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Investigating the Implementation of Block System Learning Model at Higher Education During The Covid-19 Pandemic

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ABSTRACT

This study aims to investigate the management and learning achievement in vocational higher education using the block system learning model. This study used the descriptive qualitative method. The subjects consisted of 150 students, 6 lecturers for courses, and 6 structural officials, while the object of the research is learning management using the block system learning model. The data was collected using observations, interviews, documentation, and questionnaires. The steps in analyzing data are processing, reducing, presenting, and drawing conclusions. The results of the study state that; 1) in the planning of the block system learning model, lecturer involvement is needed for curriculum design 2) the implementation of the block system learning model is prioritized to be implemented in one course; 3) the assessment system is in accordance with the provisions set out in the curriculum evaluation; 4) the institution provides flexibility in developing learning curriculum in accordance with the Indonesian Qualifications Framework and Indonesian National Work Competency Standards. The inhibiting factors with the block system learning model are the disruption of software and hardware facilities; 5) the achievement target of student competence is by what has been determined by the curriculum.

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1. INTRODUCTION

Vocational education at the university level has been widely developed in Indonesia. Its existence is an interesting issue to discuss because of its good bargaining power against jobs career. Compared to other college systems, the output of vocational education prioritizes preparing skilled workers who are ready to compete in the jobs career (Murnomo, 2010). Hopefully, vocational education will continue to survive and develop according to the times and technology, especially in the conditions and atmosphere of the covid-19 pandemic today (Nasution, 2020).

In the COVID-19 pandemic, all aspects of human life become hampered, especially in the education sector. The education system must be conducted via offline learning. Now, it must be shifted to online learning to reduce the spreading of the COVID-19 cluster. So that the learning of direct interaction between lecturers and students becomes hampered (Hutauruk, 2020). This condition is the main cause of the learning process carried out through the internet network (online). However, vocational education cannot be fully done online since its a largely practical learning system (Maulana & Hamidi, 2020). Therefore, it is very necessary to study directly in the classroom.

In this world, the demand for education for the nation's improvement becomes the main factor in achieving a perfect and comprehensive education (Noviantoro, 2020). The role of parents, environment, teachers or lecturers also influence the achievement of these educational goals. To run a good education system, education must be supported by competent Human Resources (Musfah, 2012). Through competent human resources in running the wheels of education, competent human resources will be obtained and ready to work according to the needs of the industrial world.

The quality of education determines the quality of human resources. In a pandemic situation, improving the quality of human resources is more difficult because everything is limited, especially for interaction. Improving the quality of education in this pandemic can be done by managing educational learning. One of them is by using the block system learning model. According to research conducted by Said et al. (2014), it is explained that the block system learning model is appropriate and adequate to be developed by combining the principles of distance learning and the principle of face-to-face learning. Interaction between lecturers and students is effective, as indicated by the time available for preparing the professional competence course report enhancement. Although in that context, block system learning is applied because of the affordability and geographical considerations among remote islands in north Sumatra.

At some levels of vocational education, the block system learning model has been widely applied. The block model vocational education is a parallel curriculum structure that does not include or is not based on the semester learning curriculum. Because this model is more demanding, the competence of certain courses, such as those made in modular form because it, consists of several forms of modules or blocks (Said et al., 2014). However, not all of the components of the learning curriculum can be created in modular or block form. There is also a form of the block system model in the form of semesters. It runs in general by grouping several courses based on the same competence or similar such as for some professional skills courses. So that the achievement of the semester will refer to the achievement of similar competencies and must be completed in the semester without having to be a prerequisite to continue to the next course.

Makassar Tourism Polytechnic is a higher education that adheres to the link and match curriculum, namely the adjustment of learning at the vocational education level that adjusts to the demands of the business world and the industrial world. With the excellent D3 program, Makassar Tourism Polytechnic must prepare students to be ready to work and compete in the work environment. In accordance with the learning achievements in the Indonesian Qualifications Framework (KKNI) through Presidential Decree 08/2012 and Regulation of the Minister of Research, Technology, and Higher Education 44/2015 developed by the Higher Education Curriculum Development Team of the Directorate General of Learning Belmawa Ministry Of Research, Technology, And Higher Education in 2017 for the D3 program to occupy level 5, namely mastering the theoretical concepts of certain fields of knowledge in general, and able to formulate procedural problems. This can be seen from the following figure 1.

Figure 1 Indonesian Qualification Framework

To obtain the results of the learning model of the block system learning model at Makassar Tourism Polytechnic, the researcher felt the need to conduct research in the form of learning management, starting from the form of planning, implementation, assessment and evaluation, and find supporting factors and learning barriers with the block system learning model. These things are a form of problem limitation as well as a research goal that was studied.

This study examines the block system learning model at the Makassar tourism polytechnic during the COVID-19 pandemic. The field condition shows that the implementation of distance learning (online) during a pandemic is dominant. However, this condition is not optimal if it is fully applied to vocational education learning, such as the Makassar tourism polytechnic, which is more demanded to develop special skills. Based on previous research conducted by Said et al. (2014), the block system learning model is quite effective in applying to higher education institutions. Because The block system learning model was appropriate and adequate, for it was developed by combining distance learning principles and face-to-face learning principles. The difference is that the research was conducted due to geographical reasons for the separation of students on remote islands, while in this study the emphasis was due to the COVID-19 pandemic. Therefore, this study was conducted to investigate the results of the block system learning model at the Makassar tourism polytechnic.

2. METHOD

This research used qualitative descriptive methods. The focus of this research was the management of learning on vocational education at Makassar Tourism Polytechnic as well as being a research place. This study was conducted from March to June 2021. The subjects consisted of 150 students, 6 lecturers for courses, and 6 structural officers consisting of directors, assistant directors of the academic division, head of student affairs, head of departments, head of study programs, and head of the Tata Boga management laboratory. At the same time, the object of this research is the management of the block system learning model during the COVID-19 pandemic, which includes planning, implementation, assessment and evaluation, supporting factors and inhibitions of learning models, as well as the impact of block system learning on vocational education.

The qualitative data were collected through observation and interviews. Data collection instruments are researchers themselves who are naturalistic and have no other choice but to make humans the main research instrument. This is by the exposure Sholihannisa & Juliawati (2020), that the category of good Instruments in qualitative research are those who understand the research methodology, have mastery of insight into the researched field, and are ready to explore the object of research. It is also in line with the role of the researcher as a key instrument. Thus, in this study, the researchers are also the interviewers in collecting data by asking, requesting, and hearing the answers from sources directly.

Observations made in this study were by recording research objects ranging from the atmosphere of learning activities in the classroom, buildings and infrastructure facilities in the tourism polytechnic campus environment, as well as employees of the academic and management program of Tata Boga (MTB). The documentation carried out was to collect documents related to the research, including a list of lecturers and management (employees) in the academic and study fields, documents of the organization of Makassar tourism polytechnic, photographs of activities, administration of academic learning such as academic calendar, syllabus, Semester Lesson Plan, modules and teaching materials. Interviews were conducted to obtain information about the management of the block system learning model from the initial planning, implementation process, evaluation, and analysis of supporting and inhibiting factors to the impact caused by the learning model. The semi-structured interview (based on the guidelines but is still open). The interview was conducted to Deputy Director I of Academic Affairs, Academic Head, Chairman of Tata Boga Management Study Program (MTB), Course Coordinator, and Lecturer. In addition, this study used an open questionnaire; namely, the answer has been provided, but the respondent can still write his own answer if the answer is not in the options provided. The targets given by the questionnaire were students of the Tata Boga Management study program, lecturers and several stakeholders mentioned above.

To test the accuracy of the data in this study, it was done through data credibility or the degree of data trust. The data confidence or credibility test is carried out by means of triangulation techniques, either source triangulation or triangulation methods, namely by comparing information data obtained between Deputy Director 1 and Academic Head of State. The triangulation method was used to compare the data of interview results with field records between Tata Boga Management (MTB), and lecturers. In addition, test the accuracy of interview data by confirming the interview results with the informant.

Furthermore, the data analysis that researchers did in this study was by processing data, reducing data, presenting data, and drawing conclusions to events conducted and collected from observations, documentation, and interviews. In addition, to analyze the observation and documentation data, researchers also organise and group according to the data and aspects observed, determine each aspect's score level, and calculate the frequency for each aspect observed. The stages of this research can be seen from the flow of the figure 2.

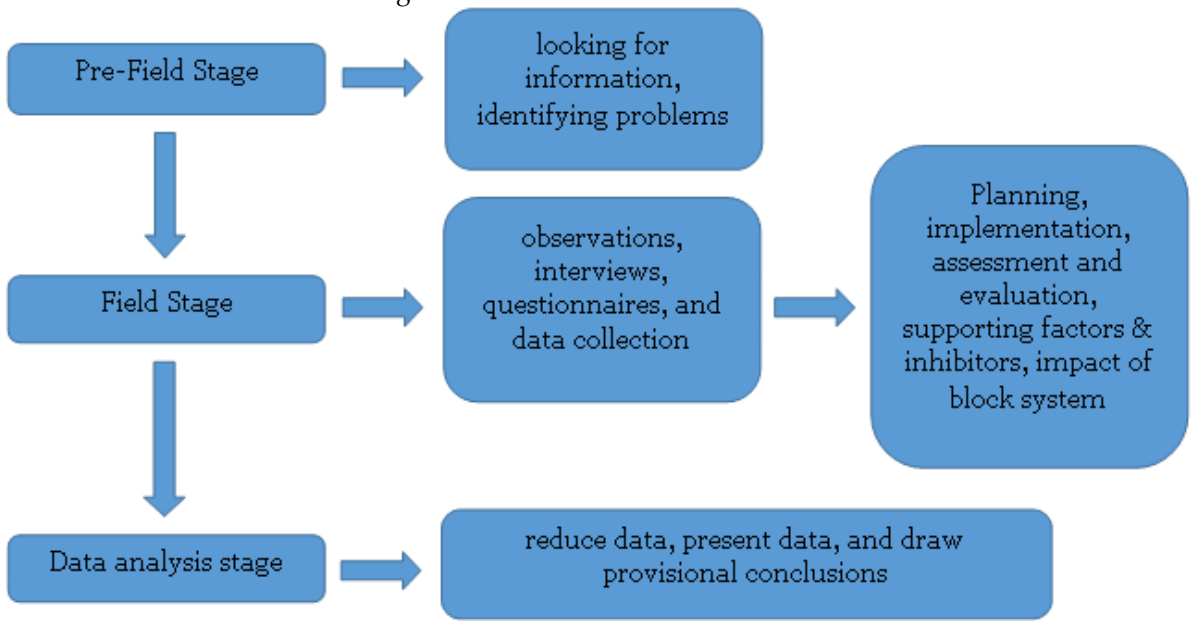

Figure 2 Research Stage Flow

3. FINDINGS AND DISCUSSION

The education process will never be separated from the curriculum and learning process. In higher education, the achievement of the complete educational objective is the learners prepared to become

members of the community according to their competencies. This is stated in Republic of Indonesia government regulations Number 60 of 1999 on Higher Education that the Purpose of Higher Education contained in Chapter II article 2 as follows: a) prepare learners to become members of society who have academic or professional abilities that can apply, develop, or enrich the characteristics of science, technology and art; b) develop and disseminate science, technology or art and strive for their use to improve people's standard of living and enrich national culture. In fact, the learning process must be effective, interactive, holistic, scientific, collaborative, and, most importantly, student-centred. Learning will be effective if the learning process is assisted by using the right models, approaches, strategies, methods, techniques, and media and according to the type or character of the course to obtain optimal learning achievements. Thus, effective learning is learning that produces benefits for students through proper procedures (Daulae, 2014).

The above definition contains two important indicators: the occurrence of learning in students and what lecturers do. The learning process in Higher Education must have standards. The learning process includes learning characteristics, learning process planning, the implementation of the learning process, and the learning burden of students. It is stated in regulation of the minister of research, technology, and higher education No. 44 of 2015 concerning National Higher Education Standards chapter II section 4 article 10 paragraphs 1 & 2. Therefore, in order to fulfil these components' research objectives regarding to the learning management of the learning block system model, the following research results were found:

Planning Block System Learning Model

At this stage, it began by conducting a Forum Group Discussion (FGD) of several academic activity teams, consisting of the drafter of curriculum learning planning design with a block system learning model in vocational education. The lesson planning design team was consisted of: Deputy Director 1 academic field, an Academic Head, and a Chairman or Secretary as the first team. The course coordinator team was the Chairman or Secretary, and the chairman of the course coordinator and lecturers who mastered the courses acted as the second team.

The first team has the task of determining and grouping courses or having the same competence in the semester that has been determined without being a requirement for the next course or modular. It was also related to the form of vocational education curriculum as a program to achieve graduate competence or output that must be implemented. Referring to the regulation of the minister of research, technology, and higher education No. 44 of 2015 on National Higher Education Standards, the task carried out by the second team as a form of planning block system learning model was to compile a syllabus and Semester Lesson Plan developed by lecturers coordinator of courses by the grouping in their respective study programs by adjusting to the academic calendar and making modules of lecture teaching materials (Sholihannisa & Ma'sum, 2020). One of the research activities was to interview on the Management program of Tata Boga.

Students were given a package system in the first semester, so one class consisted of the entire student study program. While in the next semester, students had been classified that consisting of 25 students with the same study program. For example, in the course of Operational Tata Boga 1. In this course, students gained the competence to know about the database, know the operational system of Tata Boga, manage the interaction between foodstuffs that would be managed into food products, know the scope of food and food processing techniques. Students must make one food from processed food products for final assessment and evaluation through practice. Here is the block system model contained in the Tata Boga Management program:

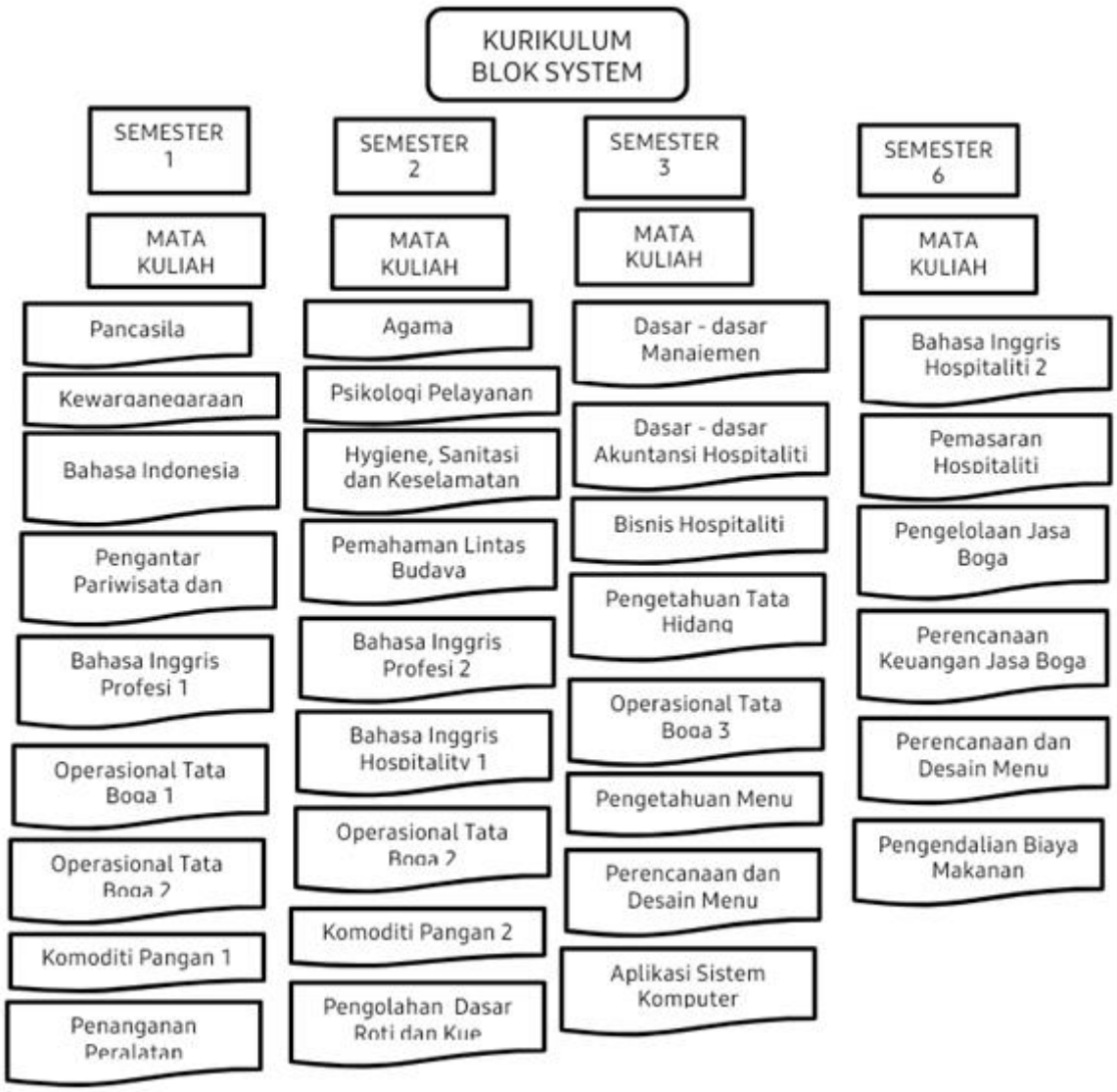

Figure 3 Curriculum Block Management Of Hospitalization Concentration Management

The Head of The Tata Boga Management Study Program (MTB) explained that the curriculum block above was the result of the Discussion Group Forum on various elements in the management of the Study Program. To ensure that the block curriculum program was in accordance with the concept of management, the author interviewed the Deputy Director of 1 Academic Section of Makassar Police. The results obtained in the field through interviews and questionnaires at the learning planning stage of the block system learning model can be seen in the following table 1.

Table 1 Results of Learning Planning Questionnaire

No.	Aspects	Average (%)	Percentage of aspects
	Planning		22.82%
1.	I found out about the College Curriculum that runs where I teach	3.70	
2.	I am involved with the College curriculum design, including syllabuses and Semester Lesson Plan courses.	4.03	
3.	Higher Education curriculum that runs in accordance with the Indonesian Qualifications Framework and Indonesian National Work Competency Standards	3.83	
4.	The learning planning I made in accordance with the College curriculum design guidelines	3.76	
5.	Understand the components of learning planning, especially the Semester Lesson Plan in accordance with the syllabus of the College curriculum	3.63	
6.	Designing learning goals based on Indonesian National Work Competency Standards	3.87	

Based on the data processing through the triangulation stage with the results of the table above, it can be explained that the Higher Education curriculum design contained in point number 2 obtained the highest average. This shows that lecturer involvement is very needed in the design and preparation of the learning process on campus, especially for themselves as the person in charge of the courses that will be mastered. These results are in line with research conducted by Sholihannisa & Juliawati (2020) that the involvement of lecturers in curriculum design plays a very important and decisive role in the learning planning process. In addition, the above data reinforces the fact that learning planning with this block system learning model is designed and prepared carefully by all stakeholders of the Makassar Tourism Polytechnic Tata Boga Management Study Program (MTB).

Implementation of Block System Learning Model

Each learning model has its characteristics in its implementation. The same goes for the Block system Learning model. Rettig (2013) explained that the implementation of the block system learning model contains scheduling comparison criteria, among others: 1) time per subject; 2) available options; 3) cost; 4) the burden or charge of students; 5) the burden or load of the teacher; 6) core percentage (assumed to be 1 class per semester/period or in the form of blocks); 7) in a group format. Results obtained in the field through questionnaires at the stage of learning implementation of the block system learning model can be seen in the following table 2.

Table 2 Results of learning implementation questionnaire

No.	Aspects	Average (%)	Percentage of aspects
	Implementation		22.93%
1.	Carry out learning activities in accordance with the established planning (Semester Lesson Plan)	3.78	
2.	Carrying out learning in accordance with the demands of the curriculum and the competence needs of students	3.85	
3.	Provide various examples of case studies on each learning	3.87	
4.	The learning climate goes in only one direction.	4.10	
5.	Develop learning materials for students to practice	3.61	
6.	Students are given the freedom to argue in express opinions in learning.	3.72	

Based on the table above, it can be explained that the implementation of the block system learning model tends to run only one way. The percentage of scattered questionnaires obtained the highest average of 4.10%. The learning climate, in general, must be done in multi-direction, while in learning with a block system learning model must be prioritized in one direction because the goal of learning achievement is the success of student competence. In other words, students must be more active, creative, and innovative in learning activities. At the same time, the lowest percentage is at point 5, with an average of 3.61%. This condition implies that lecturers are always required to design learning materials and implement it so that students can develop their competence. Safril (2020) explained that the block system learning model will also be more effective and efficient because it was carried out one full day without a time lag. It will accelerate the achievement of student competence. The stage of implementation in the learning process can be seen in the figure 4.

Figure 4 Learning activities

Assessment and evaluation of block system learning model

In learning, assessment and evaluation are a requirement to know the achievement of the learning curriculum objectives that have been determined. According to Ibrahim & Masitoh (2011), evaluation

models can be developed into several models, including; 1) measurement. That is, measurement of the behaviour of learners to reveal individual and group differences; 2) congruence. The conformity between the goals and learning outcomes achieved, to see the extent to which changes in educational outcomes have occurred; 3) illumination. This model was based more on judgments (considerations) whose results were necessary for the program's refinement, including evaluation objects such as the background and development of the program, the implementation process, learning outcomes and difficulties experienced; 4) educational system evaluation. This model performs comparisons and performances of each dimension of the program and criteria that will end with a description and judgement.

Meanwhile, at the assessment and evaluation stage of the block system learning model obtained the following table 3.

Table 3 Result of Questionnaire Assessments and Evaluation of Learning

No.	Aspects Assessment and Evaluation	Average (%)	Percentage of Aspects
1.	Determine assessment procedures	3.74	21.91%
2.	Administrating the assessment of processes and learning	3.72	
3.	Design evaluation or assessment tools to measure learning progress and success	3.56	
4.	Conduct assessments using tests in the form of theory and practicum	4.10	
5.	Utilizing the results of reflection for the improvement and development of courses that are mastered	3.49	
6.	Conduct assessment of learning outcomes using assessment standards and campus curriculum assessment guidelines	3.30	

Based on the table above, it can be seen the assessment using tests in the form of theory and practicum is the highest point with an average of 4.10%. This means that lecturers conducted assessments in accordance with the provisions that have been set in curriculum evaluation and learning. The practical assessment aims to apply theory in limited conditions and situations. Practical learning is also suitable when applied with a block system because motoric skills in practical work are appropriate when trained continuously with relatively short time lags. In addition, with the block system at the time of practicum, students are fully responsible for the equipment used during the practicum, both in terms of use and maintenance (Prastyo & Yoto, 2017).

Supporting factors and inhibiting the Block System Learning Model

The learning activities were not completely able to run smoothly and effectively. To achieve learning goals in accordance with the provisions of the curriculum, there are factors either support or hinder the learning process (Katz, 2012). No exception to the learning process with the Block System Learning model. The supporting and inhibiting factors in the learning model can be seen in the table 4.

Table 4 Results of questionnaire supporting factors and learning inhibitors

No.	Aspects Supporting and Inhibitors factors	Average (%)	Percentage of Aspect
1.	Semester Lesson Plan currently under-supporting on student competence	3.49	22.07%
2.	Experiencing obstacles and difficulties during learning in the classroom or in the laboratory considering the situation of	3.77	
3.	Experiencing disruption to facilities that are software and hardware to the planning, implementation, and evaluation of learning in COVID 19 situations	4.00	
4.	The institution provides freedom in the development of learning curriculum in accordance with the Indonesian Qualifications Framework	3.65	
5.	Academic information system helps the activities of the academic community of lecturers and students	3.47	
6.	Conduct feedback to students as an assessment of lecturer performance	3.74	

Based on the table above, in general, institutions, academic systems, and lecturer performance are good supporting factors, but the average amount of some supporting factors is still less high than inhibiting factors. It can be seen in the third row that the obstacles in the learning process with the Block System Learning model in the covid-19 pandemic are the disruption of software facilities and hardware on average. The percentage gets the highest at 4.00%. Such conditions proved that, technically, the campus was not fully ready to implement that learning model. Because in fact, although this learning model was considered suitable to be applied during current conditions, it required overall support from the institution, especially related to supporting facilities. In line with that, Prastyo & Yoto (2017) research also stated that the first idea of learning with the block system was applied because the comparison between the number of students and the existing facilities was not balanced, especially if it was applied in a COVID-19 pandemic situation.

Impact of Block System Learning Model

The changes in actions, attitudes, and behaviours is the main goal of learning. These changes can be in the form of abilities or skills that must be owned by every learner. Quantitative output is usually a benchmark in the achievement of learning success (Kugler et al., 2019). But in fact, in the national education objectives listed in Law No. 20 of 2003 on the National Education System article 3 the main purpose of learning is to develop the potential of learners to become human beings who believe and fear God Almighty, noble, healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens. Therefore, the impact caused in learning will leave an imprint and be very useful for students' lives.

Some of the effects of the use of block system learning models include; (1) Shorter learning time scheduling; (2) The learning materials were in accordance with the purpose of learning; (3) Encouraging the students to attend in the offline and online learning processes by applying health protocols; (4) Made it easy to analyze student behaviour in the learning process; (5) used information on assessment and evaluation results to determine the completion of learning; and (6) The achievement of the students' competence was in accordance with the curriculum of the University. But based on the results of the scattered questionnaire and according to the results of the implementation of the learning model, it appeared that the most prominent of the questionnaire results were the achievement of the target of student competence in accordance with the curriculum that has been set by a percentage of 3.83%. These

results were strengthened by the existence of student competency tests as a measuring tool for student competence in accordance with their respective study programs. Furthermore, followed by the motive of encouragement by lecturers to the students to be able to always attend at the lecture even with strict health protocols with an average of 3.74%. This was intended so that students did not fall behind the material delivered in the learning because there was no repetition or review of the material given at each meeting. The following was the average impact of learning models obtained from the distribution of questionnaires.

Table 5 Results of questionnaire impact of block system learning model

No.	Aspects Impact of Learning Model	Average (%)	Percentage of Aspects
			21.50%
1.	Scheduling shorter learning time	3.58	
2.	Teaching learning materials in accordance with learning objectives	3.70	
3.	Lecturers give encouragement to students always present in the implementation of learning both through off line and online by applying health protocols	3.74	
4.	Makes it easy to analyze student behavior in the learning process	3.38	
5.	Use assessment and evaluation information to determine learning completion	3.27	
6.	Achievement of student competence in accordance with the curriculum of the University that runs	3.83	

An overview of the results of learning management research block system learning model can be shown through the figure 5.

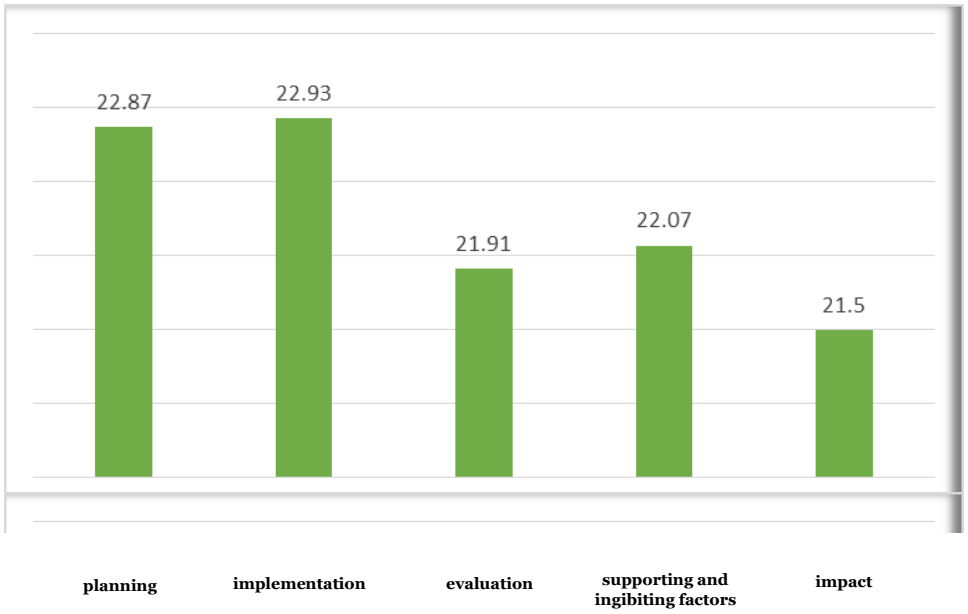

Figure 5 Graph of Management Block System Learning Model

Based on the management graph of the block system learning model above, it can be shown that Makassar Tourism Polytechnic has done planning with a percentage of 22.87%, and implementation of 22.93%. Such conditions can be said that what is planned is all well realized. For assessment factor 21.91%, support and inhibitory factor 22.07%, while impact 21.05%.

CONCLUSION

Implementing the block system learning model at the Makassar Tourism Polytechnic during the covid-19 pandemic can be applied optimally. It can be carried out normally from the beginning of the planning stage to the assessment. The findings in this study are; 1) in planning the block system learning model, lecturer involvement is needed in curriculum design; 2) the implementation of the block system learning model must prioritize running in one direction because the goal of learning achievement is the success of student competence; 3) assessment and evaluation are by the provisions set out in the evaluation of curriculum and learning; 4) as a supporting factor, the institution provides freedom in developing a curriculum that is by Indonesian Qualifications Framework and Indonesian National Work Competency Standards. The inhibiting factors for the implementation of the block system learning model are the disruption of software and hardware facilities due to the lack of readiness of the institution; 5) the impact of achieving the target of student competence is in accordance with what has been determined by the curriculum, which means that the student competency test as a competency measurement tool is by the study program. The results of this study have proven that the block system learning model is effectively implemented during the COVID-19 pandemic. Therefore, it is recommended for lecturers and education practitioners to use the block system learning model, especially in vocational education institutions.

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