Research Article

ENHANCING PRIMARY STUDENTS' READING LITERACY: THE NEED OF DIGITAL INFORMATION RESOURCES FROM TEACHERS' PERSPECTIVES

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ABSTRACT

This article surveys primary teachers' perspectives on the need for digital information resources (DIR) to develop primary students' reading literacy. The survey includes (1) the need for DIR, (2) the levels of investment in DIR, (3) the agreement on allowing primary students to read DIR, (4) the level of difficulty in selecting DIR, and (5) the necessity of having a standard framework for selecting DIR. The survey results from 134 teachers of three primary schools in Binh Chanh district, Ho Chi Minh City show that teachers indicated their high demand for digital information resources. Most teachers showed their agreement on allowing primary students to use DIR. Regarding the demand for investing in DIR, most of the teachers recommended schools acquire DIR equally and higher than physical information sources.

Keywords: digital information resources; primary teacher; reading literacy; Vietnam

1. Introduction

The use of information and communication (ICT) in primary schools allows students to get familiar with smart devices and provides them chances to access DIR in both schools and families to read for pleasure or learning. Studies examining the impact of new technologies on students' reading literacy online (Aleksieva, 2019, Lim, 2020; OECD, 2021) show that if teachers have the right perspectives on the roles and features of DIR and how to utilize DIR, the orientation to the need of DIR for developing students' reading literacy will be more proactive and effective. Among the documents discussing this issue, there are only a few studies abroad mentioning teachers' perspectives on DIR for teaching, but no studies

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have been found in Vietnam. Therefore, the author researched to collect information from three primary schools in Binh Chanh to identify the relationships between factors such as gender, seniority, and teaching grade and the difference in the level of teachers' perspectives on the need for DIR for developing students' reading literacy. The research results help to make recommendations for training programs, or for teacher training programs to apply DIR to develop primary students' reading literacy.

Digital technology in the 21st century allows many types of multimedia text forms to attract reader interaction, especially primary school age – the foundational stage to nurture reading habits, practice skills, and promote reading motivation. In addition to some similar benefits as printed materials that support the development of reading skills, such as increasing vocabulary, identifying rhymes, and improving writing and reading comprehension, but with the advantage of high interaction in the digital environment, DIR also helps to exploit students' senses and multiple intelligences when their reading process is supported with moving images or sound effects, as well as searching tools are all embedded in the text. DIR also promotes the role of supporting students' personalized teaching methods by creating digital links in document sources to help students locate and find documents in a group of materials with the same topics or genres, or get suitable with their reading abilities, and also help readers build interactions with reading materials and with other readers (Kucirkova, et al., 2016; Reneisen, 2016, Werlen, 2017; Walker, 2018; Clark, 2019).

In Vietnam, the process of digital transformation in publishing, education, and library sectors has been supported since the National Digital Transformation Program was approved in 2020, and the Plan to develop reading culture in the Vietnamese community in 2021-2025 by the Ministry of Information and Communications was announced in 2021. To establish a digital community ecosystem in the field of education, digital materials are expected to be not only an entertainment medium but must be identified as an important element to serve the teaching and learning programs (Tran, 2021; Khanh Vy, 2022; Nguyen, 2022; Ha, 2022). These areas are promoted to provide digital reading products for students. However, The 2021 summary report of the Department of Publishing, Printing, and Distribution shows that the number of publishing houses qualified to produce electronic publications accounts for only 21%. Most digital book manufacturers have only just started making audiobooks to serve young and middle-aged people, from 25-45 years old. Electronic publications for children only stop at digitizing printed copies and converting audiobooks or podcasts, with only a few interactive products appearing on the electronic screen interface, but still do not meet the standard requirements in content, technology, and creativity as well as are not linked to the curriculum, and are also suitable with the developing characteristics of primary students' reading literacy (Tran, 2018; Nguyen, 2019; Nguyen, 2022; Ha, 2022). To

proactively create a favorable online learning environment, the Ministry of Education and Training in Vietnam has directed educational departments to develop their digital learning materials - ensuring that by 2025, 100% of students can access electronic learning materials. Some school libraries have become electronic publishing portals for lesson plans, video clips, audiobooks, or released products created by the school itself. Many schools are proactively enhancing their digital collections by editing paper content with free illustration apps, such as Wakelet, Padlet, and Canva. In general, digital endogenous documents do not fully meet and balance the needs of the development at different grades, do not comply with digital publishing standards, and do not comply with the Copyright Law. The above limitations create a large gap between the supply of digital documents for children and the need to exploit them to develop primary students' reading literacy. To overcome this problem, publishers should have a strategy to grasp innovation trends in primary education, especially the needs, perspectives, understanding, and experiences of teachers and students to innovate the way of making digital documents for primary students more effectively (Nguyen, 2019; Pham, 2021; Ha, 2022).

Research by Reisanen (2016) and Cao Thi Phuong Chi et al. (2022) shows that when teachers are aware of the role of DIR in the development of students' reading literacy, they become ambassadors to promote the effectiveness of DIR in the educational community, students will be well oriented in using electronic devices to access SIR to strengthen reading literacy and promote digital capabilities. Since 2016, the International Organization for Assessing the Progress of Reading Comprehension Development (PIRLS) has conducted an assessment of the impact of digital technology on students' work by surveying DIR invested in schools, and how teachers perceive, understand, and exploit digital documents during class. To promote the need to exploit DIR effectively, the strategy of manufacturers or educational managers is to determine the level of awareness, understanding, and skills of teachers regarding DIR. This advantage makes DIR suppliers abroad take advantage of promoting the need to exploit and improve digital reading products in schools and at home, for example, databases. Famous digital documents all provide free accounts for teachers to access and exploit such as Eipc, Reading Eggs, and Oxford Owls (Nguyen, 2017; Clark, 2019; Laeli, 2020; Landoli, 2010, 2020; Spiteri, 2020; Konikoc, 2021).

To effectively promote DIR for developing primary students' reading literacy, the level of awareness in teachers about DIR to develop students' reading literacy is one of the issues that needs to be researched. The scope of the article focuses on identifying factors that affect the level of teachers' awareness of the need for DIR for developing primary students' reading literacy. The study also explores a correlation between gender, seniority, and teaching grade to the level of teachers' perspectives on the need for DIR for developing students' reading literacy, specifically the need for DIR for developing primary students'

reading literacy, the levels of investment in DIR for developing primary students' reading literacy, the agreement on allowing primary students to read DIR, the level of difficulty in selecting DIR for developing reading literacy, and the necessity of having a standard framework for selecting DIR for developing primary students' reading literacy.

2. **Research design**

A structured questionnaire was deployed via a Google Form on teachers from three primary schools in Binh Chanh in three residential areas with similar economic - social - cultural - educational conditions.

The questionnaire was designed and tested in Thien Ho Duong School (District 10) to adjust the duration and content more appropriately. The questionnaire has been adjusted to change the interpretation of terms used in the library area to make it easier for teachers to understand, and some multiple-choice questions were separated to make the choices more accurate. The questionnaire was shared with the Board of Directors and sent to 191 teachers of three schools, Pham Hung, Tan Kien, and Tran Quoc Toan. The questionnaire was conducted by the Board of Directors. After collecting response information from the Google Form, the data was cleaned before being analyzed.

2.1. Research participants: primary teachers on the need for digital information resources (DIR) for developing primary students' reading literacy.

2.2. Research question

Five questions were asked to determine whether there are differences between the awareness levels of groups of teachers (grouped by gender, seniority, and grades).

a. Research question 1 (RQ) 1: What is the perceived need of primary teachers for DIR to develop primary students' reading literacy?

b. Research question 2: How is DIR invested in developing primary students' reading literacy?

c. Research question 3: To what extent do teachers agree on allowing primary students to read DIR?

d. Research question 4: How difficult is it to select DIR for developing reading literacy?

e Research question 5: How necessary is it to have a standard framework for selecting DIR for developing primary students' reading literacy?

2.3. Survey duration

From June 1, 2022 to June 30, 2022.

2.4. Research scope

Teachers at three schools representing Binh Chanh district, including Pham Hung Primary School (Road No. 6A, Dai Phuc Green Villas Residential Area), Tan Kien No. 2,

Street No. 2, Depot Metro Resettlement Area, Tan Kien Commune) and Tran Quoc Toan (Hamlet 4, Vinh Loc B), distributed in Residential Areas 1, 3 and 5 of the district with similar economic, social and educational conditions. As a result, 134 teachers answered the survey (See Table 1 and Table 2).

***Table 1.** School name and number of teachers answering the questionnaire*

Primary school	Pham Hung	Tan Kien	Tran Quoc Toan	Total number of teachers
Number of teachers	57	68	66	191
Number of teachers	52	57	25	134

SPSS version 26 was used to analyze the data. According to Yamane Taro's (1967) sample calculation formula as follows:

$$n = \frac{N}{1 + N \times e^2}$$

In which: n: sample size to be determined; N: overall scale; e: acceptable error level at ±0,05. Based on this calculation, n in this study will be 129,49. So the number of teachers joining this study meets the requirement.

***Table 2.** Participants' demographic information*

The class in charge	Quantity	Seniority	Quantity	Sex	Quantity
Grades 1-2-3	64	From 10 years or less	32 98	Male	19
Grades 4-5	36	Over 10 years	36	Female	115
Two grades or more	24				
Total	**134**		**134**		**134**

SPSS 26 was used to analyze Levene Chi-square tests and one-way ANOVA.

3. Results and discussion

3.1. Results and discussion

RQ 1: Determining that there is a difference between the level of awareness of groups of teachers by gender, seniority, and grades of teaching about the need for DIR to develop primary students' reading literacy.

Data analysis results show that the need for DIR to develop primary students' reading literacy was identified as necessary. Research has not shown that there is a difference in awareness between male and female teacher groups regarding the need for DIR (Independent sample T-test, Sig value. in the Levene test (=0,232)>0,05, Sig. (2-tailed) =0,805>0,05). The result did not show any difference in the level of need for DIR among different groups of teachers under 10 years of teaching experience and more than 10 years (Sig value. in the Levene test =0,647>0,05 and Sig. (2-tailed) =0,247>0,05). The results also show that there was no statistically significant difference between groups of teachers of each grade groups: junior level, senior level, and the group in charge from two or more grades on the need for DIR (One-way ANOVA, Sig based on Mean in this test =018>0,05 and Sig in ANOVA test =0,15 > 0,05). The result also helps researchers identify the teachers' agreement on allowing primary students to read DIR (4,37/5) for developing primary students' reading literacy.

RQ 2: Determine whether there is a difference among groups of teachers by gender, seniority, and grades of teaching on reported investment in DIR.

The results show that most teachers agree on the rate of investment in DIR for primary school students, however, there were no differences between male and female teachers (Chi-square test, Sig index. (2-tailed).) =0.299>0.05) and between those with 10 years or less working experience and more than 10 years (Chi-square test, index Sig. (2-tailed) = 0.58 > 0.05) as well as groups of teachers in charge of grade groups (Chi-square test, Sig Based on Mean =0.213 > 0.05, Anova test, ANOVA index, =0.44 > 0.05)). The results show that 15.8% of teachers agreed that paper-based information resources should be prioritized, 64% of teachers believed that there should be an equal investment ratio between digital and paper information resources, and 20.2% of teachers agreed about investing more in DIR.

RQ 3: Determine whether there is a difference between groups of teachers by gender, seniority, and grades of teaching on the levels of agreement on allowing primary students to read DIR.

The results show that most teachers agreed with the use of DIR for primary students. However, no difference was found between male and female teachers (Independent sample T-test, Sig. value in Levene test (F-test) (=0.78)>0.05, Sig index. (2-tailed) (=0.15)>0.05). The results also show no difference between the groups of teachers with 10 years or less and more than 10 years or more (Independent sample T-test, Sig. value in Levene test (F-test) (=0.581)>0.05 and Sig Index. (2-tailed) (=0.773)>0.05). It was found that there was a statistically significant difference in the agreement on allowing primary students to read DIR between groups of teachers in charge of each grade group: junior level, senior level, and the group in charge from two or more grades (One-way ANOVA To test, Sig based on Mean value in this test (=0.33) > 0.05, Sig in ANOVA test (=0.00) < 0.05). The results show that

all teachers showed their agreement on allowing students to read digital documents, in which the group of teachers in charge of many grades indicated highest agreement (Mean=4.71), followed by the group of teachers responsible for students at the junior level (Mean=3.96), and the lowest is with the group of teachers in charge of the senior level (Mean=3.80).

RQ 4: Determining that there is a difference in the teachers' perception of the level of difficulty in selecting DIR by gender, seniority, and grades of teaching.

The results show that most teachers perceived that choosing DIR was difficult. This study found that gender, working experience, and grades of teaching did not affect the result (For gender: Independent sample T-test, Sig. value in Levene test (F-test) (=0.528)>0.05, Sig Index. (2-tailed) (=0.220)>0.05; For working experience, Independent sample T-test to verify, Sig value in Levene test (=0.473)>0.05, Sig Index. (2-tailed) (=0.322)>0.05; For grades of teaching, One-way ANOVA to test, Sig based on Mean in this test (=0.090) > 0.05, Sig in ANOVA test (=0.44) > 0.05).

RQ 5: Identifying differences in the perspectives of teachers by gender, seniority, and grades of teaching about the necessity of developing a standard framework for selecting DIR for developing primary students' reading literacy.

The results show that most teachers agreed that it was necessary to have a standard framework for selecting DIR for developing primary students' reading literacy (M=3.92/5). However, there is no difference among teachers' perspectives by gender, seniority, and grades of teaching (For gender, Independent sample T-test, Sig. value in Levene test (=0.735)>0.05; Sig index. (2-tailed) (=0.128)>0.05; For seniority, Independent sample T-test, Sig. value in Levene test (F-test) (=0.377)>0.05, Sig Index. (2-tailed) (=0.760)>0.05; For grades of teaching, One-way ANOVA to test, Sig based on Mean in this test (=0.848) > 0.05, Sig in ANOVA test (=0.06)> 0.05).

4.   Conclusions

In sum, the need for digital information resources for developing primary students' reading literacy is an issue that the education sector needs to research to promptly propose student training strategies and professional development for primary teachers, and is also an opportunity to create cooperation between publishers, the library sector, and the education sector to aim at publishing digital reading materials to ensure the goal of reading literacy.

The results of the survey of 134 primary school teachers from three schools in Binh Chanh reflect that teachers have a high demand for DIR, most of them strongly agree with allowing primary students to read DIR, and a high percentage of teachers believe that DIR should be on par with paper documents. Teachers find it difficult to self-evaluate and choose digital materials and have a high need for a standard framework for selecting DIR for developing primary students' reading literacy. However, the data does not show the level of

agreement on the above issues, with differences in the level of awareness or assessment of the impact of differences in gender or seniority of teachers. The only difference in the results appears to be the level of agreement between the group of teachers for primary students to use digital documents, the group of teachers in charge of multiple grades or early level is higher than the group of teachers in charge of the late grades of primary school. Besides, teachers in this study realized that choosing DIR was difficult for them and most of them expressed the necessity of having a standard framework to guide teachers on how to evaluate the choice. This is also consistent with the research of Ozturk (2021), digital document applications for teaching need to be trained for teachers to know how to evaluate and use them. With this need, it is proposed that more research is needed to define standards for publishing digital documents suitable for Vietnamese primary students based on the research studies of Ladoni (2010, 2020) or Kucirkova (2016), and the trend of publishing digital documents on the market also needs to be updated according to the new educational program. Within the scope of the article, the paper only analyzes the level of perspectives of primary teachers regarding developing primary students' reading literacy. Future research should expand the scope of understanding and experience in the usage of DIR with a larger sample to have a more comprehensive view of the actual needs and conditions for deploying information resources that effectively meet the primary education program. More research is needed to understand the awareness and experience of exploiting DIR specifically on school librarians or librarian teachers, or specifically on primary students to see the overall results.

❖ ***Conflict of Interest:*** *Author have no conflict of interest to declare.*

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HỖ TRỢ PHÁT TRIỂN NĂNG LỰC ĐỌC CHO HỌC SINH TIỂU HỌC: NHU CẦU TÀI NGUYÊN THÔNG TIN SỐ TỪ QUAN ĐIỂM CỦA GIÁO VIÊN

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TÓM TẮT

Bài viết này khảo sát nhận thức của giáo viên tiểu học (GVTH) về nhu cầu tài nguyên thông tin (TNTT) số phục vụ phát triển năng lực đọc (NLĐ) cho học sinh tiểu học (HSTH). Nội dung khảo sát gồm: (1) Nhu cầu cần TNTT số phục vụ HSTH phát triển NLĐ, (2) Mức độ đầu tư TNTT số phục vụ HSTH phát triển NLĐ, (3) Đồng ý cho HS đọc tài liệu số, (4) Mức độ khó của việc lựa chọn TNTT số phục vụ phát triển NLĐ, và (5) Mức độ cần thiết của Khung Tiêu chuẩn hướng dẫn chọn lựa TNTT số phục vụ phát triển NLĐ. Kết quả khảo sát trên 134 giáo viên của ba trường tiểu học ở huyện Bình Chánh, Thành phố Hồ Chí Minh cho thấy giáo viên (GV) có nhu cầu cao đối với TNTT số. Đa phần GV đồng tình đối với việc cho HSTH sử dụng TNTT số. Riêng về nhu cầu đầu tư TNTT số, tỉ lệ GV khuyến khích nên chọn tài liệu số là ngang bằng hoặc cao hơn nguồn tài liệu giấy.

***Từ khóa:** tài nguyên thông tin số; giáo viên tiểu học; năng lực đọc; Việt Nam*