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PAPER

Exploring the Impacts of Implementing Block Mode of Teaching in Higher Education

Nguyen Thi Thao Trinh¹, Amir Hossein Ghapanchi¹,²(⊠), Afrooz Purarjomandlangrudi³

¹College of Sport, Health and Engineering, Victoria University, Melbourne, Australia

²The Institute for Sustainable Industries and Liveable Cities, Victoria University, Melbourne, Australia

³College of Arts, Business, Law, Education and IT, Victoria University, Melbourne, Australia

amir.ghapanchi@vu.edu.au

ABSTRACT

The tertiary sector is one of the most competitive industries that makes significant contributions to countries' economies. Due to rapid changes in society, universities are urged to make suitable changes to attract students. One of the innovations some universities have adopted is changing their teaching mode to facilitate the learning process and attract students who find it more suitable for their learning style. The block model of teaching (BMT), a relatively new teaching mode in the higher education industry, has demonstrated great potential for increasing students' performance. This study employs a case study method and collects data from five institutes that have implemented BMT, namely: Salford University, Colorado College, Heriot-Watt University, Victoria University, and Quest University. The thematic analysis of the collected data has led to the proposal of a taxonomy comprising 14 positive impacts and seven negative impacts of implementing BMT, grouped into eight categories. Implications of the findings for studies and practitioners are also provided herein.

KEYWORDS

block model of teaching (BMT), intensive mode of delivery, accelerated teaching mode, impacts, outcomes, consequences

1 INTRODUCTION

The block model of teaching (BMT) is defined by Cawelti [1] as a teaching method that delivers the daily schedule or the daily amount of schooling in larger blocks of time. According to Murray, Barkat, & Pearlman [2], BMT can offer various benefits to students, making it an appealing teaching approach for universities. Cawelti [1] asserts that this method has been widely applied in secondary and high schools. This is because it provides high school students with more flexibility, allowing them to receive ample instructions from teachers to support their learning. Although the BMT is not a new concept for secondary or high school educators, its implementation

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at the tertiary education level is still limited. Furthermore, the reasons why some universities incorporate this teaching model into their programs are not fully understood. Studies on the impacts of BMT implementation in the higher education sector are very limited.

The study of the consequences of implementing BMT in the tertiary sector is quite limited. Some researchers have reported positive outcomes from BMT implementation. For example, Tatum [3] found that students who attended BMT classes tend to have better learning outcomes. Karjanto and Yong [4] discovered that BMT provides students and teachers with the opportunity to build relationships and allows teachers to closely monitor students' progress. On the other hand, some studies have reported negative outcomes for BMT. For instance, Patel [5] found that BMT implementation does not enable academics to achieve their desired teaching goals. Furthermore, Harkin [6] found that BMT implementation not only makes it difficult to interpret student and tutor behaviors but also to anticipate new demands and pressures placed on students and tutors. Due to the current gap in the literature, this study aims to investigate the impacts of BMT implementation on universities through multiple case studies. The study will explore various aspects such as students' performance, level of satisfaction, teacher support, and challenges that staff may encounter. Additionally, the study aims to provide insights for universities interested in adopting this teaching approach and for learners considering enrolling in BMT universities. The study question underlying this paper is:

RQ: What are the impacts of BMT projects on universities after implementation?

There is a gap in the literature regarding studies that offer a relatively comprehensive taxonomy of both positive and negative consequences that BMT can bring to universities. Therefore, by conducting this study, the authors aim to propose a comprehensive taxonomy for both the positive and negative impacts of implementing BMT in universities.

The rest of the paper is as follows: after this introductory section, a literature review will be presented, followed by a discussion of study methodology. Finally, the analysis and study findings will be presented, followed by a discussion of the findings and concluding remarks.

2 LITERATURE REVIEW

According to Davies [7], the BMT refers to subjects offered over a shorter period but more frequently and with longer hours. Although BMT has been implemented in several universities, the debate about what BMT truly offers has always been a concern. According to Tatum [3], students who attended BMT classes tend to have better learning outcomes. However, there are some limitations to these findings, such as memory retention, long-term outcomes, and course withdrawals. Since BMT courses are often brief, it is challenging for universities to gather sufficient information to compare with the traditional teaching mode. However, Burton & Nesbit [8] suggest that students who have chosen BMT or who have become familiar with BMT over time tend to perform better compared to students who have been studying in traditional classes.

Although there is very limited information regarding the implementation of BMT at universities, it is essential to learn from available study publications to gain a better understanding of BMT implementation projects and their impacts at various educational levels.

The study of the consequences of implementing BMT is quite limited. Among these studies, Karjanto and Yong [4] conducted a study at the University of Nottingham Malaysia Campus regarding the pros and cons of BMT for delivering mathematics modules to engineering students. They found that although BMT provides students and teachers with the opportunity to build their relationship and allows teachers to monitor students' progress closely, some students find it challenging to adapt. Lu and Wu [9] investigated an integrated evaluation approach to teaching and learning. The two researchers compared the traditional teaching mode with the new teaching approach that combines teaching and learning activities in BMT, enhancing learning activities and opportunities to interact with teachers. The results showed that students can acquire knowledge more effectively in the latter approach, where lessons are learned through open discussions, interactions with teachers, and numerous practices in the class.

Some other researchers collected data regarding the BMT implementation at Victoria University in the first-year college [10]. After analysing the data, they found that BMT implementation has positive impacts on students' learning outcomes. Some of these impacts include an increase in grades and the level of student engagement. Following the study of [10] on the BMT implementation project at Victoria University in the first-year college, Semerawickrema and Cleary [11] continued the study to evaluate the impacts of the project in the second year. The studies discovered that pass rates increased significantly, especially among students from non-English-speaking countries and those with low socio-economic status.

[12] investigated the impacts of BMT implementation on science subjects at the tertiary level. The study findings suggested that universities should only implement BMT on a subject-by-subject basis, as the block model is not suitable for all subjects. Patel [5] conducted a study on the post-implementation of BMT at Manchester Metropolitan University, where lecturers were invited to contribute their opinions regarding the impacts of the project. The study found that BMT implementation cannot provide academics with the opportunity to fulfill their desired teaching goals. Harkin [6], a lecturer in the Department of Psychology at Manchester Metropolitan University, investigated the impacts of the online block teaching model using Lefebvre's Trialectic of Space. Despite the fact that BMT implementation seems to allow universities to operate safely, it is not only difficult to interpret student and tutor behaviors but also challenging to foresee new demands and pressures that students and tutors are placed under.

Lostroh [13] provided more insights regarding BMT implementation at Colorado College. Their study found that although there are some concerns that block courses (usually taught in 3.5 weeks) cannot be delivered substantively, there are two strategies that can have positive impacts on students' deep learning. These strategies involve focusing on one area or delving deep conceptually and taking students off-campus to gain more practical knowledge. Additionally, peer-to-peer interactions are crucial to enhancing the effectiveness of BMT. However, there are still debates about whether BMT courses truly facilitate real learning or merely create an illusion. The table below summarizes the previous studies.

 $Table\,1\,summarizes\,what\,past\,studies\,have\,found\,on\,the\,topic\,of\,BMT\,consequences.$

Table 1. Overview of the relevant research studies

Author (Name, Year)	Key Findings
Karjanto & Yong (2018) [4]	Provided the pros and cons of block teaching model for delivering mathematics modules to engineering students.
Lu & Wu (2018) [9]	Compared the traditional teaching mode and the new teaching approach where there is a combination of teaching and learning activities in BMT
McCluskey Weldon & Smallridge (2019) [10]	BMT implementation at Victoria University in the first-year college.
Semerawickrema & Cleary (2021) [11]	BMT implementation at Victoria University in the second-year.
Harvey, Power & Wilson (2017) [12]	The impacts of BMT implementation were studied on science subjects in tertiary level.
Patel (2021) [5]	A post-implementation study of BMT at Manchester Metropolitan University.
Harkin (2021) [6]	Investigated the impacts of online block teaching model by using Lefebvre's Trialectic of Space.
Lostroh (2007) [13]	Studied BMT implementation at Colorado Collage.

3 METHODOLOGY

This study employs an interpretivism research paradigm. This research paradigm posits the belief that study questions can be answered based on human experience and social reality. It utilizes a qualitative research approach. According to [14], a qualitative research approach is a qualitative inquiry that uses data as instruments to interpret and uncover underlying or hidden meanings. Humans are frequently at the core of qualitative research activities because qualitative research is commonly conducted to observe, interview, and analyze specific factors influencing human behaviors.

3.1 Research method and data collection

The study method applied in this study is a multiple-case study, which is an appropriate study approach to generate an in-depth, contextual, multi-faceted understanding of a complex real-world subject or issue. A case study enables the researcher to explore the key meanings, implications, and characteristics of the case by focusing on one case in depth or multiple cases to make comparisons in various aspects of the study question [15]. Different studies have defined case studies differently. For example, Stake [16] believes "A case study is both the process of learning about the case and the product of our learning" (p. 237). Miles and Huberman [17] describe it as "a phenomenon of some sort occurring in a bounded context" (p. 25), while Green and Thorogood [18] define it as an "In-depth study undertaken of one particular 'case', which could be a site, individual, or policy" (p. 284). However, the main concept is to conduct an in-depth investigation of an event or phenomenon and its impacts on the surrounding environment. Table 2 shows the results of the last step of data collection and the cases that have been targeted and studied.

As mentioned, this study employed the case study research method by studying five universities and higher education institutes that have already adopted BMT. These cases include Salford University, Colorado College, Heriot-Watt University, Victoria University, and Quest University. The data collected was secondary data from various verified, reliable, and valid sources such as university websites, higher education magazines, newspapers, non-profit media, university student blogs, academic publications, educational forums, higher education conferences, educational discussion groups, and so on. Table 2 briefly introduces these five cases. Each of the five cases is explained after Table 2.

Case Name Country The Highlight of the Case Victoria University Australia VU has completely restructured its teaching style to BMT and the students need to complete subjects in 'blocks' of 4 weeks for undergraduate and 8 weeks for postgraduate. The undergraduate model involves studying one unit at a time, where the postgraduate involves studying 2 units at a time. IJK The school offers block teaching and learning by six weeks intensive Salford University programme which focuses on one subject only. There are also exceptions. Colorado College US Students on the Block Plan take their subjects in three and a half weeks blocks, followed by a 4-day block break. UK Heriot-Watt They offer block teaching which is spread over a period of 6 weeks or less. University Quest University Canada They offer blocks of one month for each subject and it usually

Table 2. Cases studied in this study

Victoria University (VU), an Australian university, has completely restructured its teaching style by switching all its units to the BMT. Undergraduate and first-year college students are required to complete subjects in 'blocks' of four weeks, while postgraduate students have eight-week blocks. Results indicate that the block model has already delivered significant improvements for the university. VU has reported an overall increase in pass rate following the implementation of BMT. A notable impact on various student groups, such as those with non-English-speaking backgrounds, Indigenous students, and those from lower socio-economic backgrounds, has been reported by Loton [19].

each class is of three hours duration.

begins on a Monday and ends on the Wednesday of the fourth week,

Salford University applied BMT in a modular framework for various programs such as business and nursing. Each module is a self-contained block of learning and is designated at different levels: Level 3 (foundation level), Level 4 (certificate level), Level 5 (diploma level), Level 6 (degree level), and Level 7 (postgraduate level). In each block, students study one subject at a time in a six-week intensive program. They are assessed by two assignments, one after week 3 and one after week 6.

In Colorado College, students on the Block Plan take their subjects in three-and-a-half-week blocks, followed by a four-day block break. Currently, Colorado College offers 11 blocks. During the COVID-19 pandemic, the block model allowed the college to adopt a phased approach to bringing students back to campus. Colorado College is finding the ability to adapt and react rapidly as one of the benefits of adopting the block model of teaching.

In the BMT model adopted by Heriot-Watt University, classes are spread over a period of six weeks or less. The subject design is structured to provide students with 150 hours of learning for each subject. This model at Heriot-Watt University incorporates problem-based learning (PBL) sessions for each subject, giving students the opportunity to reflect on their learning.

At Quest University, a Canadian institution, students enrol in month-long blocks for each subject. These blocks typically start on Monday and conclude on Wednesday of the fourth week, with each class lasting three hours. Unlike traditional universities, at Quest University, students focus on one subject at a time. This unique approach allows students to collaborate around the clock and engage in self-directed projects within the framework of discipline-specific and interdisciplinary blocks.

3.2 Data analysis

This study utilized the thematic analysis method to analyze the data. Braun and Clarke [20] define thematic analysis as a method for identifying, analyzing, and reporting patterns within the collected data to extract relevant information. Various studies have employed different steps for thematic analysis. Consistent with prior studies [20], [21], and [20], this study followed the four key steps outlined below for data analysis:

Step 1: The initial step involves reading and re-reading the gathered data multiple times to help students become acquainted with the dataset. Once researchers are familiar with the collected data, they can acquire a more profound understanding of the BMT and fully comprehend the data.

Step 2: The second step involves coding or identifying the codes according to features or the information that the data carries.

Step 3: Step three involves examining the collected data along with the generated codes. Researchers should dedicate time to reviewing data codes repeatedly and consider whether certain codes may offer information related to a specific aspect of the project or fall under the same category. This particular aspect can be identified as a theme or pattern of information.

Step 4: The fourth step is to evaluate and outline the themes. A theme is a pattern that captures something important about the data or study question.

4 RESULTS

This section demonstrates all the findings of this study. The findings are responses to the study question and help understand the impacts of BMT implementation in the tertiary sector. Figure 1 presents the taxonomy, which has been created as a result of analyzing data collected through thematic analysis. This taxonomy shows the 21 impacts of BMT adoption (including 14 positive impacts and 7 negative impacts) grouped into eight categories. The impacts in yellow font in Figure 1 show the negative impacts, and those in white font are the positive impacts. Following Figure 1, each category and the underlying impacts in each category are explained.

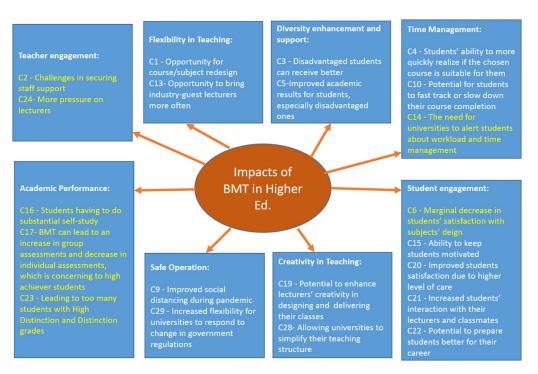


Fig. 1. Taxonomy of findings

4.1 Flexibility in teaching

The category 'flexibility in teaching' refers to any impacts that result in an increase or decrease in universities' flexibility in delivering their classes. This category has two underlying positive impacts of the Block model of teaching.

C1 – Opportunity for course/subject redesign. The BMT has the potential to provide universities with the opportunity to redesign courses and subjects to align with students' demands, ultimately leading to greater student retention. According to Ross (2018), universities are increasingly interested in modifying the way they deliver education to better suit students' preferred learning methods. Given that students may have diverse backgrounds and require additional support in learning, or may prefer shorter courses to accommodate work responsibilities, adapting classes to fit their needs appears to be a strategy for educational institutions to attract more student enrolment.

C13 – Opportunity to bring industry-guest lecturers more often. The BMT implementation projects allow universities to bring guest lecturers more frequently, including alumni who can share their work experiences and lessons with current students. According to [22], Salford Business School has implemented a program called the MBA Guest Leadership Speaker Series, which they have considered a module in the block class. In this module, students have the opportunity to interact with guest speakers, who are also Salford Business School alumni, and these speakers can share their knowledge and work experiences.

4.2 Teacher engagement

This category is used to describe any impacts the BMT implementation has on university staff. There are two negative impacts associated with this category.

C2 – **Challenges in securing staff support.** Block model of teaching has presented challenges for universities in obtaining staff support, as it is difficult to persuade staff to adopt and commit to a new teaching approach. An interview conducted by [23], titled 'Block teaching model ripe for copycats', highlighted that convincing employees to embrace and test the new teaching model after its implementation is challenging. Consequently, universities continue to encounter difficulties in securing support after implementing it, even after the Block model of teaching.

C24 – More pressure on lecturers. The BMT can lead to lecturers feeling more pressured as they have to finish all the markings and submit final results in a shorter timeframe. In a discussion under Dodd's article titled "Block teaching comes of age at Victoria University" [24], some people believed the amount of pressure the BMT projects put on teachers was tremendous. This is because teachers are required to not only redesign the classes but also take on longer classes and finish all the marking within a shorter period compared to traditional teaching methods. As the amount of work increases significantly, many teachers are forced to simplify the lesson content and assessments, which could be the reason why students' academic results increase significantly.

4.3 Diversity enhancement and support

This category pertains to the impacts of BMT implementation on disadvantaged students. It encompasses two positive impacts of the Block model of teaching.

C3 – **Disadvantaged students can receive better support.** The BMT has the potential to help students who have disadvantages in learning ability, are low performers, or have modest financial backgrounds, as they have a better chance of getting their questions answered in class.

The implementation of BMT at universities has had many positive impacts on students, especially first-in-family students, who are defined by O'Shea et al. [25] as the first persons in their immediate families of origin to attend an institution at the tertiary level. In an article written by Ross [23], Professor Dawkins states that the implementation of BMT projects brings many positive impacts on first-in-family students, who also represent a large group of students at Victoria Universities. As these students often face disadvantages in language, economics, or physical abilities, BMT allows the university to redesign the subjects to meet their needs, provide more opportunities for them to have their questions answered in class, and offer additional assistance and time to help them understand the learning concepts in class.

C5 – Improved academic results for students, especially disadvantaged ones. The BMT can generally lead to improved academic results for students who have economic or learning disadvantages. According to [26], students with a business background seem to enjoy greater positive impacts from the projects, while students from the arts and education disciplines seem to be less impacted. Although the reasons are not identified, they may be due to the nature of their disciplines or depending on their departments. Nevertheless, the overall level of satisfaction among this group of students increases.

4.4 Time management

The theme is the staff's ability to manage their time effectively in BMT. This category has three underlying impacts: two positive impacts and one negative.

C4 – **Students' ability to more quickly realize if the chosen course is suitable for them.** The BMT allows students to determine if their chosen area of study is suitable for them in a shorter period of time compared to the conventional model. This enables students to switch to another study area without wasting excessive time and money. When universities implement the BMT, it helps students ascertain if the chosen discipline is a good fit for them in a shorter time frame, as they dedicate a significant amount of time to learning and practicing in classes [23]. Consequently, students can transition to a more suitable discipline, saving time and money before it becomes too late.

C10 – Potential for students to fast track or slow down their course completion. The BMT has the potential to empower students who wish to take full control of the pace at which they complete their studies and how they manage their work-life balance.

According to [22], students studying in BMT can choose to complete their course faster or more slowly, depending on how they want to manage their life events or personal circumstances. While full-time students usually take two subjects per block, part-time students can take one subject and work part-time. In some situations, when students have life events that require their full attendance, they can simply skip one block and return to school the following block.

C14 – The need for universities to alert students about workload and time management. With BMT implementation, universities need to alert students about the workload required to complete assessments on time. According to James Cook University Australia [27], universities adopting BMT must warn students about the work required and meet assessment deadlines.

4.5 Student engagement

This category is used to describe the impacts of BMT implementation on student engagement. It includes five underlying impacts, four positives, and one negative.

C6 – Marginal decrease in students' satisfaction with subjects deign. While students' academic performance can generally improve by studying through BTM, they may experience a slight decrease in satisfaction with the design of subjects and a slight increase in satisfaction with their lecturers. According to [26], the impact of projects on students' performance across different disciplines is unclear, but students are believed to be slightly more content with their lecturers. However, their attitudes towards the design of their block units differ, as they do not provide much positive feedback regarding the design of these units.

C15 – Ability to keep students motivated. The BTM can help keep students motivated and interested in learning. According to Roseman University [28], students feel more motivated studying in BMT, as it allows them to focus on one unit at a time and understand the content completely before moving to a higher level of knowledge. In addition, all students are required to participate fully and contribute to class discussions. Therefore, their level of interest is also significantly increased while their knowledge is deepened.

C20 – Improved students' satisfaction due to higher level of care. The BTM can lead to higher satisfaction among certain groups of students due to the increased level of care and support provided to them. According to Curtin University [29], the implementation of BMT helped the university focus on their segmented group of students. Curtin University has a program called the Centre for Aboriginal Studies (CAS) that caters to students from Aboriginal communities. The implementation of BMT projects has enabled them to provide extra care to their students by redesigning the subjects to meet these students' needs and schedules.

C21 - Increased students' interaction with their lecturers and classmates.

As a result of the BMT implementation, the size of classes has been reduced, allowing students to have more opportunities to interact with their lecturers and classmates. According to [30], BMT requires universities to reduce their class size as classes will be held more regularly, for longer hours, but within a shorter period. As students spend more time with each other and with their teachers, they have more opportunities to interact and discuss, which can help them build long-term relationships. This benefits students when they enter the workforce, as they already have connections in the field.

C22 – **Potential to prepare students better for their career.** The BTM has the potential to better prepare students for their careers. According to [30], BMT is believed to better prepare students for the job market as the length of the learning course is reduced.

4.6 Creativity in teaching

This category discusses how the implementation of BMT has influenced universities' creativity in delivering classes. There are two positive impacts associated with this category-block model of teaching.

C28 – Allowing universities to simplify their teaching structure. The BTM implementation projects have enabled universities to simplify their teaching structure, fostering creativity in learning and embracing students' potential rather than adhering to traditional academic measurement methods. According to Laville [31], after implementation, BMT has empowered teachers to embrace students' potential in learning by adopting more creative teaching approaches. Teachers can introduce various changes to the learning content within the required development principles, enabling them to emphasize students and devise more innovative methods to promote student learning. Consequently, new teaching approaches are being explored, leading to a significant enhancement in students' creativity.

C19 – Potential to enhance lecturers' creativity in designing and delivering their classes. The BTM has the potential to enhance lecturers' creativity in designing and delivering their classes and exploring different ways to improve student learning. According to Laville [31], after implementing BMT, teachers are impressed with the opportunities to be more creative and motivated, particularly in taking proactive steps to explore more creative teaching approaches.

4.7 Safe operation

This category is used to describe any impacts that BMT implementation has on universities' ability to operate safely and in accordance with government regulations. This category encompasses two positive impacts of the block model of teaching.

C9 – Improved social distancing during pandemic. The BTM has provided universities with the opportunity to continue operating safely during the pandemic by enabling them to eliminate large classes and reduce interaction between students. As noted by Nadworny [32], this is possible because class sizes can be reduced, teachers can opt to move classes online, or half of the learning is conducted online while the other half takes place on campus. Since students typically focus on one subject at a time, the ability to reduce interaction and trace COVID cases has been proven effective.

C29 – Increased flexibility for universities to respond to change in government regulations. The BTM can give universities more flexibility in responding to changes in government regulations, especially during pandemics, enabling them to continue their operations safely. As indicated by Manchester Metropolitan University [33] and the university teaching academy department [34], BMT allows universities to offer students "one unit at a time" to plan and act more swiftly.

4.8 Academic performance

This category is used to describe any impacts that BMT has on students' academic performance. This category encompasses three negative impacts.

C16 – Students having to do substantial amount of self-study. With BMT, students often must do a substantial amount of private study in their subjects to be able to fully understand everything. According to some nursing students who joined the forum discussion regarding the BMT on University Reviews [35], there are many flaws in the teaching materials that were simplified by their teachers as a result of BMT delivery. These students believed the knowledge they were taught in some blocked classes was not complete and not fully accurate and that they had to do a significant amount of self-directed learning.

C17 – BMT can lead to an increase in group assessments and decrease in individual assessments, which is concerning to high achiever students. The BMT can lead to an increase in the number of group assignments and a decrease in the number of individual assignments, which can, in turn, lead to an increase in high-achieving students' concerns as their grades now depend on other students who may not be learning at the same level as them. In the discussion forum under university review [35], when transitioning to BMT, teachers are compelled to simplify the learning content, reduce individual assignments, and increase the number of group projects. Consequently, some high-achieving students may struggle when assigned to a group where all the group members are not performing at the same level as them. As a result, these students tend to feel frustrated when they must either do more group work for the team or accept lower grades.

C23 – **Leading to too many students with high distinction and distinction grades.** The BMT can result in an increase in the number of students achieving high distinction grades. According to Marc, in the discussion group of the university review [35], students enrolled in BMT tend to achieve higher scores. The transition to BMT has led to a significant rise in the number of students passing the block course with high distinction. This can be attributed to simplified assessments and the introduction of more quizzes when adopting the block model of teaching.

5 DISCUSSIONS AND RESEARCH CONTRIBUTION

This paper aimed to uncover the positive and negative impacts of implementing BMT in the tertiary sector. Educational studies can benefit from this study by learning from its findings. They can gain more knowledge about the impacts that BMT implementation can have on universities. Studies can then consider our findings, compare them to their own study findings, and conduct further studies to explore different aspects of BMT implementation. Table 3 illustrates this study's contribution by showing which impacts confirm previous studies' findings and which impacts are new to the best of our knowledge.

Table 3. Research contribution

2442-01.0004-01.0014-244-01.		
Impact Number	Newly Found (NF) OR Confirming Existing Literature	
1	NF	
2	NF	
3	[36], [37], [38]	
4	NF	
5	NF	
6	NF	
9	NF	
10	[39]	
13	NF	
14	NF	
15	[40], [37, 41]	
16	NF	
17	NF	
19	NF	
20	[37]	
21	NF	
22	NF	
23	[37]	
24	NF	
28	NF	
29	NF	

This study can bring enormous benefits to various groups of practitioners, including universities or educational providers, governments, students who are preparing to enter universities and colleges, and their parents. The study can benefit three categories of educational providers at different levels: universities or colleges that have already adopted BMT, those that are considering implementing BMT, and those that do not have a plan to adopt BMT but are interested in learning about it as an alternative.

As for the first group, universities and colleges that have already adopted BMT, this paper provides them with a relatively comprehensive taxonomy of the various positive and negative consequences of BMT implementation. It potentially communicates with them, makes them aware of some possible challenges that implementing BMT can bring about, and allows them to work on them. Since this study paper has collected a wide range of data, for example, from many discussion forums where students and staff are more willing to express their opinions, the findings from this paper can potentially provide these universities with insights they have not already been aware of. The taxonomy proposed herein also allows such institutes to examine their BMT implementation against the positive and negative impacts found to see how they have fared with the block model of teaching.

As for the second group, universities and colleges that already have plans to implement BMT, this paper provides them with an overview of the consequences they can expect from implementing BMT in their environment. This will help them leverage their resources to attain maximum benefits and minimize potential negative consequences.

As for the third group, universities and colleges that do not have a plan to adopt BMT but are interested in learning about BMT as an alternative, the taxonomy provided here can offer insights into the potential positive and negative outcomes that adopting BMT can bring. This will help them identify areas for improvement and anticipate challenges they may face if they choose to adopt the block model of teaching.

The taxonomy provided here can also inform government departments of education about policy-making for the tertiary sector. By considering our findings, governments can review their rules and regulations to assist universities in adopting teaching methods that best suit students.

Students who are about to enter colleges or universities, as well as their parents, are another group that can benefit from these study findings. By examining the impacts of studying in BMT on current students, these individuals can assess whether block courses align with their learning preferences before making a decision about which universities to attend. Parents can also utilize our findings to gain insights and engage in discussions with their children about the different universities they can select from.

6 CONCLUDING REMARKS

Block mode of teaching is a condensed teaching approach that enables universities to streamline the learning process and appeal to students who prefer this style of learning. BMT has shown significant potential for enhancing students' academic performance. This study utilized a multiple case study method, examining five higher education institutions from four different countries that have integrated BMT: Salford University, Colorado College, Heriot-Watt University, Victoria University, and Quest University. The thematic analysis of the gathered data resulted in the development of a taxonomy outlining 14 positive impacts and seven negative impacts of BMT implementation, categorized into 8 groups. The findings are valuable for various stakeholders, particularly universities, as they complement the adoption of the block model of teaching.

7 REFERENCES

- [1] G. Cawelti, "High school restructuring: What are the critical elements?" *NASSP Bulletin*, vol. 79, no. 569, pp. 1–15, 1995. https://doi.org/10.1177/019263659507956902
- [2] T. Murray, I. Barkat, K. Pearlman, and L. Robinson, "Intensive mode screen production: An Australian case study in designing university learning and teaching to mirror 'real-world' creative production processes," *Media Practice and Education*, vol. 21, no. 1, pp. 18–31, 2020. https://doi.org/10.1080/25741136.2019.1644842
- [3] B. C. Tatum, "Accelerated education: Learning on the fast track," *Journal of Research in Innovative Teaching*, vol. 3, no. 1, pp. 35–51, 2010.
- [4] N. Karjanto and S. T. Yong, "Some pros and cons of implementing parallel and block teachings for mathematics modules," *arXiv preprint arXiv:1810.07365*, 2018.

- [5] H. Patel, "Decolonising the curriculum within a block teaching structure: A beginning," *Learning and Teaching in Action [Special issue]*, vol. 14, no. 1, pp. 9–17, 2021.
- [6] B. Harkin, "Academic readiness and collaborative communities in online block teaching: A Lefebvrian case study," *Learning and Teaching in Action*, vol. 14, pp. 1–8, 2021.
- [7] W. M. Davies, "Intensive teaching formats: A review," *Issues in Educational Research*, vol. 16, no. 1, pp. 1–20, 2006.
- [8] S. Burton and P. L. Nesbit, "Block or traditional? An analysis of student choice of teaching format," *Journal of Management & Organization*, vol. 14, no. 1, pp. 4–19, 2008. https://doi.org/10.5172/jmo.2008.14.1.4
- [9] Y.-L. Lu and C.-W. Wu, "An integrated evaluation model of teaching and learning," *Journal of University Teaching & Learning Practice*, vol. 15, no. 3, p. 8, 2018. https://doi.org/10.53761/1.15.3.8
- [10] T. McCluskey, J. Weldon, and A. Smallridge, "Re-building the first year experience, one block at a time," *Student Success*, vol. 10, no. 1, pp. 1–15, 2019. https://doi.org/10.5204/ssj.v10i1.1148
- [11] G. C. Semerawickrema, "Block mode study: Opportunities and challenges for a new generation of learners in an Australian University," *Student Success*, vol. 12, no. 1, pp. 13–23, 2021. https://doi.org/10.5204/ssj.1579
- [12] M. Harvey, M. Power, and M. Wilson, "A review of intensive mode of delivery and science subjects in Australian Universities," *Journal of Biological Education*, vol. 51, no. 3, pp. 315–325, 2017. https://doi.org/10.1080/00219266.2016.1217912
- [13] C. P. Lostroh, "Keeping it real: Substantive learning on a short calendar," *CBE—Life Sciences Education*, vol. 6, pp. 285–288, 2007. https://doi.org/10.1187/cbe.07-05-0024
- [14] S. B. Merriam and E. J. Tisdell, *Qualitative research: A guide to design and implementation.* John Wiley & Sons, 2015.
- [15] S. Crowe and K. Sarma, "Coping with Covid-19: Stress, control and coping among pregnant women in Ireland during the Covid-19 pandemic," *BMC Pregnancy and Childbirth*, vol. 22, p. 274, 2022. https://doi.org/10.1186/s12884-022-04579-1
- [16] R. E. Stake, The art of case study research. Sage, 1995.
- [17] M. B. Miles and A. M. Huberman, *Qualitative data analysis: An expanded sourcebook*. Sage, 1994.
- [18] J. Green and N. Thorogood, "Qualitative methods for health research," 2018.
- [19] D. Loton, I. Solomonides, and M. Trish, "Building on the foundations: Results from the inaugural block cohort," in *HERDSA Conference 2019*, Auckland, New Zealand, 2019.
- [20] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77–101, 2006. https://doi.org/10.1191/1478088706qp063oa
- [21] M. Maguire and B. Delahunt, "Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars," *All Ireland Journal of Higher Education*, vol. 9, no. 3, 2017.
- [22] Moogan, "Why study for an MBA at Salford?" https://blogs.salford.ac.uk/business-school/why-study-for-an-mba/#more-9284
- [23] J. Ross, "Block teaching model ripe for copycats," *Times Higher Education*, 2018. [Online]. Available: https://www.timeshighereducation.com/news/block-teaching-model-ripe-copycats
- [24] T. Dodd, "Block teaching comes of age at Victoria University," 2020.
- [25] S. O'Shea, J. May, C. Stone, and J. Delahunty, "First-in-family students, university experience and family life: Motivations, transitions and participation," *Palgrave Macmillan*, 2024. https://doi.org/10.1007/978-3-031-34451-0
- [26] J. Ross, "Block teaching elevates marks by a grade, study finds," *Times Higher Education*, 2020. [Online]. Available: https://www.timeshighereducation.com/news/block-teaching-elevates-marks-agrade-studyfinds

- [27] James Cook University, "Intensive mode subjects," 2021. [Online]. Available: https://www.jcu.edu.au/students/enrolment/block-mode-subjects
- [28] Roseman University, "The differences between block curriculum and traditional curriculum delivery," 2014. [Online]. Available: https://www.roseman.edu/2014/11/02/the-differences-between-block-curriculum-and-traditional-curriculum-delivery/
- [29] O. V. Curtin University, "Block release intensive study format," 2021.
- [30] T. Dodd, "Two more universities are adopting block teaching," *The Australian*, 2020.
- [31] H. Laville, "See what can be done," Learning and Teaching in Action, vol. 14, no. 1, 2020.
- [32] E. Nadworny, "6 Ways college might look different in the fall," *NPR*, 2020. [Online]. Available: https://www.npr.org/2020/05/05/848033805/6-ways-college-might-look-different-in-the-fall
- [33] Manchester Metropolian University n.d., "Learning and teaching in action," *University Teaching Academy*, 2021. [Online]. Available: https://www.celt.mmu.ac.uk/ltia/BTcall.php
- [34] U. T. A. n.d., "What is block teaching?" *University Teaching Academy*, 2021. [Online]. Available: https://www.uta.mmu.ac.uk/block_teaching/resources/what-is-block-teaching/index.html#/
- [35] U. R. n.d., "University reviews," Victoria University. https://universityreviews.com.au/ students/vic/victoria/
- [36] R. Klein, K. Kelly, P. Sinnayah, and M. Winchester, "The VU way: The effect of intensive block mode teaching on repeating students," *International Journal of Innovation in Science and Mathematics Education*, vol. 27, no. 9, 2019. https://doi.org/10.30722/IJISME.27.09.004
- [37] C. W. Yao and C. Collins, "Perspectives from graduate students on effective teaching methods: A case study from a Vietnamese Transnational university," *Journal of Further and Higher Education*, vol. 43, no. 7, pp. 959–974, 2019. https://doi.org/10.1080/0309877X. 2018.1429583
- [38] M. Swain, "Block teaching and the three A's: Attendance, attainment and attitudes," *Innovations in Practice*, vol. 10, no. 1, pp. 33–38, 2016.
- [39] D. B. Grant, "Using block courses for teaching logistics," *International Journal of Physical Distribution & Logistics Management*, vol. 31, nos. 7–8, pp. 574–585, 2001. https://doi.org/10.1108/09600030110402987
- [40] S. Bourgeois, N. Drayton, and A.-M. Brown, "An innovative model of supportive clinical teaching and learning for undergraduate nursing students: The cluster model," Nurse Education in Practice, vol. 11, no. 2, pp. 114–118, 2011. https://doi.org/10.1016/j.nepr.2010.11.005
- [41] A. K. Kofinas, Y. Bentley, and C. Minett-Smith, "Block teaching as the basis for an innovative redesign of the PG suite of programmes in university of Bedfordshire Business School," 2017.

8 AUTHORS

Nguyen Thi Thao Trinh is with the College of Sport, Health and Engineering, Victoria University, Melbourne, Australia (E-mail: thi.trinh24@live.vu.edu.au).

Amir Hossein Ghapanchi is with the College of Sport, Health and Engineering, Victoria University, Melbourne, Australia; The Institute for Sustainable Industries and Liveable Cities, Victoria University, Melbourne, Australia (E-mail: <u>Amir. Ghapanchi@vu.edu.au</u>).

Afrooz Purarjomandlangrudi is with the College of Arts, Business, Law, Education and IT, Victoria University, Melbourne, Australia (E-mail: afrooz. purarjomandlangrudi@vu.edu.au).