Enhancing Student Performance through Targeted Support

Fadhilah Mat Yamin*, Wan Hussain Wan Ishakb

aSchool of Technology Management and Logistics, Universiti Utara Malaysia,
Sintok, Kedah, Malaysia
bInstitute for Management & Business Research (IMBRe), Universiti Utara Malaysia,
Sintok, Kedah, Malaysia
bSchool of Computing, Universiti Utara Malaysia,
Sintok, Kedah, Malaysia
*Corresponding Author: fmy@uum.edu.my

Abstract

Covid-19 has force many changes in life including teaching and learning (T&L). Prior to covid-19, blended learning has been practiced in T&L with the support of information and communication technology (ICT). However, in order to reduce the spread of covid and to sustain education, T&L approach has been changed to 100% online. This approach necessitated a rapid shift in present practise of T&L and the use of technology. As a result, many students struggle to adjust to the changes and fall behind. This is because, during online T&L, some students face a variety of obstacles that make it difficult for them to focus on the learning session. A targeted support approach was employed in this study to help students comprehend and improve their knowledge and understanding. This strategy is carried out through a special session or workshop that focuses on a topic which requires in-depth discussion. In this study, the topic that has been identified is related to research methodology. Thus, four workshops have been organized including literature review, qualitative data analysis 1, qualitative data analysis 2, and quantitative data analysis. Each workshop is handled by a knowledgeable and experienced instructor. Students’ reflection shows that the approach has improved their knowledge and given them more confidence in applying what they've learned in their research work. Furthermore, the analysis of the supervisor's evaluation reveals that the students' performance has improved when compared to the previous semester.

Keywords: Teaching and learning, Blended Learning, Online learning, Targeted support learning

Introduction

Since the declaration of Covid-19 as a significant treat for the country, teaching and learning (T&L) has shifted from face-to-face to online T&L. There is no doubt that many instructors have used online T&L or e-learning as part of a blended learning approach (Yamin & Ishak, 2017), but having 100% online T&L is a great challenge for all educators (Dhawan, 2020).

Many people are resistant to the adjustments, but they must embrace them in order to lower the disease's risk. Since then, T&L practises have required a significant deal of work and refinement. Instructors for example, must redeveloped the course content, reconfigure delivery and consultation methods, establish new evaluation methods, and improve their software and hardware capabilities. As demonstrated by Özüdoğru (2021) and Izhar et al (2021), instructors are having various problems during pandemic which include class preparation, communication, and technical issues such includes hardware and internet connectivity.

Students, on the other hand, must prepare for their classes by ensuring that their software and hardware are adequate for the online session as well as having good internet
connectivity (Mahyob, 2020). Above all, both the instructor and the student must psychologically prepare for the upcoming adjustments. Some students have fallen behind in their studies as a result of the failure to prepare and adapt to the changes, while T&L continues to fall short of the course objectives.

A study by Mahyob (2020) demonstrated that even if students are eventually able to overcome technological obstacles during the pandemic, their learning performance is still impacted. During normal face-to-face T&L, students can be closely monitored. Students who are encountering difficulties in their learning can be contacted for a face-to-face meeting to identify their issues. As a result, students can receive appropriate assistance and support. However, because students were not attending regular face-to-face sessions, many tasks that required face-to-face interaction, such as individual or group consultation and monitoring, were not possible.

In this paper, an approach called targeted support is proposed to assist students overcome their problem in online T&L. In this study, the T&L is handled completely online through lecture and discussion. However, the topics that required further discussion will be identified for special discussion session.

Background of the study

This research was carried out on a group of students enrolled in the BJTP3093 Final Year Project at the School of Technology Management and Logistics (STML). Students in this course are required to conduct a study independently under the supervision of a lecturer. At the end of the study, students are required to write a comprehensive report on their research.

The course instructor will also keep track of all students' progress. The course instructor will convene a group meeting on a regular basis to discuss progress and provide assistance at each level of the research process (Figure 1). During the meeting, the instructor notices that several students are having trouble understanding certain topics that they were supposed to have learned in previous related courses.

One of the topics is research methodology. According to the students, during research methodology class, they have no problem in understanding the concepts. However, they become stuck when it comes to applying what they have learnt in the final year project. The following are some of the students’ grievances:

Student 1: “I don't know if my project is on the right track or not”
Student 2: “I'm still stuck, I'm worried I won't be able to finish my project”
Student 3: “I am still confused with my project research method”
Due to these problems, many students are not progressing well. The supervisors did their utmost to help the students, but the students' progress was still below expectations. If this issue is not quickly resolved, it will have a significant influence on student performance and grades. This is because research methodology is related to problem solving and data analysis. Failure to relate the problem to the appropriate method will have a significant impact on the research direction and data collection. Furthermore, the data analysis cannot be conducted properly. Consequently, students will not be able to write a proper report. Course evaluation for the final project is shown in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Components</th>
<th>Marks (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Final report</td>
<td>50%</td>
</tr>
<tr>
<td>2) Problem solving</td>
<td>10%</td>
</tr>
<tr>
<td>3) Consultation</td>
<td>10%</td>
</tr>
<tr>
<td>4) Class activity</td>
<td>20%</td>
</tr>
<tr>
<td>5) Proposal</td>
<td>10%</td>
</tr>
</tbody>
</table>

Method

In accordance to the students' problems, the instructor must take the appropriate approach to ensure that the students can relate and apply what they've learned to the project. Since students are having problem on certain topics only, covering all topics will not be an effective solution. Therefore to overcome this issue, the targeted support approach is applied.

The goal of the targeted support approach is to concentrate T&L on the specific topic where students are having difficulties. Students will be given extensive support and guidance so that they may learn and apply their knowledge appropriately. This approach has been recommended to be applied as an intervention for the low-performing students by Johns Hopkins Institute for Education Policy (2017). Furthermore, a study by Austin et al (2013) has shown that providing targeted support to students might help them enhance their academic performance.

In this study, the targeted support approach is applied as following:
1) topics which student having difficulties are identified
2) a special session is planned and organized
3) at the end of the course, students were asked to write a reflection on their learning experience
4) supervisors were asked to evaluate the overall performance of their students.

The literature review and data analysis were highlighted as two major topics that require extra guidance during the first class meeting. Data analysis is one of the important components of the research methodology. These topics were further subdivided into four workshops or special sessions. All workshops were handled by an expert with extensive knowledge and expertise in the field. All of the sessions were held on an online platform. The sessions are:
1) Literature review for beginner
2) Qualitative data analysis 1
3) Qualitative data analysis 2
4) Quantitative data analysis
Implementation

The first workshop, "Literature Review for Beginners," was held in the second week of class (Figure 2). Following the workshop, the instructor led a discussion session by re-linking or remapping notes, references, and previous class lessons. The following are students’ feedback after the workshop:

Student 1: "When I attended the workshop, it was easy for me to understand, because I had heard the terms of the class with FMY"

Students 2: "I like to attend workshops like this to improve my knowledge"

Two workshops on qualitative data analysis were held in order to provide students with a more in-depth understanding (Figure 3 and Figure 4). This is due to the demand from the students and difficulty of applying qualitative data analysis approach in their research.
Workshops on quantitative data analysis were organized after that. The focus is on students who study using a quantitative method. The following are students feedback after the workshop;

Student 1: "I want to ask for a slide from the facilitator, Dr… because I want to follow step by step shown"

Student 2: "I feel clearer after attending this workshop"

(a) Discussion Session
(b) Hands on Session

Figure 5. Workshop on quantitative data analysis

Students Reflection and Findings

After going through 14 weeks of learning session, students were asked to write a reflection on their learning experience. The following are some of the reflections written by the students:

Student 1: “…we often refer back to what we have been taught by lecturer Dr. Fadilah Binti Mat Yamin. We refer back to our notes while in class as a guide for information. Besides that, we also surf the internet to find out more about data analysis and how to handle it. Not only that, we also ask our friends…”

Student 2: “…first time using SPSS. But, finally I can complete the task…”

Student 3: “Selepas mendapat penerangan dari Dr. Fadhilah dan workshop baru kami faham sedikit kehendak analisis projek yang dicampur dengan maklumat tambahan dari rakan-rakan yang lain”

Student 4: “…aktiviti atau latihan diselesaikan secara bersama-sama. Kami tidak segan silu bertanya kepada rakan-rakan mahupun Dr FMY…”

Student 5: “…Mulanya kami kurang faham itu teknik kuantitatif dan kualitatif. Namun, kami belajar daripada youtube serta sesi Q &A workshop yang telah diadakan…”

Student 6: “…getting better understanding in this subject when you give a few brainstorming related to our project…”

Student 7: “We gain new knowledge from this course. For me, this course help me a lot for my future career…”

Student 8: “…I faced some difficulties… but I take it positively as new knowledge and new experience…”

Student 9: “…we found this project is hard to accomplish as we need to have a good skill in research method, SPSS and need to think outside the box …finally we have gained some skill in handling our FYP and can see the importance of FYP project in daily life.”
Along with the reflection, the supervisor's assessment of the students' problem-solving abilities is examined. Students were evaluated in terms of their abilities to perform problem identification, analysis, application, synthesis & evaluation, and decision making as part of the supervisor evaluation components (Figure 7). The students' scores were compared to the scores of students from the previous semester.

Table 2 compares the current semester's A202 students' achievement to the previous semester's A201 students' achievement. As shown in Table 2, 75 percent of semester A202 students had a score of 15-20, while 25 percent received a score of 10-14. When compared to the students' achievement in semester A201, the percentage shows an improvement. Most crucially, in semester A202, no student received a score of less than 10 compared to 5% of students in semester A201. As a result, it can be conclude that the targeted support approach improves students' performance.

<table>
<thead>
<tr>
<th>Score</th>
<th>A201</th>
<th>A202</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
<td>72%</td>
<td>75%</td>
</tr>
<tr>
<td>10-14</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>&lt;10</td>
<td>5%</td>
<td>0%</td>
</tr>
</tbody>
</table>
**Conclusions**

A targeted support approach has been proved to improve students' ability to follow and comprehend a course. This is because the workshop allows students to connect with the facilitator and dig deeper into the topic. Moreover, a student-centered method, from the
lecturer's perspective, necessitates substantial preparation, particularly in terms of knowledge, skills, and creativity. To ensure that the students can actively participate in the workshop, students should, for example, prepare and comprehend their project well.

The targeted support approach will be implemented with a new group of students next semester. The experience gains from implementing this approach in semester A202 will be utilized to enhance its implementation in a new semester. New topics that are related to student technical skills such as preparing, organizing and formatting the documents can be considered as many students still struggle to prepare well-formatted documents for their studies.

Other approaches, such as an experimental approach, can also be used to compare the impact of the new teaching methodology to the traditional method. Furthermore, the study should be expanded to include different student groups in order to have a greater grasp of the range of abilities and knowledge among students.

Acknowledgement

The authors wish to thank the Universiti Teaching and Learning Center (UTLC), Universiti Utara Malaysia for funding this study under IAP SOTL Module.

References


