



FROM OPPORTUNITY TO OBSTACLE: LEARNERS' EXPERIENCES ON THE USE OF CAMPUS MANAGEMENT SYSTEM

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Abstract

This is technological era which demands education sector for digitization of its systems and support services to distance learners. Among diverse technology embeded systems, significant one is Campus Management System (CMS). Due to prevailing importance of CMS, we conducted this study to explore the distance learners' experiences with Campus Management System (CMS) of Allama Iqbal Open University. Under this, we identified the experiences of learners regarding benefits and challenges of CMS. Researchers selected 50% M.Phil. and Ph.D. students of AIOU as sample through proportionate stratified random sampling technique. Researchers developed an extensive tool to collect data which was validated and pilot tested to estimate its utility through psychometric properties which indicated CVI=.94 and alpha reliability coefficient was .87*. Major findings of the study revealed that learners were satisfied with CMS interfacde lay out but they encountered some difficulties while using it. The findings indicates that admission process is now easy for learners in form of applying for admission and submitting applications. There were significant complexities associated with the implementation and operation of the CMS, e.g.communication barriers, and technical limitations for learners. This paper suggested some improvements regarding communication and ademic affairs within campus management system, particularly focusing on enhancing user experience.*

Keywords: Oppurtunities, Obstacle, Campus Management System (CMS), Allama Iqbal Open University (AIOU), Open and Distance Learning (ODL)

Introduction

The integration of technology in the education system of higher learning has brought a tremendous change in the management and dispensation of academic services particularly in institutes of open and distance learning (ODL). A Campus Management System (CMS) is one of the most influential innovations in this respect because it is a digital platform allowing automating, simplifying, and centralizing numerous processes within the university, among which are students admissions, course registration, fee payment, assignment of tutors, and monitoring of their academic progress (Abu-Dawood, Al-Harbi, & Ameen, 2020). In distance education, the CMS platforms are especially useful because they offer a systematic and convenient line of delivery to geographically dispersed learners who may lack capacity to access many services on campus (Asif, 2024; Asif, 2019; Zhang & Cheng, 2021).

In Allama Iqbal Open University (AIOU) which is largest and oldest distance learning institution in Pakistan CMS was implemented to modernize educational activities and to enhance efficiency in administrative aspects. What the CMS set out to do, through the digitalization of manual processes, was to increase transparency, make the operation less bureaucratic, and give students greater freedom in directing their educational experience (Ali & Ahmad, 2022; Asif et al., 2023; Mumtaz et al., 2023; Pasha et al., 2019).



CMS was initially believed to be a positive solution to the university, considered as a potential technological innovation that will fix a number of problems that the school has had for years.

Nevertheless, even along with its positive aspects, the practical application of CMS has demonstrated a variety of challenges to the learners. They have a complicated user interface, slow academic record updating, low levels of digital literacy among the users (particularly, rural students), and an absence of adequate support mechanisms (Khan et al., 2019; Rehman et al., 2021). The most common complaints received by many learners were related to chaos as they move around the system, some technical problems that impeded academic progress. Such experiences indicate that though CMS was developed bearing in mind they would create room to provide access to education and the ability of managing oneself, it has come to present some challenges that impact on student satisfaction and engagement.

Review of the Literature

Campus Management Systems (CMS), or, in other words, Student Information Systems (SIS), can significantly contribute to administrative automation and learner autonomy along with transparency within institutions of higher education, particularly, in the framework of distance learning (Asif & Sandhu, 2023; Santos et al., 2018; Usama et al., 2022).

Benefits of Campus Management System

Easy services like online admissions, course registration, and payment of fees and retrieval of results go a long way towards the empowerment of the learners. This productivity limits the need of physical campuses and bureaucracies (Al-Busaidi, 2012; Asif, 2021; Asif et al., 2022). Indeed, the study revealed that the satisfaction and willingness to continue using the system were correlated with usability, system quality, and service quality significantly.

A real-time reminder and an automated notification system, exam schedules, and registration deadlines, encourage engagement and decrease dropouts (Holmes & Prieto-Rodríguez, 2018). Through such notifications, learners will take control of the activities associated with attaining academic goals beforehand (Attiq-ul-Rehman & Shahzadi, 2025; Asif & Shaheen, 2022; Aurangzeb et al., 2021). With CMS, one can have access to the course contents 24/7, academic schedules, and grading percentages and grades 24/7, which allows working based on a self-paced approach and enhances autonomy. Students who utilized platforms such as Moodle have mentioned being more convenient, and flexible in terms of access.

Obstacles of Campus Management System

Remote learners are affected negatively by technical constraints like poor internet connection and shortage of hardware (Attiq-ul-Rehman & Shahzadi, 2025). According to Aslam and Nadeem (2020), the students of rural Pakistan do not usually have access to reliable internet connection, which can be a hindrance to the adoption of the system. A user-unfriendly interface with a time consuming or unintuitive appeal may diminish use. According to Farooq and Umer (2021), the minimal ICT skills among students make them unable to navigate through CMS features; hence, slowing the rates of adoption and general satisfaction with CMS adoption. A lot of systems drop the built-in GPA calculators or custom dashboards, and learners have to rely on external programs to monitor their academic progress (Holmes 2018).

The issues that learners can experience when they raise support requests include wrong personal data, log in issues, or delays. Qureshi and Imran (2022) reaffirmed: A slow resolving process spoils the trust and the user satisfaction. This paper thus attempts to delve into the fact that CMS is both an opportunity as well as problem in the academic life of the AIOU learners. Looking through the perspective of the learner perceptions, the research brought out the effectiveness of the system, its usability, and the weakness.

Statement of the problem

The proper management of academics plays a key role in running any higher education institution, mainly in open and distance learning such as at Allama Iqbal Open University (AIOU). With the technological advancements, commencement of efficient and cost effective student support services is adapted by AIOU in 2021 under Digital Transformation Policy. Such example is Campus Management System (CMS) developed by Ora-Tech systems. Due to its huge outreach across country and across borders, mass users are using CMS. Since its use no such study has conducted in the context of CMS to examine its unique operational requirements and potential obstacles which may hinder or improve user experiences with CMS. The research



was aimed to know potential worth of CMS from the perspective of potential users and indicate the areas which need improvement.

Objectives of the Study

Identify the learners' experiences on the use of Campus Management System in Allama Iqbal Open University in terms of its benefits

Explore the learners' experiences on the use of Campus Management System in Allama Iqbal Open University in terms of its obstacles

Delimitation of the Study

This study was delimited to MS/M.Phil. and Ph.D. scholars of AIOU who were enrolled in the spring semester of 2022.

Methodology

Research Design

This study employed a quantitative research design. Data were collected using a structured questionnaire distributed to MS/M.Phil. and Ph.D. scholars at Allama Iqbal Open University (AIOU).

Population of the study

The study population consisted of all MS/M.Phil. (242) and Ph.D. (57) scholars enrolled across all faculties and departments of AIOU for the Spring 2022 semester. The population data were obtained from the university's Admission Department to ensure accuracy.

Sample and Sampling Technique

A sample representing 50% of the scholars from each department was selected using a proportionate stratified random sampling technique. This ensured proportional representation from both MS/M.Phil. and Ph.D. programs across all departments.

Research Instrument

A structured questionnaire using a 5-point Likert scale was developed. The scale ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). For positive statements, a higher score indicated a more favourable response, while this scoring was reversed for negative statements.

The questionnaire comprised two sections:

- Section A collected demographic information, including age, gender, geographical area, level of education, and work experience.
- Section B contained eight subscales aligned with the study's objectives, totalling 35 items.

Table 1

Description of subscales and items

Objectives	Research question No	Subscales	No. of items
Identify the learners' experiences on the use of Campus Management System in Allama Iqbal Open University in terms of its benefits	RQ1: What were the perception of learners regarding instructional guidance provided to use CMS to enhance their user experience?	Guidance on CMS for new admission	05
		Guidance on CMS for courses	02
		Guidance on CMS for exams	03
	RQ2: How do learners perceive the potential benefits of technological advancements in the CMS?	Technical advancements benefits	04
Explore the learners' experiences on the use of Campus Management System in Allama Iqbal Open	RQ1: What were the specific challenges faced by the learners in adapting to the current CMS interface and technical aspects?	Clarity and helpfulness in academics	03
		Current CMS interface challenges	07
		Technical challenges of CMS	06



Objectives	Research question No	Subscales	No. of items
University in terms of its obstacles	RQ2: How did learners perceive the impact of challenges such difficulties in the admission process?	Challenges in admission process	05

The potential total score on the questionnaire ranged from 35 to 175. The instrument was administered to respondents electronically via email and WhatsApp.

Validity and Reliability of the Questionnaire

The questionnaire's validity was established through review by a panel of 11 experts in the field of education. Based on their recommendations, two items that were semantically redundant ("I can easily edit my application" and "The online help is useful") were removed. The final instrument achieved a Content Validity Index (CVI) of 0.94, indicating strong content validity.

A pilot study was conducted with 50 students who were not part of the main sample. The data from the pilot were analysed, resulting in a Cronbach's Alpha reliability coefficient of 0.87, demonstrating high internal consistency for the instrument.

Results and Discussion

Results on objective 1:

Identify the learners' experiences on the use of Campus Management System in Allama Iqbal Open University in terms of its benefits

Research question 1: subscale 1 (guidance on CMS for new admission): What are the experiences of learners regarding guidance provided to use CMS to enhance their user experience? The data was collected, and description is given below:

Table 2

Description of subscale 1(guidance on CMS for new admission)

Sr. No	Items	Mean	SD	Range		t-value	p-value
				Min	Max		
1.	Clear admission instructions	4.03	.81	3.90	4.17	15.118	.000
2.	No difficulty in uploading application	3.83	1.04	3.65	4.00	9.382	.000
3.	Ease of editing application	3.46	1.05	3.28	3.64	5.167	.000
4.	Time saving	4.08	1.02	3.91	4.25	12.500	.000
5.	Quick intimation system (SMS/email)	3.87	.96	3.71	4.03	10.702	.000

The table shows the results of Subscale 1, which is about experiences of learners regarding guidance on CMS for new admissions. The cut point was 3 which indicated a neutral benchmark. In this regard, item 1 (clear admission instructions) indicated that majority of respondents (mean value 4.03, SD .81, t-value 15.11) reflect that respondents receive clear information regarding admission process by AIU. P-value .000 also indicates that their responses are statistically significant. The results regarding item 2 (no difficulty in uploading application) indicated that majority of the respondents (mean value 3.83, SD 1.04, t-value 9.38) reflect that respondent faced no difficulty in uploading admission application) on CMS. The results regarding item 3 (ease of editing application) indicated that majority of the respondents (mean value 3.46, SD 1.05, t-value 5.16) reflect that respondents can easily edit application on CMS. P-value .000 also indicates that their responses are statistically significant. The results of item 3 (Timesaving) with (mean = 4.08, SD = 1.02), with a t-value 12.5 suggested that learners found the CMS efficient in streamlining the admission process, saving time. The results on item 5 (quick intimation system (SMS/email) with a score (mean = 3.87, SD = 0.96) also highlights learners' appreciation for timely notifications. The t-value 10.70 also indicated that their responses are statistically significant.

Results on research question1: subscale 2 (guidance on CMS for courses)

Following tables represents the descriptive statistical analysis on objective 1 (Research Question 1) subscale 2 (guidance on CMS for courses)



Table 3

Description of subscale 2 (guidance on CMS for courses)

Sr. No.	Items	Mean	S.D	Range		t-value	p-value
				Min	Max		
1	Quick selection of courses	3.91	.86	3.76	4.05	12.373	.000
2	Visible courses	4.07	.81	3.94	4.21	15.638	.000

The table shows the results of Subscale 2, which is about experiences of learners regarding guidance on CMS for courses. The cut point was 3 which indicated a neutral benchmark. In this regard, item 1 (quick selection of courses) indicated that majority of respondents (mean value 3.91, SD .86, t-value 12.37) reflect that respondents receive received favorable feedback, implying that the CMS streamlines the course selection process, saving time and reducing complexity for learners. P-value .000 also indicates that their responses are statistically significant. The item (visible courses) with a score (mean score 4.07, SD 0.81), indicates that learners found it easy to access their semester wise courses within the system. The table shows a positive response with the overall mean score (3.99) of subscale (guidance on CMS for courses) that learners highly value the system support for course related process. It indicates that the CMS provide clear and well-organized course displays, contributing to a smoother academic experience. Overall, the results indicate that the online course selection system (CMS) is highly effective in meeting students' needs. Its responsiveness and clear display of course information contribute to a positive student experience.

Results on research question 1: subscale 3 (guidance on CMS for exams)

Following tables represents the descriptive statistical analysis on objective 1 (Research question 1) subscale 3 (guidance on CMS for exams):

Table 4

Description of subscale 3((guidance on CMS for exams)

Sr. No.	Items	Mean	SD	Range		t-value	p-value
				Min	Max		
1	Exam center details	4.08	.84	3.94	4.23	15.024	.000
2	Downloading of roll number slip	4.09	.83	3.95	4.23	15.537	.000
3	Exam center changing request	3.18	.98	3.01	3.34	2.16	.032

The table shows the results of Subscale 3, which is about experiences of learners regarding guidance on CMS for exams. In this regard, item 1 (exams center details) indicated that majority of respondents (mean value 3.94, SD .84, t-value 15.024) reflect those respondents found this feature effective. These high scores reveals that the CMS provides clear, accessible, and reliable information for the critical aspects of the exam center details. p-value .000 also indicates that their responses are statistically significant.

The results regarding items 2 (downloading of roll number slip) with (mean value 4.09, SD 0.83, t-value 15.537) show that learners are satisfied with this feature. The results regarding item 3 (exam center changing request) with the score (mean value 3.18, SD = 0.98, t-value 2.16) indicating that participants are moderately satisfied with the exam centre change request feature.

Results on objective 1 (Research question 2): How do learners experience the potential benefits of technological advancements in the CMS? Subscale 4 (Technological advancement benefits)

The description of data is given below.

Table 5

Description of subscale 4 (technological advancement benefits)

Sr. No.	Items	Mean	SD	Range		t-value	p-value
				Min	Max		
1	Quickly to my actions.	3.58	.94	3.42	3.78	7.228	.000
2	User friendly mobile version	3.92	.72	3.89	4.09	15.106	.000
3	Clearly labelled buttons and labels	3.73	.85	3.58	3.87	10.110	.000
4	Easy to create new service request	3.42	1.03	3.25	3.60	4.869	.000



This table 5 presents the results of Subscale 4 (technological advancement benefits of the CMS). Overall mean score of subscales was 3.66. The results show that learners generally experienced the advancements positively, with all items scoring above the scale mean of 3. The result related to the item 1 (Quick response to my actions) with the scores (mean value 3.58, SD 0.94, t-value 7.228) show satisfaction. The highest-rated item, "user-friendly mobile version" (mean value 3.92, SD 0.72, t-value 15.106), indicates that learners found the mobile version of the CMS convenient and accessible. It effectively supports their academic needs on the go. Similarly, item 3 (clearly labeled buttons and labels) with the score (mean value 3.73, SD 0.85) received favorable feedback, reflecting the system's ease of navigation and design clarity.

The lowest-rated item, "Easy to create new service requests" (mean 3.42, SD 1.03), indicates that learners experience some challenges in initiating service requests, possibly due to complex steps or unclear processes. Overall, the data suggests that learners appreciate the user-friendly and accessible features of the CMS, particularly its mobile functionality and clear navigation, but there are opportunities to enhance responsiveness and simplify service request procedures to further improve user experience.

Results on objective 1(research question 3): What are the experiences of learners about their academic progress and convenience while using CMS? Subscale 5 (Clarity and help in academics)

The data was collected and describe in the table given below.

Table 6

Description of subscale 5 (Clarity and help in academics)

Sr. No.	Items	Mean	SD	Range		t-value	p-value
				Min	Max		
1.	Clear instructions about academic tasks	3.85	.83	3.71	3.99	12.056	.000
2.	Informative online help resources.	3.78	.87	3.63	3.93	10.478	.000
3.	Responsive customer support	3.45	.99	3.28	3.61	5.294	.000

Table 6 describes the results of Subscale 5 (clarity and help in academics through CMS). The overall mean score of this subscale was 3.69. It shows a generally positive experience among learners, as all items scored above the cut point of 3. The highest-rated item1 (clear instructions about academic tasks) with (mean score 3.85, SD 0.83, t-value12.056), indicates that learners found the CMS effective in providing clear and detailed guidance for their academic responsibilities, contributing to better task management and reduced confusion. Similarly, item 2 (informative online help resources) (mean value 3.78, SD 0.87, t-value 10.478) received favorable feedback, suggesting that learners value the availability of support materials to assist with academic challenges.

The item "Responsive customer support" with the score (mean value 3.45, SD 0.99, t-value 5.294) indicates a moderate level of satisfaction but still is higher than the cut point 3. This suggests that while the CMS provides some level of support, there may be delays or inconsistencies in addressing user queries, leading to potential frustration. Overall, the data reflect that learners perceive the CMS as a helpful tool for academic clarity and support, particularly through clear instructions and resource availability.

Table 7

Description of overall perception regarding prospects of CMS.

Sr. No	Subscales	Faculties	N	Mean	SD	Range	
						Min	Max
1	Guidance on CMS interface	Faculty of Arabic and Islamic Studies	19	3.65	.66	3.33	3.97
		Faculty of Education	43	3.81	.76	3.58	4.05
		Faculty of Science	36	4.06	.64	3.84	4.27
		Faculty of Social Sciences & Humanities	40	3.82	.66	3.60	4.03
		Total	138	3.85	.69	3.74	3.97
2	Guidance on CMS courses	Faculty of Arabic and Islamic Studies	19	3.92	.50	3.67	4.16
		Faculty of Education	43	3.90	.84	3.64	4.16
		Faculty of Science	36	4.20	.68	3.97	4.43



		Faculty of Social Sciences & Humanities	40	3.93	.71	3.70	4.16
	Total		138	3.99	.73	3.87	4.11
3	Guidance on	Faculty of Arabic and Islamic Studies	19	3.73	.60	3.44	4.02
	CMS for	Faculty of Education	43	3.66	.77	3.37	3.96
	exams	Faculty of Science	36	3.94	.69	3.71	4.17
		Faculty of Social Sciences & Humanities	40	3.76	.70	3.57	3.95
	Total		138	3.78	.70	3.66	3.90
4.	Technological	Faculty of Arabic and Islamic Studies	19	3.61	.58	3.33	3.90
	advancement	Faculty of Education	43	3.56	.78	3.32	3.81
	benefits	Faculty of Science	36	3.84	.59	3.64	4.04
		Faculty of Social Sciences & Humanities	40	3.63	.55	3.45	3.80
	Total		138	3.66	.65	3.55	3.77
5	Clarity and	Faculty of Arabic and Islamic Studies	19	3.52	.77	3.15	3.89
	academic	Faculty of Education	43	3.62	.76	3.38	3.85
	help	Faculty of Science	36	3.88	.74	3.63	4.14
		Faculty of Social Sciences & Humanities	40	3.68	.66	3.46	3.89
	Total		138	3.69	.73	3.57	3.81

This table shows learners' opinions about the Campus Management System (CMS) at Allama Iqbal Open University (AIOU), grouped into five subscales. In general, the subscale scores point to learners having mostly positive thoughts and "Guidance on CMS courses" got the highest score ($M = 3.99$, $SD = 0.73$), indicating that they felt prepared for using CMS in their courses. Learners next gave similar, but somewhat less positive ratings for "Guidance on CMS interface" ($M = 3.85$, $SD = 0.69$) and "Guidance on CMS for exams" ($M = 3.78$, $SD = 0.70$). The scores for the subscales "Technological advancement benefits" (3.66, SD 0.65) and "Clarity and academic help" (3.69, SD 0.73) show that learners think these aspects could be improved. Several reflective questions indicated that students from the Faculty of Science perceived CMS positively and more than any other group on average. All in all, the table shows that learners typically have positive experiences with the CMS, however improvements are needed, especially in technology and assistance with academic tasks.

Table 8

ANOVA Statistics for overall description of learners of all faculties towards the prospects of CMS

Subscales		Sum of Squares	df	Mean Square	F	Sig.
Guidance on CMS for new interface	Between Groups	2.41	3	.804	1.66	.177
	Within Groups	64.58	134	.482		
	Total	66.99	137			
Guidance on CMS for new course	Between Groups	2.20	3	.736	1.38	.249
	Within Groups	71.04	134	.530		
	Total	73.24	137			
Guidance on CMS for exams	Between Groups	1.28	3	.427	.861	.463
	Within Groups	66.43	134	.496		
	Total	67.71	137			
Technological advancements benefits	Between Groups	1.67	3	.557	1.31	.271
	Within Groups	56.62	134	.423		
	Total	58.29	137			
Clarity and helpfulness in academics	Between Groups	2.15	3	.718	1.32	.267
	Within Groups	72.18	134	.539		
	Total	74.32	137			



This table demonstrates from one-way ANOVA tests to show if there are statistically important differences among learners from various Allama Iqbal Open University (AIOU) faculties regarding their views on the Campus Management System (CMS) across five subscales. The results for the five subscales (Guidance on CMS for new interface, Guidance on CMS for new course, Guidance on CMS for exams, Technological advancements benefits and Clarity and helpfulness in academics) show that none of these reached the level of significant difference ($p > .05$ for all). According to the results, students from every faculty see no important differences in these aspects of the CMS. Therefore, students from multiple fields usually see the CMS opportunities in a similar way.

Results on objective 2: Explore the learners' experiences on the use of Campus Management System in Allama Iqbal Open University in terms of its obstacles

Research question1: What were the specific challenges faced by the learners in adapting to the current CMS interface and technical aspects? Subscale 6 (current CMS interface)

Table 9

Description of subscale 6 (current CMS interface Challenges)

Sr. No.	Items	Mean	SD	Range		t-value	p-value
				min	Max		
1.	Interface functioning without glitches.	3.58	.91	3.42	3.73	7.413	.000
2.	Time taking	3.15	.96	2.98	3.31	1.851	.006
3.	lose important info due to system inefficiency	2.70	1.0	2.53	2.89	-3.187	.000
4.	Tricky interface	2.65	1.0	2.43	2.79	-4.274	.002
5.	Difficult to concentrate	2.65	1.10	2.48	2.83	-4.082	.000
6.	Interface frequently stuck.	2.75	1.0	2.58	2.92	-2.867	.005
7.	Accurate and up to date data	3.57	.96	3.41	3.73	7.019	.000

The results for Subscale 6 (current CMS interface challenges) show mixed experience of the system's usability, with certain items scoring above the overall mean score of subscale and others falling below the scale mean. The results on item1 (interface functioning without glitches) with the (mean value 3.58, SD 0.91, t-value 7.413) revealed that users are highly satisfied with the functioning of CMS interface. The p-value .000 show statistical significance. Item 2 (time taking) with the (mean value 3.15, SD 0.96, t-value 1.851) indicate that users found the system less efficient, though it was slightly above the cut point. The overall mean score of subscales 6 was 3.00. Item 3 (losing important information due to system inefficiency) with the (mean value 2.70, SD 1.00, t-value -3.187) reflect a lack of trust in the system's ability to safeguard data. Furthermore, several items fell below the neutral cut point of 3, highlight critical challenges. The lowest-scoring items, (Tricky interface) with the (mean value 2.65, SD 1.00), and the results regarding item 5 (Difficult to concentrate) with the scores (mean value 2.65, SD 1.10), and item 6 (Interface frequently stuck) with the scores (mean value 2.75, SD 1.00), indicated significant dissatisfaction.

The results regarding item 7 (accurate and up-to-date data) with the scores (mean value 3.57, SD 0.96, t-value 7.019), indicates highly satisfaction among learners. Overall, it is found that sometimes interface go stuck, and learners lost important information due to inefficiency of system.

Results on research question 1, subscale 7 (technical challenges of CMS)

Table 10

Description of subscale 7 (technical challenges of CMS)

Sr. No.	Items	Mean	SD	Range		t-value	p-value
				Min	Max		
1	Rare experience technical problems	3.34	.98	3.18	3.51	4.14	.000
2	Need help from others while using CMS interface	2.75	1.17	2.54	2.94	-2.54	.012
3	High internet connectivity demand.	3.38	1.02	3.20	3.54	4.31	.000
4	Difficult to execute menu	3.06	1.04	2.88	3.23	0.65	.516
5	Technical problems of CMS make me nervous.	2.96	1.06	2.77	3.13	-4.79	.633
6	The system performs badly during peak usage.	3.30	1.02	3.13	3.47	3.49	.001



With the overall scale mean 3.13. Several items indicate challenges, while others highlight significant technical difficulties. The item 1 (rare experience technical problems) with the score (mean value 3.34, SD .98, t-value 4.14) indicate that learners are facing challenges and having technical problems. The high standard deviation value regarding items 2 (need help from others while using CMS) with the score (mean value 2.75, SD 1.17, t-value -2.54) indicates that some users need help from others while using CMS. Few of the learners need no help.

Item 3 (high internet connectivity demand) scored the highest (mean value 3.38, SD 1.02, t-value 4.31), suggest that users frequently encounter connectivity issues, which impede their ability to use the system smoothly. The item (difficult to execute menu) with the score (mean value 3.06, SD 1.04, t-value 0.65) indicates that the learners don't face any difficulty to execute the menu. However, the high standard deviation value indicates that a few learners may have difficulty to execute menu. On the other hand, item 5 (technical problems of CMS make me nervous) scored (mean value 2.96, SD 1.06, t-value -4.79) indicates that majority of users feel free to use CMS while a few got nervous while using CMS.

Item 6 (the system performs badly during peak usage) scored (mean value 3.30, SD 1.02, t-value 3.49) indicated that user face challenges because system performs badly during peak hours which create hurdles to complete different tasks. Overall, it is concluded that the users are facing technical challenges.

Results on objective 2 (RQ2) subscale 8 (challenges in admission process)

Research question 2: How did learners experience the impact of challenges such difficulties in the admission process?

Table 11

Description of subscale 8 (challenges in admission process)

Sr. No.	Items	Mean	SD	Range		t-value	p-value
				Min	Max		
1.	Delay in processing admission application form	2.8	1.1	2.61	2.98	-2.15	.033
2.	Taking help for filling and uploading admission form	2.7	1.12	2.51	2.90	-2.93	.004
3.	CMS technical issues prevent in time messages regarding continuing semester details.	3.1	1.0	2.92	3.27	1.16	.248
4.	CMS technical issues prevent in time fee deposit.	3.1	1.1	2.89	3.26	0.85	.397
5.	CMS technical issues hinder in time access of tutors' details.	2.97	1.1	2.79	3.16	-.23	.815

Table 11 shows the results for Subscale 8, (challenges in the admission process). The overall mean score of subscales was 2.93. Item 1 (delay in processing admission application form) scored (mean value 2.8, SD 1.1, t-value -2.15, p-value .033) indicates that majority of the respondents disagree in delay in processing admission application form. Item 2(taking help for filling and uploading admission form) scored (mean 2.7, SD 1.12, t-value -2.93, p-value .004), indicated that most of the learners need no help for filling and uploading admission form. Item 3 (CMS technical issues prevent in-time messages) scored (mean value 3.1, SD 1.0, t-value 1.16, p-value .248) indicate that most of the users face challenge to receive or send in time messages due to technical issues. Item 4 (CMS technical issue prevents in time fee deposit) scored (mean value 3.1, SD 1.1, t-value .85, p-value .397) indicate that although the mean is slightly above 3, the difference is not significant ($p > 0.05$). Users report moderate issues with fee deposit timing. Item 5(CMS technical issues hinders in time access of tutors' detail) scored (mean value 2.97, SD 1.1, t-value -.234, p-value .815) indicated that users experiences are neutral regarding CMS technical issues related to tutors' details. In conclusion it is stated that overall users experience moderate challenges regarding admission process.

Table 12

Description of overall perception regarding obstacles of CMS.

Sr. No	Subscales	Faculties	N	Mean	SD	Range	
						Min	Max
1	Current	Faculty of Arabic and Islamic Studies	19	3.05	.45	2.83	3.27
	CMS	Faculty of Education	43	2.78	.40	2.65	2.90



	interface	Faculty of Science	36	3.16	.82	2.88	3.44
	challenges	Faculty of Social Sciences & Humanities	40	3.08	.55	2.90	3.26
	Total		138	3.00	.60	2.90	3.10
2	Technical	Faculty of Arabic and Islamic Studies	19	3.23	.70	2.89	3.57
	challenges	Faculty of Education	43	2.89	.66	2.69	3.10
	of CMS	Faculty of Science	36	3.22	.87	2.93	3.52
		Faculty of Social Sciences & Humanities	40	3.24	.62	3.04	3.44
	Total		138	3.13	.72	3.00	3.25
3	Challenges	Faculty of Arabic and Islamic Studies	19	3.08	.92	2.63	3.53
	in	Faculty of Education	43	2.66	.77	2.42	2.90
	admission	Faculty of Science	36	2.97	1.02	2.62	3.32
	process	Faculty of Social Sciences & Humanities	40	3.11	.83	2.84	3.38
	Total		138	2.93	.89	2.78	3.08

In table 12, learners' beliefs about the difficulties encountered with the Campus Management System (CMS) are analysed. The learner's view of current CMS interface challenges is moderately challenging, as shown by an overall mean score of 3.00 (SD = 0.60) and faculty of Science participants scoring the highest at 3.16 and faculty of Education scoring the lowest at 2.78. When it comes to challenges, the total mean is 3.13 (with SD of 0.72) and the Faculty of Social Sciences & Humanities (3.24) and Faculty of Arabic and Islamic Studies (3.23) mention difficulty more often than the Faculty of Education (2.89). With respect to experiencing difficulties in getting admitted, students reported an overall mean of 2.93 (SD = 0.89) and the Faculty of Social Sciences & Humanities had the highest mean score of 3.11, but the Faculty of Education had the lowest score of 2.66. It appears that, though all faculties report some problems with using the CMS, the Faculty of Education finds them less troublesome, while the Social Sciences & Humanities and Arabic and Islamic Studies faculties find it more difficult, especially in areas related to tech and admissions.

Table 13

ANOVA Statistics for overall description of learners towards the obstacles of CMS

Subscales		Sum of Squares	df	Mean Square	F	Sig.
Guidance on CMS for new interface	Between Groups	3.35	3	1.117	3.22	0.25
	Within Groups	46.40	134	.346		
	Total	49.76	137			
Guidance on CMS for new course	Between Groups	3.37	3	1.125	2.175	0.94
	Within Groups	69.33	134	.517		
	Total	72.70	137			
Guidance on CMS for exams	Between Groups	4.90	3	1.63	2.082	.106
	Within Groups	105.1	134	.785		
	Total	110.0	137			

In Table 13, the ANOVA results show how learners from various faculties perceive various problems with the Campus Management System (CMS). The results indicated that there is a significant difference ($p = .025$) in how much support students receive from different faculties in using the new CMS interface. There were no major differences found in learners' views about challenges in CMS guidance for new courses ($p = .094$) and exams ($p = .106$), meaning that these parts of the CMS are perceived similar by everyone. It points out that all students should have equal and fair access to learning material by making the interface standard.

Findings

Based on 1st objective, 3 research questions and 5 subscales were made to collect and analyze data from learners. The findings are given below:



- Based on the results of subscale 1 (guidance on CMS for new admission), it was found that when students submit their application forms, they generally found that the admission instructions were clear on the CMS with the mean score of 4.03 (table 2).
- It was found that learners felt no difficulty in uploading application as indicated by mean score 4.03. They were also able to edit applications easily as reflected by the mean score 3.46 (table 1).
- Another significant finding regarding the CMS saving applicants' time (mean score of 4.08) received strong positive responses (table 2). It is also found that the CMS is a quick intimation system, reflected by the mean score 3.91.
- Based on the results of subscale 2 (guidance on CMS for courses), it was found that the respondents generally agreed that the CMS responds quickly to their course selection actions with the mean score of 3.91 (table 3).
- It was found that respondents felt confident because all available courses were accessible and visible on the CMS with the mean score of 4.7 (table 3).
- Based on the results of subscale 3 (guidance on CMS for exams), it was found that statements on downloading exam center details with the score (mean value 4.08) and downloading roll number slips (mean score 4.09) reflected that a majority of respondents found it easy to access the exam-related information through the CMS (table 4).
- It was found from the data regarding "change of exam center" with the mean score of (3.18) that respondents were satisfied with this aspect of the CMS (table 4).
- Based on the results of subscale 4 (technological advancement benefits) it was found that a significant majority of users found mobile version of CMS user friendly, as reflect with the mean score 3.92 (table 5).
- The findings indicated a positive user experience with the system responsiveness, as reflected by the mean score (3.58) and clearly labelled buttons with the mean score (3.73) found a positive experience among users (table 5).
- Based on the results of subscale 5, the item regarding the clarity of instructions for completing academic tasks received a high mean score of 3.85 (table 6).
- Another significant finding indicated a positive experience of users with the online help resources on the CMS, as reflected with the mean score of 3.78. it was found that CMS has a strong responsive customer support system, as reflected with the mean score 3.45 (table 6).

On the basis of 2nd objective, two research questions and three subscales were made to collect and analyze data from learners.

The findings are given below:

- On the bases of results of subscale 6 (current CMS interface), the mean score for the item regarding the interface functioning smoothly (3.58) indicates that many respondents feel it generally performs well. However, it was experienced by some respondents that it takes more time than expected to complete routine tasks as reflect with the mean score 3.15 (table 9).
- The results on item 'frequently losing important information' reflects with the mean score of (mean value 2.70) that few users faced this issue occasionally, it was not a critical concern for the majority of respondents (table 9).
- The mean scores were associated with items related to the interface being "tricky" was (mean value 2.65) indicated that majority users found CMS interface tricky and causing time wastage. Additionally, users reported challenges in concentrating on different sections of the CMS as reflected with the mean score 2.65 (table 9).
- Based on the results of subscale 7 (technical challenges of CMS), It was found that the students experienced technical problems (mean value 3.34) which indicated that the users generally do not face significant technical hindrances, but there are still enough concerns to suggest that some users encounter issues that impact their ability to utilize the system effectively (table 4.9).



- The mean score of 2.75 for the item regarding need/take help from others while using the CMS indicates that many respondents feel challenged enough to seek assistance (table 10).
- It was found that majority of the users experienced the demand of high internet connectivity to use CMS, as reflected by the mean score (3.38). The users faced not much challenges to execute menu, as reflected with the mean value 3.06. on the other hand, users faced challenges and got nervous due to technical problems of CMS, as reflected with the mean score of 2.96 (table 10).
- Based upon the results of subscale 8(challenges in admission process), The results with the mean score of 2.8 for the item indicating that CMS challenges cause delays in processing admission applications suggest that a significant number of respondents feel that technical issues negatively impact the timeliness of their applications (table 11).
- The mean score of 2.7 for the item about need expert help when filling out admission forms indicates that many respondents feel uncertain or challenged enough by the CMS to seek assistance (table 11).
- It was found that the users are satisfied while experiencing the in time messages received by the university for continue semester details, reflected by the mean score of 3.1 (table 11).
- The finding regarding the item (technical issues hinder in time access of tutors 'detail) with the mean score of (2.97) indicates that majority of the users experienced the issue of accessing in time tutors' detail on CMS (table 11).

Conclusions

CMS is effective in terms of guiding new students through admission-related procedures by providing students with clear instructions to easily upload their admission applications on the admission portal of AIOU. It is user-friendly as it saves their time through quick communication regarding application and admission status. CMS is efficient during course registration as courses are visible and accessible to students. There is also a quick responsive user interface which enhances the user experience during course registration. CMS is helpful for students to facilitate them in exam notifications. The ease of downloading exam center details, roll number slips and online change of exam centers, suggested that the system successfully supports the students. The mobile version of CMS is more manageable and convenient to use as learners have experienced the interface to be more responsive and have clearly labeled buttons. Learners benefited from the clarity of instructions for academic tasks and expressed satisfaction with the availability of online help resources and customer support, although the support system could still be enhanced for even better user satisfaction indicated by some learners (Shahid et al., 2022).

There are technical problems with CMS interface. Use of CMS is a challenge for few respondents because of its interface complexity, lagging system responsiveness, and inconsistent data accuracy led to frustration. Learners also struggled with high internet demands and system crashes during peak usage. The need for external assistance and difficulties in menu navigation indicate that usability issues still exist. CMS software and system navigation challenges create glitches in examination including: admission processing e.g. late notifications, and inaccessibility to tutor details. There remains necessity for learners to seek external help when filling out applications.

Recommendations

1. It is recommended that AIOU may improve CMS support for editable features and requests (e.g., exam center change) and may enable offline functionality for select CMS tasks (like form filling).
2. The administration of AIOU may improve infrastructure to ensure stability of CMS during peak hours to prevent loss of information due to system inefficiency.
3. Based upon the finding regarding challenges in admission process and communication barriers, it is recommended to strengthen the responsiveness and availability of learners' support services on CMS of AIOU. There is also a need to optimize the admission workflow with real-time status tracking. AIOU may build an error prompts and form-validation tools to guide applicants.
4. Future research should include a larger and more diverse sample, incorporating regional campuses and distance learners from different provinces, to improve generalizability of findings related to the CMS experiences.



5. It is recommended for future researchers to conduct series of study to find the effectiveness and efficiency of user training programs on CMS usability. This may involve assessing how different training methods like online tutorials, programmed instruction etc. influence user competence and confidence.
6. Comparative studies on CMS implementations across different universities in Pakistan may be conducted to identify best practices and apply in future.

Contributions of the Authors

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The corresponding author can provide the data used in this study upon request.

Conflicts of Interest

The authors declare no conflict of interest.

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