

Analysis of the need for e-book adaptive physical education to physical education students at University of Bengkulu

Yahya Eko Nopiyanto^{1*}, Cahyo Wibowo², Ibrahim³

¹Pendidikan Jasmani, Universitas Bengkulu, Bengkulu 38117, Indonesia

²Pendidikan Jasmani Kesehatan dan Rekreasi, Universitas Kristen Satya Wacana 50711, Salatiga, Indonesia

Pendidikan Jasmani, Kesehatan, dan Rekreasi, Universitas Cenderawasih, 99351, Indonesia

¹yahyaekonopiyanto@unib.ac.id*; ²cahyo.wibowo@uksw.edu; ³ibrahim616@gmail.com

*corresponding author

ABSTRAK

The need for e-books in adaptive physical education courses needs to be done to meet the needs of physical education students at the University of Bengkulu. Analysis of the needs of e-books is a key factor in knowing the needs of students in attending adaptive physical education courses. This study aims to determine the level of need for adaptive physical education e-books for physical education students. This research is qualitative descriptive. Instruments and data collection techniques using observation, questionnaires, and interviews. A total of 1 lecturer supporting adaptive physical education courses, and 22 students selected purposively were involved to provide research data. Data analysis using data triangulation. The results of the analysis of the data stated that: 1) lecturers have limited time to develop an e-book, and 2) students need the e-book to support the lecture process. So it can be concluded that the need for adaptive PE e-books is in the very high category. Therefore, it is necessary to develop an e-book to meet the needs of physical education students in participating in adaptive physical education lectures at the Bengkulu University physical education study program.

Keywords: needs, e-book, adaptive physical education.

INFO ARTIKEL

Article History:

Accepted : 14 Dec 2022
Approved : 03 May 2023
Available Online May 2023

Correspondence Address::

Yahya Eko Nopiyanto
Ilmu Pendidikan/Pendidikan Jasmani, Universitas Bengkulu
Road WR Supratman , Bengkulu 38117, Indonesia
E-mail: yahyaekonopiyanto@unib.ac.id

INTRODUCTION

The development of the world of technology in the 21st century is so rapid and has penetrated all lines of life including the world of education (Rodríguez et al., 2018). Therefore, as educators or lecturers in higher education institutions, they must continue to innovate following technological developments. One of the efforts that need to be made by lecturers is to provide or develop textbooks as one of the main references for students attending lectures taught by the lecturer (Lufthansa et al., 2022). Textbooks developed by lecturers should be interesting to read, easy to understand, easily accessible, and able to meet the learning needs of students in this century (Siregar et al., 2022). The textbooks that are in great demand by millennial students today are e-books (Prajawinanti, 2020). Students choose e-books as a

learning resource because they are easy to access through various electronic devices, especially smartphones.

The E-book is a technology that requires electronic devices to present information in the form of practical and dynamic multimedia (Rodhiah & Roza, 2020). In addition, e-books can be used effectively because they can be accessed at any time and are more practical than textbooks (Irmade & Jumanto, 2022). The availability of e-books has been proven to increase student learning activities, simplify the process of delivering information and learning materials, and increase student motivation. Even though the benefits of e-books in learning are known, e-books for adaptive physical education courses are not yet available in the physical education study program at the University of Bengkulu.

The adaptive assessment course is a crucial subject that must be taken by every physical education student at the University of Bengkulu's physical education study program (Nopiyanto & Pujiyanto, 2022). In these lectures, students are given learning experiences regarding theoretical concepts and didactic skills in teaching adaptive physical education to students who need special treatment. Understanding the concept theoretically can only be understood by students if students have textbooks that are easy to understand contextually and easily accessible in terms of time. Meanwhile, didactic skills can be mastered by students who have guidelines or procedures for implementing teaching contained in textbooks.

Through observations of student learning activities in the Physical Education study program at Bengkulu University, when attending adaptive physical education classes, it was stated that 20% of students had learning resources other than those provided by the course lecturers, meaning that 80% of students did not yet have learning references in the form of e-books. This is a factor in the difficulty of students in understanding lecture material due to limited learning resources. To strengthen the results of observations that have been made by researchers, interviews were conducted with lecturers supporting adaptive physical education courses. From the results of the interview, it was concluded that the textbooks or references used today still refer to old books, lecturers have difficulty managing time to develop textbooks, and the learning process in class is carried out by discussion based on the material in google blogspot.

Referring to the problems faced by physical education students, we need an analysis of the need for adaptive physical education textbooks in the physical education study program at Bengkulu University. Through this analysis, it is expected to produce comprehensive data regarding student needs for textbooks. These problems prompted researchers to conduct

research with a focus on analyzing the need for e-books for physical education students at Bengkulu University.

METHOD

Qualitative descriptive research methods are implemented to reveal a fact by using various methods in collecting data such as observation, interviews, or documentation (Moleong, 2021). The research was conducted in September 2022. The research subjects were 1 lecturer supporting adaptive physical education courses, and 2 physical education students who actively participated in adaptive physical education courses in the fifth semester of the 2021/2022 school year. The subjects were taken from 3 classes purposively with various considerations including students willing to become research subjects and providing research data honestly, students active and registered in the study program and university academic system, and students taking adaptive physical education courses. Instruments and data collection techniques using observation, questionnaires, and interviews. The questionnaire used in this study consisted of 10 question items which were described from five indicators, with a Likert scale. The validity of the questionnaire used was 0.77. The collection of interview data in this study was carried out with 1 lecturer in charge of the course and 2 physical education students. While the instruments in the form of observation guides and interviews have been consulted with experts and declared fit for use. The triangulation technique was used to analyze the data. Triangulation is a way to analyze research data by validating data from various data sources (Alfansyur & Mariyani, 2020).

Table 1. Observation Guide

Indicator	Descriptor	Result
Textbooks	Availability of textbooks used by students and lecturers.	

Table 2. Questionnaire Grid

Indicator	Descriptor	No
Textbooks	Availability of textbooks used during adaptive physical education lectures.	1,2
Motivation	The encouragement of learning in students to take part in adaptive physical education lectures.	3,4
Learning Style	The method used by students to learn while attending Physical Education lectures is adaptive.	5,6
Interest to learn	The interest that arises in students to learn while attending adaptive physical education lectures.	7,8
Learning outcomes	Competencies acquired by students in learning.	9,10

Table 3. Student Interview Guide

No	Indicator	Question
1	Learning Resources	What types of learning resources do you have for attending adaptive physical education courses?
2	Motivation	What needs to be done by lecturers supporting the subject to increase your learning motivation in attending adaptive physical education lectures?
3	Learning Style	How do you study to succeed or get good grades in the course you're taking?
4	Interest to learn	Would you be more interested in learning if sufficient textbooks were provided in lectures?
5	Learning outcomes	What efforts are there to do to get good learning outcomes in lectures?

Table 4. Lecturer Interview Guide

No	Indicator	Question
1	Availability of textbooks	How many books do you use as a reference for teaching adaptive physical education courses?
2	Learning process	Is the textbook that you have been using effectively for the learning process?
3	Book development	Have you previously developed e-book-based textbooks?
4	Obstacle	What obstacles did you experience in developing textbooks?
5	Criteria	If there is an opportunity to compile textbooks, what are the criteria according to you?

RESULTS AND DISCUSSION

To make it easier to understand the results of observations, the researcher presents them in qualitative and quantitative forms. The research data collected through observation is presented in table 5 as follows.

Table 5. Observation Results

Indicator	Results	Explanation
Textbooks	Students have minimal e-book-based textbooks compiled by adaptive physical education lecturers.	As many as 90% of the students involved in the research did not have e-book-based textbooks as a guide in attending lectures.

The observations shown in the table above, it is clear the need for e-books. To support the observation results needs analysis data is also presented based on the data in the questionnaire.

Table 6. The Results of The Analysis of The Needs of Adaptive PE Textbooks

No	Interval	Frequency	Category	Percentage
1	41-50	12	Very high	54,5%
2	31-40	10	Tall	45,5%
3	21-30	0	Currently	0
4	11-20	0	Low	0
5	1-10	0	Very low	0

The table above supports the results of the observation, where the results of the analysis in the table above illustrate that as many as 54.5% of students show a very high need for e-books, and as many as 45.5% of students have a high category need for e-books.

Table 6. Student Interview Results in 1

No	Question	Answer
1	What types of learning resources do you have to attend adaptive physical education courses?	The source of learning that I have is the internet. Usually, I access learning materials via the internet.
2	What needs to be done by lecturers supporting the subject to increase your learning motivation in attending adaptive physical education lectures?	In my opinion, if the lecturer in charge of the course provides e-book-based textbooks it will motivate me in learning.
3	How do you study to succeed or get good grades in the course you are currently taking?	I study independently. I have learned through the material on blogspot.
4	Would you be more interested in learning if textbooks were provided that were accessible in lectures?	Yes, I would feel more interested if learning had textbooks. With textbooks, we will study the material as a whole and the information will not be separated like in other people's blog spots.
5	How do you put effort into getting good learning outcomes in lectures?	All this time I try to come to class on time and follow the discussion.

Table 7. Student Interview Results 2

No	Question	Answer
1	What types of learning resources do you have to attend adaptive physical education courses?	Hmm, usually I learn through Google. Haha. If there is material or assignments from the lecturers, I usually ask seniors.
2	What needs to be done by lecturers supporting the subject to increase your learning motivation in attending adaptive physical education lectures?	Accessible textbooks. Because the book used was an old book, 1996.
3	How do you study to succeed or get good grades in the course you are currently taking?	I study in groups, usually try to find learning materials via Google, and discuss with friends.
4	Would you be more interested in learning if textbooks were provided that were accessible in lectures?	Hmmm yes. Because with books that are accessible, I can read at any time, being able to read via mobile phone is more interesting in my opinion.

5	How do you put effort into getting good learning outcomes in lectures?	The effort I always make is to come to face-to-face classes and ask the supporting lecturer if there are any difficulties.
---	--	--

Table 8. Lecturer Interview Results

No	Question	Answer
1	How many books are there that are used as references for teaching adaptive physical education lectures?	I used 1 main reference book, and it was quite old
2	Is the textbook that you have been using effectively for the learning process?	You could say it's less effective because it's an old yearbook. Maybe in appearance, it is less attractive for students to read it. Moreover, students usually only get copies.
3	Have you ever done e-book development before?	I used to make modules, but as for the e-book itself, I never did.
4	What obstacles did you experience in developing textbooks?	Time, because it is difficult to divide time between teaching, guiding, and compiling books.
5	If there is an opportunity to compile textbooks, what are the criteria according to you?	An e-book that students can easily access.

Based on the results of interviews with student 1 as a subject with the initials AR, it was concluded that the existence of e-books in adaptive physical education courses is very important. Likewise, the statement of student 2 as a subject with the initials MI states that accessible textbooks are needed by students to support them in understanding the material comprehensively. Textbooks help students achieve learning goals because textbooks contain learning material that is dynamic and develops to adapt to the demands of the times (Lufthansa et al., 2022; Lufthansa et al., 2020). Therefore, it is appropriate to develop e-books so that student's skills can be continuously improved. The existence of adaptive PE textbooks can be a solution to increase the interest, motivation, and learning outcomes of PE students at the University of Bengkulu. Relevant studies state that the existence of textbooks that can be accessed easily will be able to increase motivation and learning outcomes (O'Bannon et al., 2017; Beaudoin et al., 2018). Textbooks are an effective learning resource to guide students to develop learning outcomes skills (Hilton, 2016; Endriani et al., 2022) The success of students in participating in lectures will be greatly influenced by the availability of learning resources, However, these learning resources are still too general and difficult for students to understand comprehensively because the materials are not arranged based on student needs. This agrees with AR's statement which states that so far he has used the internet as a source of learning, but it is difficult to find specific material. Likewise, MI subjects use the internet as a learning

resource. To overcome student learning difficulties, as a subject lecturer, it is necessary to compile accessible textbooks. Because in the textbook the material has been prepared based on the lesson plans and the character of the students being guided. Furthermore, both subjects stated that they would be more motivated to learn if accessible e-books were provided. This statement is very relevant because by easily understanding the material, students will be more motivated to learn (Lin et al., 2018).

To overcome the lack of availability of adaptive physical education textbooks, especially e-books compiled by supporting lecturers, students use learning styles independently and in groups. AR subject said that he studied independently and searched for material through blogspot. Meanwhile, the MI subject stated that he tended to study in groups and search for material via the internet, especially blogspot. The two subjects interviewed in this study agreed that blogspot is easy to access but the material is not comprehensive or only a small part. There is nothing wrong when students use Blog spot as a reference but the credibility of the author in a blogspot is still in doubt (Kurniawan & Masjudin, 2017). Moreover, if the author's identity cannot be traced in the blogspot. Although, various studies state that blogspot makes it easy for educators to convey learning material and increase student interest in learning (Yang et al., 2016; Ifinedo, 2017).

Learning interest and motivation are very important factors in the adaptive physical education learning process (Sari et al., 2021; Solihin et al., 2019; Syafrial et al., 2022). Therefore, lecturers in charge of the subject need to increase their interest in learning and the motivation of the students they mentor. From the results of the interviews, it is known that AR subjects stated that they would be more eager to learn if accessible textbooks were available. The MI subject also stated the same statement that he would be more interested in learning because textbooks could be accessed without a time limit and used via a mobile phone. The increasing use of cell phones among students must be optimized by lecturers as a learning tool (Nopiyanto & Ibrahim, 2021).

An important output in the learning process is the achievement of predetermined learning outcomes. Even though students experience learning barriers due to the lack of e-book-based textbooks, students try their best to get optimal learning results. Both subjects mentioned that they would try to come to class on time and try to attend lectures well. Limitations of textbooks are not an obstacle for students to attend lectures because students consider this course very important. Through adaptive physical education courses, students learn various physical activities and teach them to children with special needs in an effective way (Syafrial & Nopiyanto, 2023)

The E-book used by lecturers in conveying learning material should be able to attract students to study. In the current technological developments, e-books have a special place in the hearts of students because they can be easily used. However, it is very unfortunate that the textbooks used by lecturers in adaptive physical education courses still use books that are not in line with students' interests. The results of interviews with the supporting lecturers revealed that the textbooks used were old books from 1996. There is nothing wrong with using old books, but students are more likely to be interested in the latest published books and are most updated according to the times. The use of less updated textbooks will certainly affect the effectiveness of learning (Rahim et al., 2020).

Even though lecturers are required to develop textbooks, at a practical level in the field it is known that lecturers experience various obstacles including the lack of technological skills and the difficulty in allocating time to compile textbooks. From the results of interviews with the lecturers who teach the subject, it is known that he wants to develop updated textbooks, but it is very difficult to allocate time in compiling them. Furthermore, it was revealed that the criteria for textbooks that needed to be developed were accessible textbooks based on e-books. Through textbooks, it can provide opportunities for students to be able to analyze, design, make decisions, solve problems, make conclusions, and work independently or in groups.

CONCLUSION

Referring to the results of the data analysis, it was concluded that the need for adaptive physical education textbooks based on e-books was in the very high category. The results of this study apply to physical education students at Bengkulu University, and cannot be generalized to subjects with different characteristics. The results of this study became the basis for future researchers to be able to develop e-books that are capable of facilitating the learning of physical education students at the University of Bengkulu. Adaptive physical education textbooks need to be developed because adaptive physical education is an important subject for students. After all, it provides a real learning experience in providing services and teaching children with special needs. The experience of learning and teaching physical education material for children with special needs is only obtained by students through adaptive physical education courses and not in other subjects.

REFERENCES

Alfansyur, A., & Mariyani. (2020). *Seni Mengelola Data : Penerapan Triangulasi Teknik* ,

- Sumber Dan Waktu Pada Penelitian Pendidikan Sosial. *HISTORIS: Jurnal Kajian, Penelitian & Pengembangan Pendidikan Sejarah*, 5(2), 146–150. <https://doi.org/10.31764/historis.v5i2.3432>
- Beaudoin, C., Parker, T., Tiemersma, K., & Lewis, C. (2018). Evaluating University Physical Activity Courses from Student and Instructor Perspectives. *Journal of Physical Education, Recreation and Dance*, 89(1), 7–11. <https://doi.org/10.1080/07303084.2017.1390508>
- Endriani, D., Akhmad, I., & Daulay, B. (2022). Development of E-Book Based Volleyball Learning Model. *Kinestetik: Jurnal Ilmiah Pendidikan Jasmani*, 6(2), 363–370. <https://doi.org/10.33369/jk.v6i2.21915>
- Ifinedo, P. (2017). Examining students' intention to continue using blogs for learning: Perspectives from technology acceptance, motivational, and social-cognitive frameworks. *Computers in Human Behavior*, 72, 189–199. <https://doi.org/10.1016/j.chb.2016.12.049>
- Irmade, O., & Jumanto, J. (2022). Pengembangan e-book Sebagai Bahan Ajar Pendidikan Jasmani Kesehatan dan Rekreasi. *Jurnal Basicedu*, 6(6), 9256–9263. <https://www.jbasic.org/index.php/basicedu/article/view/3715>
- Hilton, J. (2016). Open educational resources and college textbook choices: A review of research on efficacy and perceptions. *Educational technology research and development*, 64(4), 573-590. <https://doi.org/10.1007/s11423-016-9434-9>
- Kurniawan, A., & Masjudin. (2017). Pengembangan Buku Ajar Microteaching Berbasis Praktik Untuk Meningkatkan Keterampilan Mengajar Calon Guru. *Prosiding Seminar Nasional Pendidik Dan Pengembang Pendidikan Indonesia*, 2, 28–36. [http://www.cell.com/trends/cell-biology/abstract/S0962-8924\(12\)00067-0%0Apapers3://publication/uuid/AADADE9B-81D3-44E4-A1D1-6BCEE53EE92C](http://www.cell.com/trends/cell-biology/abstract/S0962-8924(12)00067-0%0Apapers3://publication/uuid/AADADE9B-81D3-44E4-A1D1-6BCEE53EE92C)
- Lin, P. H., Huang, Y. M., & Chen, C. C. (2018). Exploring Imaginative Capability and Learning Motivation Difference Through Picture E-Book. *IEEE Access*, 6, 63416–63425. <https://doi.org/10.1109/ACCESS.2018.2875675>
- Lufthansa, L., Saputro, Y. D., & Kurniawan, R. (2020). Pengembangan buku ajar psikologi olahraga berbasis android untuk meningkatkan motivasi belajar dan kemampuan berpikir kritis mahasiswa. *Jurnal Pendidikan Jasmani Indonesia*, 16(2), 214–223. <https://doi.org/10.21831/jppi.v16i2.34953>
- Lufthansa, L., Saputro, Y. D., Rohmah, L. N., Yusuf, H., Artanty, A., & Kurniawan, R. (2022). Analisis Kebutuhan Pengembangan Bahan Ajar Elektronik Mata Kuliah Penjas Adaptif di IKIP Budi Utomo. *Journal of Sport Sciences and Fitness*, 8(1), 23–32. <http://journal.unnes.ac.id/sju/index.php/jssf>
- Moleong, L. J. (2021). *Metodologi penelitian kualitatif*. PT Remaja Rosdakarya
- Nopiyanto, Y. E., & Ibrahim, I. (2021). Tanggapan mahasiswa pendidikan jasmani terhadap pembelajaran online. *Altius: Jurnal Ilmu Olahraga Dan Kesehatan*, 10(2), 169–180. <https://doi.org/10.36706/altius.v10i2.15287>
- Nopiyanto, Y. E., & Pujiyanto, D. (2022). Proses Pembelajaran Penjas Adaptif Di Sekolah Luar Biasa Kota Bengkulu. *Jurnal Education and Development*, 10(2), 28–34.

- O'Bannon, B. W., Skolits, G. J., & Lubke, J. K. (2017). The Influence of Digital Interactive Textbook Instruction on Student Learning Preferences, Outcomes, and Motivation. *Journal of Research on Technology in Education*, 49(3–4), 103–116. <https://doi.org/10.1080/15391523.2017.1303798>
- Prajawinanti, A. (2020). Pemanfaatan Buku Oleh Mahasiswa Sebagai Penunjang Aktivitas Akademik Di Era Generasi Milenial. *Pustaka Karya : Jurnal Ilmiah Ilmu Perpustakaan Dan Informasi*, 8(1), 34. <https://doi.org/10.18592/pk.v7i15.3757>
- Rahim, F. R., Suherman, D. S., & Muttaqin, A. (2020). Exploring the effectiveness of e-book for students on learning material: A literature review. *Journal of Physics: Conference Series*, 1481(1), 1–7. <https://doi.org/10.1088/1742-6596/1481/1/012105>
- Rodhiah, S. A., & Roza, L. (2020). Hasil Analisis Kebutuhan Pengembangan Ebook Berbasis Multipel Representasi. *Prosiding Seminar Nasional Pendidikan Fisika FITK UNSIQ*, 2(1), 143–149.
- Rodríguez, A., Cáceres Reche, M., & Alonso Garcia, S. (2018). The digital competence of the future teacher: bibliometric analysis of scientific productivity indexed in Scopus. *IJERI: International Journal of Educational Research and Innovation*, 0(10), 317–333.
- Sari, M., Risma, N., & Ulfa, D. A. (2021). Pembelajaran pendidikan jasmani adaptif: Minat siswa tunarungu dalam pembelajaran daring di masa pandemi COVID-19. *Edu Sportivo: Indonesian Journal of Physical Education*, 2(3), 171–179. [https://doi.org/10.25299/es:ijope.2021.vol2\(3\).7905](https://doi.org/10.25299/es:ijope.2021.vol2(3).7905)
- Siregar, F. S., Siregar, A., & Tarigan, D. (2022). Pengembangan Bahan Ajar E-Book Berbasis Kooperatif-Stad Pada Mata Kuliah Penjas Sd Untuk Mahasiswa Pgsd Fip Unimed. *Elementary School Journal Pgsd Fip Unimed*, 11(4), 344. <https://doi.org/10.24114/esjpsd.v11i4.32681>
- Solihin, A. O., Sriningsih, S., & Diki, D. (2019). Minat siswa tunagrahita dalam pembelajaran pendidikan jasmani mentally retarded students ' interest in physical education learning. *Journal of Physical and Outdoor Education*, 1(2), 106–110.
- Surahman, F., & Yeni, H. O. (2019). Pengembangan Buku Ajar Mata Kuliah Renang Bagi Mahasiswa Pendidikan Jasmani Kesehatan dan Rekreasi. *Journal Sport Area*, 4(1), 218–229. [https://doi.org/10.25299/sportarea.2019.vol4\(1\).2413](https://doi.org/10.25299/sportarea.2019.vol4(1).2413)
- Syafrial, S., & Nopiyanto, Y. E. (2023). Proses Pembelajaran, Pendidikan Jasmani Adaptif Siswa Tunarungu. *Jambura Journal of Sports Coaching*, 5(1), 62–71. <http://journal2.um.ac.id/index.php/gpji/article/view/24175%0Ahttp://journal2.um.ac.id/index.php/gpji/article/download/24175/9315>
- Syafrial, S., Nopiyanto, Y. E., & Arwin, A. (2022). Application of Flipped Classroom and Teams Games Tournament Learning to Increase Motivation and Adaptive Physical Education Learning Outcomes. *Kinestetik : Jurnal Ilmiah Pendidikan Jasmani*, 6(1), 41–50. <https://doi.org/10.33369/jk.v6i1.19304>
- Yang, J. C., Quadir, B., Chen, N. S., & Miao, Q. (2016). Effects of online presence on learning performance in a blog-based online course. *Internet and Higher Education*, 30, 11–20. <https://doi.org/10.1016/j.iheduc.2016.04.002>