UNIVERSITI TEKNOLOGI MARA
Cawangan Kedah
Kampus Sungai Petani

Faculty of Administrative
Science and Policy Studies

i-SPiKE 2021

Leading An Artificial Innovation In Knowledge, Education And Design

i-SPiKE 2021
INTERNATIONAL EXHIBITION & SYMPOSIUM

E-PROCEEDINGS

https://ispike2021.uitm.edu.my/

e-ISBN 978-967-2948-20-9

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Copy Editors : Azni Syafena Andin Salamat, Syazliyati Ibrahim, Asrol Hasan, Nor Zaini Zainal Abidin, Fatihah Norazami Abdullah, Chaleeda Som Sak, Nor Asni Syahriza Abu Hassan & Muhamad Khairul Anuar Zulkepli

Layout Editor : Asrol Hasan

Cover Design : Syahrini Shawalludin

Published by : Universiti Teknologi MARA Cawangan Kedah,
Kampus Merbok,
08400 Merbok,
Kedah,
Malaysia.

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THE SMART ATTENDANCE of MICROSOFT TEAM (SAMT2021) IN AN ONLINE LEARNING CLASSROOM

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ABSTRACT
Microsoft Teams has developed into an efficient platform for conducting online education and providing students with an ideal learning environment. Microsoft teams have numerous components, such as basic Microsoft team functions, discussions, evaluations, features, and attendance sheet. In this study we focus on the attendance sheet. There are some restrictions on the attendance sheet in Microsoft Teams in which it could not identify missing students. Second, it takes time to determine the length of a student's attendance in class due to the duplications of student names, and lastly, they lack monthly report compliance. In addressing these issues, we developed the smart attendance of microsoft team (SAMT2021) with an easy-to-use absence detection coordination. SAMT2021 can abstract the student's attendance frequency (in and out) of class report via the new smart attendance in comparison to Google Meet attendance and uFuture instant attendance. This smart attendance can directly and instantly connect to the WhatsApp chat to query and remind students on class absence. The anticipated result of SAMT2021 will efficiently enable lecturers to use these SAMT2021 systems and integrate them with INFOTECH and the Academic Affairs System.

Keywords: Microsoft Teams, Smart Attendance Sheet, Online Learning, Higher Learning Institutions

INTRODUCTION

Globally the educational landscape drastically changed due the pandemic situation which saw the urgency of teaching and learning being done through online digital classrooms. The COVID19 pandemic which started in March 2019 had pushed the education ministries across Asia for mass migrations online, with the help of Microsoft Teams, Office 365 and Microsoft Azure, enabling millions of students to continue learning from home (Gnaneswaran, 2020). In Vietnam, the Ministry of Education and Training deployed Microsoft Teams in a record time of 27 hours for more than 200 schools in Hai Phong city. In over 2 months, Teams was successfully adopted for more than 3.3 million teachers and students from primary and secondary schools, high schools, and institutes of higher learning across the country. Similarly, the Tokyo Metropolitan Board of Education adopted Microsoft Teams and Microsoft 365 Education to create a conducive and interactive environment online. Meanwhile, in Malaysia, the Ministry of Education (MoE) and Digital Classroom Admin (DCA), with the help of Microsoft, rose to the challenge by conducting daily webinars to introduce teachers to

Microsoft Teams and Office 365. Training sessions were recorded on Teams and uploaded on MoE's Digital Learning portal (Ruang Ilmu), enabling over 430,000 teachers across the nation to review training materials at their own time (Gnaneswaran, 2020).

Microsoft is offering anyone its premium version of Teams for free for six months and lifted existing user limits. Google has announced that it is offering its enterprise video conferencing features such as larger meetings up to 250 people and recording functionality for free to G Suite and G Suite for Education customers through July 1, 2020. Consequently, Google had limited the meeting to just 100 participants in early 2021. Zoom has lifted the time limit of video calls in China, Japan, Italy, and the US by request (Rani, 2020). The education management information system reported in early March 2020 that the number of users in Microsoft teams was only 750, while at the end of March it reached 138698 showing a significant growth in the activity (OECD, 2020).

The global pandemic situation has made the technology connection of internet and database information an essential part of the academic profession. Evidently, an academician needs to discipline their efforts to create authoritative, collaborative, online information resources and databases overseen by the academic community not only for teaching and learning, research collaboration but also for career advancement. Schools and universities need to shift to an automated time attendance system due to the pandemic situation where educators need to properly record the attendance of its students for effective planning, management and functioning of the online distance classes. In fact, educational institutions, universities, polytechnics, colleges of education are concerned about student attendance, which is mandatory and has a written policy forming part of the requirements for eligibility to sit for an examination.

Given the importance of a good attendance system towards educators, this study aims to implement the proposed smart attendance system to reduce the burden on the educators since this technology will handle it. Educators will have more time in delivering valuable knowledge and skills by having this smart attendance system in saving lecture time, being more efficient, and improving accuracy.

The remainder of this section will proceed as follows, the study's problem statement and objectives will be discussed. Following that, a comprehensive review of the literature was conducted to determine the efficacy of attendance in Microsoft teams. The objectives are then achieved through the application's methodology and design. Following that, the pilot study's findings regarding the efficacy of SAMT2021 applications are presented. The final section contains a discussion of the research findings and a conclusion.

Research Problem and Objectives

The outbreak of COVID-19 globally caused an exceptional impact on education due to educational institutions' closures (Ali, 2020) including Malaysian higher institutions education. About 1 billion students are affected by school and university closures worldwide due to COVID-19 Pandemic (UNESCO, 2020a). These closures increased the students to have home online learning which bring challenges for both learners and educators. The typical

global method of teaching used to be in a physical dialogue but as the pandemic situation prolong, the scheduled class meeting had been changed using a virtual interaction such as Google Meet and Microsoft Teams or other suitable platforms. Hence, the need for a stable and efficient system to monitor, check and ensure the students attend the scheduled session should be developed in evaluating student's academic performance is imminent. Nonetheless, the current attendance system in the microsoft teams and google meet system do not allow for the lecturer to check on those absent students. Likewise, the lecturer needs to spend time to check and detect the absentee to allow for further actions on the students. Even the electronic system entry method is still suffering from the problem of wasting time (Alghamdi et.al 2020). Furthermore, through our observation of the current system we found many problems, including the lack of accuracy of the current attendance systems, the loss of time to call the names of students to check on the virtual attendance, and the difficulty of procedures to collect excuses of absence, and to raise excuses. Hence, the objectives of this study are as follows:

1) to keep track of students who are absent from class
2) to calculate the amount of time the students spend in class
3) to calculate the number of the log-ins for each student during the class
4) to link the letter of excuse to the attendance sheet
5) to send WhatsApp message to students to remind them of their class absence.

LITERATURE REVIEW

Covid-19 has forced academic and higher institutions to drop century's methodology of teaching and learning and have made them acquire innovative solutions within a very short span of time. In fact, the continuation of the virtual classroom may further be enhanced in most academic and higher institutions even after the pandemic ends and become a norm to all academicians. Taking student's attendance is one of the major processes and concerns of lecturers in every class whether virtual or physical. The rise of student attendance and absence prevention have always been parts of concern for teachers as well as society members and parents (Hamdan & Lai, 2014) especially during this online digital learning where student's engagement is very important in absorbing the knowledge and skills. According to Hanapi, Nordin and Rus (2014), students with attendance problems are likely to develop negative social behaviors and personal practices not acceptable in the skill world.

In a recent study by Diab-Bahman, Al-Enzi, Sharafeddine, and Aftimos (2021) on effect of attendance on student performance, they concluded that both attendance and year of study did have a statistically significant influence on grades. Hence, they also concluded that further initiatives should be undertaken to link attendance and student performance. Spaho and Godolja (2014) examined the correlation between lecture attendance and final examination success and found that attendance of business students had a significant impact on their final success in the general mathematics course at the University of Tirana, Albania. In another study on student attendance on academic performance in accounting courses by Jameel and Hamdan (2015) revealed that attending classes significantly improves students' performance. Further study conducted by Abrokwa (2016) on 158 students taking accounting courses at a medium-sized state university located in the southeast of the US revealed that attendance has a significant moderately positive effect on student performance in an introductory accounting course. These results are consistent with the results reported by Marburger (2006), Snyder et al. (2014) and Nyatanga and Mukorera (2019), who found that the existence of a mandatory

attendance policy significantly reduces absenteeism and improves exam performance. As the uncertainty of Covid-19 pandemic to stop and with the increased number of online courses that have become compulsory, investigating the effectiveness of smart attendance should be initiated.

METHODOLOGY

Universiti Teknologi Mara (UiTM) are committed to health and safety during the pandemic situation to all campuses throughout Malaysia. Teaching and learning progresses through the usage of online digital learning systems by all the academicians. This study adopted an email and Google form survey as a data collection method and analysed using Microsoft Excel. Respondents of this survey are lecturers from Universiti Teknologi Mara (UiTM) Negeri Sembilan Branch who used Microsoft Team as their teaching and learning tool in the online distance learning (ODL) class. Data was collected within 60 days starting from 1 June 2021 until 30 July 2021. Hence, the methodology of our study is simplified in Figure 1.

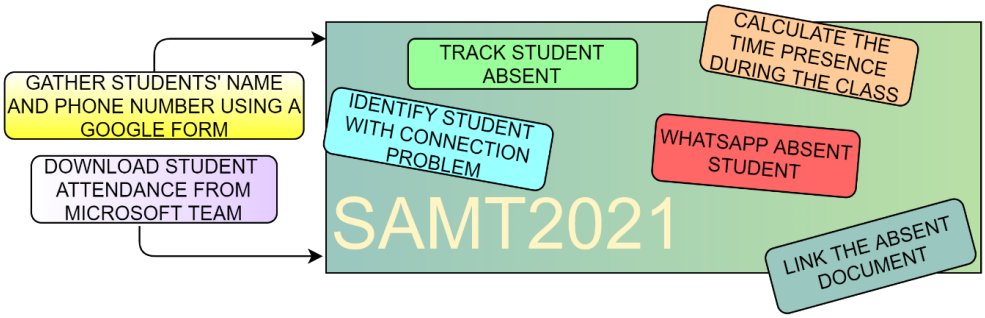


Figure 1. The SAMT2021 Flowchart

STEP 1. Gather information of students in the class (google form etc. UFuture, SIMS)

Students' information was collected at the beginning of a class, in the first week of semester using google forms as shown in Figure 1 below. Details such as full name, telephone number, email and student id are required for the lecturer to detect any circumstances occur throughout the running semester. Later, this form will be converted to excel for systematic labeling information after all the students submitted the forms.

STEP 2. Download and copy attendance report, paste to SAMT2021 template.

Attendance report will be downloaded at the end of the class that can be found in Post column as shown in Figure 2 below. Then, all the details are transformed into the SAMT2021.

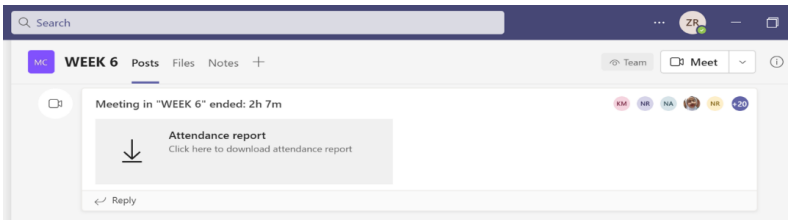
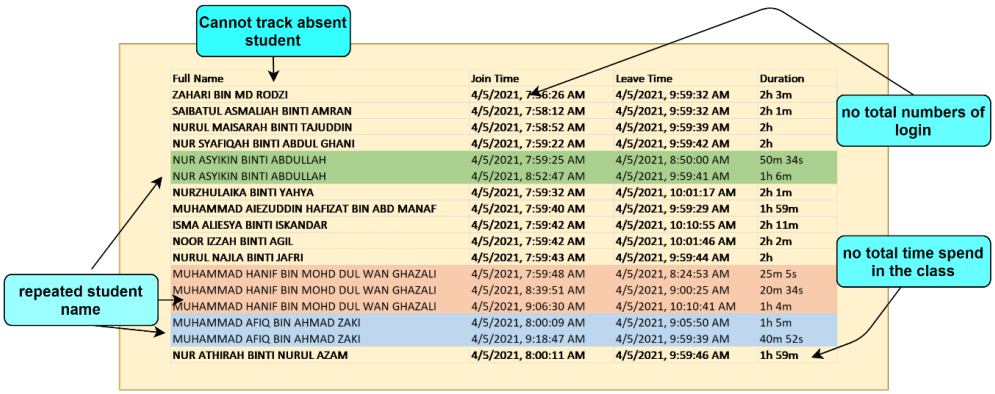


Figure 2. The attendance report in MT

However there are some problems detected within the attendance reported by the Microsoft team as shown in Figure 3. The first problem is the information in the Microsoft team attendance report could not detect an absent student during the class. Second, there are repeated name and time shown in the report. Third, the Microsoft team are unable to check the total time spent by the student in the class.



Full Name	Join Time	Leave Time	Duration
ZAHARI BIN MD RODZI	4/5/2021, 7:56:26 AM	4/5/2021, 9:59:32 AM	2h 3m
SAIBATUL ASMALIAH BINTI AMRAN	4/5/2021, 7:58:12 AM	4/5/2021, 9:59:32 AM	2h 1m
NURUL MAISARAH BINTI TAJUDDIN	4/5/2021, 7:58:52 AM	4/5/2021, 9:59:39 AM	2h
NUR SYAFIQAH BINTI ABDUL GHANI	4/5/2021, 7:59:22 AM	4/5/2021, 9:59:42 AM	2h
NUR ASYIKIN BINTI ABDULLAH	4/5/2021, 7:59:25 AM	4/5/2021, 8:50:00 AM	50m 34s
NUR ASYIKIN BINTI ABDULLAH	4/5/2021, 8:52:47 AM	4/5/2021, 9:59:41 AM	1h 6m
NURZHULAIKA BINTI YAHYA	4/5/2021, 7:59:32 AM	4/5/2021, 10:01:17 AM	2h 1m
MUHAMMAD AIEZUDDIN HAFIZAT BIN ABD MANAF	4/5/2021, 7:59:40 AM	4/5/2021, 9:59:29 AM	1h 59m
ISMA ALIESYA BINTI ISKANDAR	4/5/2021, 7:59:42 AM	4/5/2021, 10:10:55 AM	2h 11m
NOOR IZZAH BINTI AGIL	4/5/2021, 7:59:42 AM	4/5/2021, 10:01:46 AM	2h 2m
NURUL NAJLA BINTI JAFRI	4/5/2021, 7:59:43 AM	4/5/2021, 9:59:44 AM	2h
MUHAMMAD HANIF BIN MOHD DUL WAN GHAZALI	4/5/2021, 7:59:48 AM	4/5/2021, 8:24:53 AM	25m 5s
MUHAMMAD HANIF BIN MOHD DUL WAN GHAZALI	4/5/2021, 8:39:51 AM	4/5/2021, 9:00:25 AM	20m 34s
MUHAMMAD HANIF BIN MOHD DUL WAN GHAZALI	4/5/2021, 9:06:30 AM	4/5/2021, 10:10:41 AM	1h 4m
MUHAMMAD AFIQ BIN AHMAD ZAKI	4/5/2021, 8:00:09 AM	4/5/2021, 9:05:50 AM	1h 5m
MUHAMMAD AFIQ BIN AHMAD ZAKI	4/5/2021, 9:18:47 AM	4/5/2021, 9:59:39 AM	40m 52s
NUR ATHIRAH BINTI NURUL AZAM	4/5/2021, 8:00:11 AM	4/5/2021, 9:59:46 AM	1h 59m

Figure 3. The Characteristics of Attendance Report of MT

Therefore, SAMT2021 is developed to enhance the Microsoft team attendance report. The advantage of SAMT2021 is it can identify an absent student after the class ends. It is also easier for the lecturer to proceed further actions on the absent student. Instead of transferring all the information to an excel, the data can be pasted into SAMT2021 based on the wanted column.

SAMT2021 as can be seen in Figure 4 is where the attendance report can clearly show the students time that they spent in the class. It makes it easier for the lecturer to track how much time the students are in the class during the class session which would make it easier for the lecturers to identify if the students are having internet connection problem or others.

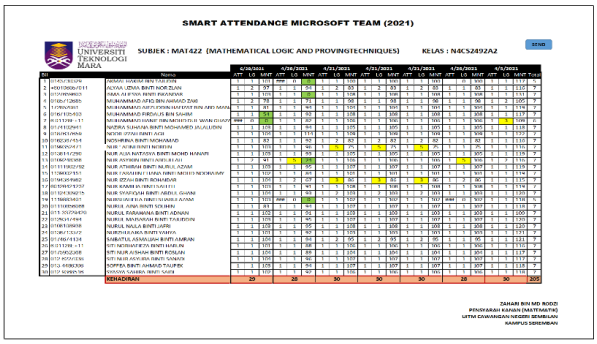


Figure 4. The SAMT2021

The advantage of SAMT2021 is, it can identify an absent student after the class ends. It is also easier for the lecturer to proceed further actions on the absent student through the tracking system. Illustration as per Figure 4 and 5.

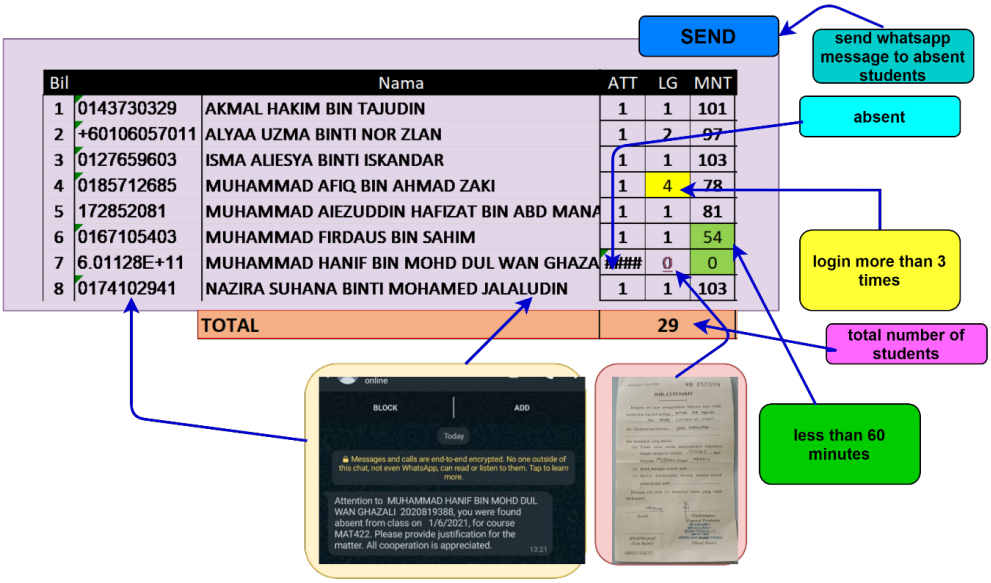


Figure 5. Student Tracking in SAMT2021

SAMT2021 allows the lecturers to identify and check more accurately on the student's participations in the class. The system further allows the lecturers to connect with the students directly via the WhatsApp in giving reminder for the student absentee. Once the student gets the reminder, they should contact or reply to the lecturers for the reasoning of their absence.

RESULTS

In this section, the results of a pilot study on the efficacy of SAMT2021 application are presented in Figure 6-Figure 11.

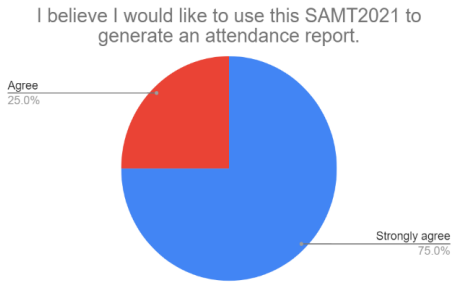


Figure 6. I believe I would like to use this SAMT2021 to generate an attendance report

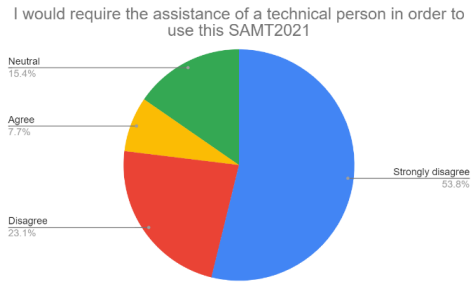


Figure 7. I believe that I would require the assistance of a technical person in order to use this SAMT2021

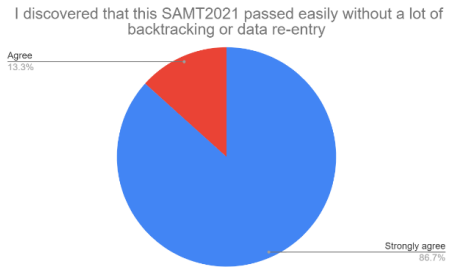


Figure 8. I discovered that this SAMT2021 passed easily without a lot of backtracking or data re-entry

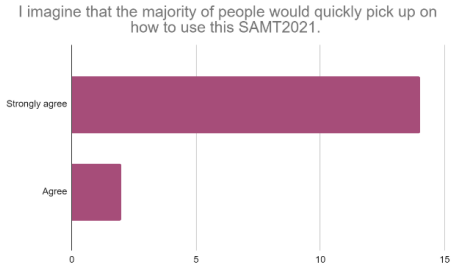


Figure 10. I imagine that the majority of people would quickly pick up on how to use this SAMT2021

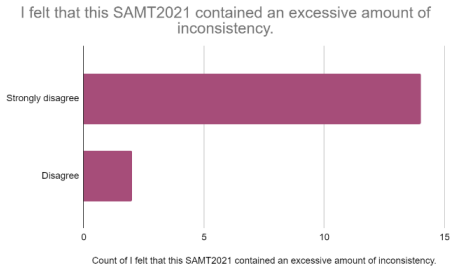


Figure 9. I felt that this SAMT2021 contained an excessive amount of inconsistency.

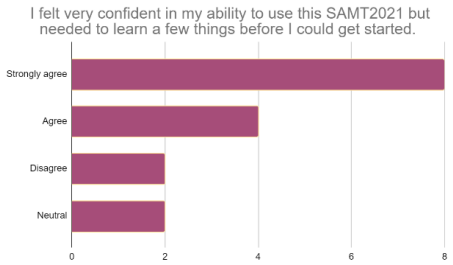


Figure 11. I felt very confident in my ability to use this SAMT2021 but needed to learn a few things before I could get started.

This study investigates lecturer's engagement during online learning by using Microsoft Teams as the online teaching tool during the Covid-19 pandemic. The study was conducted in Universiti Teknologi MARA (UiTM) Cawangan Negeri Sembilan when most online learning is done virtually as the lecturers are working from home due to the pandemic situation. Majority of the respondents acknowledged the effectiveness of SAMT2021 attendance and its reporting. The respondents found the SAMT2021 attendance is not complex and easy to use. In fact, they mentioned that they can easily navigate through the attendance sheet system without a lot of backtracking or data entry. Most respondents also are interested to continue using as SAMT2021 is easy and can quickly be adapted. They also feel that they are confident in using it although they are new to SAMT2021 as the navigation is easy and not complicated. It can be concluded that SAMT2021 was found by the lecturers to be supportive and an efficient tool to

monitor the student's attendance in their online teaching and learning especially during the pandemic situation.

CONCLUSIONS

The objectives of this study are (1) to keep track of students who are absent from class (2) to calculate the amount of time the students spend in class (3) to calculate the number of the log-ins for each student during the class (4) to link the letter of excuse to the attendance sheet and (5) to send WhatsApp message to students to remind them of their class absence. The results show that most lecturers surveyed are aware of the importance of their attendance and agreed that the smart attendance Microsoft team 2021 are satisfied with its functions which are better and efficient as compared to uFuture attendance and the original system of Microsoft team attendance available. The results show that SAMT2021 have five advantages as compared to uFuture attendance and Microsoft Team attendance which are summarized in the table below.

Table 1. The comparison of attendance report

SAMT2021	Ufuture ATTENDANCE	ATTENDANCE REPORT FOR MT
Students do no need to fill the attendance sheet,	Students need time to fill the attendance sheet.	Students do not need to fill the attendance sheet, but it is not user friendly.
Lecturers are able to track student absentee from the class easily.	Lecturers are able to track student absentee from the class easily.	Lecturers are unable to track student absentee from the class easily.
Lecturers are able to track the time the student spent in the class.	Lecturers are unable to track the students spent time in the class.	Lecturers are able to track student's time spent in the class but need time to calculate manually.
Lecturers are able to identify the student that have internet connection problems.	Lecturers are unable to identify students that have internet connection problems.	Lecturers are able to track and identify student with the internet connection problems but need to check manually.
SAMT2021 has connection with WhatsApp which help the lecturers to directly connect with their students.	Lecturers are unable to connect with students via WhatsApp.	Lecturers are unable to connect with students via WhatsApp.

Based on the summarized table, this study has achieved the five objectives stated earlier. The researcher of this study is planning to develop and innovate a more stable system that can help lecturers to return personal exam test or assignment to a larger number of students. In fact, the future planning of SAMT2021 will be to efficiently help lecturers to send the student's carry mark and messages privately to each student. Nonetheless, the outcomes of this study indicate that it is crucial still to innovate the attendance system in helping lecturers to deliver an efficient teaching and learning from home. It is also hope that SAMT2021 can improve problems of tracking students absentee and internet problems, sending messages instantly and connect with the students directly, while sharing and delivering teaching and learning during the pandemic. This smart attendance system is hoped to help the educators and the academic student affairs in delivering an efficient and quality service during the pandemic.

REFERENCES

Abrokwa, J. (2016). Attendance and student performance in an introductory accounting Course-Allied academies international conference. *Proceedings of the Academy of Accounting and Financial Studies (AAFS)*, *21*(2), 1-5.

Alghamdi, R., Alsubaie, W., Alharthi, R., Alghamdi, W., Alboaneen, D. A., & Alqahtani, N. F. (2020, August). A Smart Attendance System for Imam Abdulrahman Bin Faisal University Using Facial Recognition. In *Journal of Physics: Conference Series* (Vol. 1627, No. 1, p. 012004). IOP Publishing.

Al Lily, A. E., Ismail, A. F., Abunasser, F. M., & Alqahtani, R. H. A. (2020). Distance education as a response to pandemics: Coronavirus and Arab culture. *Technology in society*, *63*, 101317.

Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher education studies*, *10*(3), 16-25.

Diab-Bahman, R., Al-Enzi, A., Sharafeddine, W., & Aftimos, S. (2021). The effect of attendance on student performance: implications of using virtual learning on overall performance. *Journal of Applied Research in Higher Education*.

Gnaneswaran, D. (2020, June 11). *Teaming up to transform education in Asia*. (Microsoft) Retrieved June 11, 2021, from https://news.microsoft.com/en-my/2020/06/11/teaming-up-to-transform-education-in-asia/:

Hamdan, A. R., & Lai, C. L. (2014). Adakah Prestasi Sekolah Menjadi Penyumbang Utama Pengajaran Efektif?. *Sains Humanika*, *2*(1).

Jameel, S. H., & Hamdan, A. (2015). Effects of student's attendance on accounting student's performance. *International Journal of Business and Management Review*, *3*(5), 79-93.

Marburger, D. R. (2006). Does mandatory attendance improve student performance?. *The Journal of Economic Education*, *37*(2), 148-155.

Mathew, I. R. & Iloanya, J. E. (2016). *Open and Distance Learning: Benefits and Challenges of Technology Usage for Online Teaching and Learning in Africa.* Commonwealth of Learning. http://oasis.col.org/bitstream/handle/11599/2543/PDF?sequence=4

Nyatanga, P., & Mukorera, S. (2019). Effects of lecture attendance, aptitude, individual heterogeneity and pedagogic intervention on student performance: A probability model approach. *Innovations in Education and Teaching International*, *56*(2), 195-205.

OECD. (2020). 'A framework to guide an education response to the COVID-19 Pandemic of 2020'. Retrieved on 4 April 2020 from https://read.oecd-ilibrary.org/view/?ref=126_126988-t63lxosohs&title=A-framework-to-guide-an-education-response-tothe-Covid-19-Pandemic-of-2020

Rani Molla, VOX (2020). 'Microsoft, Google, and Zoomare trying to keep up with demand fortheir now free work-from-home software'. Retrieved on 4 April 2020 from

https://www.vox.com/recode/2020/3/11/21173449/microsoft-google-zoom-slack-increaseddemand-free-work-from-home-software

Snyder, J. L., Lee-Partridge, J. E., Jarmoszko, A. T., Petkova, O., & D'Onofrio, M. J. (2014). What is the influence of a compulsory attendance policy on absenteeism and performance?. *Journal of Education for Business*, *89*(8), 433-440.

Spaho, A., & Godolja, M. (2014). Lecture Attendance and Succeed on General Mathematics. Case Study of First-Year Business Students, University Of Tirana, Albania. *International Journal of Research in Business Management*, *2*(5), 72-78.

UNESCO. (2020a). Global Education Coalition. COVID-19 Education Response. https://en.unesco.org/covid19/educationresponse/globalcoalition.

Hanapi, Z., Nordin, M. S., & Rus, R. C. (2014). Unemployment problem among graduates of technical field: Competencies of the graduates and quality of the education. *Sains Humanika*, *2*(2).

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