Students and Lecturers' Perspectives on Coursera MOOCs: Insights from Public and Private Universities in Surakarta

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Abstract. The digitization of education through platforms like Coursera offers opportunities for delivering more inclusive and high-quality learning experiences. This study aims to investigate the perceptions of both faculty and students regarding Massive Open Online Courses (MOOCs) on the Coursera platform at public and private universities in Surakarta. A total of 25 lecturers and 181 students participated, with data collected through questionnaires (using a 5-point Likert scale) and semi-structured interviews. The survey results revealed strong positive perceptions: for example, 89–96% of students agreed that system manuals and technical support facilitated their engagement, and over 92% reported high motivation and satisfaction with the platform. Faculty members recognized the potential of MOOCs to enhance teaching innovation, with approximately 80% agreeing that MOOCs improved student learning experiences. However, challenges were also reported, including limited interaction with instructors, difficulties in monitoring academic honesty (reported by 40% of faculty), outdated or incomplete materials, and issues with time management. Qualitative interview responses supported these findings, emphasizing both the flexibility and the need for stronger contextualization of content to the Indonesian higher education setting. These results suggest that while MOOCs provide significant benefits for learners and instructors, universities must address issues of engagement, content relevance, and academic integrity to maximize their effectiveness.

Keywords: digital learning; higher education; MOOCs; user perception

INTRODUCTION

The development of the digital world has brought significant transformation to the education sector, enabling broader, more flexible, and personalized access to learning through various online platforms. Massive Open Online Courses (MOOCs) are an innovative approach to teaching and learning that leverage the internet to deliver information, revolutionize, and encourage students to learn together about educational content from universities and

other educational institutions (Voudoukis & Pagiatakis, 2022). MOOCs can serve as the latest platform for online learning and can be used as an alternative to replace or integrate traditional teaching methods implemented by higher education institutions. In fact, MOOCs have been adopted into the curricula of many higher education institutions (Ho et al., 2022).

While much research has emphasized student experiences, understanding the needs and challenges faced by learners during MOOCs is only one side of the story. Faculty perspectives are equally important, as lecturers play a central role in designing, facilitating, and evaluating MOOC-based instruction. Their perceptions influence how MOOCs are integrated into curricula, how learning resources are contextualized, and how institutional policies are implemented. However, despite the growing global adoption of MOOCs, research exploring both student and faculty perspectives in the Indonesian higher education context remains scarce. Previous studies have often emphasized either student experiences or global trends, while the interplay between learner needs and faculty readiness in Indonesia is still underexplored. Moreover, prior findings on MOOC engagement are inconsistent—some report enthusiasm and improved access, while others highlight low completion rates and challenges in sustaining active participation (Ngo et al., 2023). Addressing these gaps, this study investigates both student and faculty perceptions to provide a more comprehensive understanding of how MOOCs can be effectively implemented in Indonesian universities.

MOOCs can be accessed worldwide without restrictions on location or time, with one of the most well-known providers being Coursera. Although MOOCs are an innovative form of learning, various perceptions have emerged regarding their advantages and disadvantages. MOOCs offer high flexibility, unlimited access, and opportunities to study diverse topics from renowned institutions worldwide (Ayoub, 2020). Coursera, as one of the leading MOOC platforms, has become a popular choice for both educational institutions and individual learners seeking to enhance their competencies through online learning. However, the implementation of MOOCs, such as Coursera, also faces challenges, including limited direct interaction between participants and instructors, content delivery that is sometimes perceived as too dense or complex, and difficulties in maintaining motivation and concentration during learning (Tartari & Kashahu, 2021). Additionally, language proficiency and time management skills also affect the effectiveness of learning through this platform (Luo & Wang, 2023). Considering these advantages and challenges, it is crucial to examine both student and faculty perceptions of Coursera usage in the Indonesian higher education context. Such insights not only provide a basis for evaluating user experiences but also support the formulation of more adaptive, effective, and contextually relevant online learning policies (Silvia, 2015).

METHODOLOGY

Research Design

A survey questionnaire was developed in this study to measure the perceptions of lecturers and students regarding Massive Open Online Courses (MOOCs) through the Coursera platform. Two separate Google Form questionnaires were designed: one for lecturers, comprising 16 questions, and one for students, comprising 15 questions. The instruments covered general perceptions, perceived benefits, and obstacles in participating in MOOC learning. In addition, semi-structured interview protocols were developed to capture more in-depth information, consisting of 9 questions for faculty members and 19 questions for students.

The sample consisted of 25 lecturers and 181 students drawn from Indonesian universities. Participants were recruited using purposive sampling, with the inclusion criteria being lecturers and students who had actively participated in at least one Coursera MOOC provided through the university partnership program. The sample provides a balanced representation of both faculty and student perspectives across different institutional types.

To assess the validity and reliability of the questionnaire, a pilot study was conducted with 15 respondents (8 students and 7 lecturers) who were not part of the main sample. Feedback indicated that the questionnaire was understandable and relevant, requiring only minor revisions to wording for clarity. Reliability testing using Cronbach's alpha yielded values of 0.82 for the student instrument and 0.85 for the faculty instrument, both exceeding the recommended threshold of 0.70, indicating good internal consistency (Ngo et al., 2023).

For data analysis, both descriptive and inferential statistical approaches were applied. Descriptive statistics (frequency distribution, mean values, and standard deviations) were calculated using Microsoft Excel. To further examine potential differences between groups, inferential tests were conducted using SPSS, including independent-sample t-tests to compare perceptions between students and faculty, and chi-square tests to analyze differences between respondents from public and private universities.

Qualitative data from the semi-structured interviews and open-ended survey responses were analyzed thematically. While AI-assisted text analysis was initially used to generate preliminary themes, the outputs were cross-validated through manual coding by two researchers to ensure accuracy and interpretive rigor. Discrepancies were discussed and resolved through consensus, thereby strengthening the reliability of the qualitative findings. This combined approach allowed the study to capture both broad patterns and nuanced insights into the perceptions of MOOCs in the Indonesian higher education context.

Research Instrument

This study employed a mixed-methods approach, combining quantitative and qualitative instruments to examine the perceptions of lecturers, university staff, and students toward Coursera MOOCs in public and private universities in Surakarta. Two survey versions were prepared: one for faculty and staff (Table 1), comprising 16 closed-ended items and open-ended questions, and another for students (Table 2), comprising 15 closed-ended items and open-ended questions.

TABLE 1. Questionnaire item for student

Variable	Item Code	Indicators	Source
General Perception (G)	G1	There are system manuals or guidelines available for using the online learning platforms.	Ngo et al. (2023)
	G2	I am quite familiar and skilled in using the online learning applications.	
	G3	There is someone (lecturer/admin/friend) who can help me when I face difficulties.	
	G4	A personal desire to learn and grow.	
	G5	Feeling motivated to seek different learning experiences.	
	G6	Recognition of personal competence (e.g., course certificate).	
	G7	Easy to operate during the learning process.	
	G8	Easy to handle when technical difficulties occur.	
	G9	The system is not complicated and does not cause mental burden.	
	G10	It does not take long to learn and get used to the learning system.	
	G11	This program meets my learning needs and expectations.	
	G12	Satisfied with the learning experience during the learning program.	
	G13	Satisfied with the technical support services during the learning program.	
Benefit (BF)	BF1	Easy to understand.	
	BF2	Matches my learning needs and goals.	
	BF3	Relevant to the latest knowledge in the field (up-to-date).	
	BF4	Presented in an engaging and creative way.	
	BF5	Enhances independent learning.	
	BF6	Provides greater flexibility in learning.	
	BF7	Offers learning materials from a wider range of sources.	
	BF8	Enhances the learning experience through varied learning models.	
	BF9	Improves learning outcomes/scores (e.g., earning certificates upon course completion).	
	BF10	Learning videos are engaging.	
	BF11	Courses are designed in a structured manner.	
	BF12	There is a measurable assessment system.	
	BF13	Responsive learning support services are available.	
Barrier (BR)	BR1	The learning process is too relaxed, leading to a lack of discipline.	

TABLE 2. Questionnaire item for faculty member (lecturers)

Variable	Item Code	Measure	Source
General Perception (G)	G1	Lack of direct contact with students creates obstacles in building engagement, facilitating, discussions, and providing feedback	Sun et al. (2008) Dixson, (2010)
	G2	Students feel overwhelmed and struggle to prioritize their learning focus	
Benefit (BF)	BF1	Supporting students learning experience	
	BF2	Supporting students' academic development	
	BF3	Supporting lecturers in expanding their teaching methods	
	BF4	The course content is aligned with the intended learning outcomes	
	BF5	The learning materials are comprehensive (covering most of the contents from the regular college subject)	
	BF6	The learning materials are up-to-date	
	BF7	The material presented is understandable to students	
Barrier (BR)	BR1	Students' academic honest behavior during learning activities (including exams/assessments) is difficult to monitor	
	BR2	It is difficult to monitor students understanding and learning achievements	
	BR3	Not all materials for conventional learning outcomes (regular courses) are available	
	BR4	Learning material delivered in English, thus hindering students understanding	
	BR5	lack of connection between theoretical content and its application in projects, simulations, or real practice relevant the local context of Indonesia	
	BR6	Too much materials or learning resource variants are provided without clear curation	

All closed-ended items were measured on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), adapted from prior MOOC studies, and covered three key dimensions: general perceptions, benefits, and barriers. The open-ended questions invited participants to describe the most satisfying and least satisfying aspects of their MOOC experience.

Data Collection Technique

Data collection employed a mixed-methods approach, utilizing surveys and semi-structured interviews. The questionnaire was pilot-tested, reviewed for content validity by experts, and checked for reliability using Cronbach's alpha. Distribution was via WhatsApp groups and institutional networks. Semi-structured interviews with selected participants provided deeper insights. Confidentiality was ensured, and data were reported in aggregate form.

RESULTS AND DISCUSSION

This section presents the results of a questionnaire distributed to universities in Surakarta, focusing on their perspectives on the sustainability of digital learning platforms. The valid responses were obtained and processed using descriptive statistical analysis. The findings are visualized through pie charts showing the distribution of responses for each variable.

General Perception

Figure 1 presents the charts of students' and lecturers' general perceptions of MOOCs. Complete charts are available in the appendix.

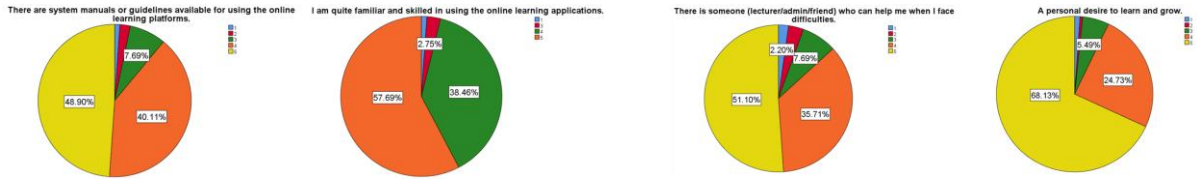

FIGURE 1. Distribution of students' responses for the general perception variable

A majority of participant (around 89-96%) agreed that the availability of system manuals and guidelines, as well as their own familiarity and skills in using online learning applications, supported their engagement. Most students (about 87%) also reported having access to support from lecturers, administrators, or peers when encountering difficulties. Motivation and personal growth were highlighted, with over 92% expressing a strong desire to learn, explore different learning experiences, and recognize their personal competence, such as earning course certificates.

Ease of use was another key finding, as more than 84% indicated that the platforms were easy to operate and that technical challenges were manageable. This finding is supported by Spencer & Temple (2021), who found that students perceived online instructional technologies as reliable, easy to use, and effective in meeting their learning needs. Similarly, about 89-91% of respondents perceived the system as uncomplicated, requiring minimal time to adapt, while also meeting their learning needs and expectations. Finally, satisfaction levels were high, with nearly 90% of students expressing contentment with both the learning experience and the technical support services provided. Overall, these results indicate strong readiness for online learning, characterized by high familiarity, motivation, and satisfaction with the platforms and their support mechanisms. The questionnaire results for lecturers indicate that their perceptions of MOOC implementation are quite varied, reflecting a combination of support for online learning innovation and concerns about its implementation effectiveness.

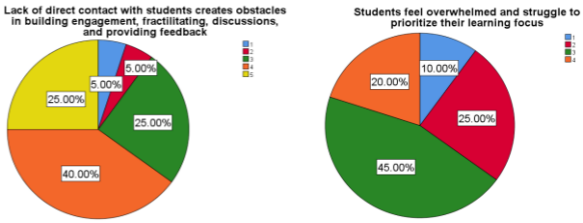

FIGURE 2. Distribution of faculty members' responses for the general perception variable

Figure 2 presents the distribution of faculty members' responses for the general perception variable regarding MOOCs. The findings show that a considerable proportion of respondents acknowledged the obstacles created by limited direct contact with students, which hinders engagement, discussions, and feedback. Similarly, many faculty members recognized that students often feel overwhelmed and struggle to prioritize their learning focus in online environments. This struggle is echoed in a study by Giasiranis & Sofos (2020), who noted that even with self-regulation skills, students often struggle with the 'Help-seeking' factor. This suggests that the lack of direct interaction is a significant barrier for learners and a key reason for the challenges observed by faculty. Overall, the responses highlight faculty awareness of key challenges in MOOCs, particularly related to reduced interaction and student difficulties in maintaining focus.

Benefit

The following are the results of the questionnaire regarding students' and lecturers' benefit variables toward MOOCs.

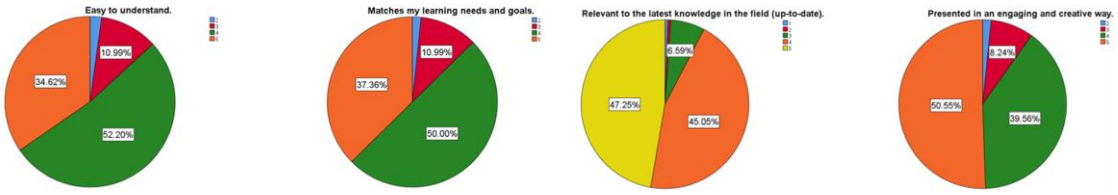

FIGURE 3. Distribution of students' responses for the benefit of digital learning

Figure 3 illustrates the distribution of students' responses for the benefit variable related to digital learning platforms. Complete charts are available in the appendix.

The majority of participants (around 87–95%) agreed that the course content is easy to understand, aligns with their learning needs, and remains relevant to the latest knowledge in the field. A similar proportion highlighted that the materials are presented in engaging and creative ways, foster independent learning, and provide greater flexibility through a wide range of sources.

Students also recognized the added value of varied learning models, improved learning outcomes such as certificates upon completion, and engaging video materials. Furthermore, over 92% indicated that the courses are designed in a structured manner, supported by measurable assessment systems, and complemented with responsive learning support services. Overall, these findings demonstrate that students highly appreciate the quality, relevance, and flexibility of digital learning platforms, which significantly enhance their learning experiences and outcomes. The high level of appreciation expressed by our participants for the course content, its relevance, and its structured design is supported by findings in similar studies. For example, Agawin & Gonzales (2024) reported that students perceive Coursera as effective and easy to use, with a key finding being that good quality content is a critical factor in user satisfaction and overall platform effectiveness.

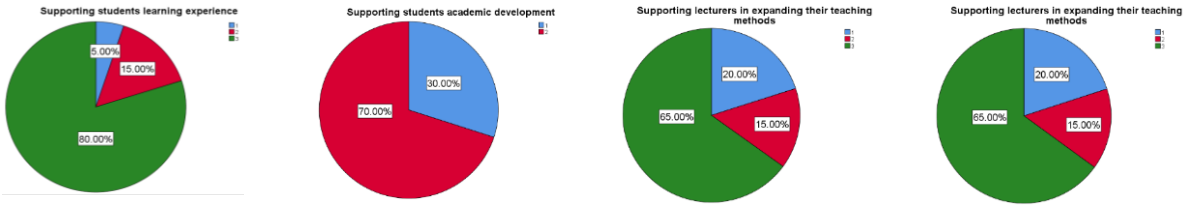

FIGURE 4. Distribution of faculty members' responses for the benefit variable

Figure 4 illustrates the distribution of lecturers' responses for the benefit variable related to digital learning platforms. Complete charts are available in the appendix.

From the benefit perspective, the majority of lecturers believe that MOOCs contribute positively to students' learning experiences and to the development of their own teaching methods. As shown in Figure 2B, a large proportion of respondents (around 80%) agreed that MOOCs enhance students' learning experiences, though fewer viewed them as strongly supporting academic development, with the majority expressing disagreement. At the same time, approximately two-thirds of lecturers acknowledged MOOCs as helpful in broadening teaching methods and fostering pedagogical development. This finding is consistent with a study by Herranen et al. (2021), which suggests that MOOCs can serve as relevant courses for teachers' professional development in various educational fields.

Faculty members also noted that the course content generally aligns with learning outcomes, although perceptions about the comprehensiveness of the materials were more mixed. A strong concern emerged regarding outdated content, with all respondents expressing some level of disagreement about its currency. Finally, while many lecturers found the materials to be understandable, a substantial share felt that there was still room for improvement in clarity. Overall, faculty members appreciate the innovative and experiential benefits of MOOCs, but remain cautious about their academic depth, comprehensiveness, and the need for up-to-date, clearly presented learning materials.

Barrier

The following are the results of the questionnaire regarding students' and lecturers' barrier variables toward MOOCs.

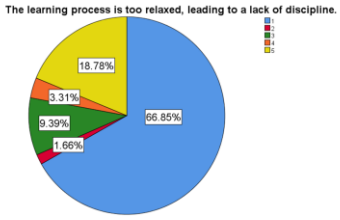

FIGURE 5. Distribution of students' responses for the benefit variable

Figure 5 presents the distribution of students' responses regarding barriers in using digital learning platforms. Only about 22% of participants agreed that the relaxed nature of online learning reduces discipline, indicating that this concern is shared by a minority. Overall, most students (66.85%) did not perceive the relaxed learning environment as a significant barrier to maintaining discipline. This perspective is particularly noteworthy as other studies, such as one by Bączek et al. (2021), highlight that self-learning requires students to maintain self-discipline, which can be difficult without direct supervision from the teacher.

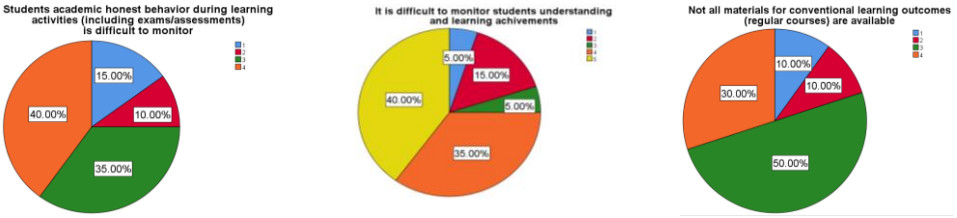

FIGURE 6. Distribution of faculty members' responses for the barrier variable

Figure 6 presents the distribution of faculty members' responses to the barrier regarding learning in MOOCs. Complete charts are available in the appendix. A majority of lecturers reported difficulties in monitoring students' academic honesty during learning activities and assessments (40%), as well as challenges in tracking students' understanding and achievements (85%). Around half of the respondents also noted that not all materials needed to support conventional learning outcomes are readily available. Concerns were further raised about the use of English as a medium of instruction, which some perceived as limiting students' comprehension.

Additionally, many faculty members highlighted the weak connection between theoretical content and its application in projects or real-world practices relevant to the Indonesian context. Finally, several respondents expressed that the abundance of materials and resource variants, when not clearly curated, may overwhelm and confuse students. These faculty concerns about assessment integrity and a lack of direct interaction mirror issues previously found in MOOCs from the student perspective (Nguyen, 2022).

Text Mining Result

In addition to the quantitative analysis, a text mining process was conducted on the open-ended responses to gain deeper qualitative insights. The analysis was performed using word cloud visualizations for four key questions which can be seen in Figure 7 (a), (b), (c), and (d).

The word cloud (Figure 7) reveals strong motivations, including a desire to learn, increase knowledge, and gain tangible benefits (e.g., certificates, new experiences). Keywords such as "learning," "study," and "program" dominate, indicating academic and professional aspirations, as well as the appeal of flexible online learning. The

importance of these motivations is echoed in other research, with Milligan & Littlejohn (2017) reporting that a large majority of participants are driven by a desire to learn for a variety of reasons, including a general interest in content, a desire to acquire new knowledge, or the need to improve their current or future professional skills.

(a) (b) (c) (d)

FIGURE 4. Word cloud of participants' responses on (a) motivations; (b) discipline; (c) completion; and (d) improvement suggestions

While flexibility was valued, participants also reported challenges in self-discipline and time management, as reflected in terms like lack of discipline, managing, and deadlines. This suggests a need for structured support, such as reminders and time management guidance.

Most participants indicated they successfully completed the courses (successful, completed), though some cited obstacles such as time constraints and workload. Expressions of satisfaction drawn from text mining reflect positive outcomes among completers. These personal challenges are recognized as potential barriers in other studies. For instance, Aldowah et al. (2020) identified course time and commitments as factors influencing learners' success, even though they were considered less important than other criteria, such as social presence and course design.

Feedback focused on enhancing content quality, better platform support (especially Coursera), and improving accessibility. While many comments were positive, constructive suggestions included providing more guidance, offering flexible schedules, and offering more relevant materials. This need for improved design is critical, as findings show that effective instructional design and quality instructional material are key to motivating learners and ensuring high completion rates (Giasiranis & Sofos, 2020)

CONCLUSION

The findings indicate that both students and lecturers in Surakarta generally hold positive perceptions of MOOCs. Students demonstrated relatively high readiness, motivation, and satisfaction toward digital learning platforms, valuing accessibility, flexibility, and the relevance of course content. Lecturers acknowledged MOOCs' potential to diversify instructional methods and enhance student engagement. Reported challenges though noted by a minority of respondents, included limited direct interaction, difficulties in monitoring learning progress and academic honesty, occasional outdated or insufficiently contextualized materials, and issues with learners' time management and discipline.

To address these challenges, universities should consider multifaceted interventions: (1) provide structured academic support such as mentoring systems, regular reminders, and time-management scaffolds for students; (2) invest in continuous updating and contextualization of MOOC materials to align with local curricula and student needs; (3) strengthen interactive features (for example, discussion facilitation, scheduled synchronous sessions, and collaborative projects) to improve instructor–learner engagement; and (4) enhance assessment integrity through appropriate digital-proctoring or authentic assessment strategies. These measures are likely to increase the effectiveness and credibility of MOOCs within Indonesian higher education.

Limitations. Several limitations qualify the interpretation and generalizability of these findings. First, the study sample was drawn from universities in Surakarta; therefore, results may not be fully generalizable to other regions of Indonesia or to institutions with substantially different profiles. Second, the cross-sectional and self-reported nature of the survey limits causal inference and is susceptible to response and social desirability biases. Third, the manuscript currently lacks full methodological detail in some areas that readers need to evaluate the instrument's rigor (for example, pilot sample size, Cronbach's alpha values, and response rates); reporting these details explicitly will strengthen transparency and reproducibility. Fourth, qualitative insights were generated in part using AI-assisted

text analysis, an efficient approach that nonetheless requires explicit reporting of the tool, prompts, and validation steps. If human cross-validation (e.g., independent coder review or researcher triangulation) was not conducted, this should be acknowledged as a methodological limitation. Finally, the primary analyses relied on descriptive statistics; incorporating inferential tests (e.g., t-tests, chi-square tests, or regression models) in future revisions would allow for the examination of statistically significant differences across groups (e.g., students vs. faculty, public vs. private institutions).

Future research. Future studies should (1) expand the geographic and institutional scope to improve generalizability; (2) adopt longitudinal designs to examine how sustained MOOC exposure affects academic development and employability; (3) employ more rigorous mixed-methods procedures for qualitative coding and report AI-assisted workflows transparently; and (4) test the effectiveness of specific interventions (mentoring, interactive modalities, integrity tools) using experimental or quasi-experimental designs. Comparative analyses between MOOCs, blended learning, and fully in-person modalities would also clarify which approaches best enhance learning outcomes in the Indonesian context.

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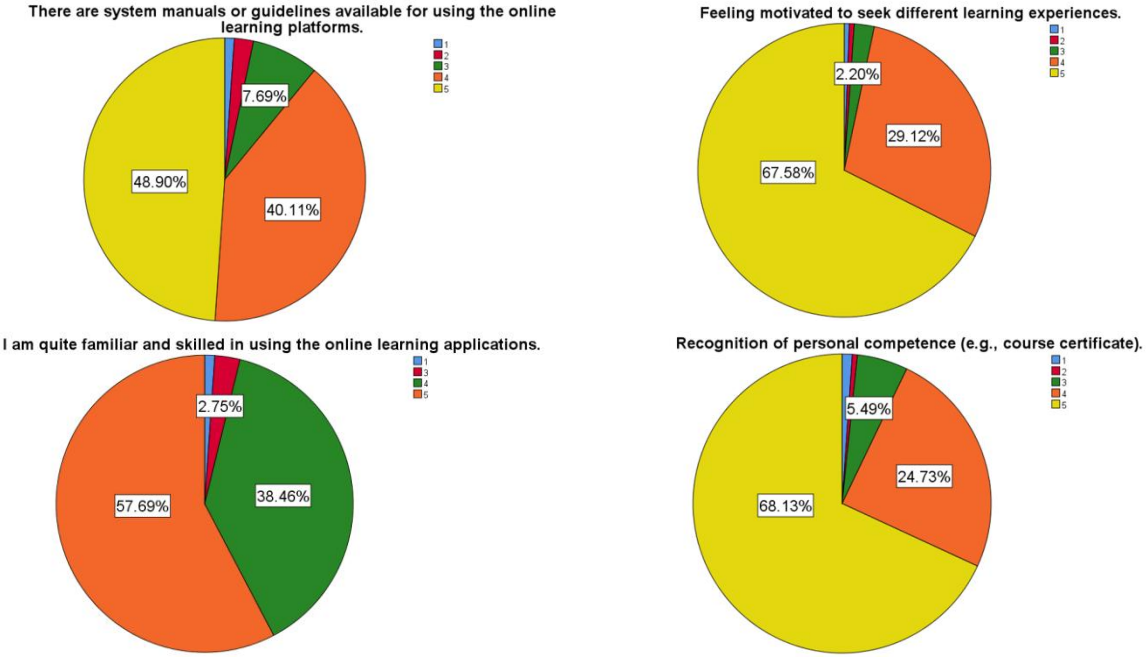
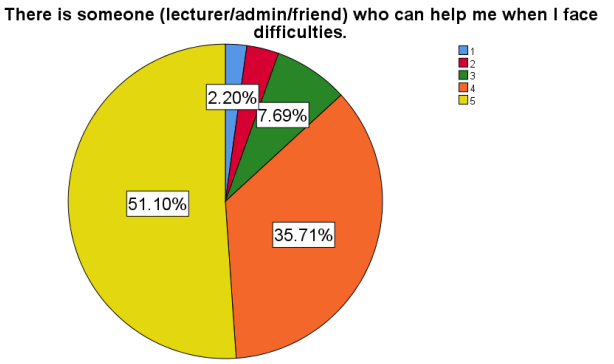
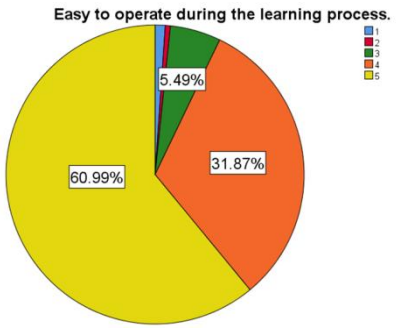
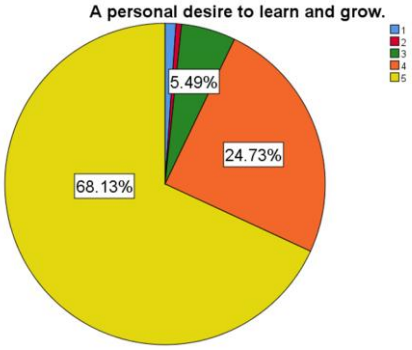
APPENDIX

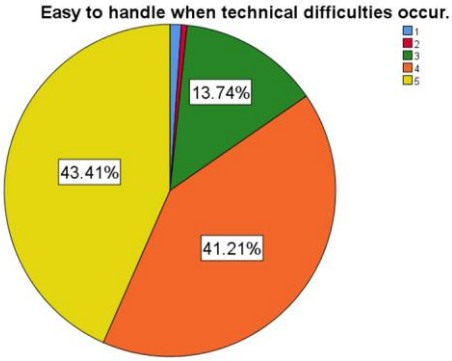
General Perception

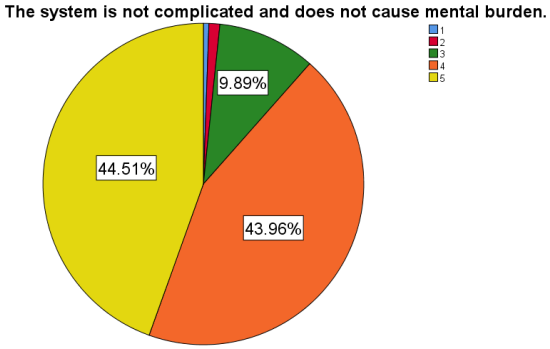


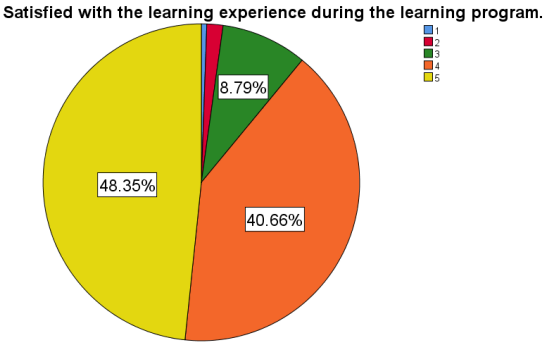

There is someone (lecturer/admin/friend) who can help me when I face difficulties.
2.20%
7.69%
51.10%
35.71%

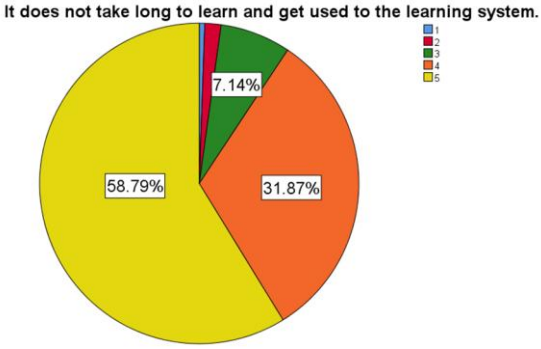

Easy to operate during the learning process.
5.49%
31.87%
60.99%

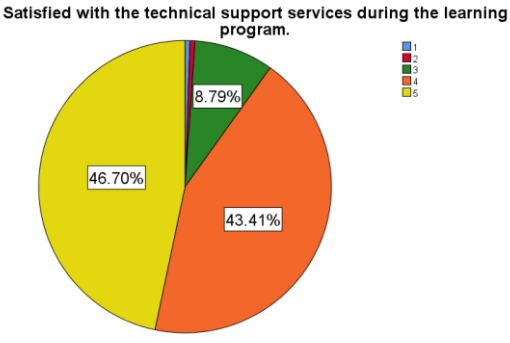

A personal desire to learn and grow.
5.49%
24.73%
68.13%

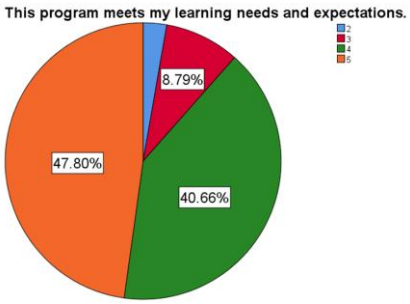

Easy to handle when technical difficulties occur.
13.74%
43.41%
41.21%


The system is not complicated and does not cause mental burden.
9.89%
44.51%
43.96%

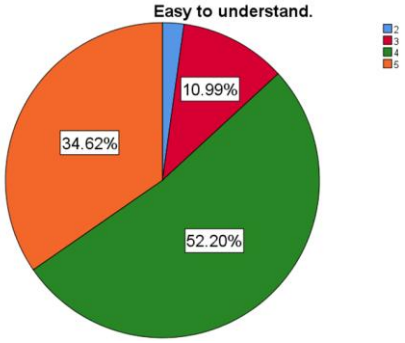

Satisfied with the learning experience during the learning program.
8.79%
48.35%
40.66%

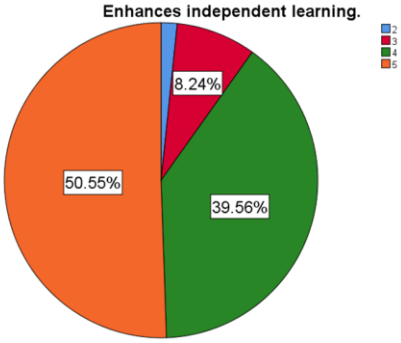

It does not take long to learn and get used to the learning system.
7.14%
58.79%
31.87%

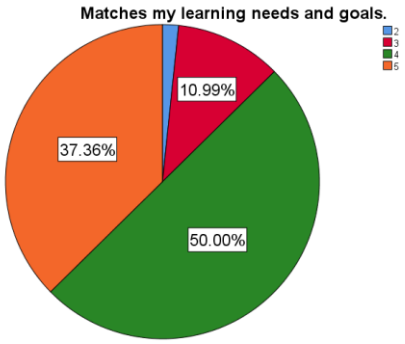

Satisfied with the technical support services during the learning program.
8.79%
46.70%
43.41%

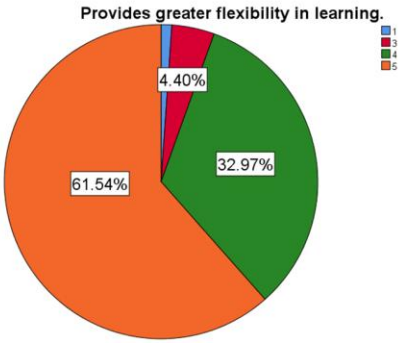

This program meets my learning needs and expectations.
8.79%
47.80%
40.66%

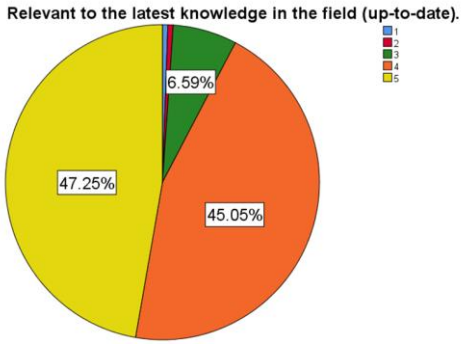
Benefit

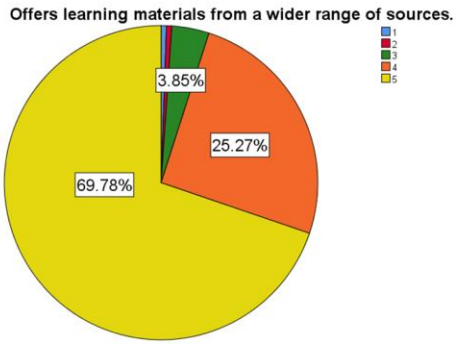

Easy to understand.
10.99%
34.62%
52.20%

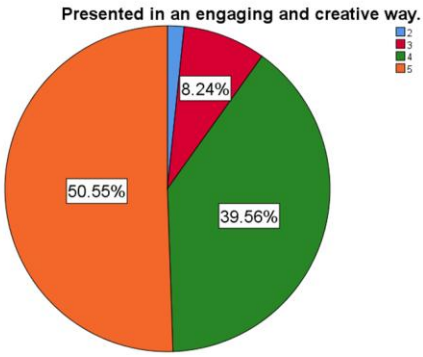

Enhances independent learning.
8.24%
50.55%
39.56%

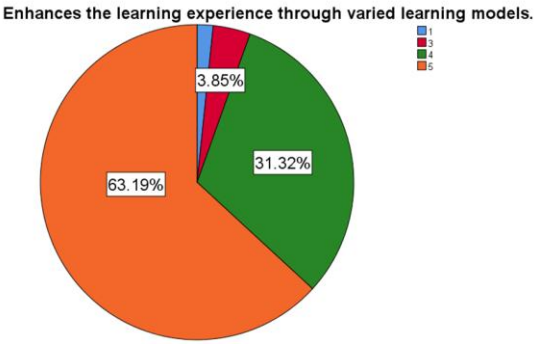

Matches my learning needs and goals.
10.99%
37.36%
50.00%

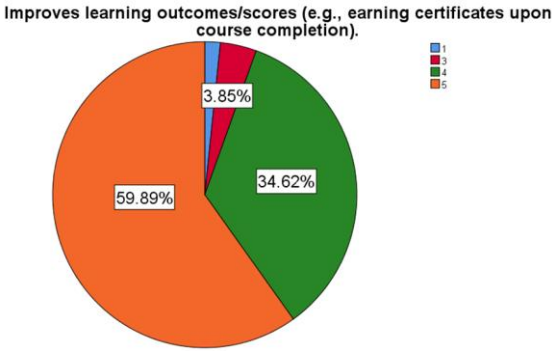

Provides greater flexibility in learning.
4.40%
32.97%
61.54%

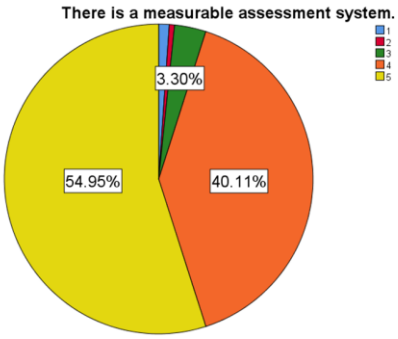

Relevant to the latest knowledge in the field (up-to-date).
6.59%
47.25%
45.05%

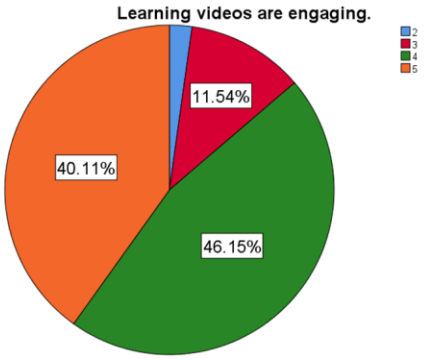

Offers learning materials from a wider range of sources.
3.85%
25.27%
69.78%

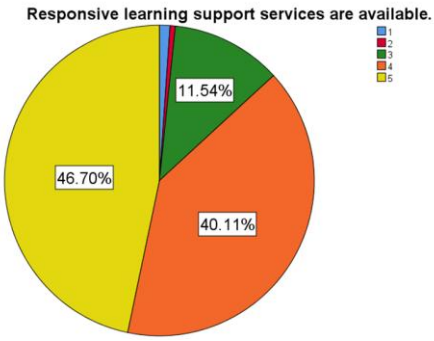

Presented in an engaging and creative way.
8.24%
50.55%
39.56%

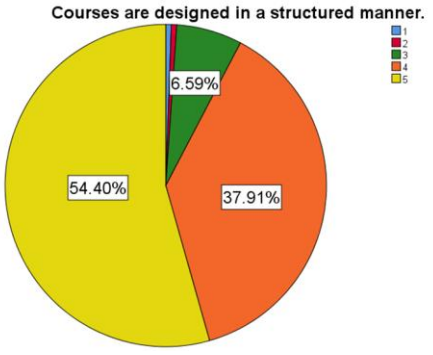

Enhances the learning experience through varied learning models.
3.85%
63.19%
31.32%

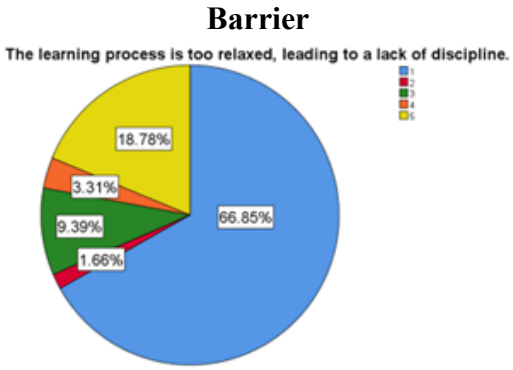

Improves learning outcomes/scores (e.g., earning certificates upon course completion).
3.85%
59.89%
34.62%


There is a measurable assessment system.
3.30%
54.95%
40.11%


Learning videos are engaging.
11.54%
40.11%
46.15%


Responsive learning support services are available.
11.54%
46.70%
40.11%


Courses are designed in a structured manner.
6.59%
54.40%
37.91%


Barrier
The learning process is too relaxed, leading to a lack of discipline.
1
2
3
4
5
18.78%
3.31%
9.39%
1.66%
66.85%