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STUDENTS ON ADVANTAGES AND DISADVANTAGES OF USING PAPER AND E-TEXTBOOKS IN HIGHER EDUCATION

Svitlana Babushko

Doctor of Pedagogical Sciences, Professor,
Head of the Tourism Department
National University of Ukraine on Physical Education and Sport, Ukraine

Myroslav Solovei

Candidate of Pedagogical Sciences, Associate Professor,
Associate Professor of the Department of Pedagogy and
Methods of Teaching Foreign Languages
Kyiv National Linguistic University, Ukraine

Lyudmila Solovei

Candidate of Pedagogical Sciences, Associate Professor,
Associate Professor of the Department of English Language and
Communication
Borys Grinchenko Kyiv Metropolitan University, Ukraine

Summary. *The article presents the result of the survey of university students' opinions on advantages and disadvantages of paper or electronic format of a textbook in higher education. The obtained results show that students are well aware of positive and negative features of both formats. Moreover, they even singled out quite a new feature of both formats that is a reflection of war consequences on critical infrastructure in Ukraine – urgent or planned blackouts, deterioration of the Internet and mobile connection make paper textbooks more suitable for learning. Further research is required to specify the reasons why learners interact differently with paper and digital (electronic) media, in which conditions each textbook format is more effective.*

Conclusion. *Students' opinion should be necessarily taken into account when choosing a textbook for learning an academic discipline at the university.*

Keywords: *students' opinion, university, electronic, paper textbook, choice, advantages, disadvantages.*

New technologies and rapid digitalization of all spheres of life, including education, have brought to the foreground some problems and challenges that require the immediate and meticulous attention of practicing educators and scientists. One of these problems is the choice of using e-textbooks (electronic) or paper textbooks in educational process.

Digital media, books, and textbooks have become so popular and in demand that, for example, in the United States, President B. Obama set the goal of using e-textbooks in every classroom by 2017. In Florida, the related legislation was even developed and approved, according to which public schools would require to convert all their paper textbooks into electronic ones [1]. However, the total fascination with electronic books and textbooks for educational purposes unexpectedly had negative consequences. And the question of using e-textbooks in educational institutions and the rejection of paper textbooks remains unsolved and rather disputable.

The negative results of using e-books and e-textbooks on reading skills were proven by international research of reading literacy that was conducted in 2021 [2]. The researchers fixed a considerable decline in the development of schoolchildren's reading skills and directly connected it with the transition to digital media. In particular, schoolchildren could easily read texts from digital media, but they had difficulty remembering, interpreting, integrating and evaluating the information obtained from the text information.

Thus, among 10-year-old schoolchildren in Sweden, this difficulty increased from 12% to 19%. Scientists explain the unsatisfactory result by the fact that digital media have been used in the educational process for more than 10 years in Sweden. Even in kindergartens, all children receive e-tablets for learning. Disappointing results led to the fact that the Minister of Education of Sweden announced the return to education with the "good old paper textbook" and at the same time the simultaneous use of electronic textbooks [3].

In Ukraine the Law of Ukraine "On Education" underlines the equal importance of paper and electronic textbook in educational process in general secondary education [4]. However, the choice of electronic or paper textbook in higher education remains unregulated. It is logical that in the conditions of digitalization, pedagogical staff of higher educational institutions create textbooks and other educational and methodological literature in both formats. But actually, the preference is given to creating and using electronic textbooks.

It is interesting to specify what format of textbooks appeals to the university students and why. In view of this, the purpose of the article is to find out the students' opinion of the advantages and disadvantages of using both electronic and paper formats of textbooks in their learning at the university.

To achieve the established purpose the authors conducted a survey and asked students to outline what advantages and disadvantages they personally see in using both formats of textbooks.

42 students from 2 Kyiv universities took part in the survey, namely Kyiv Borys Grinchenko Metropolitan University and National University of Ukraine on Physical Education and Sport. Among the respondents, 32 students are studying at specialty 035 Philology (the English Language) and 10 students are at specialty 242 Tourism and Recreation.

The obtained answers were systemized and grouped accordingly. Table 1 contains the students' answers on advantages of an electronic and paper textbook.



Table 1

Advantages of an electronic and paper textbook	
Electronic	Paper
Do not require storage space, do not clutter the room	More aesthetic and attractive than e-books
Since electronic textbooks are on electronic media, special lighting is not required	You can pick up and feel the paper from which the book is made, which increases the pleasure
Fonts, lighting when using electronic textbooks can be adapted to yourself	You can create your own library and reread books whenever you want
All textbooks can be downloaded on one gadget	The textbook can serve as both a book and a workbook where different tasks and home assignments are performed
They do not take up much space, do not wear out, and pages do not get lost	When you buy a textbook, it is yours, and you can write a translation, your opinion, etc. in it
They bring economic and environmental benefits to society	When the lights are turned off and the Internet disappears, you can work with the textbook
They are interactive and allow a quick search for the required information	The paper format helps to focus your attention better by highlighting key ideas or the main idea with a marker

Source: systemized by the authors.

Table 2 includes the students' answers on disadvantages of using an electronic and paper textbook.

Table 2

Disadvantages of an electronic and paper textbook	
Electronic	Paper
You need light and access to the Internet; without them it becomes impossible to use the electronic textbook	Trees are destroyed for the production of textbooks, which results in destroying the environment
With long-term use, your eyes get tired, it is difficult to focus the gaze in the distance	The price of the paper textbook is quite high, and the electronic one is free or much cheaper
If the texts are long, it is difficult to remember all the information that was at the beginning	A used textbook is unpleasant to pick up and to touch
There is a lot of information, there are no fields where you can write down your thoughts at once. As a result, the concentration of attention is much lower	There are not enough paper textbooks for all applicants
The operating time of the electronic device is limited and currently it may be impossible to charge it	You can lose your textbook, leave it somewhere, or lend it to your classmates and forget about it
In order to use electronic textbooks, electronic gadgets are needed, and they are expensive to buy	You can't read a book in the dark, as you need additional lighting

Source: systemized by the authors.

Analyzing the advantages and disadvantages of both types of textbooks identified by the respondents, the authors came to the conclusion that, in general, the students of Ukrainian higher education institutions identified the same number of advantages for electronic and paper textbooks and the same number for disadvantages. Thus, the pluses and minuses of both formats appeared as if on the scales. There is a certain correlation: what is good about a paper textbook, is not quite appropriate for an e-textbook, and vice versa.

It is worth mentioning that identifying advantages and disadvantages, the students singled out quite a new feature that is currently rather important for them. That is, the influence of the realities of modern life in Ukraine. Due to the war and damaged objects of critical infrastructure, there is a deep and urgent lack of electrical capacity in the country. This results in constant and extraordinary turn-offs the electricity, the disappearance of the Internet, the deterioration of mobile communication. With this in mind, the advantages of electronic textbooks are decreasing, and because of this, the number of their disadvantages is increasing. Therefore, the lack of electricity, mobile communication and the Internet availability are significant criteria that either add or distract positive features of the selected textbook format.

One of the good reasons that influence the format of the textbook is physical: tactility and kinesthetics, attractiveness of the design and cleanliness. These features are important for students. The majority of first-year students support the idea of using a paper textbook. At the same time, for both groups; junior and senior students, the paper textbook is more suitable for learning a foreign language, since it is used as a book to read and a workbook to write in. For social and humanitarian educational disciplines, in students' opinion, both formats are quite good. However, when the students need to remember the information large in volume, they prefer a paper textbook.

To conclude, the results show that the students are clearly aware of the advantages and disadvantages of both formats of their textbooks. Hence, the university pedagogical staff should make the choice of textbook format thoroughly, necessarily taking into account the students' opinion. When performing some educational tasks, paper or electronic format does not make a big difference. At the same time, the performance of certain tasks or the study of certain academic disciplines will be more effective with the use of a paper textbook. As students know and use the advantages of each format of the textbook in their learning to the full, they can be acknowledged as experts in this field. Thus, the consideration of students' opinion will definitely help choose the most suitable format of the textbook.

Given this, further empirical research is needed to clarify the reasons why learners interact differently with paper and digital media, in which conditions each textbook format is more effective. So, the difference between a paper and an electronic textbook exists, and therefore, it must be taken into account in the educational process.

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АНАЛІЗ ДУМКИ ЗДОБУВАЧІВ ВИЩОЇ ОСВІТИ ЩОДО ПАПЕРОВОГО ТА Е-ФОРМАТУ ПІДРУЧНИКА У НАВЧАННІ

Бабушко Світлана Ростиславівна

доктор педагогічних наук, професор,

завідувач кафедри туризму,

Національний університет фізичного виховання і спорту України, Україна

Соловей Мирослав Іванович

кандидат педагогічних наук, доцент,

доцент кафедри педагогіки та методики викладання іноземних мов

Київський національний лінгвістичний університет, Україна

Соловей Людмила Сергіївна

кандидат педагогічних наук, доцент,

доцент кафедри англійської мови та комунікації

Київський столичний університет імені Бориса Грінченка, Україна

Анотація. У статті наведено результати опитування студентів закладів вищої освіти щодо переваг і недоліків паперового чи електронного формату підручника. Отримані результати показують, що студенти добре знають позитивні та негативні риси обох форматів. Більше того, вони навіть виділили нову особливість обох форматів, яка є відображенням наслідків війни на критичній інфраструктурі в Україні – термінові чи планові відключення електроенергії, погіршення роботи Інтернету та мобільного зв'язку роблять паперові підручники більш придатними для навчання. Потрібні подальші дослідження, щоб визначити причини, чому студенти по-різному взаємодіють із паперовими та цифровими (електронними) носіями, за яких умов кожен формат підручника є більш ефективним.

Висновок. При виборі підручника для вивчення навчальної дисципліни у закладі вищої освіти обов'язково слід враховувати думку студентів.

Ключові слова: думка студентів, заклад вищої освіти, електронний, паперовий підручник, вибір, переваги, недоліки.