



## A Study Effect of application of E-books in teaching and learning: eBOOK: Integrated Macroeconomics

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**Abstract :** Macroeconomics course is one of the compulsory courses that students of the Diploma Business Study must take in polytechnics. The previous Teaching and Learning Method (PdP) used Power Point slide presentations provided by course lecturers as well as reference books available in the library. Although this method is acceptable to students, it can be considered as a traditional method that is still used today and it has its own challenges in the era of the Covid 19 pandemic. This method is seen as no longer providing high traction towards teaching and learning (PdP) to students. Hence, to arouse interest and attract students' attention to this course, an innovation called eBook: Integrated Macroeconomics has been introduced. Through this innovation, students will be able to learn the Macroeconomics Course by using the Flipping Book software. With the use of Flipping Book, it makes PdP for Macroeconomics courses more exciting and enjoyable by including interactive elements in this eBook. There are videos uploaded into this eBook. In addition, there are also questions provided as a reference to students as well. This innovation is expected to improve students' understanding, make it easier for students to review and make the Macroeconomics Course an interesting and easy-to-understand course. Questionnaires on students' perception of the use of e-books were conducted and the findings showed that a large number of students agreed that the use of e-books can increase interest and focus in teaching and learning. These findings prove that relevant e-books are used as teaching aids and should be expanded in order to achieve positive impact in teaching and learning activities.

**Kata Kunci:** Macroeconomics, Flipping Book, eBook

### INTRODUCTION

The world of education in Malaysia has undergone significant changes in the current COVID-19 pandemic era. Educational institutions in Malaysia have carried out various initiatives to ensure the continuity of the learning process, among which is to emphasise on teaching based on information and communication technology (TMK). These changes have affected the method of obtaining information where users are more likely to obtain information using technology faster and without limitation. In addition, information and communication technology also promotes creative, innovative, dynamic and entertaining teaching approaches as the main medium that is able to attract students' attention in the teaching process and 21st century learning including in higher education institutions, secondary school rankings and even in lace school rankings (Rusli et al., 2021).

This statement is supported by Mohd Salleh and Mukhari (2007) who stated that

today's students are more attracted to a more interactive and different teaching approach to traditional methods that are solely teacher-center. Among the transformations implemented in teaching and learning is the use of multimedia as a teaching aid (ABBM). ABBM is divided into two categories, namely electronic and non-electronic. Examples for the electronics category are radio, television, slide projector, video and computer-assisted devices. While the non-electronic category consists of scan cards, models, journals, photographs, and magazines related to the teaching taught (Mohamad & Musa, 2013). While Savage and Vogel (2013) gave the multimedia definition as a combination of the process of development and transmission of information in the form of audio, video, graphics, text, images and animations using digital devices. Ibrahim (2013) also stated that the use of multimedia elements such as text, audio, video, animation, graphics, images and interactive animations can stimulate students' interest in following the teaching and learning process.

In line with the current situation, the use of e-books in the process of teaching and learning is seen as more relevant than printed books. Therefore, this study was conducted to review students' perception of the use of e-books for the Integrated Macroeconomics in polytechnics.

## BACKGROUND OF STUDY PROBLEMS

The Covid-19 pandemic has led to a massive transformation of the country's education landscape where the use of online apps and learning using technology has been widely used to ensure students can continue teaching and learning activities. All educational institutions in Malaysia are now striving to further expand the use of ICT in education by providing sufficient ICT infrastructure in every school and higher education institution to conduct online teaching and learning. In addition, educational institutions have also been asked and advised to rearrange assessments and curriculum in applying ICT elements as a teaching and learning process, conducting training for teaching staff to improve their knowledge and skills in ICT (Roslin & Salleh, 2021).

Earlier, the use of traditional teaching methods was widely used compared to the use of the latest information technology. However, the use of modern technology today is seen as more relevant and effective to ensure the continuity of learning activities during the COVID-19 pandemic. Instructors play an important role by leveraging technology Teaching Aids (BBMs) in producing interactive teaching (Muhd Zulhilmi et al. 2020). Although there are many

The research presented the advantages of using BBM technology, however the level of technology usage is still at a moderate level (Haron et al., 2020). Therefore, in order to diversify the teaching and learning methods digitally, the use of e-books is seen as playing a role in shaping the change from traditional teaching using printed books to technology-based teaching, e-books using multimedia and more interactive to create a positive impact on students. Early discussions on e-books as an alternative to printed books began in the 1990s with the creation of the first e-book device (Godwin-Jones, 2003). The initial target of e-books is for professionals as they are the most read group and need access to information at their fingertips (Ellen, 2005). E-books have many advantages that give the reader the convenience to carry them all over the place without heavy loads. Since it is electronic data, the size and weight of this e-book is much lighter when compared to printed books on the market (Awang, 2010).

In addition, simple e-book features such as hyperlinks and keyword search are able to make e-books an attractive reference for reference collections such as dictionaries, encyclopedias or textbooks. Users do not need to flip sheet by page and search for the meaning of words one by one. In terms of cost, publishing printed books requires high costs, such as the cost of paper and print. Meanwhile, such costs are not taken into account in the publication of e-books. According to Kleiman (2002), the development of e-books has not yet been widespread so that it can really match printed books. However, with the opportunities available today, coupled with the new features of e-books being enhanced from time to time, e-books could potentially be introduced as teaching aids to students.

Thus, an innovation called eBook: Integrated Macroeconomics was introduced to students of the Diploma marketing at the Sultan Salahuddin Abdul Aziz Shah polytechnic , Diploma Kewangan Islam perbankan (DIB) and Diploma Logistic (DLS) Politeknik Nilai as a teaching aid to learn the Macroeconomic Course by using the Flipping Book software.

## Study Methodology

This article uses the form of survey study using descriptive methods. In this article, researchers use a quantitative approach to measure students' perception of e-books for the Macroeconomic course at Polytechnic Sultan Salahuddin Abdul Aziz Shah and Polytechnic Nilai. 131 students answered the questionnaire online. The construction of the questionnaire instrument was adapted from the Rusli et al. (2021) study and modified based on the suitability of the title and objectives of the study. The student's perception of e-book usage was measured based on the mean value of the Likert scale obtained from each respondent's answer. The Likert scale used is Highly Disagree with a score of 1 to Very Agree with a score of 5. The data obtained are analyzed using a descriptive method to find the frequency and percentage.

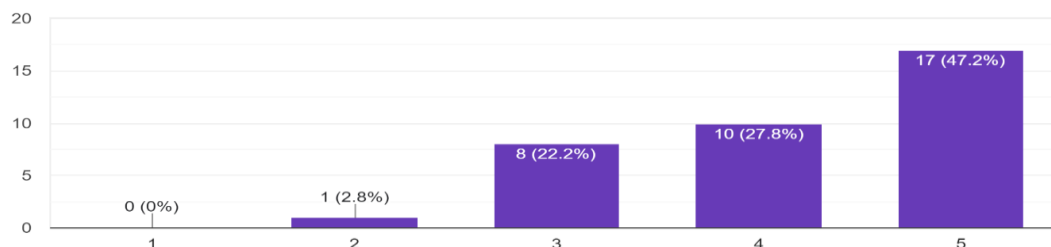
## Study findings and discussions

The next discussion is based on indicators that measure students' perception of e-book usage as shown below:

### POLYTECHNIC SULTAN SALAHUDDIN ABDUL AZIZ

1. Isi kandungan dalam buku rujukan disusun mengikut silibus

36 responses



**Figure 1: Percentage of respondent perception for question 1**

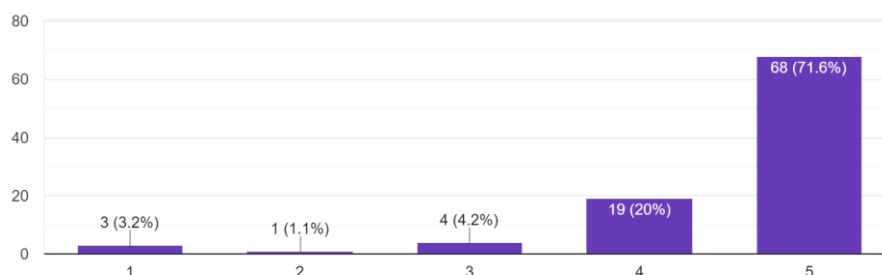
Source : research data 2022

A total of 36 students, 10 students (27.8%) agreed that the use of e-books is The contents of the reference book are arranged according to the syllabus. A total of 37 students (47.2%) also strongly agreed to the same, while 8 were neutral and (0%) responded to disapproval.

### POLYTECHNIC NILAI

1. Isi kandungan dalam buku rujukan disusun mengikut silibus

95 responses



Source : research data 2022

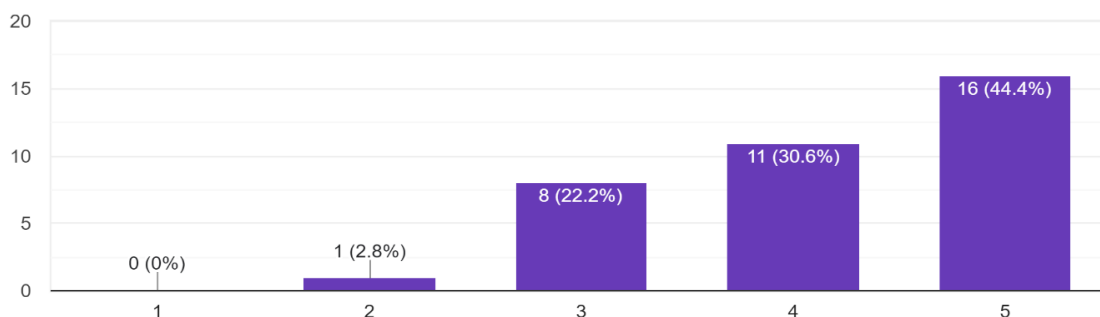
A total of 95 students, 19 students (20%) agreed that the use of e-books is The contents of the reference book are arranged according to the syllabus. A total of 95 students (71.6%) also strongly agreed to the same, while 4 were neutral and only a few 131students (3.6%) responded to disapproval.

**Figure 2: Percentage of respondent perception for question 2**

POLYTECHIC SULTAN SALAHUDDIN ABDUL AZIZ SHAH

2. Buku rujukan ini jelas dan mudah difahami

36 responses

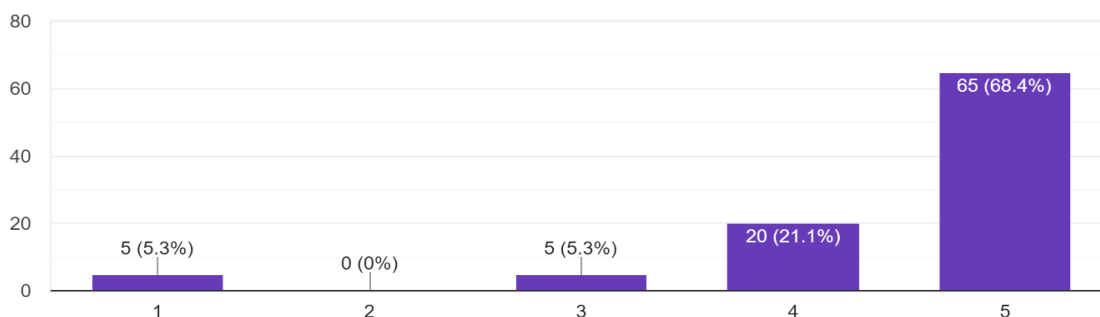


For question 2, a total of 36 students, 30.6% agreed that This reference book is clear and easy to understand in the e-book. . A total of 37 students (44.4%) also strongly agreed to the same, while 8 were neutral and only a few students (2.8%) responded to disapproval.

POLYTECHNIC NILAI

2. Buku rujukan ini jelas dan mudah difahami

95 responses

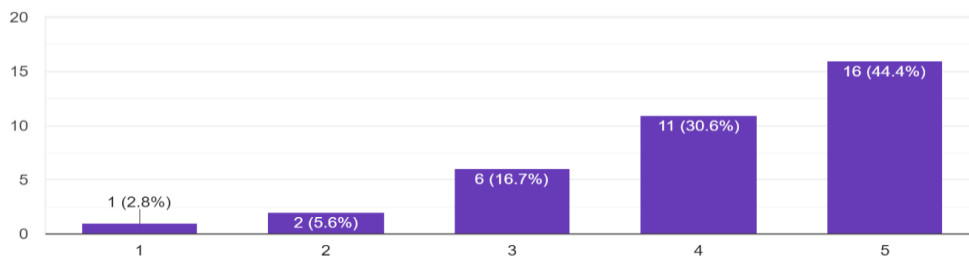


For question 2, a total of 95 students, 21.1% agreed that This reference book is clear and easy to understand in the e-book. . A total of 95 students (68.4%) also strongly agreed to the same, while 5 were neutral and only a few students 5(5.3%) responded to disagree.

Source : research data 2022

POLYTECHIC SULTAN SALAHUDDIN ABDUL AZIZ SHAH

3. Buku rujukan ini memberi manfaat kepada saya dari segi pembelajaran  
36 responses



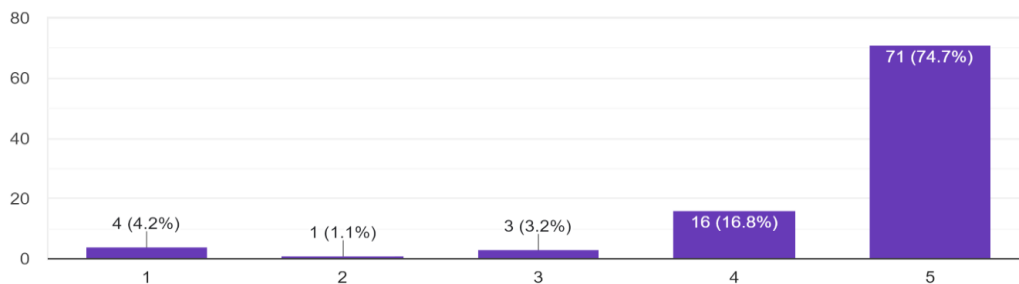
**Figure 3: Percentage of respondent perception for question 3**

Source : research data 2022

For question 3, a total of 36 students, 21.1% agreed that This reference e-book is clear and easy to understand. A total of 37 students (68.4%) also strongly agreed to the same, (30.6%) agree while 5 were neutral and only a few students 5(5.3%) responded to disagree.

POLYTECHNIC NILAI

3. Buku rujukan ini memberi manfaat kepada saya dari segi pembelajaran  
95 responses



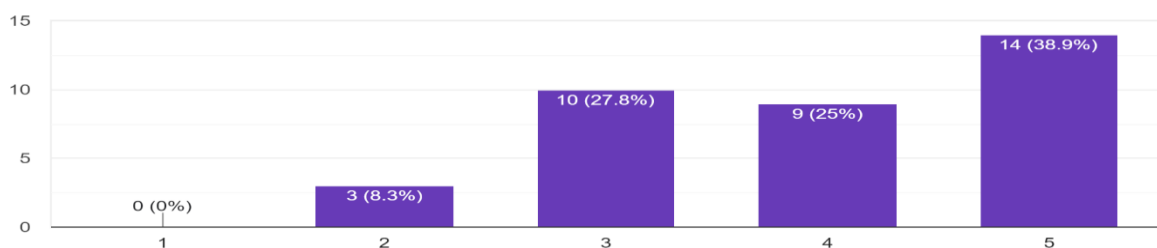
**Figure 4: Percentage of respondent perception for question 4**

Source : research data 2022

For question 3, a total of 95 students, 16.8% agreed that This reference book is clear and easy to understand in the e-book. . A total of 95 students 71 (74.7%) also strongly agreed to the same, while 3 were neutral and only a few students 4(4.2%) responded to disagree.

POLYTECHIC SULTAN SALAHUDDIN ABDUL AZIZ SHAH

4. Buku rujukan ini dapat membantu saya mengukuhkan lagi pemahaman mengenai kursus ini  
36 responses



**Figure 5: Percentage of respondent perception for question 5**

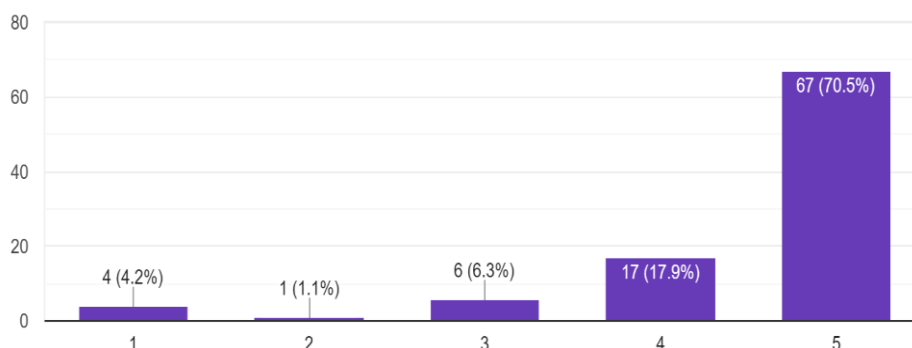
Source : research data 2022

For question 4, a total of 36 students 14(38.9%) strongly agreed that they would this references book can help further strengthen my understanding through the use of e-books while 25% percent agreed were 27.8 % percent neutral and a small proportion of 2 students (8.3%) disagreed.

### POLYTECHNIC NILAI

4. Buku rujukan ini dapat membantu saya mengukuhkan lagi pemahaman mengenai kursus ini

95 responses



**Figure 6: Percentage of respondent perception for question 6**

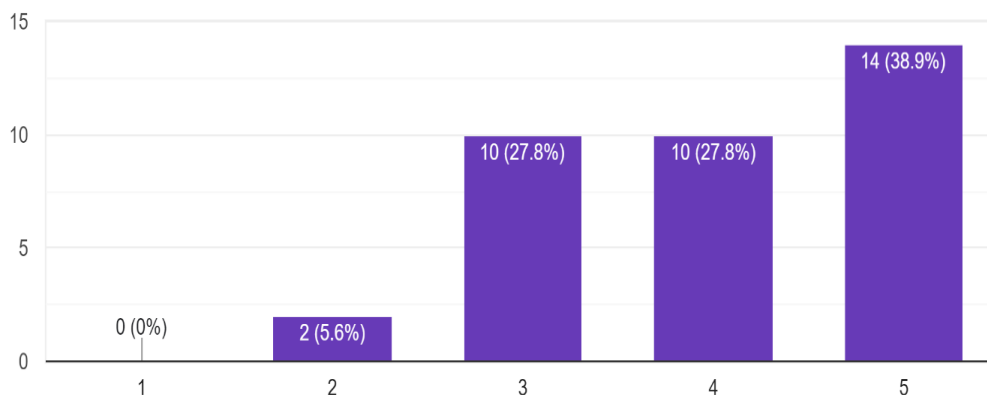
Source : research data 2022

For question 4, a total of 95 students (70.5%)strongly agreed that they would this reference book can help further strengthen the use of e-books while 17.9 percent were neutral and a small proportion of 4 students (4.2%) disagreed.

### POLYTECHIC SULTAN SALAHUDDIN ABDUL AZIZ SHAH

5. Saya akan mengesyorkan buku rujukan ini kepada pelajar-pelajar lain

36 responses



**Figure 7: Percentage of respondent perception for question 7**

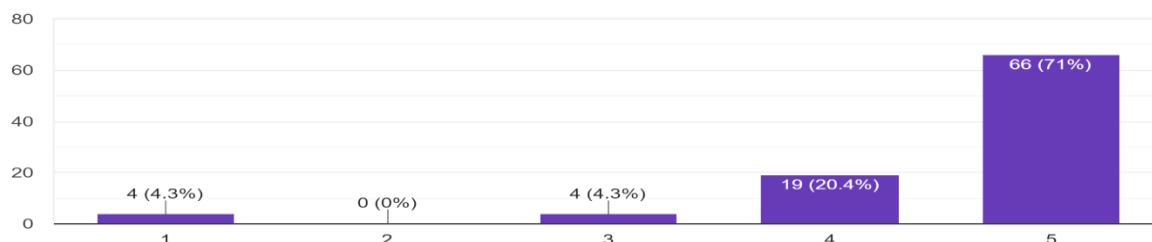
Source : research data 2022

For question 5, a total of 36 students (38.9%) strongly agreed that they would recommend this reference book to other students through the use of e-books while 27.8 percent were neutral and a small proportion of 2 students (5.6%) disagreed.



## POLYTECHNIC NILAI

5. Saya akan mengesyorkan buku rujukan ini kepada pelajar-pelajar lain  
93 responses



**Figure 8: Percentage of respondent perception for question 8**

Source : research data 2022

For question, a total of 95 students (71%) strongly agreed that they would recommend this reference book to other students through the use of e-books while 20.4 percent were agreed, 4.3% were neutral and small proportion of 4 students (4.3%) disagreed.

The findings showed that overall, the students agreed that the use of e-books could help them to focus on the teaching and learning process. This situation can generate interest and increase the motivation of students to learn and continue reading. Therefore, the use of e-books for Macroeconomics courses specifically for students majoring in the Diploma in Marketing at Polytechnic Sultan Salahuddin Abdul Aziz Shah and Diploma Kewangan Islam Perbankan (DIB) and Diploma Logistics (DLS) Polytechnic Nilai in the post-COVID-19 era is seen as relevant compared to the print book and in line with the goals of the Polytechnic Strategic Plan 2018-2025 which focuses on digital learning in line with the Industrial Revolution 4.0.

### CONCLUSION

The rapid development of technology has made room for the development of e-books in the market. This is because, digital information can not only reduce the cost of printing and paper, but also in the aspect of updating information. For example, updating a technical document is easier if the document is digital because it doesn't need to be printed repeatedly, thus saving costs. The same is true of student reference books. Students do not need to purchase a new reference book every time the book is updated. All that needs to be done is to achieve it online by uploading the latest version. Therefore, the e-book innovation is seen to benefit the instructors and students in general.

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