Examining Student Acceptance and Intention to Continue Online Digital Learning: A Case Study at Public Universities in Surakarta

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Abstract. This study aims to examine students' acceptance and continuance intention toward digital learning platforms, with a focus on Coursera MOOCs (Massive Open Online Courses). The research investigates six variables: Computer Self-Efficacy (CSE), System Interactivity (SI), Content Feature (CF), Perceived Usefulness (PU), Perceived Ease of Use (PE), and Intention to Continue (IC). A quantitative approach was employed using a structured questionnaire distributed to 182 students at Public Universities in Surakarta who had participated in Coursera-based MOOCs. Prior to data analysis, validity, reliability, and classical assumption tests (normality, multicollinearity, heteroscedasticity, and autocorrelation) were conducted to ensure the robustness of the model. The data were analyzed using linear regression to examine the relationships among the variables. The results reveal that CSE and CF have significant effects on PU and PE, whereas SI shows no significant influence. Furthermore, PU and PE significantly affect students' IC, with PU emerging as the most influential factor driving students' continuance intention. These findings suggest that students' ongoing engagement with digital learning platforms is largely determined by their perceived usefulness of the system rather than its interactive features. Despite potential sampling bias due to online group distribution, this limitation was minimized through multi-department dissemination. Overall, the study provides empirical insights into the key determinants supporting the sustainability of MOOC-based learning in higher education.

Keywords: acceptance; digital learning; intention; MOOCs; online platform

INTRODUCTION

The Industrial Revolution 4.0 has brought about a fundamental transformation in various sectors, including education. One of the most notable changes is the shift in teaching and learning methods, which now heavily incorporate digital technologies. In Indonesia, the implementation of online learning has expanded significantly across all levels of education, from elementary schools to universities. This development is particularly well-received in higher education, as most university students are already well-acquainted with technological tools. Their familiarity with digital platforms enables more efficient access to learning materials, resulting in a more flexible and effective learning process (Sari & Dahnial, 2022).

Among the innovations that have emerged in the digital education landscape is the Massive Open Online Course (MOOC), a model that leverages the internet and multimedia technology to disseminate educational content widely. MOOCs are designed to facilitate collaborative learning, provide structured material in an engaging way, and allow learners to study independently according to their interests (Pachisia, 2022). Typically, MOOCs present content in the form of video lectures that are regularly updated to remain current and relevant, helping to meet the diverse needs of learners from various backgrounds (Edelsbrunner et al., 2022; Muti Altalhi, 2021).

Recent research by Nugroho et al. (2024) has shown that Generation Z students in Indonesia are more inclined to continue using MOOC platforms when they perceive a strong alignment between the technology and their learning tasks (task–technology fit), as well as when they receive encouragement or acknowledgment from their social circles such as peers, family members, or lecturers (social recognition). These two elements significantly influence the perceived ease of use, which ultimately leads to higher user satisfaction and sustained engagement with the platform.

This study employs the Technology Acceptance Model (TAM), proposed by Davis (1989), as its underlying theoretical framework. TAM explains that users' behavioral intentions toward technology use are primarily determined by perceived usefulness (PU) and perceived ease of use (PE). Building upon this foundation, the present research incorporates three external variables, which are computer self-efficacy (CSE), system interactivity (SI), and content feature (CF), as antecedents that influence users' perceptions of usefulness and ease of use. In this extended model, CSE represents users' confidence in operating the platform, SI captures the level of interaction between users and the system, and CF reflects the quality and relevance of learning materials provided. Together, these constructs shape students' intention to continue (IC) using MOOC platforms, offering a comprehensive view of technology acceptance and sustained engagement among Generation Z learners.

Despite the promising potential of MOOCs, challenges remain—particularly for local platforms. For example, IndonesiaX has demonstrated effectiveness in delivering structured and interactive content; however, it still requires enhancements in multimedia design principles and interface consistency to compete with established international platforms, such as Coursera or edX (Adriyanto et al., 2021). Additionally, a qualitative study conducted on the Ruang Guru platform emphasized several advantages, including diverse content offerings and the presence of active learning communities. However, the platform still faces limitations such as minimal real-time interaction between instructors and learners, technical difficulties in accessing materials, and unequal internet infrastructure across different regions of Indonesia (Rohiem & Sari, 2023).

Given these considerations, it is crucial to examine how students evaluate their experiences with MOOCs and identify the factors that contribute to their continued use. This study, therefore, employs a quantitative research approach to analyze the level of student acceptance and their intention to continue using MOOC platforms, with a focus on students at Public Universities in Surakarta. Data were collected using an online structured questionnaire and analyzed with descriptive statistical methods to identify student responses.

Although previous studies have extensively examined students acceptance of online learning, limited attention has been given to understanding the combined influence of individual, system, and content-related factors, specifically Computer Self-Efficacy (CSE), System Interactivity (SI), and Content Feature (CF) on perceived usefulness (PU), perceived ease of use (PE), and students' intention to continue (IC) in the context of digital learning platforms such as Coursera. This gap underscores the need to investigate further how these factors interact to influence continuous usage behavior among university students. Therefore, this study seeks to address the following research questions: How do CSE, SI, and CF influence students' PU and PE? How do PU and PE affect students' IC in using online digital learning platforms? And which factor contributes most significantly to students' continued use intention?

METHODOLOGY

Research Design

The research was implemented in a series of stages (see Figure 1). The process began with a comprehensive literature review to establish the theoretical framework and support the selection of variables. This was followed by the development and pilot testing of the questionnaire. After refining the instrument, the survey was distributed, and responses were collected. The results were also visualized using pie charts to aid interpretation.

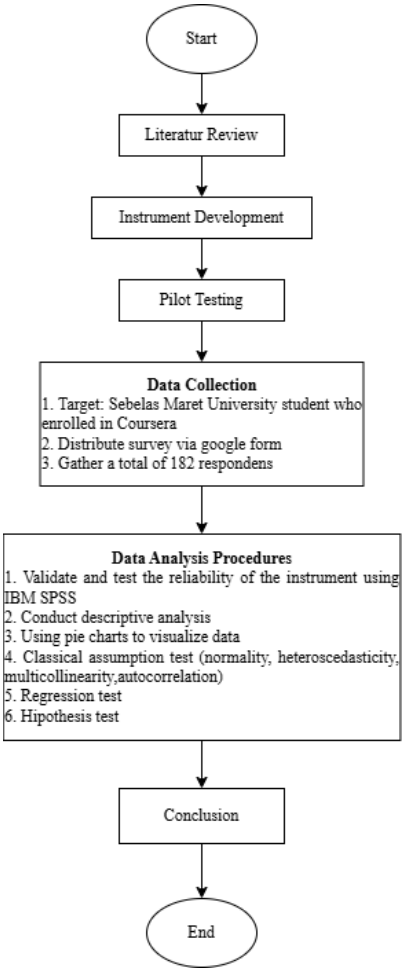

FIGURE 1. Flowchart of the research stages

The target population of the study comprised students in Public Universities who had participated in MOOCs, specifically through the Coursera platform. A purposive sampling method was employed with students who met the general criterion of having completed at least one MOOC course. The survey link was distributed through official WhatsApp groups of Coursera participants across various universities. This approach ensured that all respondents met the inclusion criterion of having completed at least one MOOC course.

To understand the background of participants involved in this study, demographic data were analyzed based on the respondents' universities of origin. This information provides an overview of the academic environment and institutional diversity represented in the research sample.

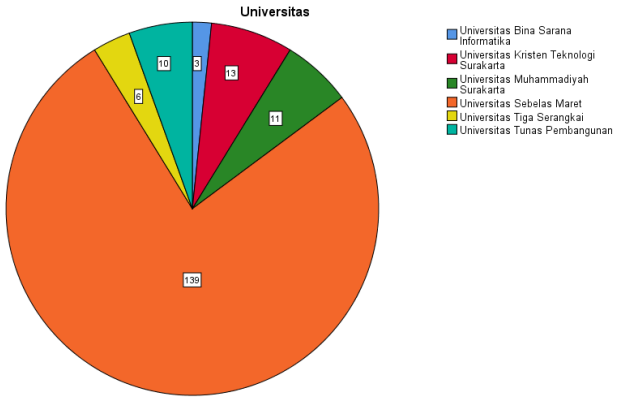

FIGURE 2. Distribution of respondents based on their university

Based on the demographic analysis of respondents by university, as illustrated in Figure 2 (pie chart), the majority of participants were from Universitas Sebelas Maret (UNS), with a total of 139 respondents, representing more than half of all participants. Other respondents were distributed among several universities located in the Surakarta area, including Universitas Muhammadiyah Surakarta (11 respondents), Universitas Kristen Teknologi Surakarta (13 respondents), Universitas Tunas Pembangunan (10 respondents), Universitas Tiga Serangkai (6 respondents), and Universitas Bina Sarana Informatika (3 respondents). This distribution indicates that most participants were affiliated with public universities, particularly UNS, which may reflect its larger student population and research accessibility within the Surakarta region.

In this study, data analysis was performed using IBM SPSS Statistics version 25. Prior to conducting the regression analysis, several classical assumption tests were carried out to ensure the data met the statistical requirements for further testing. These included tests for normality, multicollinearity, heteroscedasticity, and autocorrelation. After verifying that all assumptions were satisfied, linear regression analysis was employed to examine the relationships among the study variables. Specifically, Computer Self-Efficacy (CSE), System Interactivity (SI), and Content Feature (CF) were examined as antecedent factors influencing Perceived Usefulness (PU) and Perceived Ease of Use (PE), which in turn affect students' Intention to Continue (IC) using online digital learning platforms. Finally, conclusions were drawn based on the findings, along with recommendations for improving MOOCs-based learning experiences for university students

Research Variable

This study examines six main variables that influence students' experiences and their intention to continue using MOOCs. These variables are explained as below.

1. Computer self-efficacy refers to an individual's belief in their capability to effectively perform tasks using a computer. It is not a measure of one's technical talent but rather their confidence in utilizing existing skills to complete tasks through digital tools (Sayaf et al., 2021; Shahbaz et al., 2020).
2. Social influence, the degree to which an individual perceives that important people in their social circle, such as friends, peers, or colleagues, believe they should use a new system or technology (Kamal et al., 2020).
3. Content features, which relate to the quality and structure of information presented in an e-learning system. These include elements such as text, hypertext, graphics, audio, video, animations, simulations, embedded tests, and other multimedia components. High-quality and frequently updated content can enhance user engagement and learning outcomes (Alkhuwaylidee, 2025; Ho et al., 2023).

4. Perceived ease of use, defined as the degree to which a person believes that using a particular system would be free of effort. When users perceive a technology as easy to use and learn, they are more likely to adopt and continue using it. This perception also contributes to a more favorable attitude toward the system (Davis, 1989, in Li, 2021; Huang, 2021).
5. Perceived usefulness, the extent to which an individual believes that using a system will enhance their performance or help them achieve learning goals. A user may continue using a system if they perceive it to be beneficial, even if it is not easy to use, because its utility outweighs usability concerns (Jung & Yoon, 2021).
6. Intention to continue refers to a user's willingness or determination to keep using a system or platform in the future. This intention is often influenced by their previous experience, perceived usefulness, satisfaction, and ease of use. When learners find a system beneficial and easy to navigate, they are more likely to develop a sustained intention to continue using it over time (Ho et al., 2023).

Research Instrument

The research instrument used in this study was a structured, closed-ended questionnaire measured on a five-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5), and distributed online via Google Forms. The questionnaire was developed to measure six main variables through a total of 22 items. Computer Self-Efficacy was measured using three items that assessed students' confidence in operating digital platforms and handling tasks related to online learning. Social Influence was also measured with three items, focusing on how support or encouragement from peers, lecturers, or the surrounding environment influenced student participation. Content Features consisted of four items examining the clarity, relevance, visual presentation, and multimedia elements of the learning content. Perceived Ease of Use included four items that captured the simplicity, intuitiveness, and adaptability of the platform. Perceived Usefulness was measured using five items that addressed students' perceptions of the platform's benefits in supporting independent learning, accessing diverse resources, and enhancing learning outcomes. Lastly, Intention to Continue was assessed through three items that reflected students' willingness and confidence to continue using MOOCs-based learning platforms in the future. All items were adapted to fit the research context, and the instrument was pilot-tested to ensure its validity and reliability before full-scale data collection.

The measurement indicators for each construct were adapted from established studies to ensure theoretical alignment and content validity. The indicators for Perceived Usefulness (PU) were adapted from the Technology Acceptance Model by Davis (1989), as this model provides the theoretical foundation for understanding technology acceptance. Items for Computer Self-Efficacy (CSE) were derived from Sayaf et al. (2021), while Social Influence (SI) indicators were adapted from Kamal et al. (2020) to capture the effect of external encouragement on technology usage. Measurement items for Content Feature (CF) were based on Alkhuwaylidee (2025) and Ho et al. (2023), emphasizing the quality, structure, and relevance of MOOC content. Finally, Intention to Continue (IC) was measured using items adapted from Ho et al. (2023), which focus on learners' willingness and motivation to sustain their engagement with MOOC platforms. These sources were selected because they are empirically validated and widely applied in TAM-based and e-learning research, ensuring theoretical consistency and contextual relevance for this study.

Before the questionnaire was distributed on a broader scale, a pilot study was carried out with a group of students who had prior experience in completing online courses. This preliminary phase aimed to assess the clarity of language, ease of understanding, and logical structure of the questionnaire. Input gathered from the participants during the pilot testing was used to revise and improve several statements, ensuring that the final instrument would be easily comprehensible for all respondents. Prior to conducting the main analysis, the validity and reliability of the instrument were tested using IBM SPSS 25 student version to ensure consistency and accuracy of the measurement items. The reliability analysis yielded a Cronbach's Alpha value of more than 0.60 for each research variable, indicating excellent internal consistency and confirming that the instrument is reliable. Furthermore, the validity test using Pearson correlation showed that all questionnaire items had correlation coefficients greater than 0.30, as all items for each construct produced correlation coefficients ranging from 0.305 to 0.921, with significance values below 0.05, indicating that all items met the validity requirement and were retained for further analysis. The final questionnaire items for each dimension, along with their corresponding literature sources, are presented in Table 1.

TABLE 1. Questionnaire items indicators

Construct	Item Code	Item Indicators	Source
Computer Self-Efficacy (CSE)	CSE1	There are available guidelines or user manuals for using the online learning platforms.	(Nguyen et al., 2023)
	CSE2	Already quite accustomed and skilled in using online platform applications.	
	CSE3	There is someone (lecturer/admin/friend) who can help me when I have difficulties.	
Social Influence (SI)	SI1	Lecturers encourage and motivate me to participate in this program.	
	SI2	My friends also participate in the program.	
	SI3	There is positive information about the program on social media.	
Content Feature (CF)	CF1	Easy to understand.	
	CF2	According to my learning needs and goals.	
	CF3	Relevant to the latest scientific fields (up to date).	
	CF4	Attractively and creatively packaged.	
Perceived Ease of Use (PE)	PE1	Easy to operate during the learning process.	
	PE2	Easy to handle when there are technical difficulties.	
	PE3	Doesn't burden my mind with the complexity of the system.	
	PE4	It doesn't take long to be able to and get used to this learning system.	
Perceived Usefulness (PU)	PU1	Improve independent learning.	
	PU2	Gives me greater flexibility in learning.	
	PU3	Providing knowledge material from wider learning sources.	
	PU4	Enhance the learning experience with varied learning models.	
	PU5	Increasing the outcome/value of learning outcomes (*for example, getting a certificate in each course if you pass).	
Intention to Continue (IC)	IC1	I am interested or willing to participate in the program.	
	IC2	I want to recommend the program to others (e.g. friends).	
	IC3	Don't hesitate to join the program.	

Research Hypotheses

Based on the Technology Acceptance Model (TAM) and relevant previous studies, this research proposes the following hypotheses related to the determinants of students' perceptions and their intention to continue using online digital learning systems. Table 2 summarizes the hypotheses formulated in this study.

TABLE 2. Research hypotheses

Hypothesis Code	Relationship	Statement
H1	CSE → PU	Computer Self-Efficacy positively influences Perceived Usefulness
H2	CSE → PE	Computer Self-Efficacy positively influences Perceived Ease of Use
H3	SI → PU	Social Influence positively influences Perceived Usefulness
H4	SI → PE	Social Influence positively influences Perceived Ease of Use
H5	CF → PU	Content Feature positively influences Perceived Usefulness
H6	CF → PE	Content Feature positively influences Perceived Ease of Use
H7	PU → IC	Perceived Usefulness positively influences Intention to Continue
H8	PE → IC	Perceived Ease of Use positively influences Intention to Continue

Data Collection Technique

The data collection in this study was conducted using a survey method through the distribution of an online questionnaire. The questionnaire was distributed throughout May - June 2025 via WhatsApp group channels to reach the intended participants efficiently. To protect respondent privacy, the questionnaire included a confidentiality

statement, assuring that all personal data would be kept anonymous. Furthermore, the collected data were processed and reported in aggregate form to ensure the privacy and confidentiality of individual responses.

The data collection distributed through several official university WhatsApp groups that included students actively participating in Coursera-based digital learning programs. This platform was chosen for its practicality and accessibility, particularly during periods of remote learning when direct interaction was limited. To reduce potential selection bias, the questionnaire link was disseminated across different faculties, departments, and study levels, ensuring that participation opportunities were not limited to a single group. In addition, respondents were encouraged to share the survey within their academic circles under supervision, enabling broader coverage while maintaining the academic target population. Although the use of WhatsApp groups may not represent a fully random sampling process, the diverse distribution channels and cross-departmental participation helped minimize bias and enhance the representativeness of the collected data. This limitation, however, is acknowledged and further discussed in the conclusion section.

RESULTS AND DISCUSSION

Descriptive Analysis

This section presents the results of the questionnaire distributed to students regarding their acceptance and intention to continue using digital learning platforms. A total of 182 valid responses were obtained. The responses were analyzed using descriptive statistics and are visualized using pie charts to illustrate the distribution of responses for each variable. Each pie chart represents the percentage of agreement levels among respondents, enabling clearer interpretation of trends and patterns in students' perceptions.

Computer Self-Efficacy

Figure 3 shows that students agreed that having a manual or guide helped boost their confidence in using the system (89.01%), besides 96.15% reported being familiar and skilled in using online applications. The students also felt supported by lecturers, admins, or peers when facing difficulties (86.81%). In conclusion, approximately 90% of students demonstrated a high level of Computer Self-Efficacy, indicating that confidence in using technology plays a crucial role in the success of digital learning.

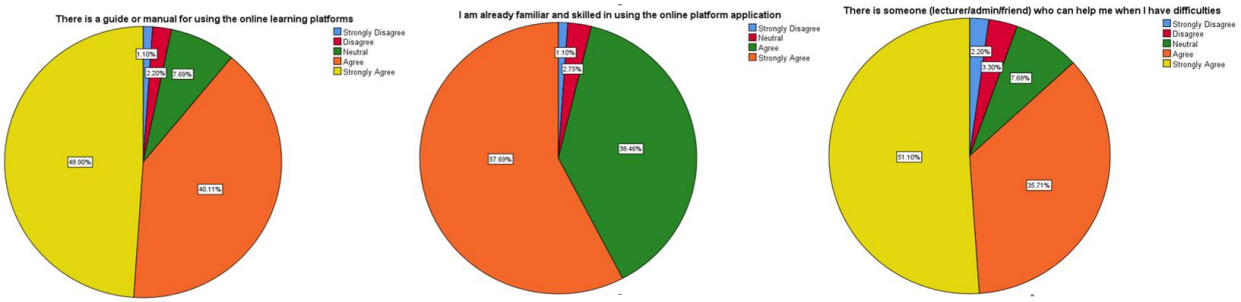

FIGURE 3. Distribution of responses for the computer self-efficacy variable.

Social Influence

As shown in Figure 4, students reported experiencing various forms of social influence in their decision to join the program. Specifically, 74.73% reported receiving direct encouragement from lecturers, 82.96% agreed that peer participation created a positive social effect that strengthened their motivation, and 65.38% indicated that social media had a positive impact on their perception of the program, although this percentage was lower than the other two factors.

Overall, approximately 75% of students reported experiencing notable social influence in their decision to engage in digital learning, underscoring the importance of the social environment in sustaining their participation.

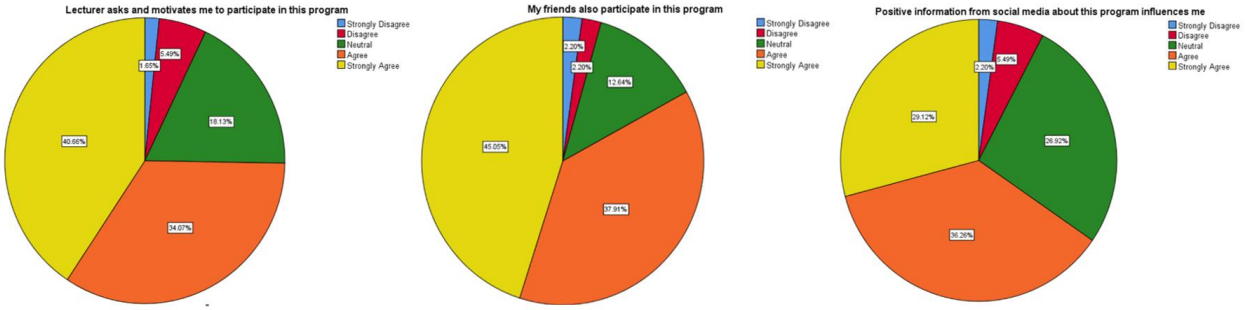

FIGURE 4. Distribution of responses for the social influence variable

Content Feature

The majority of students (approximately 87–92%) agreed that the learning content was easy to understand, well-aligned with their learning objectives, and relevant to current developments in their field. Specifically, 86.82% reported that the content was easy to follow, 87.36% noted that it was well-targeted and supported their learning objectives, and 92.30% believed it was relevant to current developments in their discipline. Furthermore, 90.11% of respondents highlighted that visual elements, supporting media, and presentation style effectively captured their interest and enhanced their engagement. Taken together, these results shown in Figure 5 suggest that nearly 90% of students perceived content features as functioning optimally in supporting their learning process, reinforcing the role of content quality as a key factor in sustaining digital learning programs.

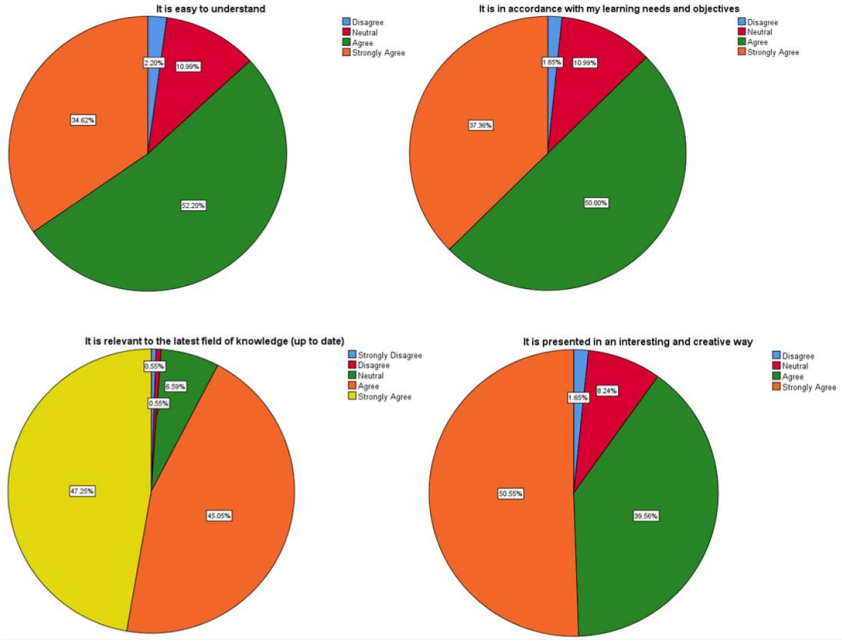

FIGURE 5. Distribution of responses for the content feature

Perceived Ease of Use

Figure 6 presents the perceived ease of use, which 92.86% of students agreed that the platform was easy to operate, indicating an intuitive interface and user-friendly navigation; 84.62% felt confident in handling technical issues, 88.47% agreed that the system was not confusing or cognitively burdensome, suggesting a simple and understandable user flow, and 90.66% stated they could quickly adapt to the platform, showing that the onboarding process and design supported new users effectively. Approximately 89% of students found the digital learning platform easy to use, highlighting usability as a key factor in ensuring a smooth, efficient, and sustainable learning experience.

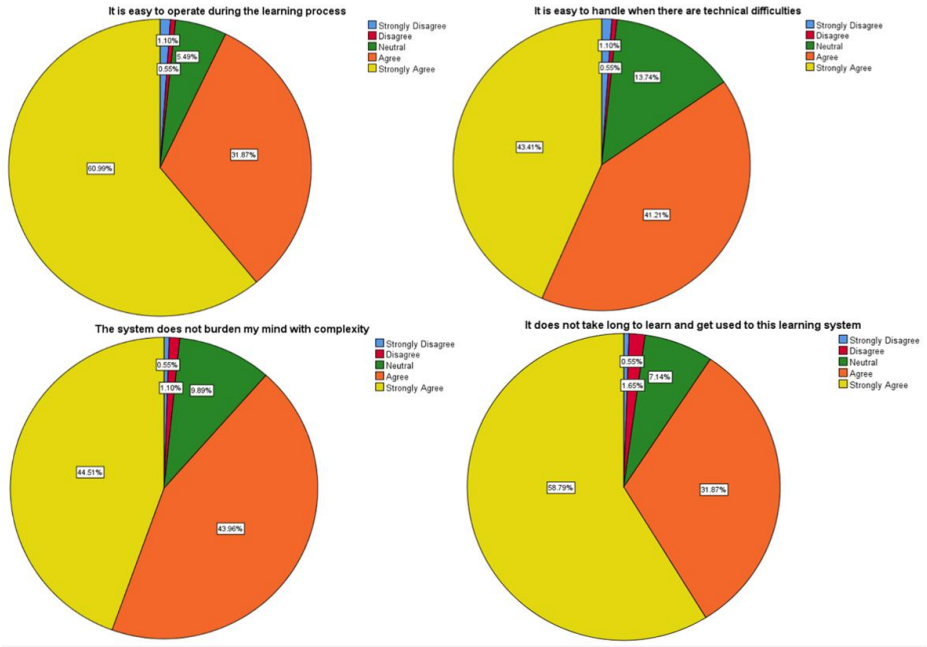

FIGURE 6. Distribution of responses for the perceived ease of use

Perceived Usefulness

Figure 7 present the perceived usefulness, in which 94.51% of students agreed that the platform supported independent learning, encouraging personal initiative and control, and 95.05% identified time and location flexibility as a major advantage of digital learning. Additionally, the students found that the platform offered a broad and diverse range of learning resources, which significantly improved learning quality (94.51%). The students also agreed (94.51%) that various methods, such as videos, quizzes, and discussions, made learning more engaging. Additionally, 93.41% of respondents stated that receiving certificates gave them extra motivation to complete courses successfully.

In conclusion, about 94% of students perceived clear benefits from using digital learning platforms, making perceived usefulness a crucial factor in their acceptance and continued use. These benefits include increased independence, flexibility, wider access to materials, diverse learning methods, and enhanced learning outcomes.

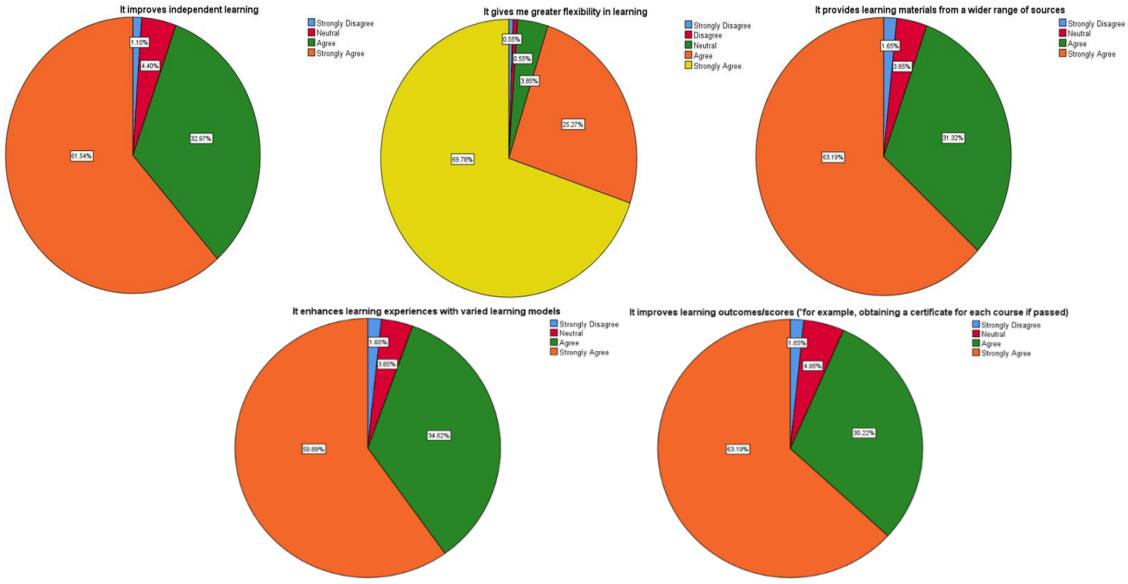

FIGURE 7. Distribution of responses for the perceived usefulness

Intention to Continue

Figure 8 illustrates students' intention to continue using digital learning programs. The results show that 90.11% of students agreed their experience was positive and worth pursuing further. In addition, 89.02% expressed confidence in the program's quality and indicated a willingness to recommend it to others. Similarly, 85.72% reported strong trust in the program, reflecting minimal doubt and a belief that it is safe, beneficial, and reliable for consistent use. Overall, approximately 88% of students demonstrated a strong intention to continue using platforms such as Coursera, underscoring the critical role of continuance intention in sustaining student engagement with digital education.

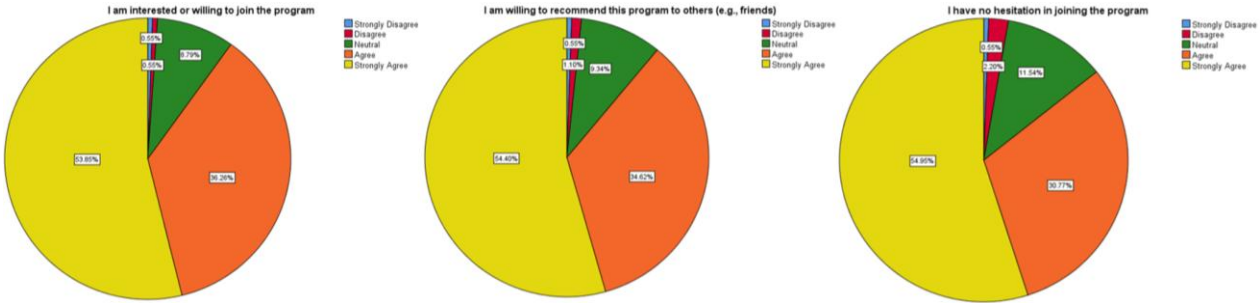

FIGURE 8. Distribution of responses for the intention to continue

Descriptive Statistics

Descriptive statistics were used to examine the respondents' perceptions of the variables measured in this study. As shown in Table 3, all constructs recorded mean values above 4.00 on a 5-point Likert scale, indicating that students expressed generally positive perceptions toward online digital learning. Computer Self-Efficacy (M = 4.38, SD = 0.63), Content Feature (M = 4.29, SD = 0.58), Perceived Ease of Use (M = 4.38, SD = 0.65), and Intention to Continue (M = 4.40, SD = 0.70) demonstrated high levels of agreement among respondents.

Social Influence showed the lowest mean score (M = 4.04, SD = 0.76), although the perception remained favorable. Meanwhile, Perceived Usefulness recorded the highest mean score (M = 4.55, SD = 0.62), suggesting that students

strongly believed in the benefits of online learning in enhancing academic activities. These results indicate that respondents generally accepted the online digital learning system and believed it supported their learning performance effectively (Hair et al., 2020; Ghozali, 2021).

TABLE 3. Descriptive statistics results

Variable	N	Minimum	Maximum	Mean	Std. Deviation
CSE_mean	182	1.00	5.00	4.3846	0.62567
SI_mean	182	1.67	5.00	4.0421	0.75805
CF_mean	182	1.75	5.00	4.2981	0.57703
PE_mean	182	1.00	5.00	4.3846	0.64991
PU_mean	182	1.00	5.00	4.5516	0.62213
IC_mean	182	1.00	5.00	4.4029	0.69554
Valid N (listwise)	**182**				

Classical Assumption Tests

Classical assumption testing was conducted prior to the regression analysis to ensure that the estimated model meets the requirements for Best Linear Unbiased Estimator (BLUE). The tests include normality, multicollinearity, heteroscedasticity, and autocorrelation.

Normality of the regression residuals was examined using a histogram and a Normal P–P Plot of standardized residuals. The histogram showed a bell-shaped curve, and the data points in the P–P Plot were distributed close to the diagonal line. These results indicate that the residuals were normally distributed, and therefore the normality assumption is satisfied (Hair et al., 2020; Ghozali, 2021). Meeting the assumption of normality ensures that the regression estimates are statistically valid and unbiased.

Multicollinearity was also evaluated by using the Tolerance and Variance Inflation Factor (VIF) values for each independent variable. All predictors indicated Tolerance values above 0.10 and VIF values below the threshold of 10. For Perceived Ease of Use as dependent variable, the results are CSE: 0.605 & 1.652; SI: 0.678 & 1.475; CF: 0.541 & 1.849. Multicollinearity test also evaluated Perceived Usefulness as a dependent variable, and the results are CSE: 0.605 & 1.652; SI: 0.678 & 1.475; CF: 0.541 & 1.849. These results demonstrate that no multicollinearity problem exists among the independent variables, and therefore each construct makes a unique contribution to predicting the dependent variable (Gujarati & Porter, 2020; Hair et al., 2020).

The heteroscedasticity test was carried out using a scatterplot of standardized residuals. The random and homogenous distribution of the residual points around the horizontal axis, without forming any specific systematic pattern, suggests that the model does not exhibit heteroscedasticity (Ghozali, 2021; Sarstedt et al., 2020). Thus, the variance of the residuals is constant, fulfilling the homoscedasticity assumption.

An autocorrelation test was also assessed using the Durbin-Watson (DW) statistic from the regression model summary. A DW value ranging between 1.5 and 2.5 indicates that the model is free from positive or negative autocorrelation (Hair et al., 2020; Gujarati & Porter, 2020). The DW value obtained in this study ranges from 1.760 to 2.095, indicating that it falls within the acceptable range. This implies that there is no autocorrelation in the residuals, and therefore, the assumption of independent error terms is fulfilled.

All classical assumption tests were satisfied, indicating that the regression model is suitable for further analysis and that hypothesis testing can be conducted reliably.

Regression Analysis

The regression analysis was conducted to examine the effect of Computer Self-Efficacy (CSE), Social Influence (SI), and Content Feature (CF) on Perceived Usefulness (PU) and Perceived Ease of Use (PE), as well as the influence of both PU and PE on Intention to Continue (IC). The results presented in Table 5 indicate that CSE and CF significantly predicted both PU and PE, while SI did not have a significant effect on these two variables. Furthermore, PU and PE significantly contributed to IC with substantial standardized β values, indicating strong predictive effects

on students' willingness to continue using online digital learning platforms. These findings suggest that individual capability and content design are the primary factors that shape students' perceptions and intentions to continue.

TABLE 4. Model summary and ANOVA

Model	Dependent	Predictors	R^2	Adj R^2	F	Sig.
1	PU	CSE, SI, CF	0.552	0.544	73.085	0.000
2	PE	CSE, SI, CF	0.579	0.572	81.659	0.000
3A	IC	PU	0.426	0.423	133.832	0.000
3B	IC	PE	0.302	0.298	77.871	0.000

In behavioral and educational studies, R-squared values ranging from 0.20 to 0.40 are considered moderate and acceptable, as human behavior is influenced by numerous external factors (Hair et al., 2020).

TABLE 5. Regression coefficients

Dependent Variable	Independent Variable	β	Sig.	Result
PU	CSE	0.374	0.000	Significant
PE	CSE	0.433	0.000	Significant
PU	SI	0.076	0.215	Not Significant
PE	SI	0.037	0.536	Not Significant
PU	CF	0.404	0.000	Significant
PE	CF	0.438	0.000	Significant
IC	PU	0.653	0.000	Significant
IC	PE	0.550	0.000	Significant

Further analysis, as shown in Table 5, reveals that Content Feature and Computer Self-Efficacy are strong predictors of both Perceived Usefulness and Perceived Ease of Use, while Social Influence has no significant influence on either variable. In contrast, both Perceived Usefulness and Perceived Ease of Use have a significant and positive impact on students' Intention to Continue online learning, with Perceived Usefulness being the strongest predictor.

Hypothesis Testing

Table 6 summarizes the evaluation of each hypothesis based on the regression output results.

TABLE 6. Hypothesis decision

Hypothesis Code	Decision
H1	Accepted
H2	Accepted
H3	Rejected
H4	Rejected
H5	Accepted
H6	Accepted
H7	Accepted
H8	Accepted

Based on the results of the regression analysis, hypothesis testing was conducted by referring to the standardized beta coefficients (β) and significance values (p-value). Hypotheses with p-values below 0.05 are considered statistically supported. Table 6 presents the results of hypothesis testing for this study. From the analysis, H1 and H2 were accepted, indicating that Computer Self-Efficacy significantly influences both Perceived Usefulness and Perceived Ease of Use. This implies that students with higher digital confidence tend to perceive online learning systems as more useful and easier to use.

The results further showed that H3 and H4 were rejected, as social influence did not significantly affect either Perceived Usefulness or Perceived Ease of Use. This suggests that students' perceptions of the usefulness and ease of online learning are more shaped by their personal experiences and platform characteristics than by external social encouragement.

Meanwhile, H5 and H6 were accepted, confirming that Content Feature plays an important role in predicting both Perceived Usefulness and Perceived Ease of Use. High-quality digital content improves students' learning efficiency and facilitates smoother interaction with the system. H7 and H8 were also accepted, indicating that Perceived Usefulness and Perceived Ease of Use significantly predict students' Intention to Continue using online digital learning. Among these two, Perceived Usefulness shows the strongest effect, suggesting that students are more likely to continue using the platform when they perceive clear academic benefits.

In summary, most of the proposed hypotheses were supported, except those related to Social Influence. These findings reinforce key assumptions of the Technology Acceptance Model, which suggest that usability and usefulness are the most critical determinants of technology adoption and continuance intention among students in higher education (Hair et al., 2020; Venkatesh & Davis, 2020).

CONCLUSION

This study explored students' acceptance and continuance intention toward Coursera-based MOOCs at Public University in Surakarta by examining six key variables: Computer Self-Efficacy (CSE), Social Influence (SI), Content Feature (CF), Perceived Usefulness (PU), Perceived Ease of Use (PE), and Intention to Continue (IC). Through statistical testing and multiple linear regression analysis, the results demonstrated that both CSE and CF significantly influence PU and PE, indicating that students who possess higher confidence in operating digital platforms and engage with well-designed, relevant content perceive the system as more beneficial and easier to use. In contrast, SI didn't show a significant effect, suggesting that the role of social encouragement from lecturers, peers, or external networks is secondary compared to individual capability and content-driven learning experiences. These findings highlight that students' engagement with MOOCs is predominantly shaped by their internal competence and the platform's instructional design rather than by external social factors.

Moreover, the study confirmed that both PU and PE exert a significant positive impact on students' IC of online learning platforms, with PU emerging as the strongest predictor influencing sustained engagement with online learning platforms. This reinforces the central premise of the Technology Acceptance Model, which posits that perceived usefulness is the most critical determinant of technology adoption and continuance behavior. The implications of these findings emphasize that long-term sustainability of MOOCs in higher education depends on improving user confidence, continuously enhancing content quality through interactive and up-to-date materials, and optimizing the platform's usability to create a seamless learning experience. Therefore, universities and platform developers are encouraged to provide continuous technical support, integrate MOOCs strategically into academic programs, and recognize students' achievements through certification systems. Strengthening these aspects will not only enhance students' satisfaction and motivation but also foster a more resilient digital learning ecosystem that supports life-long learning in the context of higher education.

REFERENCES

Adriyanto, A. R., Santosa, I., Syarief, A., & Irfansyah, I. (2021). Design and multimedia learning principles on MOOC IndonesiaX. *Jurnal Cakrawala Pendidikan, 40*(1), 92–106. https://doi.org/10.21831/cp.v40i1.34699

Alkhuwaylidee, A. R. (2025). Exploring factors influencing students' continuance intention to use e-learning system for Iraqi university students. *Computers, 14*(5), 176. https://doi.org/10.3390/computers14050176

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340.

Edelsbrunner, S., Steiner, K., Schön, S., Ebner, M., & Leitner, P. (2022). Promoting digital skills for Austrian employees through a MOOC: Results and lessons learned from design and implementation. *Education Sciences, 12*(2), 89. https://doi.org/10.3390/educsci12020089

Ghozali, I. (2021). *Aplikasi analisis multivariate dengan IBM SPSS 26.* UNDIP.

Gujarati, D. N., & Porter, D. C. (2020). *Basic econometrics* (6th ed.). McGraw-Hill.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2020). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.

Ho, N. T. T., Abdullah, M. R. T. L., Idrus, H. B., Sivapalan, S., Pham, H.-H., Dinh, V.-H., Pham, H. K., & Nguyen, L. T. M. (2023). Acceptance toward Coursera MOOCs blended learning: A mixed methods view of Vietnamese higher education stakeholders. *Sage Open, 13*(4). https://doi.org/10.1177/21582440231197997

Huang, C.-H. (2021). Exploring the continuous usage intention of online learning platforms from the perspective of social capital. *Information, 12*(4), 141. https://doi.org/10.3390/info12040141

Jung, H.-S., & Yoon, H.-H. (2021). Generational effects of workplace flexibility on work engagement, satisfaction, and commitment in South Korean deluxe hotels. *Sustainability, 13*(16), 9143. https://doi.org/10.3390/su13169143

Kamal, S. A., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). *Technology in Society, 60,* 101212. https://doi.org/10.1016/j.techsoc.2019.101212

Li, R. (2021). Modeling the continuance intention to use automated writing evaluation among Chinese EFL learners. *Sage Open, 11*(4). https://doi.org/10.1177/21582440211060782

Muti Altalhi, M. (2021). Towards understanding the students' acceptance of MOOCs: A unified theory of acceptance and use of technology (UTAUT). *International Journal of Emerging Technologies in Learning (IJET), 16*(2), 237. https://doi.org/10.3991/ijet.v16i02.13639

Nguyen, L. T., Kanjug, I., Lowatcharin, G., Manakul, T., Poonpon, K., Sarakorn, W., Somabut, A., Srisawasdi, N., Traiyarach, S., & Tuamsuk, K. (2023). Digital learning ecosystem for classroom teaching in Thailand high schools. *Sage Open, 13*(1). https://doi.org/10.1177/21582440231158303

Nugroho, A., Mursityo, Y. T., & Hariyanti, U. (2024). Analisis faktor yang mempengaruhi penggunaan berkelanjutan massive open online course pada Gen Z menggunakan technology acceptance model termodifikasi dan task technology fit. *Jurnal Sistem Informasi, Teknologi Informasi, dan Edukasi Sistem Informasi, 5*(2), 89–99. https://doi.org/10.25126/justsi.v5i2.508

Pachisia, J. (2022). The concept of blended learning mode. *International Journal of Home Science, 8*(1), 74–81. http://www.homesciencejournal.com

Rohiem, A. F., & Sari, J. (2023). Analisis SWOT sarana pembelajaran digital massive open online course (MOOC) Ruang Guru. *Dirasat: Jurnal Manajemen dan Pendidikan Islam, 9*(2), 126–136. https://doi.org/10.26594/dirasat.v9i2.3684

Sari, R. P., & Dahnial, I. (2022). Impact of massive open online course (MOOC) as best practice in Indonesia Medan Marelan District Elementary School. *Jurnal Pemikiran dan Pengembangan Sekolah Dasar (JP2SD), 10*(2), 122–133. https://doi.org/10.22219/jp2sd.v10i2.20379

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2020). Partial least squares structural equation modeling. In C. Homburg, M. Klarmann, & A. Vomberg (Eds.), *Handbook of market research.* Springer.

Sayaf, A. M., Alamri, M. M., Alqahtani, M. A., & Al-Rahmi, W. M. (2021). Information and communications technology used in higher education: An empirical study on digital learning as sustainability. *Sustainability, 13*(13), 7074. https://doi.org/10.3390/su13137074

Shahbaz, M., Gao, C., Zhai, L., Shahzad, F., & Arshad, M. R. (2020). Moderating effects of gender and resistance to change on the adoption of big data analytics in healthcare. *Complexity, 2020,* 1–13. https://doi.org/10.1155/2020/2173765

Venkatesh, V., & Davis, F. D. (2020). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science, 46*(2), 186–204.