Enhancing course management and student monitoring through the myStudentStatus application: A user perception study

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Abstract. myStudentStatus is a student course status tracking system that has been developed to address the challenges academic advisors face in managing and monitoring student course status. This system provides academic advisors with comprehensive information about students' final exam results and their performance in each course they have taken in quickly and accurately monitoring students' academic progress. This system has also been able to assist academic advisors in identifying students who may be at risk of falling behind or dropping out of a course. This includes the student's course status, including grades, completion of prerequisites and overall academic performance. This quantitative study involved 57 respondents consisting of lecturers and students of Polytechnic Kuching Sarawak. Overall, 100% of respondents acknowledged the effectiveness of the myStudentStatus application where the response for each evaluation item received the approval of respondents above 80%. This user-friendly myStudentStatus application is instrumental in increasing the productivity of academic advisors, reducing errors and indirectly improving student support services. By leveraging technology to streamline administrative processes, myStudentStatus contributes to a more efficient and effective education system that benefits both academic advisors and students.

1 Introduction

The advancement of web technology today is seen to give great significance in all areas of life including education. Faster and faster access to information in the digital world has greatly helped improve the efficiency and productivity of individuals including lecturers and students. This is also recognized Fazilah and Khalid where this online mobile news application has been built to help users browse current news faster and get more extensive information [1]. In the meantime, Stangl et al., thinks web-based monitoring for a distributed production by effectively integrating cloud services has managed to reduce costs dramatically [2]. Chia et al., also developed online business for the shop in order to manage the online business for the shop and ease the ordering process for the customers [3].

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Routine monitoring also benefits from the development of web-based technology. A review of web-based surveillance systems by Choi et al., has been able to implement web surveillance systems more optimally [4].

There is no doubt that web-based applications can be accessed without time and location limitations. This is proven in the study Nawi et al., also thinks that the web-based E-College Monitoring System can help monitor student activities by UITM Machang administrators and even parents who are in their hometowns can also monitor their children's activities even if they are in different locations in addition to being able to save significant costs as well as facilitate the administrative work of student entry and exit [5].

The study Mohd Adnan shows that the development of the UTHM e-Commerce website has been able to help students carry out transactions online whether for sales or purchases by UTHM residents. This can indirectly apply the entrepreneurial culture among UTHM citizens including students to generate their own income [6].

According to Izzati et al., the Audit Management and Monitoring System for Sawit Kinabalu Sdn Bhd (SKSB) is a system that has been developed which has enabled management and audit monitoring to be done more systematically and efficiently and can even reduce the time taken by users to conduct internal audits [7].

2 Problem statement

In the pursuit of success in higher education, a critical commitment expected of every student is the successful completion of all structured courses outlined in the provided curriculum. Among the issues commonly encountered among higher education students are academic and course attrition. Academic attrition refers to students being unable to continue their studies due to various factors such as financial problems, academic pressure, program mismatch, or personal factors [8]. Student attrition can have negative effects on their academic achievements, future career prospects, and the institution's future. Investigative studies by Csuka et al., [9] reveal that institutional factors such as location, type, condition, and position of the higher education institution, teaching quality, prestige, facilities, and infrastructure also influence students' decisions to discontinue their studies. This is acknowledged by Csuka et al., [9] research findings where demographic factors are also an important factor in student dropouts in their studies.

Furthermore, course attrition can contribute to academic attrition if not addressed. Course attrition occurs when students fail to complete the required credit hours of a course before completing their studies. For diploma students in polytechnics, they undergo Industrial Training (LI) in their final semester, Semester 6. This implies that students must complete the designated credit hours as per the curriculum by successfully completing all the planned courses. Failure to complete the required credit hours will lead to students missing their Industrial Training and subsequently delaying their graduation. Course attrition issues include the dropping of courses due to failing prerequisite courses and unintentionally neglecting to retake failed courses.

Manually tracking and identifying students' course progress by academic advisors is a complex task. This can make it difficult for academic advisors to keep track of and identify students who have not taken or have failed courses that need to be completed before their graduation. The issue of students not completing all required courses before graduating is common among polytechnic students. Students often forget about the courses they need to complete before graduating with a diploma. This can result in students missing out on completing a course at the end of their studies. Student attrition in this regard is influenced by various factors, including students unintentionally being dropped from certain courses due to oversight and missing courses they have not taken before completing their studies.

In view of these challenges, this study was developed to assess the perceptions of academic advisors and students regarding the effectiveness of the myStudentStatus application in monitoring the course statuses registered and completed by students under their supervision before graduating from the polytechnic. The myStudentStatus application is a web-based information system designed to facilitate academic advisors' supervision of their assigned students. This systematic monitoring can help prevent student attrition due to missing out on courses that need to be completed before graduation. The system features a user-friendly interface that is accessible anytime and anywhere. Generating comprehensive student course status reports can help reduce administrative workload and enhance the productivity of academic advisors and instructors.

3 Research inquiry

The research question refers to the research objectives, which are as follows:

1. To what extent is myStudentStatus effective in producing a systematic information system for monitoring students' course statuses?
2. To what extent is myStudentStatus effective in providing a platform for students to update their current course statuses?
3. To what extent can myStudentStatus generate comprehensive reports on students' course statuses?

4 Research objective

This study aims to:

1. Evaluate the effectiveness of myStudentStatus in creating a systematic information system for monitoring student course statuses.
2. Evaluate the effectiveness of myStudentStatus in providing a platform for students to update their current course statuses.
3. Evaluate the effectiveness of myStudentStatus in generating comprehensive student course status reports.

5 Research focus

This study was conducted on respondents comprising both lecturers and students at Politeknik Kuching Sarawak. The study utilized a quantitative approach, where the instrument employed was the distribution of online questionnaires to collect data from respondents. Additionally, data collection involved the preparation and distribution of online questionnaires to the respondents.

6 Analysis and findings

6.1 Respondents background

Data analysis was performed on the survey questionnaires distributed randomly to 57 respondents, including students and lecturers from all departments at Politeknik Kuching Sarawak. The demographic background of the respondents involved in this study is presented in Table 1.

Table 1. Demographic background.

Question	Category	Total
Status	Student	55
	Lecturer	2
Gender	Male	34
	Female	23
Age	18-23 years old	55
	24 years and above	2
Race	Malay	23
	Chinese	5
	Bumiputera	2
	Others	25
Semester	Jabatan Teknologi Maklumat dan Komunikasi	27
	Jabatan Kejuruteraan Mekanikal	25
	Jabatan Perdagangan	5

The respondents consisted of 34 males and 23 females. There were 55 respondents aged between 18-23 years, and two respondents aged 24 years and above. The highest number of respondents were of Bumiputera ethnicity, comprising 25 individuals, followed by Malay ethnicity with 23 respondents. There were 5 respondents of Chinese ethnicity, 2 respondents of Indian ethnicity, and the remaining 2 respondents belonged to other ethnicities. The respondents were from various departments, including 27 from the Department of Mechanical Engineering, 25 from the Department of Information and Communication Technology, and 5 respondents from the Department of Commerce.

6.2 Analysis of research findings

Section II comprises detailed items for this study, which are the effectiveness and user satisfaction with myStudentStatus in monitoring and managing student course statuses, the appropriateness and user satisfaction with myStudentStatus in course management for students, and the impact of the myStudentStatus application on efficiency and productivity in student course management and monitoring. Table 2 presents the findings for Section A of the questionnaire related to the effectiveness and user satisfaction with myStudentStatus in monitoring and managing student course statuses.

Table 2. Question items related to the effectiveness and user satisfaction with myStudentStatus in monitoring and managing student course statuses.

Question Code	Item	% Agree	% Disagree
S1	The use of myStudentStatus (myStudentStatus) enables easy checking of students' course statuses	84	16
S2	The use of myStudentStatus (myStudentStatus) helps identify the current statuses of courses taken by students	91	9
S3	The use of myStudentStatus (myStudentStatus) simplifies the process of generating reports for students who are lagging behind	88	12

Table 2. Cont.

S4	The use of myStudentStatus (myStudentStatus) can be easily accessed	81	19
S5	The use of myStudentStatus (myStudentStatus) provides concise and detailed data on students' course statuses	88	12
S6	The use of myStudentStatus (myStudentStatus) assists in complex manual verification processes.	86	14

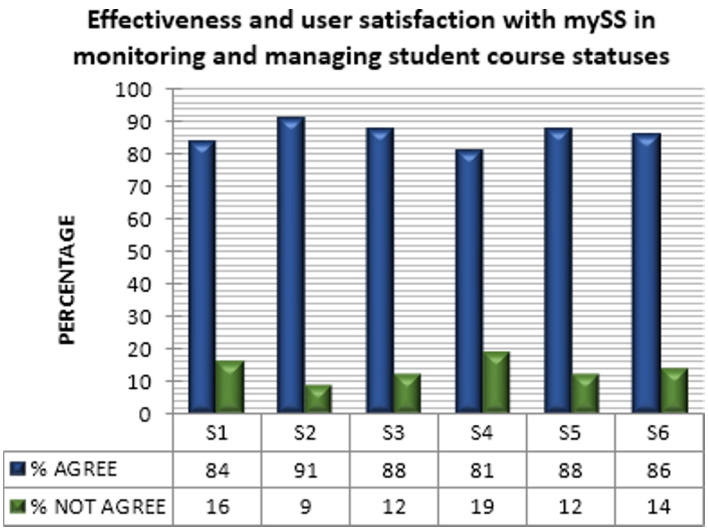

Fig. 1. Effectiveness and user satisfaction with myStudentStatus in monitoring and managing student course statuses.

Based on figure 1, it is found that myStudentStatus can assist both academic advisors and students in checking the courses that have been taken and completed. myStudentStatus is seen not only to facilitate the process of verifying course statuses but also to replace the time-consuming and risky manual verification process, which is prone to errors and potential course discrepancies due to individual limitations. This can be observed in question item S1, where 86% of respondents agree that myStudentStatus can easily check students' course statuses and overcome the complexities faced during manual verification processes. This is further evident in question item S2, where 91% of respondents agreed that myStudentStatus can help identify the current statuses of courses taken by students. Item S5 "The use of myStudentStatus (myStudentStatus) provides concise and detailed data on students' course statuses" also reflects a high percentage of agreement, which is 85%. This indirectly facilitates the process of generating reports for students who are lagging behind, as demonstrated in item S6 with an agreement percentage of 88%. The use of myStudentStatus has facilitated academic advisors in identifying students who are lagging behind, as agreed upon by 88% of respondents, where myStudentStatus can provide direct data on students' course statuses.

Table 3 presents the findings for Section B of the questionnaire, which pertains to the appropriateness and user satisfaction with myStudentStatus in course management for students.

Table 3. Question items related the appropriateness and user satisfaction with myStudentStatus in course management for students.

Question Code	Item	% Agree	% Disagree
S7	The developed system is suitable for the issues faced by students.	86	14
S8	myStudentStatus (myStudentStatus) is very user-friendly	81	19
S9	myStudentStatus (myStudentStatus) greatly assists students in avoiding subject discrepancies	86	14
S10	The developed myStudentStatus (myStudentStatus) is capable of tracking each subject taken by students	88	12
S11	The developed system is highly suitable for use by every layer of students.	88	12
S12	myStudentStatus (myStudentStatus) can attract students' interest in using it	83	17
S13	The design of myStudentStatus (myStudentStatus) is in line with its usability	86	14

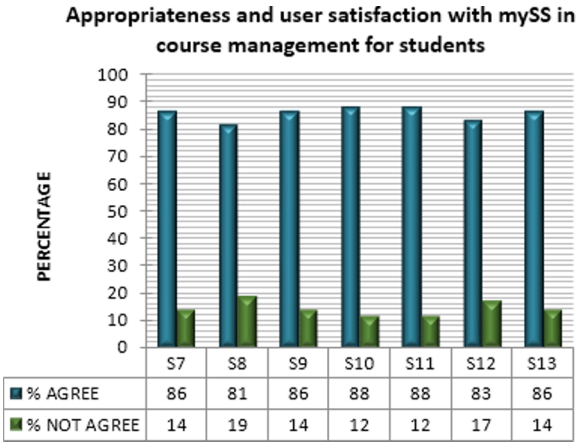

Fig. 2. Appropriateness and user satisfaction with myStudentStatus in course management for students.

The myStudentStatus application was developed to address the issue of course discrepancies among students. Based on figure 2, myStudentStatus was found to be capable of tracking each subject taken by students with an agreement of 88% of respondents in question item S10. This indirectly helps students avoid course discrepancies before completing their studies at the polytechnic, acknowledged by 86% of respondents in question items S7 and S9. Findings also indicate that 83% of respondents agreed with question item S12 "myStudentStatus (myStudentStatus) can attract students' interest in using it." This is because the myStudentStatus application is user-friendly and easy to use. This was recognized by over 80% of respondents in question items S8 and S13.

The survey findings for section C, which pertains to the impact of the myStudentStatus application on the efficiency and productivity of course management and monitoring for students, can be seen in Table 4 below.

Table 4. Question items related to the efficiency and productivity of course management and monitoring for students.

Question Code	Item	% Agree	% Disagree
S14	The myStudentStatus (myStudentStatus) application facilitates the process of quickly checking students' course statuses	90	10
S15	The myStudentStatus (myStudentStatus) application saves time in searching for student data	91	9
S16	The myStudentStatus (myStudentStatus) application can generate student course status reports quickly	86	14
S17	The myStudentStatus (myStudentStatus) application enhances the productivity of lecturers as Academic Advisors.	86	14
S18	The myStudentStatus (myStudentStatus) application allows Academic Advisors to quickly generate lists of students with discrepancies	90	10
S19	The myStudentStatus (myStudentStatus) application assists in more effective time management.	90	10

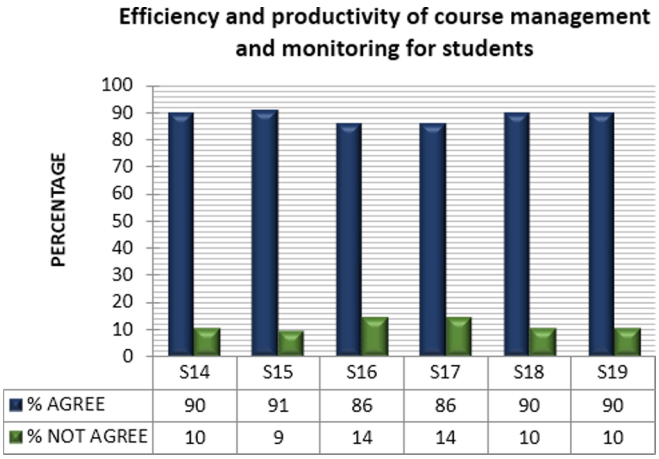

Fig. 3. Efficiency and productivity of course management and monitoring for students.

Based on Figure 3, the findings for item S14 indicate that 90% of respondents agree that myStudentStatus facilitates the process of quickly checking students' course statuses. This is evident in item S18, where 90% of respondents agree that myStudentStatus can help Academic Advisors quickly list students with discrepancies. This indirectly aids Academic Advisors and students in saving time and managing time more effectively for course checking, thereby enhancing the productivity of both lecturers and students. This can be observed in item S17, where 86% of respondents agree that myStudentStatus can enhance lecturers' productivity.

7 Discussion

By utilizing technology in the matter of checking the student's course status has had a positive impact in the matter of monitoring the student's course by the academic advisor. According to Cherkasova et al., the web-based conference verification system has been able to help the management of conference applications to be easier, faster and more efficient than the manual process [10]. It is clear here that the integration of technology into routines as lecturers and

academic advisers can directly help increase the productivity of lecturers and academic advisers. The myStudentStatus application has been proven to have a positive impact on the management and monitoring of student course status, as stated in the findings which is presented. The main advantage of this application is to be able to check the student's course status easily and quickly in addition to reducing the complexity of the manual review process. This not only helps academic advisors in identifying courses that have been completed by students, but also allows students to monitor their academic progress more effectively. The data shows that more than 90% of respondents agree that myStudentStatus plays an important role in identifying the current status of courses taken by students.

Furthermore, the use of myStudentStatus also helps mitigate the risk of course discrepancies. By providing detailed and up-to-date data on student course statuses, this application allows Academic Advisors to identify potentially missing students more quickly and efficiently. This helps reduce the time taken for managing such cases and subsequently enhances the productivity of both Academic Advisors and students.

Additionally, another advantage of this application is its ability to facilitate the generation of reports for students with discrepancies. The available data through myStudentStatus enables educational institutions to take appropriate actions to assist students in achieving better performance. This also contributes to improving overall academic management efficiency.

Moreover, myStudentStatus has also demonstrated its ability to attract user interest. The user-friendly and easy-to-use design has provided satisfaction to over 80% of respondents. This user-friendliness plays a crucial role in the wider adoption of the application by students. Finally, the use of myStudentStatus has resulted in increased lecturer productivity. By providing access to accurate and up-to-date information about student statuses, lecturers can provide more effective guidance to students in need of specific assistance. Findings indicate that 86% of respondents agree that myStudentStatus can enhance lecturer productivity.

The use of myStudentStatus has resulted in increased lecturer productivity. By providing access to accurate and up-to-date information about student status, lecturers can provide more effective guidance to students who need special help. Findings show that 86% of respondents agree that myStudentStatus can increase lecturer productivity. For improvement purposes, the myStudentStatus application can be improved by increasing functionality with the production of android applications to enable multiple access.

8 Conclusion

Overall, these findings indicate that myStudentStatus has provided significant benefits in addressing course discrepancy issues and enhancing academic management among students and Academic Advisors at Politeknik Kuching Sarawak, specifically, and can be extended to all polytechnics in Malaysia in general. The adaptation of the work of lecturers and academic advisors to web-based technology is seen to greatly help organizations optimize their performance, security, and analytics by using data directly and accessing it through web-based platforms.

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