Analysis of Factors Affecting Digital Textbook Pricing in Korea

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Abstract

The use of paper books for teaching and learning has many limitations in terms of cost and efficiency. The advantages of digital textbooks are emphasized in many studies. Researchers say that the use of digital textbooks as mediators of the 21st century provides the ability to solve a variety of educational and learning problems for the future. However, many stakeholders in education, such as teachers, students, parents, publishers and educators, are not prepared to accept it and infrastructure is incomplete. In Korea, digital textbooks are used in classrooms in 2018. Publishers are creating new digital textbooks containing sophisticated digital content in accordance with government guidelines, teachers want to create customized lessons for each student level, and profitability and market expectations are changing the importance of digital asset pricing in the textbook market. In this paper, we explore factors that affect digital textbook pricing, to help publishers maximize revenue over their product lifecycle.

Keywords: digital textbook, pricing of digital textbooks, digital content, digital asset pricing, higher-quality of digital textbooks, digital revolution, hyper-connectivity, classroom teaching improvement, self-directed learning

1. Introduction

The education system faces significant challenges in adapting to the technological advances of the 21st century. This is an era in which technology affects every activity in our lives, especially the younger generation born after the Internet. The students of the new digital generation have only experienced the world in which this technological advancement exists. These students learn in different ways and this paper will help teach and understand them better. The digital generation are students who are growing up constantly connected to the world around them through smartphones, tablets, and computers. Because of this hyper-connectivity, students will learn differently than previous generations did. It's important to understand how modern students learn and interact with the world in order to teach more effectively (Ioana and Maria-Carmen, 2016; Li et al, 2017).

The textbooks, or other useful materials, have been became the basic resource to transfer curriculum guidelines to classrooms. In every environment and sector of our industry, the massive raid of Information Technology and Communication(ICT) is creating fundamental shifts in the way we can produce, consume, distribute, and agree on information and knowledge. However, textbooks have not unaltered their format for decades, if not their content. Although the composition of textbooks has evolved into more and more innovative and appealing materials for students, the way in which students interact with them has not changed since the possibilities inherent in paper textbooks are limited. Nevertheless, as hardware and software evolved over the last few decades, a new and more effective way of transferring knowledge from paper to digital screens on smaller, portable devices has emerged (Jeongwon, 2017). Concepts such as interactive books and e-books are increasingly relevant to textbooks for the first time and are changing the way students interact with teachers in the classroom and how they study at home. This model, however, not only changes the way students learn, but also changes the way in which people create content and distribute content, giving the school more control over its educational resources when the technology gap is filled (Susan et al, 2014; HeeJeong et al, 2013; Okpechi et al, 2018; ; Sandy, 2018; Vafa, Sappington and Coombs-Richardson, 2018; Var, 2018; Wang and Yang, 2018; Yazdanjoo and Fallahpour, 2018).

The textbook market has long been prepared for fundamental changes in their products, markets and industries. Paper textbooks, e-textbooks, digital textbooks and supplements that are sold through different channels and sales models are a big change (Polat, 2018; Promsri, 2018).

What pricing strategies does digital textbook publishers currently adopt? How can they price various digital materials in a particular content package to maximize revenue over the product's lifecycle?

Industry sustainability is also a major concern as the shift from print to digital takes place. Profits for digital assets have traditionally been much lower than paper books, and for large publishers, the form of fixed costs changes dramatically as the focus shifts from revising previous versions of existing works to creating many newer, smaller versions (Rob, 2016; Rashid, 2017; Teba, 2017; Tolulope, 2017; Obi and Okekeokosisi, 2018; Puteri, 2018; Saeed and Kayani, 2018).

Today, the textbook market reveals the importance of digital asset pricing due to constant changes in all these areas, such as product, profitability and market expectations. Textbook publishers are struggling to develop products that have not been tested in ambiguous markets. On a social level, digital textbook publishers cannot be considered another potential business victim of the information age. They are responsible for providing quality products at reasonable prices to educators, students, parents, and their larger society. Digital textbook publishers must find a sustainable pricing model for the new digital products (Bliss, 2017).

Changes in this market affect educational quality both at the supplier and consumer level. This study has two major goals:

1. To explore current digital textbook pricing practices from the perspective of multimedia content in digital textbooks based on the Korean government's 2015 Revised Curriculum.

2. To analyse the potential impact of external factors – including regulation – on digital textbook pricing practices in the future.

In this paper, we examine the situation of the textbook market and the changes of the specific market according to the development of the digital technology and investigate the current pricing trend of digital assets based around single "source" textbook products(complete e-textbook, supplementary materials, etc.) Using this information, we explore factors that affect the price of digital textbooks so that publishers can maximize their profits over the life cycle of the product.

2. Related Background

In 2007, the Korean government plans to turn the education system into the worlds most advanced. The Ministry of Education has announced that Korea is preparing for a new digital revolution that will change schools in the future. It is planning to change from paper to digital textbooks (Ministry of Education, 2007; Ministry of Education and Human Resources Development, 2007).

Digital textbooks are electronic (digital) or e-books that serve as learning materials for classes. Digital textbooks are also called e-textbooks. Digital textbooks are a key component of technology-based education reform. Digital textbooks include learning through the use of multimedia. Digital textbooks, however, require different types of devices to access digital textbooks. It can be a computer, smart phone, tablet, or other electronic reader device. Digital textbooks can serve as texts for traditional face-to-face classes, such as the LCMS(Learning and Content Management System) or MOOCs(Massive Open Online Courses). The Korean government has made great efforts to turn traditional paper textbooks into digital ones. The key elements of change are the worldwide breakthroughs of tablet, smartphone and e-book readers.

Digital textbooks are designed to facilitate the production of diverse multimedia such as audio, interactive games, video, cartoon, animation, 3D graphics, apps and other digital products (Rakab, 2018). To use digital textbooks, students download them from the digital textbook delivery system and keep them in their library (Fig. 1).

Digital textbooks that are currently in use contain various multimedia and online materials in the form of paper products converted into digital products as shown in Fig. 2 and Table 1 (Junghoon et al, 2014; Jeong et al, 2013). Digital textbooks include the same cover, Table of Contents (Fig. 3), and images of the paper textbook, but additionally include bookmarks, memos, various supplementary images and videos, highlights, search, and animations. Reference books, evaluation items, and terminology dictionaries enable students to become self-directed learners anywhere and at any time according to their own learning pace and style. The online community linked to digital textbooks can also facilitate interaction between learners and other learners or teachers through sharing their opinions online, which can enable additional learning. The interaction and feedback functions of digital textbooks offer many possibilities for learning. What is important in digital textbooks is to present interaction that is lacking in classroom classes and customized content at individual levels. It is also presented in terms of interaction learning. The interaction and feedback features of digital textbooks provide many possibilities for learning.
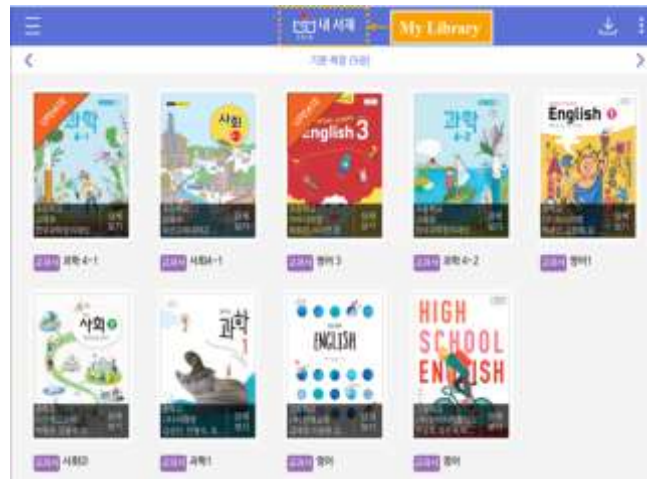
Figure 1. My Library contains digital textbooks

Figure 2. Digital textbook interface

Paper and digital textbooks are now used in primary, middle, and high school classes. The applied subject matter includes three subjects in science, social studies, and English. Figure 1 shows some of the digital textbooks that are currently being serviced. Digital textbooks are available on the computers, tablets and mobile phones from this year (Fig. 4).

Figure 3. Cover and table of contents of digital textbooks

Table 1. Main Function of Digital Textbooks

Supporting and facilitating	. Multimedia (images, cartoons,
learning	photos, illustrations, animations, sound, movies), AR (augmented reality)
	. References
	. Hyperlinks
	. Terminology
Interaction and links with various information resources	. Linkage with information resources
	. Interaction w/ experts via the web
Key learning function	. Memos, bookmarks, highlights, etc.
Evaluation tool and Learning management	. Evaluation tool
	. LMS

Digital textbooks have not been able to switch to the 21st century, where they can share a single piece of text with millions of people almost free of charge via the Web. To make this model work in the digital world, digital textbooks must use copyright enforcement, strict license terms, and DRM(digital rights management) controls to prevent unauthorized use of digital textbooks by multiple people. These restrictions inherently short the most advantageous features of today's technology. Until now, e-textbooks have taken a long time and the future defined by digital textbooks has not only replaced one broken system with another system (Jeongwon, 2007; Jeong, 2013).

Figure 4. Digital textbooks of Science and Social Studies subjects

3. Factors Affecting the Pricing of Digital Textbooks

A. Value of Digital Content

The quality of digital content can be measured and verified according to certain evaluation criteria, such as the accuracy of the text included in the contents itself, the harmonious visibility of graphics and text, and the integrity for preventing the illegal change of the contents. Measuring the consumer's satisfaction with the superiority of the content service can be used to assess the quality of the platform. In other words, the evaluation of the quality of the digital contents, and the superiority of the content itself, can be objectively measured and verified (Jeong and Pyung, 2017).

B. Pricing of Digital Textbooks

Factors that affect the pricing of a digital textbook include the length and perceived quality of contents, as well as the prices of other such books.

In Korea, the government controls the prices of digital textbooks. However, the publishers of digital textbooks are asking publishing companies to decide the price of digital textbooks. Therefore, this paper examines reasonable pricing models for digital textbooks while retaining high-quality content (Poedjiastutie, 2018; Polat, 2018; Promsri, 2018; Purwanto et al, 2018).

First, a SWOT analysis of how to determine the price of digital textbooks is presented below. The results of the analysis are shown in Figures 5 and 6.

According to the analysis results, it was discovered that the most reasonable method of determining digital textbook prices was for the publisher to autonomously determine the appropriate price after consultation with publishers and government, and in accordance with the current system.

Therefore, this paper examines the method for setting reasonable prices while maintaining high-quality contents of digital textbooks. To do this, the amount of multimedia contents in the digital textbooks that are currently being developed was analyzed.

During the development period, a very important factor is to estimate the development cost of the digital textbooks (Jeong and Pyung, 2018; Youn et al 2017). Thus, the length of time publishers were involved in the development period of digital textbooks was examined. The outsourcing period of digital textbooks and reference books (outsourcing ratio 32.4%) took 1.8 months; editing took 2.3 months; designing took 1.6 months; and marketing took 2.0 months. In total, the production of digital textbooks and reference books took about seven months from planning to the marketplace.
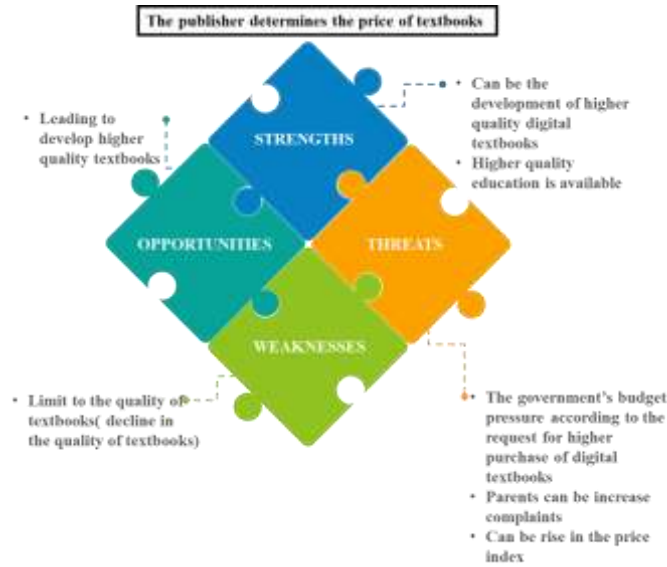

Figure 5. The publisher decide to the digital textbook pricing

The growth of digital textbook sales in the general publishing, education and technology market is affected by the following factors:

- The method of design and plan
- The components of digital textbook contents (movie clips, photos, animations, images, tables, evaluation items, functions, etc.)
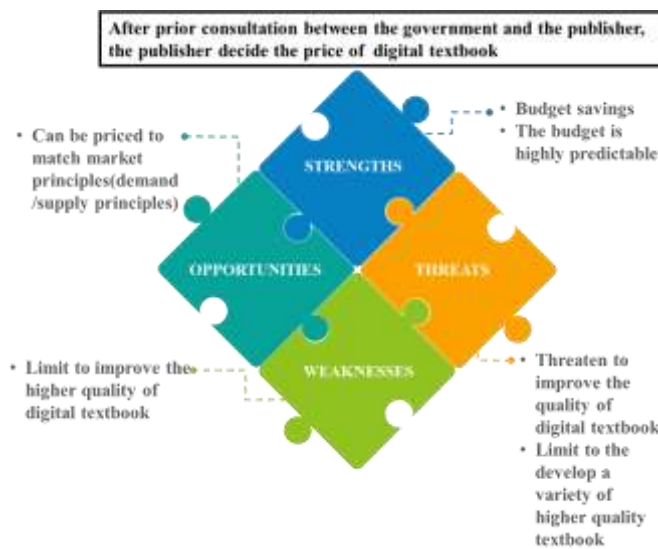

Figure 6. The publisher decides on the price of digital textbook after prior consultation between the government and the publisher

- The increased popularity and availability of OER(Open Educational Resources) and open digital content

- The continued growth of online learning and for-profit institutions

- The Student sharing and purchasing trends

- The digital textbook growth in trade publications

- The popularity and evolution of tablet devices and smartphones

- The increase in digital publishers and open textbook movement

- The popularity of online retail and distribution options

- The advances in software/hardware technology of electronic readers

- The standardization of digital textbook formats

One of the most important factors in accurately assessing the components of the content is the amount of multimedia data added to digital textbooks. The cost of developing the contents of the digital textbooks was calculated based on the pictures, illustrations, and cartoons present in the paper versions of the textbooks of the 2015 Revised Curriculum (Table Ⅱ).

The price of digital textbook is related to the growth of the digital textbook market and will also be influenced by the following factors:

• The cost of textbooks and other learning materials

• The availability of digital textbook content

• Student buying and sharing trends

• The continued growth of for-profit institutions and online learning

• The increased popularity and availability of OER (Open Educational Resources) and open digital content

• An increase in digital-first publishers and open textbook movements

• The textbook rental market

• The popularity of online retail and distribution options

•The popularity and evolution of tablet devices and smartphones

• The advance of e-reader software/hardware technology

• Format standards for digital textbooks

• The growth of e-books in trade publishing

Table 2. The Photos, Illustrations, and Cartoons in the Paper Textbooks of the 2015 Revised Curriculum

School	Subject	Average # of pages	Photos	Illustrations	Cartoons
Elementary	English 3	144	280	290	0
	English 4	154	212	292	0
Middle	Social Studies ①	249	434	241	132
	Social Studies ②	249	343	241	135
	Science ①	296	665	214	152
	English ①	188	279	239	9
High	English	244	369	219	11
	English Conversion	140	299	32	5
	English I	172	302	57	7
	English Reading & Writing	188	268	34	12

There are many factors that will have a greater impact on the price of digital textbooks. For example, the cost of textbooks and other learning materials remains a strong determinant of purchasing decisions for most consumers.

C. Criteria for the Quantitative Evaluation of Digital Textbooks

In this study, we used quantitative evaluation methods to evaluate the contents of digital textbooks. In this section, we describe the quantitative approach used to describe the learning context and identify the desired characteristics of high-quality digital textbooks. And we developed a conceptual model of digital textbook quality and explained the quantitative approach used to empirically evaluate the proposed model. Traditional digital textbooks and guidelines book for teachers were used to evaluate the desirable quantitative characteristics of digital textbooks.

A study in "The Effect of Digital Textbooks on Academic Achievement in Korea" by Jeongwon (2017) suggested rational methods for the pricing and transmission of digital textbooks. Based on the criteria used in this study, the analysis criteria was created according to the each type of content present in that study, as shown in Table Ⅲ.　For example, 'Simple illustration' means an illustration that includes one person or one object.

Existing paper textbooks and guide books for teachers were compared with digital textbooks, and the research analyzed whether or not the multimedia contents of digital textbooks included the same pictures, illustrations, and evaluation questions as the paper textbooks, or if these were newly developed specifically for the digital textbooks. The levels of manipulative interaction functions used to improve the quality of digital textbooks were also analyzed.

To analyze the quality of the multimedia contents included in digital textbooks, the types of content needed for quality evaluation were extracted through a literature analysis. Based on the analysis criteria, the contents of 74 kinds of digital textbooks were compared with those of paper textbooks. Of the 74 volumes, 16 were elementary school digital textbooks, 29 were middle school digital textbooks, and 29 were high schools digital textbooks (Table IV). The analysis of digital textbooks was conducted by compiling a list of the contents of both the paper textbooks and the digital textbooks. The evaluation of the contents of the digital textbooks was accomplished in the following steps.

- Record the number of contents according to Table Ⅲ
- Organize by content in the content table, but also include missing items in the content list

Table 3. The Analysis Criteria According to Each Type Of Content

1st Category	2nd Category	3rd Category	Description	Judging criteria
Terminology			Term	Same, New, Reuse
Voice	Short		Word, one or two sentences	
	Long		More than 3 sentences	
Image	Photo			
	Illustration	Simple	One person or one object	
		Complex	More than 2 persons or a composite illustration including a background	
Animation			Play time	
Movie Clip			Play time	
Assessment	Subjective			
	Objective		Including functions	
	Short Answer			
Function	Simple		Fill, Line drawing, Drag & Drop, Web link, Popup, Zoom, Page link, etc.	
	Complex		Combined functions, such as games or activities	
Table			Contents displayed using a table	

Table 4. Digital Textbooks to be Analysed

School	Number of Digital Textbooks			
	Social studies	Science	English	Total
Elementary	3	3	10	16
Middle	14	2	13	29
High	0	0	29	29
Total	17	5	52	74

- The contents of the site operated by the publisher was treated as 'new' content

- A speech bubble was inserted in the book illustrations, and animation was treated as 'new' content

- Play time was recorded only for new animations and videos

- Science experiments were recognized as one animation or video that was cut and edited into several pieces

- New/same/reuse were judged only with regard to the textbooks with 'same' content being the same as paper textbooks, 'new' content was not found in bookshelf textbooks, content will be the same as paper textbooks, and 'reuse' content having been used on previous pages

- 'Recognized' (or reused) photos were single photos that were cut or enlarged from an existing photo

- In the pop-up window, all newly inserted thumbnail images were newly counted

Table V shows some of the detailed analysis results. The 74 digital textbook analysis results were created in 74 tables, each of which included the statistics for each digital textbook. Table VI, Table VII and Table VIII shows the results of the analysis according to the type of multimedia content for Science, Social studies, and English subjects.

Table 5. Results of Detailed Analysis of an English Digital Textbook

Table 6. Multimedia Contents of Elementary School - Science

Category			Contents Usage			Item		Play time (sec) contents
1st	2nd	3rd	New	Same	Reuse	New	Same	only New
Terminology			161					
Voice	Short		18					
	Long		1					
Image	Photo		484	424	87			
	Illustration	Simple	27	85	18			
		Complex	19	29	13			
Animation			17		1			505
Movie Clip			145		1			3842
Assessment	Subjective							
	Short Answer		41			66		
	Objective		67			110		
Function	Simple		219					
	Complex		64					
Table								

Table 7. Multimedia Contents of Middle School - Social Studies

Category			Contents Usage			Item		Play time (sec) contents
1st	2nd	3rd	New	Same	Reuse	New	Same	only New
Terminology			443	73	20			
Voice	Short							
	Long							
Image	Photo		2	121	36			
	Illustration	Simple	25	121	64			
		Complex	9	136	31			
Animation			38					1559
Movie Clip			145		1			7334
Assessment	Subjective		85	11		85	21	
	Short Answer			86			177	
	Objective		85	12		205	33	
Function	Simple		1211		27			
	Complex		27					
Table			3	9	1			

D. The Results of the Analysis of Content Types in Digital Textbooks

Table Ⅸ shows the average of the content types within the digital textbooks analysed in this study.

13) Terminology: Terminology was often used to supplement the contents of a term or unit, and new contents not included in the paper textbook were often presented. On average, about 63 more vocabulary words were added to digital textbooks as compared with paper books.

Table 8. Multimedia Contents of High School - English

Category			Contents Usage			Item		Play time (sec) contents
1st	2nd	3rd	New	Same	Reuse	New	Same	only New
Terminology			357					
Voice	Short		89					
	Long		265		50			
Image	Photo		5	261	4			
	Illustration	Simple	1	21				
		Complex		9				
Animation								
Movie Clip			14					1005
Assessment	Subjective							
	Short Answer		41			66		
	Objective		67			110		
Function	Simple		320					
	Complex		109					
Table			0					

Table 9. Average of the Content Types of Digital Textbooks

Category			Contents Usage			Item		Play time (sec) contents
1st	2nd	3rd	New	Same	Reuse	New	Same	only New
Terminology			236.67	63.5	31.7			
Voice	Shot		164.7	5.7	125.1			
	Long		176.5	8.4	47.0			
Image	Photo		58.1	214.8	33.7			
	Illustration	Simple	34.9	62.1	33.5			
		Complex	94.1	143.0	38.3			
Animation			45.8	13.0	48.9			2,328
Movie Clip			14					1,514
Assessment	Subjective		19.6	11.2	0.0	51.2	23.0	
	Shot Answer		41.2	22.6	2.0	184.5	63.4	
	Objective		26.9	9.3	0.0	113.1	21.8	
Function	Simple		422.1	2.5	52.0			
	Complex		107.0	18.0	15.6			
Table			11.2	10.9	1.3			

2) Voice: Some explanations about the contents of the paper book were often vocalized. In English, most vocalized content was used to read words or phrases or to present conversations about given problems. The average amount of short voice additions was 165 new sources, with 125 reused sound sources. On average, long voice additions included 176 new sound sources, and 47 reused sound sources.

3) *Image:* Images were used primarily in paper textbooks without any distinction between photos or illustrations. Most images were often used in the same way between digital and paper textbooks, but many of the images found in the assessment were also classified as 'new'. In particular, an average of 214 images were the same between both paper and digital textbooks, but an average of 53 new images were included in the digital textbooks, which accounted for about 25% of the number of total images. On the other hand, in the case of illustrations, more than 50% of the images used in digital textbooks were 'new.'

4) *Animation:* In the case of animation, the situations and conversations given in the English paper textbook were animated, and in other subjects animations were used to explain scientific phenomena or specific situations. Most animations were newly produced, with an average of 45 'new' animations being used.

5) *Movie Clip:* Movie clips were used to provide more realistic information than animations, and an average of 14 videos were used.

6) *Function:* Simple functions such as clicks, connections, and fills were developed and diverse and complex functions for enhancing games and interactions were also developed. Particularly, the functions were being actively used in digital textbooks as a tool to enhance the lack of interactivity in traditional paper textbooks.

4. Conclusions and Policy Suggestion

Digital textbooks can be used to enhance traditional paper textbook materials with multimedia contents such as illustration, movie clip, animation, and virtual reality, and it is possible to quickly and accurately reflect new facts and information with web links. In addition, since various educational materials are linked with databases, it is easy and possible to access real-time information that is difficult to provide in paper textbooks. Learners can study digital textbooks any time and anywhere according to their own learning level and learning speed. The ability of digital textbooks to provide immediate feedback and multi-directional learning between teachers, students, and computers through SNS and other communication tools can double the effectiveness of learning. It then becomes possible to facilitate student-centered classroom activities and self-directed learning because the variety of additional contents and interactivity are enhanced.

In this study, a plan was presented for evaluating the quality of content that affects price determination of digital textbooks distributed to elementary, middle, and high school students in Korea in 2018. A multimedia contents analysis was also conducted that included 74 digital textbooks. This analysis of the contents of state and provincial digital textbooks was conducted to compare and identify the changed contents between digital and paper textbooks. After selecting the analysis criteria by content type, the amount of content types was analyzed for each of the 74 selected digital textbooks. Due to the constraints of the national budget, it is difficult to make market price decisions based solely on market principles. Therefore, it is desirable that publishers decide on the appropriate price of digital textbooks after consulting with the government and publishing companies.

The content types of digital textbooks were categorized into terms, dictionaries, voice, images, animations, videos, assessment items, functions, and tables, and compared with paper textbooks.

- In the digital textbook planning stage, various planning research, function development, and linkage work were developed for considering textbook contents, but this was not reflected in the amount of content presented because it was difficult to judge objectively.

- Although the function is simple, various development processes are needed to cope with the digital book viewers, OS(operating systems), and devices, and further testing and inspection are required, but this was excluded because it was difficult to include in the content types and amount.

In the case of classes using digital textbooks, additional contents and functions of digital textbooks can be used to enhance the interest in and understanding of the subject of the class through various interactions as well as the selection of additional learning content. Digital textbooks can also contribute to enhancing the interaction between teachers and students, as well as providing unrestricted content and services.

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References

Bliss, T.J. (2017). A model of digital textbook quality from the perspective college students. Dissertation of Ph. D, Brigham Young University.

HeeJeong, J.L., Chris, M. & Kok-Lim, A.Y. (2013). Can and electronic textbooks be part of K-12 education?:Challenges, technological solutions and open issues. *The Turkish Online Journal of Educational Technology, 12*(1), 32-44.

Ioana, M. & Maria-Carmen, D. (2016). Primary school teachers' opinion on digital textbooks. *Acta Didactica Napocensia, 9*(3), 47-54.

Jeong, S.Y. & Pyung, K. (2017). A study on the pricing system and transmission method of digital textbook. Korea Education and Research Information Service.

Jeong, S.Y. & Pyung, K. (2018). Factors affecting digital textbook pricing in Korea. *International Conference on Future Information & Communication Engineering*, 127-130.

Jeong, S.Y. (2013). A model of pricing decisions for digital textbooks. The 3rd International Conference on Convergence Technology, 2(1), 96-97.

Jeong, S.Y., Seok, J.J., Dae, H.L., Jeong, M.N., Joo, H.N. & Kyun, L.E. (2013). A study digital textbook pricing and distribution system, Korea Education and Research Information Service.

Jeongwon, C. (2017). The effect of digital textbook on academic achievement in Korea. *Journal of Theoretical and Applied Information Technology, 95*(18), 4871-4878.

Junghoon, L., Byungro, L. & Eunmo, S. (2014). Development study on the quality certification standards of smart education contents. *The Journal of Educational Information and Media, 20*(3), 327-353. https://doi.org/10.15833/KAFEIAM.20.3.327

Li, J. Shin, & Lee, H.C. (2017). Text mining and visualization of papers reviews using R language. *Journal of Information and Communication Convergence Engineering, 15*(3), 170-174.

Ministry of Education and Human Resources Development. (2007). Diffusion plan of digital textbook. Government News Release.

Ministry of Education. (2007). *Launch the commercial development of digital textbooks*.

Obi, M. N., & Okekeokosisi, J. (2018). Extent of Implementation of National Entrepreneurship Curriculum in Tertiary Institutions as Perceived by Educators. *American Journal of Education and Learning, 3*(2), 108-115. https://doi.org/10.20448/804.3.2.108.115

Okpechi, P. A., Denwigwe, C. P., Asuquo, P. N., Abuo, C. & Unimna, F. U. (2018). Awareness and utilization of e-learning resources by trainee counsellors of counselling education in Calabar, Nigeria. *International Journal of Educational Technology and Learning, 3*(2), 45-51.

Poedjiastutie, D. (2018). Indonesian school students reading habits: A sociocultural perspectives. *International Journal of English Language and Literature Studies, 7*(4), 94-100. https://doi.org/10.18488/journal.23.2018.74.94.100

Polat, S. (2018). An analysis of the multi-cultural characteristics of the pre-service teachers in terms of the values they have. *Asian Journal of Education and Training, 4*(4), 336-346. https://doi.org/10.20944/preprints201807.0099.v1

Promsri, C. (2018). The influence of external locus of control on life stress: Evidence from graduate students in Thailand. *International Journal of Social Sciences Perspectives, 3*(1), 38-41. https://doi.org/10.33094/7.2017.2018.31.38.41

Purwanto, M. R., Chotimah, C. & Mustofa, I. (2018). Sultan Agung's thought of Javanis Islamic Calender and its implementation for Javanis Moslem. *International Journal of Emerging Trends in Social Sciences, 4*(1), 9-14. https://doi.org/10.20448/2001.41.9.14

Puteri, L. H. (2018). The Apperception Approach for Stimulating Student Learning Motivation. *International Journal of Education, Training and Learning, 2*(1), 7-12. https://doi.org/10.33094/6.2017.2018.21.7.12

Rakab, M. B. (2018). The frequency effects of a relatively rarely used grammar structure: The case of had better. *International Journal of English Language and Literature Studies, 7*(4), 101-114. https://doi.org/10.18488/journal.23.2018.74.101.114

Rashid, R. A. (2017). Study on national girls education strategy implementation, monitoring and evaluation. *American Journal of Education and Learning, 2*(1), 92-95. https://doi.org/10.20448/804.2.1.92.95

Rob, R. (2011). *Digital textbooks reaching the tipping point in U.S. higher education*. Xplana.

Saeed, N., & Kayani, A. I. (2018). Role of College Principals in Promoting Quality of Education in District Kotli AJ&K. *Asian Journal of Contemporary Education, 2*(2), 149-158. https://doi.org/10.18488/journal.137.2018.22.149.158

Sandy, W. (2018). Factors Influencing Indonesian Students Satisfaction During their Studies in China. *Asian Journal of Contemporary Education, 2*(2), 136-148. https://doi.org/10.18488/journal.137.2018.22.136.148

Susan, G., Elizabeth, l.R. & Theo, B. (2014). The effect of digital publishing on the traditional publishing environment. Essays Innovate. 95-101.

Teba, S. C. (2017). Using Effective Strategies for Errors Correction in EFL Classes: a Case Study of Secondary Public Schools in Benin. *Journal of Education and e-Learning Research, 4*(2), 63-71. https://doi.org/10.20448/journal.509.2017.42.63.71

Tolulope, A. (2017). Demographic Variables as Factors Influencing Accessibility and Utilisation of Library Software by Undergraduates in Two Private Universities in Nigeria. *Journal of Education and e-Learning Research, 4*(3), 92-99. https://doi.org/10.20448/journal.509.2017.43.92.99

Vafa, S., Sappington, K., & Coombs-Richardson, R. (2018). Using Augmented Reality to Increase Interaction in Online Courses. *International Journal of Educational Technology and Learning, 3*(2), 65-68. https://doi.org/10.20448/2003.32.65.68

Var, L. (2018). The Analysis of Teacher Candidates' Self-Sufficiency about Their Teaching Abilities at Different Departments. *Asian Journal of Education and Training, 4*(3), 246-249. https://doi.org/10.20448/journal.522.2018.43.246.249

Wang, K., & Yang, Z. (2018). The Research on Teaching of Mathematical Understanding in China. *American Journal of Education and Learning, 3*(2), 93-99. https://doi.org/10.20448/804.3.2.93.99

Yazdanjoo, S., & Fallahpour, H. (2018). A Study on the Correlation between Creative Thinking of Iranian EFL Learners and Using Metaphor in Descriptive Writing Tasks. *International Journal of English Language and Literature Studies, 7*(2), 32-44. https://doi.org/10.18488/journal.23.2018.72.32.44

Youn, J.H. Seo, Y.H. & Oh, M.S. (2017). A study on UI design of social networking service messenger by using case analysis model. *Journal of Information and Communication Convergence Engineering, 15*(2), 104-111.