in using technology, and their emotional response to using technology). These results show a persistent tension between the potential instructional benefits of phonics applications (e.g., engagement, individualization, feedback) and concerns related to: screen time, play-based pedagogy, and the developmental appropriateness of the applications. In synthesizing these perspectives from educational psychology with early literacy research, this review addresses one of the primary recommendations for conducting more contextually sensitive and theoretically grounded analyses of the adoption of technology in preschool settings. Perhaps most importantly, the synthesis shows that there is currently a significant need for longitudinal and psychologically-informed studies examining how teachers' beliefs and acceptance of phonics applications develop over time and in different educational contexts. Future research that uses a mixed-methods design and longitudinally examines how teachers' psychological readiness evolves as they acquire the necessary technical skills will help to build a stronger evidence-base for informing practice and policy and provide better support for educators to implement phonics learning applications in a way that is both pedagogically effective and developmentally appropriate, while also being responsive to their professional beliefs and needs.

Acknowledgements

I would like to express my sincere gratitude to Universiti Pendidikan Sultan Idris (UPSI) in Tanjong Malim, Malaysia, for providing the academic environment, resources, and opportunities that made this research possible, and to my supervisor, Dr. Tajul Rosli Shuib, whose expert guidance, unwavering support, and insightful feedback throughout every stage of my study have been invaluable.

Volume: 11 Issues: 83 [June, 2026] pp. 85 - 91
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: academicinspired.com/jised
DOI: 10.55573/JISED.118307

Reference

Castles, A., Rastle, K., & Nation, K. (2022). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest, 23*(1), 5–51. https://doi.org/10.1177/1529100620986950

Ehri, L. C. (2021). The science of learning to read words: A case for systematic phonics instruction. *Reading Research Quarterly, 56*(S1), S191–S203. https://doi.org/10.1002/rrq.334

Greenhalgh, T., Thorne, S., & Malterud, K. (2023). Time to challenge the spurious hierarchy of systematic over narrative reviews? *European Journal of Clinical Investigation, 53*(5), e13921. https://doi.org/10.1111/eci.13921

Hirsh-Pasek, K., Zosh, J. M., Golinkoff, R. M., Gray, J. H., Robb, M. B., & Kaufman, J. (2022). Putting education in "educational" apps: Lessons from the science of learning. *Psychological Science in the Public Interest, 23*(3), 1–58. https://doi.org/10.1177/15291006221085283

Howard, S. K., Tondeur, J., Siddiq, F., & Scherer, R. (2022). Profiling teachers' readiness for technology integration in education. *Educational Technology Research and Development, 70*(5), 2473–2495. https://doi.org/10.1007/s11423-022-10100-5

Neumann, M. M. (2022). Teacher perceptions of the benefits and challenges of digital technology in early childhood education. *Australasian Journal of Early Childhood, 47*(2), 98–112. https://doi.org/10.1177/18369391221080045

Neumann, M. M., & Neumann, D. L. (2023). Digital technologies and early literacy development: Benefits, risks, and pedagogical implications. *Early Childhood Research Quarterly, 63*, 1–14. https://doi.org/10.1016/j.ecresq.2022.11.002

Pyle, A., DeLuca, C., & Danniels, E. (2023). A scoping review of play-based pedagogies in early childhood education. *Review of Education, 11*(1), e3386. https://doi.org/10.1002/rev3.3386

Sarkar, S., & Bhatia, G. (2021). Writing and appraising narrative reviews. *Journal of Clinical and Scientific Research, 10*(3), 169–172. https://doi.org/10.4103/jcsr.jcsr_1_21

Scherer, R., & Siddiq, F. (2024). Teachers' technology acceptance revisited: A systematic review of longitudinal evidence. *Computers & Education, 194*, 104703. https://doi.org/10.1016/j.compedu.2023.104703

Scherer, R., & Teo, T. (2023). Unpacking teachers' intentions to integrate technology: A meta-analysis of technology acceptance models. *Educational Psychology Review, 35*(2), 1–34. https://doi.org/10.1007/s10648-022-09712-0

Scherer, R., Siddiq, F., & Tondeur, J. (2021). The technology acceptance model (TAM) in education: A meta-analytic structural equation modeling approach. *Computers & Education, 164*, 104102. https://doi.org/10.1016/j.compedu.2020.104102

Snyder, H. (2022). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research, 139*, 333–339. https://doi.org/10.1016/j.jbusres.2021.10.028

Tondeur, J., Howard, S. K., & Scherer, R. (2023). Factors influencing teachers' technology integration: A systematic review. *Educational Technology Research and Development, 71*(1), 123–147. https://doi.org/10.1007/s11423-022-10158-1

Turnbull, D., Chugh, R., & Luck, J. (2023). Systematic–narrative hybrid literature review: A strategy for integrating a concise methodology into a manuscript. *Social Sciences & Humanities Open, 7*, 100381. https://doi.org/10.1016/j.ssaho.2022.100381