

Design of an E-Guidebook for Teaching and Learning Implementation in International Classes of The Applied Marketing Management Undergraduate Program at The State Polytechnic of Malang (A Study in The Applied Bachelor of Marketing Management at State Polytechnic of Malang)

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ABSTRACT

This study aims to design an E-Guidebook for the Teaching and Learning Process (TLP) in the international class of the Applied Undergraduate Program in Marketing Management at State Polytechnic of Malang. This study uses an action research approach consisting of planning, action, observation, and reflection stages. Data were collected through preliminary observation, semi-structured interviews, documentation, and a questionnaire based on the Technology Acceptance Model (TAM), focusing on perceived usefulness and perceived ease of use. User evaluation was conducted using a descriptive quantitative approach with purposive sampling involving 30 respondents as E-Guidebook users. The results indicate that the E-Guidebook can help address the issue of previously fragmented TLP information and serve as a more structured, accessible, and relevant digital guidance medium for the needs of the international class.

Keywords: *E-Guidebook, International Class, Teaching Learning Process, Action Research, Technology Acceptance Model.*

1. INTRODUCTION

Educational transformation in the era of globalization requires higher education institutions to manage the learning process in a more adaptive, structured, and digitalized manner. Technology has become an important element in expanding learning access, improving digital literacy, and supporting learning that is relevant to global needs. Suhartini et al. (2025) explain that clear, structured, and easily accessible academic information is also needed because it affects the effectiveness of learning implementation. In this context, a study program is expected not only to provide qualified learning activities but also to offer academic information services that help students understand the learning process comprehensively.

International classes are one form of higher education internationalization. They generally use a foreign language as the medium of instruction, apply international academic standards, and require students to have stronger academic readiness and cross-cultural communication skills. Izzi et al. (2022) explain that the implementation of international classes encourages student-centered learning and requires students to develop independent learning skills. Therefore, international classes cannot be supported only by the use of English or an international label. They also require academic services that are clear, consistent, integrated, and easy to access.

The Applied Undergraduate Program in Marketing Management at State Polytechnic of Malang has implemented international classes since the 2019/2020 academic year. Based on internal academic data, the number of active international-class students changed from the 2019/2020 academic year to the odd semester of 2025/2026. The data are not used to conclude the causes of enrollment changes, but to show that the international class is a dynamic program that needs continuous strengthening in terms of academic services. One important aspect is the availability of a centralized guide for the Teaching and Learning Process (TLP).

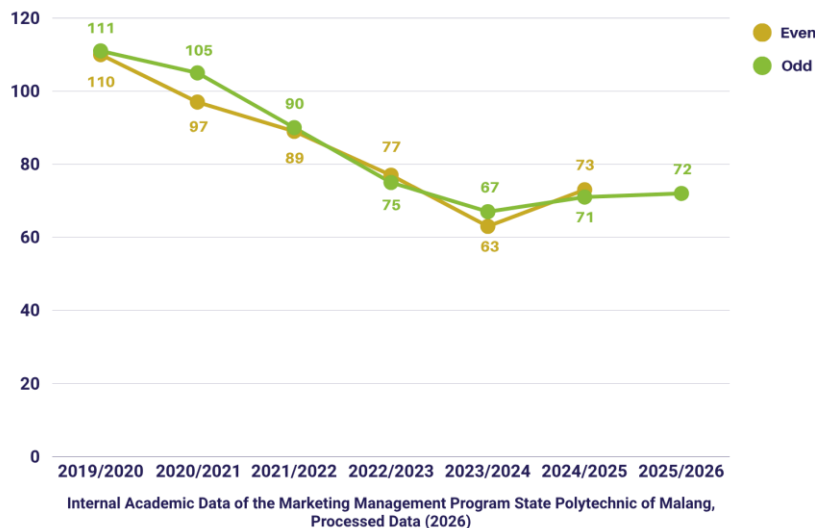


Figure 1 International Class Student Enrollment Trend (Source Internal Academic Data, Processed Data 2026)

Preliminary observations conducted in the first week of January 2026 and interviews conducted in the first week of February 2026 with five student representatives from the 2022 to 2025 cohorts showed that there was no integrated TLP guide specifically designed for international classes. Students stated that TLP information was obtained through WhatsApp groups, SIAKAD, PDF files from academic administration staff, information from friends, and Instagram. Some confusing information included lecturer contacts, academic schedules, SKKM and SKKEI information, unwritten academic rules, language use, and the characteristics of international classes. This condition indicates that TLP information needs to be integrated into one guidance medium.

According to Menrisal (2022) Digital learning media can present information flexibly through software, networks, and electronic devices. In this study, an E-Guidebook is selected because it can function as a digital learning guide that provides structured information for users. This is supported by Lestari et al. (2021), who found that a travel guide e-book application was considered excellent and acceptable by users, indicating that a digital guidebook can function as a practical information medium when its usability is properly evaluated.

Aviyanti and Widiaty (2021) emphasize that digital media such as e-books are very helpful in the learning process because they facilitate students' access to information, increase independent learning and support flexible learning according to users' needs. Previous studies also show that guidebooks can support learning implementation (Pancawati, 2021), assessment activities (Putri et al., 2024), and digital information delivery using an action research approach (Rahmadani and Wardani, 2024).

This study focuses on designing an E-Guidebook for international-class TLP implementation and preparing a user evaluation instrument based on the Technology Acceptance Model (TAM). According to Tawafak et al., (2023), TAM is used because it explains user acceptance of technology through perceived usefulness and perceived ease of use. The study does not examine the full TAM model up to actual system use because the focus is the evaluation of the E-Guidebook design as a digital guidance medium.

2. RESEARCH METHODOLOGY

2.1. Type of Research

This study used an action research approach to design an E-Guidebook as a guidance medium for the Teaching and Learning Process (TLP) in the international class of the Applied Undergraduate Program in Marketing Management at State Polytechnic of Malang. According to Arikunto (2020), Action research was selected because it focuses on solving practical problems within a specific group or community and allows the research results to be directly re-implemented in the related setting. Based on Kurt Lewin's model the action research process consisted of four stages, namely planning, action, observation, and reflection. The planning stage was conducted by identifying the needs of the E-Guidebook content, determining the design concept, and preparing visual elements such as typography, images, color palette, and layout. The action stage was carried out by developing the E-Guidebook using the Affinity application as the design tool. The observation stage was conducted by distributing questionnaires to evaluate user responses toward

the designed E-Guidebook based on the Technology Acceptance Model (TAM). The reflection stage was conducted by analyzing respondents feedback, criticism, and suggestions to improve the E-Guidebook design.

2.2. Population and Sample

The research population consisted of parties directly involved in the implementation and evaluation of the Teaching and Learning Process (TLP) in the international class of the Applied Undergraduate Program in Marketing Management at State Polytechnic of Malang. The sample in this study consisted of 30 respondents, including one department head, one department secretary, one head of study program, one international class coordinator, five international class lecturers, one graphic design expert, and twenty international-class students. The student respondents were selected from four cohorts, namely 2022, 2023, 2024, and 2025, with five students representing each cohort. The sampling technique used in this study was purposive sampling with quota, because the respondents were selected based on their relevance to the implementation of the international-class TLP and their competence to evaluate the E-Guidebook. Campbell et al. (2020) explained that purposive sampling is used when researchers select participants who are appropriate to the purpose and context of the study. The sample size of 30 respondents was considered appropriate because this study was a limited-scale descriptive quantitative study that aimed to evaluate user perceptions of the designed E-Guidebook, not to examine complex causal relationships. According to Kwak and Kim (2017), a sample size of around 30 can support descriptive statistical analysis because the sampling distribution tends to approach normality. In addition, Roscoe's guideline in Ali Memon et al. (2020), states that a sample size of more than 30 and less than 500 is commonly used for most behavioral studies.

2.3. Data Analysis Method

The questionnaire in this study was developed based on the Technology Acceptance Model (TAM) to evaluate user acceptance of the E-Guidebook as a digital guidance medium for the Teaching and Learning Process (TLP). According to Davis (1980), TAM was used because it focuses on two main constructs, namely Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). According to Putri Luthfiya et al. (2021), TAM can be used to examine user acceptance by assessing the usefulness and ease of use of a product. Therefore, the questionnaire was designed to measure whether the TLP E-Guidebook was structured, practical, and effective as a guidance medium.

Table 1 TAM Based Questionnaire Development

Variable	Sub Variable	Indicators	Measurement
Technology Acceptance Model (TAM) (Davis, 1980)	Perceived of Ease Use (PEOU) (Shasya Bonita et al., 2022)	Comfort	Users' level of comfort when reading and using the TLP E-Guidebook.
			The level of consistency in content presentation and visual appearance.
		Ease of Use	Users' ease of accessing the TLP E-Guidebook via the internet on digital devices.
			Users' ease of downloading the TLP E-Guidebook on digital devices.
		Ease of Understanding	Users' ease of understanding the information in the TLP E-Guidebook.
			Users' ease of understanding the clarity of language and terms.
		Information Currency	The extent to which the TLP E-Guidebook aligns with current TLP conditions and needs.
			The level of validity of the information (accurate and up-to-date).
	Perceived of Usefull (PU)	Supporting the Planning of Teaching and Learning Activities	The extent to which the E-Guidebook is useful in helping users understand the teaching and learning flow.

	(Shasya Bonita et al., 2022)		The extent to which the E-Guidebook is useful in supporting the planning of teaching and learning activities.
		Supporting Access to Information	Users' level of ease in obtaining essential information about the teaching and learning process.
			The extent to which the E-Guidebook is useful in supporting the planning of teaching and learning activities.
		Supporting Decision Making	Users' level of ease in determining the initial steps in the teaching and learning process.
			Users' level of ease in choosing appropriate services/references for the teaching and learning process.

(Source Davis (1980), Shasya Bonita et al (2022), Data Processed 2026)

Each questionnaire item was measured using a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. This scale was used to indicate respondents' level of agreement with each statement, from the lowest to the highest score (Sugiyono, 2023).

The data analysis method used in this study was a descriptive quantitative approach with descriptive statistical analysis. Descriptive statistical analysis was used to describe the tendency of respondents' answers toward the designed E-Guidebook. The analysis was conducted by calculating the mean score and percentage of respondents' answers for each questionnaire item and construct. According to Febrieta and Fitriani (2023), the mean is used to describe the central tendency of respondents' answers, while percentages are used to show the distribution of responses in each score category.

The mean score was calculated using the following formula:

$$\bar{x} = \frac{\sum x_i}{n}$$

Notes:

$\bar{x}$: Mean (average)

n : Number of data points

$\sum x_i$: Sum of the data values

The percentage was calculated using the following formula:

$$P = \frac{f}{n} \times 100\%$$

Notes:

P : Percentage for a particular category

f : Frequency of respondents in a particular category

n : Total number of respondents

Thus, the percentage ranges are as follows:

0-20% : very low

21-40% : low

41-60% : moderate

61-80% : high

81-100% : very high

Before conducting descriptive statistical analysis, the quality of the research instrument was evaluated through validity and reliability testing. Validity testing was conducted using Pearson Product-Moment correlation by correlating the score of each statement item with the total score of the variable. An item was considered valid if the calculated

correlation value was greater than the r-table value at a 5% significance level, and a correlation coefficient of at least 0.30 was used as the minimum validity guideline (Sugiyono, 2023). Reliability testing was conducted using Cronbach's Alpha coefficient to measure the internal consistency of the questionnaire items. The instrument was considered reliable if the Cronbach's Alpha value reached the minimum acceptable threshold of 0.60, while a value of 0.70 or higher was considered more acceptable (Fein et al., 2021).

3. RESULTS AND DISCUSSIONS

The result of this study is an E-Guidebook for the Teaching and Learning Process (TLP) in the international class of the Applied Undergraduate Program in Marketing Management at State Polytechnic of Malang. The E-Guidebook was designed to provide a centralized digital guidance medium because TLP-related information was previously obtained from various sources, such as WhatsApp groups, SIAKAD, PDF files, mouth to mouth, and Instagram. This condition caused information to be fragmented and created the possibility of different understandings among students. The design was developed using the Affinity application by considering typography, institutional identity, color palette, images, and layout consistency. The visual elements were arranged to make the E-Guidebook readable, informative, and relevant to the international-class context. According to Aviyanti and Widiaty (2021), attractive visual appearance in digital learning media can increase users' interest and help them understand learning materials more effectively.

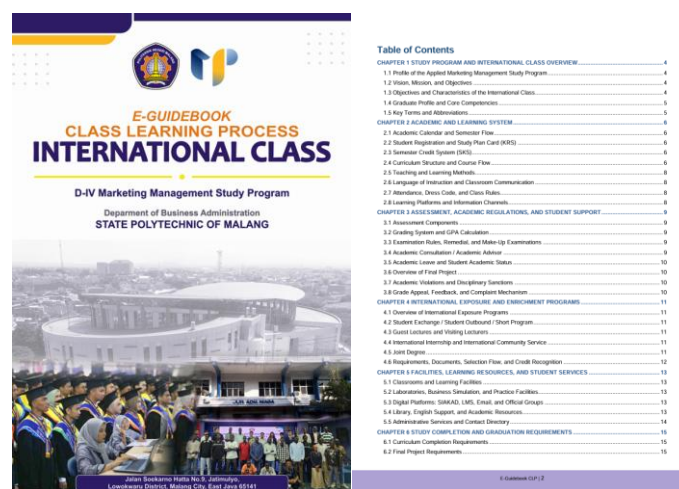


Figure 2 Display of the TLP E-Guidebook (Source Processed Data 2026)

3.1. Cycle 1

Based on the Cycle 1 evaluation, the E-Guidebook obtained an overall mean score of 4.48 with a percentage of 89.61%, indicating that the product was categorized as very high. However, several aspects still need to be evaluated and improved. The lowest scores were found in the items related to ease of understanding and information accuracy, both with a mean score of 4.18 and a percentage of 83.64%. Therefore, the main improvements focused on simplifying long sentences, checking the accuracy and currency of academic information, improving layout readability, correcting typographical errors, and adding supporting visual elements such as icons, screenshots, flowcharts, QR codes, and a list of abbreviations. These improvements were expected to make the E-Guidebook clearer, more readable, and more relevant to the needs of international-class users.

3.2. Cycle 2

In this cycle, the E-Guidebook was revised by simplifying long sentences, checking the accuracy of academic information, improving page layout, correcting typographical errors, and adding supporting elements such as icons, screenshots, flowcharts, QR codes, and a list of abbreviations. These improvements were made to ensure that the E-Guidebook became clearer, more readable, and easier to use. Overall, Cycle 2 served as a refinement stage to improve the quality of the E-Guidebook as a structured and accessible digital guidance medium for the Teaching and Learning Process in the international class. The revision results indicated a high level of user satisfaction and supported the improvement of the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) aspects. This finding is supported by Fediasha et al. (2025), who showed that improvements made in Cycle 2 based on respondent feedback increased the effectiveness of a flipbook-based digital medium and made it more attractive, accessible, and informative for users.

Based on the implementation of Cycle 1 and Cycle 2, the E-Guidebook was improved through user evaluation, reflection, and design refinement. This is in line with the action research approach, in which reflection is used to review the implemented action and determine further improvements when weaknesses are still found (Arikunto, 2020). The improvements made in Cycle 2 also supported the evaluation of the E-Guidebook through perceived usefulness and perceived ease of use, as TAM explains user acceptance based on the usefulness and ease of use of a system or technology (Wicaksono, 2022). Therefore, the revised E-Guidebook became clearer, more readable, and more accessible as a digital guidance medium for the Teaching and Learning Process in the international class.

4. CONCLUSIONS

This study designed an E-Guidebook for the Teaching and Learning Process (TLP) in the international class of the Applied Undergraduate Program in Marketing Management at State Polytechnic of Malang. The E-Guidebook was developed to address the problem of fragmented TLP information by providing a structured and accessible digital guidance medium. The design process was carried out using an action research approach through planning, action, observation, and reflection stages. The E-Guidebook contains essential information related to the study program, academic and teaching-learning system, assessment rules, international exposure programs, facilities, student services, and final study completion requirements. Overall, the E-Guidebook is expected to help students, lecturers, and administrators obtain clearer information, reduce confusion, and support consistency in the implementation of the international-class Teaching and Learning Process.

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