

Examining Views of Science Teacher Candidates about E-Books

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Abstract

This research aimed to investigate and obtain the opinions of science teacher candidates about e-books. The study was designed following the phenomenology research model which is one of the techniques of qualitative research. The research was carried out with 11 science teacher candidates. Every participant in the research was given access to a course that involved creating an electronic book with topic modules, relevant posters, and videos. This e-book was created with the assistance of the Exe-Learning software program. With the help of this program, users may produce their own books, movies, tests, and other e-learning resources. After learning how to use the application, participants selected the subjects and began to develop their own teaching-learning environment. Within the context of this study, science teacher candidates' comments about the e-book were gathered using a semi-structured interview form created by the researchers. Within the framework of this study, teacher candidates have constructed the e-book material sources. However, by building an e-book around the integration of creativity and self-regulation skills, in-service teachers may also create their own digital e-books with additional resources that effectively increase their students' creativity and self-regulation skills.

Keywords: Science Education, Teacher Candidates, Digital Sources, E-Books

INTRODUCTION

When we look at the products that emerged as a result of technological change and development from past to present, it is possible to see traces of digital transformations. Digital platforms, whose use has become widespread with the improvement of technological opportunities, also carry with them the evolution of technological information. Mass media, which has become one of the indispensable basic characteristics of human life, has enabled the development of information technologies, and this has led the society we live in to access information in the fastest and easiest way. One of the elements directly affected by the developments in the technological age we are in is printed books, which are the basic building blocks of the education sector and the main characters of the act of reading. Printed books that human beings have used for centuries are now giving way to electronic books in digital form on the shelves. When we examine printed books, we can see that they are books written on any material (such as sheets of paper). However, there are many different definitions of e-books in the literature. An E-book is an electronic product on any device with a screen. They are products available in electronic media for reading, other than magazines and books. E-books are books that have

the features of pictures and texts that are published in digital environments and can be read in this context. Armstrong, Edwards, and Lonsdale (2002) define an e-book as a form of downloading and reading a written text in electronic form onto a portable or desktop device. Electronic books are books prepared through various devices using existing technology and offered to the service of humanity. As can be understood from these expressions in the literature, the e-book is the transfer of any printed or non-printed text to equipment with screen features, with the development of technology and the internet world. Software development has also been facilitated by the widespread usage of computers and the Internet. Concurrently, the process of moving books into the digital realm gave rise to e-books. However, thus far, there have been numerous solutions to such queries as what e-books are and what the ingredients of e-books are. Önder (2010) defined an e-book as "a digitalized form of some or all printed books or as one produced completely in the digital environment, which can be viewed and accessed on any portable device like computers or specially designed e-book readers" in a study assessing e-books and digital broadcasting globally. Activating past information, establishing connections, monitoring understanding,

drawing conclusions, identifying key concepts, assessing, summarizing, synthesizing, and communicating are some of the online reading comprehension techniques and skills. In an online or digital context, reading dispositions are crucial to consider. Research (Dwyer, 201; Leu et al., 2004; Putman, 2014) highlights problems with self-control, curiosity, self-efficacy, perseverance, intrinsic drive, and the capacity to create goals that are learner centered. Students are better able to develop these attitudes in a classroom environment that fosters a sense of community. Collaborating with others and encouraging one another's problem-solving and creative thinking are examples of social practices in such a classroom environment.

To guarantee the quality of learning and to improve students' diverse behavioral attitudes in a more sustainable way, gamification was used by Oliveira et al. (2021) in a study. Third, when utilized properly, electronic materials provide e-learning with built-in sustainability. For example, recycling instructional resources like e-books and learning objects contributes to the sustainability of e-learning. A study by Calvo and Villarreal (2018) examined the use of e-books in place of conventional printed books. They think that as e-books gain popularity, the publishing industry

will be more inclined to stop producing paper books, which will lessen the negative effects that the consumption of wood pulp has on the environment and the economy.

E-books are specially developed with hardware and software components and are designed to read data on portable electronic devices which are computers, tablets, and smartphones. Kindle, Amazon, etc. can be shown as e-book readers (Moore, 2009). Publishers need to determine the best e-book price plan. Certain e-book publishers choose to manage their own distribution, while others work with outside distributors. Publishers and distributors have been engaged in ongoing discussions and business conflicts around the pricing of e-books. For instance, in an effort to boost e-book sales from the start, Amazon compelled publishers to accept a far lower list price for their e-books than for printed books. While this pricing approach was helpful in launching the e-book sector, it may also cause buyers to anticipate e-books to be inexpensive, which would reduce publisher profits (Kim, Jeong, Choi & Kim, 2013). Apart from these, it is possible to find e-book readers designed in different ways in markets selling electronic products. These devices are increasing in number; they differ in terms of hardware features such as pictures, animations, sound and

visual effects, and storage capacities (Hillesund, 2001). Electronic books, briefly e-books, are the digital versions of printed books, which are the most permanent means of information transfer in human history. Changes and developments in technology have enabled societies to develop and renew on a different front, and as a result of these developments, to open the door to social changes and transformations. All these changes have brought with them digital literacy competence. Even though the first thing that comes to mind when it comes to the act of reading is reading written texts, in essence, graphics, tables, pictures, figures, etc. It also includes the ability to read and interpret other elements. It has been envisaged that education and training should progress in an integrated manner with technology as the best way to provide this ability to society. With the increase in the number of e-books, interactive books have also started to make a name for themselves. In this respect, it has not been difficult to attract the attention of the new generation, which is literally born into technology and called digital natives, and the foundations of the transition to learner-centered interactive learning in education have been laid. Teachers frequently employ e-books in the same manner as traditional textbooks because they have just recently been included in

the educational process. This strategy may seriously impair e-book adoption's instructional potential. Additionally, since information and communication technologies advance so quickly, new categories of E-Books—such as interactive, hypermedia, and game-based ones—are emerging. E-books, which provide a plethora of interactive alternatives, surpass conventional books in terms of competitiveness and emerge as a distinct phenomenon. So, the fundamental query is: How do students engage with electronic books? Do they make the most of their opportunities for education? How should the instructor mentor them? Process mining is a field of study that creates models based on certain patterns using log data from software systems that support a wide range of various activities (Opanasenko, Siiman & Pedaste, 2023).

Electronic books are described as a hardware and software combination that enables texts to be created in electronic settings or in forms that may be seen on devices other than computers (Morgan, 1999; Cliff & Dearnley 2003; Vidana 2003; Lam & Ark., 2009). Because the early e-books couldn't satisfy the demands of e-book readers, modern devices are more user-friendly, which has caused the devices to become more widely used as a result of technological advancements. Businesses that are

interested in these goods have combined computer and e-book characteristics and started making tablet PCs. According to Wilson (2003) and Moore (2009), these forms of initiation made it easier to utilize e-books on portable electronics like tablets, PDAs, and cell phones.

One of the main reasons behind the unexpected results of the popularity of e-books can be said to be easy access, which corresponds to the concept called "ubiquity". In addition, positive factors such as free access or low cost, easy portability, customizability, physical storage conditions being more suitable than the printed book, providing various multimedia opportunities and the possibility of making changes to texts, figures, and tables, and being environmentally friendly, are among the advantages of e-books. These can be shown as the main reasons why books are preferred. On the other hand, it is important to transfer the reading strategies necessary to help people gain digital reading habits. Because there are differences between reading e-books and reading physical printed books. Even though the act of reading is becoming increasingly common, the issue of determining trends in how to determine reading habits for primary school students who are just starting to acquire reading habits has arguably taken its place on the agenda. According to

research, technology has a positive effect on increasing a person's reading habit, and in fact, in the findings obtained from the studies, it has been observed that the self-reading and reading perception of students who read e-books have developed positively (Miranda, Williams-Rossi, Johnson & McKenzie, 2011). Reading digital books has remained relatively rare, despite youngsters using touchscreen devices on a regular basis. As few as thirty percent of kids in the US have read on a touchscreen device in 2013. Playing video games and viewing movies was far more popular than reading on multifunctional digital gadgets. According to a different study, kids between the ages of two and ten read print books for an average of 29 minutes per day as opposed to just five minutes online (Strouse & Ganea, 2017).

According to Goodwyn's research (2014), although teachers do not view e-books positively, students find reading e-books "cool". In the e-book reading study conducted by Huang, Liang, and Chiu (2013), it was revealed that students had positive thoughts about reading e-books. The positive reception of reading e-books by students may provide an answer to the question of what should be done to improve children's reading habits. In the research conducted by Suell, Ratchford, Cook, and Cost (2013), students were

made to compete with each other in reading books in the summer. According to this, it has been observed that those who read e-books are more competitive in "reading more books" than those who read printed books. In addition to the existence of e-books, which are playing a leading role in education day by day, printed books also maintain their place as a continuity of the ongoing habit. When the speed of reading printed books, which serve as the main source for teachers and students, is compared with the speed of reading with digital books, there are studies suggesting that the reading speed of printed books is more fluent and permanent. The main reasons for this are that digital screens cause eye fatigue and scroll-based screens cause readers to be distracted and read in parts (Baker, 2010; Grace, 2011). In addition, in other studies conducted with teachers, results were obtained showing that teachers prefer to read from physical paper instead of reading from the screen that textbooks should continue to be printed in the future, and that they do not want digital textbooks. It appears that many people still prefer traditional printed books, despite the fact that the number of people using e-readers is rising and the e-book store system is succeeding in growing the e-book industry. The Association of American Publishers reports that e-books accounted for 9.03% of all consumer

book sales in 2010 (up from 3.31% at the end of 2009). Even while e-books had made significant progress, their market share was still far lower than that of traditional printed books. Japan saw the e-book craze start the same year (Bao et al., 2019).

When printed books and e-books are compared in terms of their usage, it has been observed that features such as taking notes on printed books and feeling the texture, smell, and pages of the book preferably represent the positive aspects of printed books. In the studies conducted, prospective teachers expressed their opinions that physical situations such as taking notes preferably on paper, underlining the texts, touching the page, and feeling the presence of the paper are more usable compared to electronic books. Teachers agree that it is appropriate to follow the book's accomplishments, but they prefer workbooks when it comes to substance. More activity is required, in the judgment of the teachers, in order to reinforce the material covered. It would not be suitable to utilize an alternative source; instead, it is advised to provide more information and activity areas in order to counterbalance the program's stated advantages. In addition to textbooks, student workbooks were taken into consideration. Considering the value of textbooks for education, it's critical to

make the required revisions in accordance with the results (Erten, Şen & Yüzüak, 2015).

Based on these points, the study attempted to determine the opinions of prospective teachers about e-books. It is thought that the results obtained in this context will contribute to educators and researchers. During the research, answers were sought to the following sub-problems:

- 1) According to science teacher candidates, is the e-book content important material?
- 2) What are the opinions of science teacher candidates who have experience in the e-book preparation process about the process experience?
- 3) According to science teacher candidates, are the e-books useful?
- 4) What do science teacher candidates think about the contribution of e-book material to education?
- 5) What are the developmental suggestions of science teacher candidates about the e-book materials?

METHOD

Research Design

This study was conducted using the phenomenology technique within the framework of the qualitative research method. The main purpose of choosing a phenomenology technique is to describe

individuals' different views and interpretations in detail (Creswell, 2002; Creswell & Poth, 2016; Patton, 2014).

Participants

The relevant research was conducted with the purposeful sampling technique which consisted of 11 science teacher candidates who were studying at a university in the Western Black Sea Region in Turkey, and they were responsible for preparing e-content within the scope of the course. When the participants are examined demographically, it is seen that 9 females and 2 males, 7 of them are 3rd-grade students of the science teaching department and 4 of them are 4th-grade students.

Data Collection Tool, Data Collection Process, and Data Analysis

In this study, all participants have received a course based on constructing the e-book material which consists of the units of subjects, related posters, and videos. This e-book material is constructed by the help of the Exe-Learning program. This software enables people to create their own e-learning materials, such as books, videos, tests, etc.

Firstly, participants have learned how to use the program, then they chose the topics, and they started to create their own teaching-learning areas. Some of the related example visuals from the

studies were displayed in Figure 1, Figure 2, Figure 3, Figure 4, Figure 5, Figure 6, Figure 7, and Figure 8.

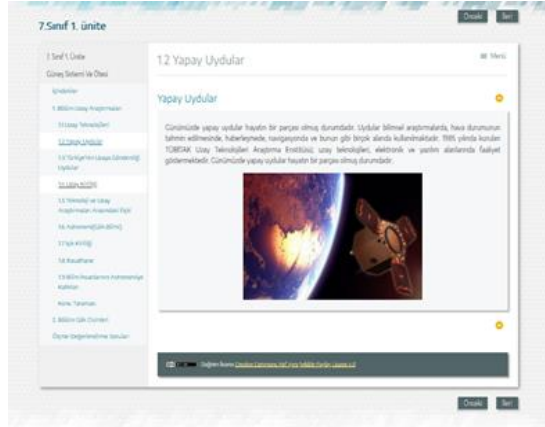


Figure 1. Topic of Artificial Satellites

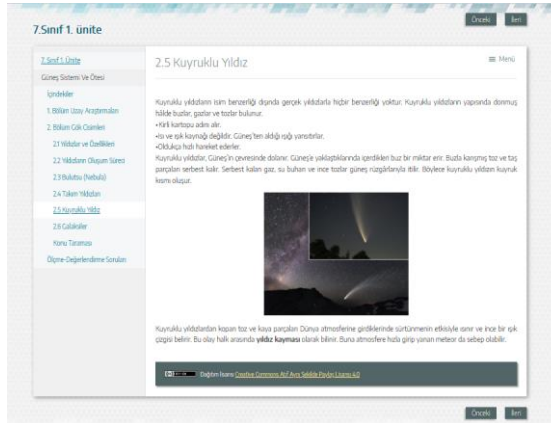


Figure 2. Topic of Comets

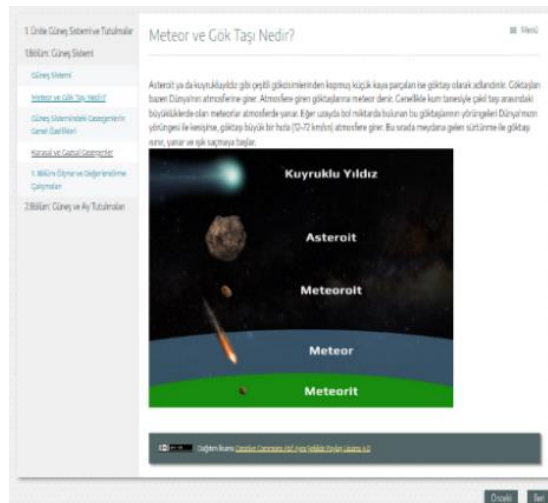


Figure 3. Topic of Meteor and Meteorites

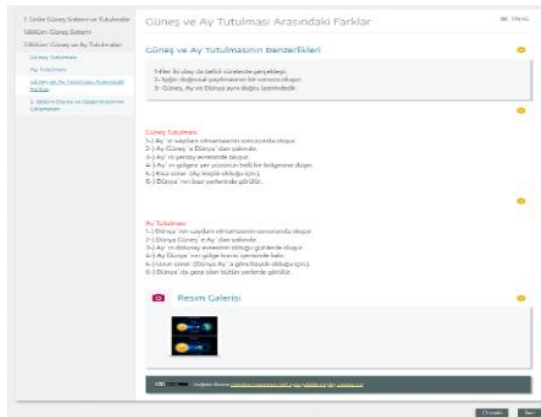


Figure 4. Topic of Solar and Lunar Eclipse

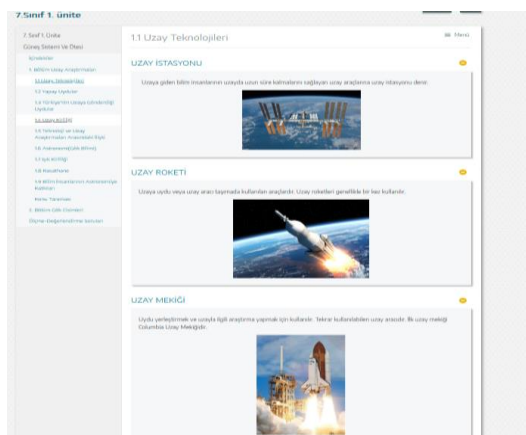


Figure 5. Topic of Space Technologies

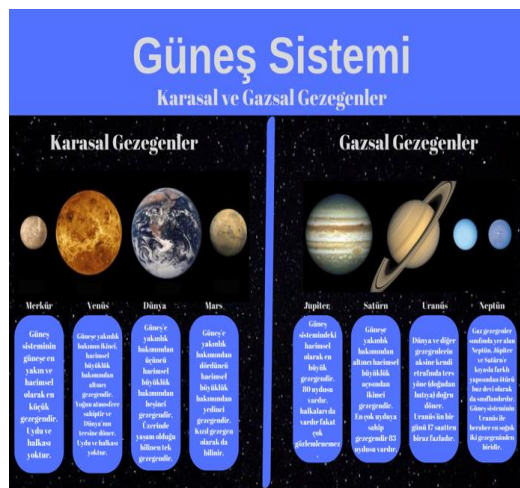


Figure 6. Poster of Solar System



Figure 7. Poster of Space Technologies



Figure 8 Poster of Pressure

In the framework of this research, a semi-structured interview form developed by the researchers was used to obtain the opinions of science teacher candidates about the e-book. The interview form includes 3 items describing demographic characteristics and an additional 12 questions. These questions were categorized under 5 themes in total: importance, process experience, usefulness, contribution, and suggestion. The interviews were held individually at a place and time determined according to the availability of the participants. Approximately 15 minutes are allocated for each interview.

The data obtained because of the interviews were examined using the content analysis technique. The sub-themes that emerged as a result of the analysis were associated with the main themes. In the analysis of the data obtained from teacher candidates, similar expressions were brought together with the help of coding, and code groups were created. Then, a qualitative data code map was obtained with the help of the MAXQDA 20 data analysis program. The data were interpreted by grouping common codes with the help of the qualitative data code map, which represents the relationships between

codes. In addition, in order to explain the students' statements and evaluations in detail, their opinions were tabulated as direct quotes and included in the findings section.

Reliability and Ethics

External validity in qualitative research is achieved by appropriateness and transferability, whereas internal validity is achieved through persuasiveness. The degree to which the researcher's perceptions and observations of a situation accurately reflect reality is the focus of the internal validity study. How far the research's findings may be applied is correlated with the external reality. Consequently, for internal validity, study findings were attempted to be assessed in line with the setting in which the data were collected (Miles and Huberman, 1994). It was observed that the collected data was consistent and significant in and of itself and that it complied with the conceptual framework. It has been attempted to define the interview approach in detail with regard to external validity. Methods for gathering, handling, evaluating, deciphering, and drawing conclusions from data are explained. An attempt has been made to provide a detailed explanation of the records' breadth in terms of the techniques and steps used during the investigation. The study's raw data was saved so that other researchers

could examine it. Techniques including member verification, long-term involvement, expert review, and the utilization of several data sources are favored in order to boost dependability in qualitative research. Transferability, a crucial component of qualitative research, refers to how well study results may be used in other situations or contexts. The capacity to generalize results from one set of settings to another similar set of conditions is known as external validity. To guarantee external validity, a thorough account of the study participants' backgrounds should be included in the research report. Nonetheless, the reader must also modify the study's findings for other scenarios. Purposive sampling methods, such as criteria sampling, were employed in this study to establish the participant group in an effort to improve external validity. The researcher spoke with participants orally about the study and asked for their signatures in order to get consent forms and participant support. Face-to-face interviews were conducted with the participants to ensure sufficient involvement throughout the research, with the time and location chosen based on their preferences. Second, the draft semi-structured interview form was assessed by experts for content validity, and their feedback was incorporated into the final version. Participating in the data

collecting and interpretation process with several researchers is one way to improve descriptive validity. In order to preserve descriptive validity and guarantee that no replies were overlooked, the researcher and three field specialists cross-checked the participant responses with the themes they had developed. In this study, research ethics principles were observed, and the necessary ethics committee permissions were obtained (2024-SBB-0152).

RESULTS AND DISCUSSION

When examining the findings obtained because of the research within the scope of sub-problems, it can be said that the conceptual code map (Figure 2) below, which represents the opinions of prospective teachers about the e-book material, is a guide. Accordingly, sub-themes that highlight the themes of importance, process experience, usefulness, contribution, and suggestion are listed, and their frequencies are shown with the help of visual emphasis.

The obtained data can be expressed as follows in the light of the sub-problems:

- 1) The importance of e-book material according to teacher candidates.
- 2) Experiences of teacher candidates in the process of preparing e-books.
- 3) The usefulness level of e-book material according to teacher candidates.

4) The contribution of e-book material to education according to teacher candidates.

5) Pre-service teachers' suggestions for e-book material.

The Importance of E-Book Material According to Teacher Candidates

When the opinions of teacher candidates regarding the e-book material were examined, findings were found that it had a positive contribution to teacher education and enabled the development of digital literacy skills. They stated that today, almost everyone can obtain it without any transportation difficulties and that the tendency towards e-books is of great importance due to their low cost. In addition, teacher candidates also mentioned that it is necessary to stay informed about innovations by keeping up with technological developments and changes. Some of the views of science teacher candidates were given as follows:

ST1: "It is important because it requires digital literacy, which is among the 21st century skills. It is very good in terms of both accessibility and low cost."

ST5: "Preparing an e-book was important because, as a teacher candidate, with the developing technology, preparing an e-book was of great importance both to keep up with technology and to provide us with preliminary information on how to prepare a unit."

ST6: "Because I find the use of e-books important in this century where technology is developing more and more every day. It is not possible for e-books to be lost or damaged. Therefore, I think the e-book is important."

ST9: "It is very important because direct students will benefit from this book. We should show that there is no misconception, it should be a good guide."

Experiences of Teacher Candidates During the E-Book Preparation Process

Most teacher candidates emphasized that they experienced certain difficulties in the e-book preparation process, that they encountered technical difficulties because they did not know how to use the relevant technology, but that when the process was completed, they improved because they had experience now. They stated that they felt inadequate at the beginning, and over time, as the learning process took place, they started to use the e-book preparation program without any problems. Related to this sub-problem, some of the views of science teacher candidates were given as follows:

ST2: "The teacher must definitely know how the unit should be prepared."

ST4: "I definitely observed and paid more attention to design principles and using technology."

ST7: "While designing an e-book, I had never prepared a poster before and I didn't know it, but now I know how to prepare a poster and what I can do to make the poster better. I can easily prepare the e-book in the same way. I have improved myself by practicing more."

ST10: "After the e-book preparation process, I became able to use instructional technologies much better."

ST5: "Yes, I observed. I improved myself on many points such as how to prepare for the unit, how to ask assessment and evaluation questions, how to pay attention to visual design elements, how to prepare a book in accordance with the grammar, the font size of the written texts, font style or alignment."

Usability Level of E-Book Material According to Teacher Candidates

When prospective teachers evaluated the e-book material in terms of usefulness, the data obtained showed that although it provided practicality of use, negative responses were encountered due to reasons such as being harmful to eye health and the troublesome preparation process. Apart from these, it has been observed that positive justifications were also used for the reason for choosing it, such as the fact that it can be used as an additional resource by both teachers and students, that it can be accessed free of

charge, regardless of time and place, and that it consists of interactive, short and concise information. Consistent with these, some of the views of teacher candidates were given as follows:

ST3: "I think it is useful for students and teachers. Because students need a resource to study."

ST5: "Every teacher should use it. Since it is not suitable for students who are not familiar with technology and do not have internet at home, it may be negative for the teacher who only uses this material."

ST6: "It's always available so it's positive. It is also important in terms of sharing. Students are provided with equal opportunities and are accessible."

ST9: "I definitely recommend every teacher to use it. A teacher should know how to prepare a unit and what points to pay attention to."

Contribution of E-Book Material to Education According to Teacher Candidates

When the opinions regarding the direct and indirect contributions of e-book material to education are evaluated, it is seen that the positive reasons are attributed to the fact that it is a material that can be easily obtained from anywhere with internet access. When the opinions of teacher candidates were evaluated, it was seen that the excitement of learning about a useful platform for teachers at the end of the process of

knowing how to prepare e-books was also reflected in the interview. The experiences gained in the process of developing this material, which encourages the use of instructional technologies and supports teacher training in digital content preparation, have led to more effective and efficient results. To be understood well, some of the quotes from science teacher candidates were given below:

ST2: "As the use of technology increases over the years, its use will increase in the future. It provides students with many conveniences that normal books do not. It can be greatly enriched visually."

ST4: "E-books provide education and training students with easy access to content prepared in parallel with the course they study at school. Therefore, it can increase students' achievement."

ST7: "Accessing information becomes easier. Information from different disciplines is easily accessible."

ST9: "It brings students closer to technology and motivates them."

ST11: "It has great benefits for education. Everything in the normal textbook is available on the site using technology, which may attract more attention from the students."

Suggestions of Teacher Candidates for E-Book Materials

When the opinions of the teacher candidates and their suggestions

regarding the e-book material were evaluated, the general picture that emerged was that they emphasized the need to enrich the content by using more visual materials, providing access without the internet, and simplifying its use and updating it. Suggestions have been made that a visual simulation add-on can be introduced, and a special design can be provided for each teacher on the basis of each branch. On the below, some of the science teacher candidates' views were given:

ST4: "I would make the e-book more comprehensive. I would put competitions, games, and videos, so that the student does not get bored of the lesson, and it is more positive for him to participate in the lesson. After giving the theoretical part, I would add a virtual laboratory to put it into practice. They learn better by doing experiments thanks to the virtual laboratory to test what they have learned and know, that is, to learn by doing. Students learn faster and participate better. It is more economical in terms of daily life, they can be made without paying for materials, and it is more useful."

ST8: "It can be used offline or without the internet, it should be easy to use, student activity should be high, and it should attract student attention very well."

ST10: "It should be supported by visual simulation."

ST11: "It can be developed with a simpler and more understandable application. It can be put into practice by separating it from class to class. Videos containing summary information can be added for each topic."

It is projected that as publishers step up e-book availability and instructors and students get more comfortable with e-books and mobile devices, e-book consumption will rise in both the academic and commercial industries (Daniel and Woody, 2013; Linares et al., 2013). E-books have really forced libraries to reassess their collection creation procedures entirely. Electronic books are not as widely utilized as print books, nor have they performed as anticipated. Although customers enjoy their novel features, ease, and round-the-clock accessibility, they still seem to prefer the printed format (Daniel and Woody, 2013; Walton, 2013). According to user experience, reading from a screen, relevance, platform and license restrictions, and lack of knowledge are the main reasons why e-books aren't used. It is clear that e-books are "not just a passing fad" even though consumers in the academic setting have not completely embraced them (Cassidy et al. 2012). As in this research, e-books will "prevail" in

spite of their alleged drawbacks (de Oliveira, 2012). Thus, it is imperative that we keep researching and studying the end-user experience to understand and obtain opinions from firsthand users. In addition to these, using digital technology to implement products promotes students' thought processes, enhances their capacity for self-regulation, and actively sparks the generation of new ideas in all teaching and learning activities (Sumarwati et al., 2020). Therefore, integration of this kind of activity into the classes can improve the students' thinking ability. Moreover, according to Arjaya et al. (2023), digital product-based learning significantly enhances students' creativity by inspiring them to motivate themselves and control their self-regulation talents in problem-solving. There is a rise in creativity when integrated learning is used in the evaluation of digital media. Virtual education can direct students' learning experience and exploration. (Syahwin et al., 2022).

CONCLUSION

E-books are now more popular as a learning tool due to the widespread use of tablets in today's digital world and the advancement of digital reading technologies like multimedia and interactive features (Huang & Liang, 2015; Jenny et al., 2015). Students learning processes are impacted by

interactive and multimodal e-book features like music, animation, video, and narration (Tsuei et al., 2020). Using digital media is an effective strategy to enhance self-regulation skills in online learning. According to Granberg et al. (2021), students' capacity for self-regulation in online learning is triggered by the use of digital media devices. This is consistent with (Li et al., 2020); as computer-based digital media develops, students' capacities for self-regulation grow, enabling them to find novel solutions through adaptive interventions. Studying digital media can motivate pupils to become more self-reliant and creative thinkers (Chen & Hsu, 2020).

The impact of interactive e-books on a range of learning outcomes has produced largely positive results, according to the findings of several studies on the use of interactive e-books in learning processes (Huang & Liang, 2015; Hwang & Lai, 2017; Li et al., 2020; Liu et al., 2017; Shamir & Lifshitz, 2013; Sung et al., 2019; Turel & Sanal, 2018). According to this study, digital e-book goods are legitimate, useful, and successful in enhancing students' capacity for creativity and self-control. When it comes to providing procedural and non-creative resources for online learning, as well as getting over the constraints of time, space, and students' lack of enthusiasm for reading, digital e-

book goods are an excellent substitute. Therefore, it is envisaged that digital e-book items used in education would function successfully and efficiently in order to boost students' capacity for creativity and self-control. In the framework of this study, teacher candidates have developed the e-book sources, but in-service teachers can also develop digital e-books with other resources that effectively boost their students' creativity and self-regulation skills by creating an e-book based on the integration of creativity and self-regulation ability, since expanding and encouraging the digital e-book creation might involve people with different educational backgrounds. In order to address relevant concerns, it would be beneficial to be aware of the shortcomings of students with regard to their use of computers and the Internet, which offer excellent opportunities for the search and processing of knowledge. Finding out the opinions and knowledge levels of preservice teachers about this topic appears to be crucial, especially since they will be working in a school where they will be required to use tablet computers and e-books in the future as part of a Ministry of Education project. Lessons that were added to university program curricula could help students overcome the inadequacies that were identified (Yalman, 2014).

SUGGESTION

More empirical studies and replication of this research that concentrate on a particular kind of e-book system or service as well as on a different demographic group are required in order to provide a more robust suggestion of the predictor for continued desire to use e-books. This might map and pinpoint the cause of a certain user group's ongoing intention to use a particular e-book system. In information science research, it may also apply the same study paradigm to the implementation of other systems or technologies. This would improve our understanding of many fields and yield new insights. It may also reveal distinct patterns of deterrent behavior, particularly with regard to the goal of sticking with a certain system or piece of technology.

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