

# IMPLEMENTATION OF THE MBKM PROGRAM ON 21ST CENTURY COMPETENCE AND UNDERSTANDING OF SDGs (Tracer Study on Biology Education Study Program Students, Pakuan University)

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## Abstract

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This study aims to analyze the implementation of the MBKM program on 21st century students' skills and the relevance of the MBKM program to the SDGs. The research was conducted on students of the Biology Education Study Program, FKIP Pakuan University, carried out in November-December 2021. The methods used were surveys, interviews and video analysis. The data collected were 109 respondents (96% of the total population). The instruments used are: the 2021 MBKM Implementation Survey Instrument through SPADA DIKTI and a closed 21st century skills questionnaire, a closed SDGs questionnaire, and a student perspective questionnaire related to MBKM. The data was processed through descriptive statistical analysis. The results showed that 96% of students were involved in filling out the questionnaire and 82.6% had implemented the MBKM program. The MBKM program has an impact on the 21st century competence of Biology Education Study Program students, with an average score for critical thinking skills of 3.82, collaboration skills of 4.11, communication skills of 3.86, and creative thinking skills of 3.77. The MBKM program also has a positive impact on students in achieving the SDGs, which has the greatest impact on the topic of Reducing Inequality and Protecting Land Ecosystems by 3.47.

**Keywords:** SDGs, 21st Century Skills, Freedom to Learn

## I. INTRODUCTION

According to UNESCO, education in the 21st century includes; (1) key subjects and Themes, (2) Life and Career skills (life skills and work skills); (3) learning and innovation skills (4C's) (learning and innovation skills); (4) Information, media, and Technology skills (skills related to information, media, and technology)[1]. 21st century skills are needed in dealing with changing job requirements [2];[3]. In general, 21st century skills include collaboration, communication, digital literacy, citizenship, problem solving, critical thinking, creativity, and productivity [4]. The skills of the 21st century are more relevant to today's economic and social developments than the last century which was characterized as an industrial mode of production[1]. In this case, higher education institutions need to transform the teaching-learning process, with the fundamental aim of equipping students with sufficient skills and abilities to develop themselves in a society characterized by complexity and uncertainty. The most striking feature in the 21st century is the existence of multitasking (multitasking), multimedia (multimedia), online social networking (online social media networks), online in for searching (online search), online games (online games) [2][5].

The education process in higher education needs to be aligned with the sustainable development goals (SDGs)

which cover the complex social, economic and environmental aspects of formal and informal curricula [6][3]. This kind of academic approach allows students to express their knowledge, talents and experiences to play a more responsible role in society. Education in the context of the concept of sustainable development sets new targets for the implementation of professional activities, searches for new educational content, innovative learning technologies, and engages students to learn to solve problems, as well as critically analyze various points of view. This educational transformation can be packaged in the Independent Learning Program and Independent Campus (MBKM).

MBKM is a policy of the Minister of Education and Culture, which aims to encourage students to master various sciences that are useful for entering the world of work and to support students and lecturers in achieving quality and meaningful learning to face the disruption of the current era [7];[8][4]. MBKM is motivated by the relevance of learning that has been studied by students in class with the needs of the industrial world and the field is still relatively low [9][5]. This policy is also considered capable of equipping students with new experiences and opening up their horizons of knowledge and experience [10][6]. In order to prepare students to face changes in social, cultural, world of work and rapid technological advances, student

competencies must be prepared to be more adaptive to the needs of the times. Learning in the Merdeka Campus provides challenges and opportunities for the development of innovation, creativity, capacity, personality, and student needs, as well as developing independence in seeking and finding knowledge through realities and field dynamics such as ability requirements, real problems, social interaction, collaboration, self-management, performance demands, targets and achievements.

Based on this description, this article aims to analyze the implementation of the MBKM program on 21st century student skills and the relevance of the MBKM program to the SDGs.

## II. RESEARCH METHODS

This study uses a design (mixed method parallel design). The method used in this research is survey, interview and video analysis. The survey method is carried out in the following stages:

- a. Identification of MBKM concepts, 21st century skills, and SDGs as the basis for making research instruments.
- b. The making of research instruments includes: closed 21st century skills questionnaire, SDGs closed questionnaire, student perspective questionnaire related to MBKM.
- c. Identification of research subjects
- d. Dissemination of online questionnaires via google form
- e. Processing and data analysis
- f. Report generation

The interview method was carried out by interviewing several samples of Biology Education study program students who took part in the MBKM program. Interviews were carried out to find out directly the responses of students after carrying out MBKM activities. Video analysis was carried out to identify various MBKM programs that were participated by students, where the video in question was the result of student documentation during MBKM activities outside the study program.

## III. RESULTS AND DISCUSSION

Pakuan University Biology Education Study Program has 113 active students. Of the total students, only 109 people (96%) filled out a questionnaire about the impact of MBKM on 21st century competencies and SDGs. It is known that the majority of student respondents in the Biology Education study program are women with the largest number of respondents, namely Class 2019. Of the 109 respondents, 82.6% of students stated that they had implemented the MBKM program, and only 17.4% stated that they had never been involved in any activities. MBKM. In fact, the Biology Education study program at Pakuan University received a grant under the PKK scheme for the implementation of the MBKM curriculum and program which involved all students in all generations. However, as many as 17.4% of students still stated that they had not been involved in MBKM. This can be caused by a lack of student understanding of the MBKM concept and the realization of MBKM activities, so that students do not

realize that the programs they have implemented in the odd semester of 2021/2022 are MBKM programs. The MBKM program socialization activities have been carried out by the study program aimed at students, lecturers and education staff. However, due to the short time of socialization and the number of activities carried out by study programs while participating in the PKK grant, the understanding received by students has not been comprehensive regarding MBKM. Information was obtained that students already knew most of the contents of the MBKM policy, which was 69%. The source of information on MBKM policies was obtained at most through offline/online socialization activities organized by PT, amounting to 39%. However, this data becomes less relevant when compared to the subsequent data obtained from the SPADA DIKTI instrument, as many as 73% of students stated that the study program did not have the MBKM curriculum document and MBKM Implementation Guide. This of course becomes irrelevant because before the implementation of MBKM, the study program must first carry out the MBKM Curriculum Workshop with the final product in the form of the MBKM Curriculum Document and the MBKM Implementation Guide at the study program level. This is an important concern that the MBKM socialization activities to students have not run optimally. 80% of students said the study program did not have a previous program that was in accordance with MBKM activities. This data also shows the low level of student understanding of the MBKM program, because prior to the existence of MBKM students of the Biology Education Study Program, FKIP, Pakuan University always carried out Teaching Practice activities in schools and Thematic Real Work Lectures where these activities were part of the curriculum in FKIP Pakuan University.

78% of students are not ready to be part of MBKM activities. This data is quite inversely proportional to the questionnaire data from the Pakuan University research team where 82.6% of students stated that they had implemented the MBKM program. This further strengthens that the process of socializing MBKM activities that have been carried out so far has not been effective enough in providing understanding to students related to the MBKM program.

Figure 7 shows that students' doubts are still high about the impact of MBKM activities. 95% of students said MBKM activities might provide additional competence and 87% of students said MBKM activities might broaden perspectives. The high level of doubt is once again an indication that students of the Biology Education Study Program, FKIP, Pakuan University have not yet received a complete understanding of the MBKM Program and its implementation. Some of the cases above will be explained through additional data obtained from interviews with samples of students who have participated in MBKM activities and analysis of video testimonials of students participating in MBKM activities.

21st century competencies are needed by students to be equipped to face global competition. The types of competencies that are included in the 21st century competencies include critical thinking skills, creative

thinking, collaboration, and communication. Data related to the 21st Century Competencies of Biology Education Study Program students can be seen below.

#### a) Critical Thinking Skills

The critical thinking skills of Biology Education students showed a score of 3.82 in the high category. Most of the students in Biology Education study program have often analyzed arguments, solved problems, looked for solutions to a problem, interpreted data, and drew conclusions. This can be due to the fact that in the Biology Education study program, the implementation of lectures has implemented a problem based learning model, case method, or project based learning in each course so that it familiarizes and trains students to be able to think critically. The study program has compiled an MBKM curriculum document accompanied by RPS and case-based and project-based teaching materials. With this curriculum, it will certainly create a supportive learning atmosphere for students to build their critical thinking skills. Through MBKM activities, students will have the freedom to think either individually or in groups, so that in the future they can give birth to students who are superior, critical, creative, collaborative, innovative, and participating. It is hoped that with the independent learning program, the involvement of students in learning will increase [13].

#### b) Creative Thinking Skills

The creative thinking skills of Biology Education students showed a score of 3.77 in the high category. The data shows that most students in the Biology Education study program have often analyzed innovative ideas to solve a problem and create original products or ideas in an effort to solve the problems they are facing. based learning, case method, or project based learning in each course so that it familiarizes and trains students to be able to think creatively in creating original, innovative, and solution-based ideas and products to contextual problems that occur in the surrounding environment. In addition, student activities such as mini research activities, field lectures, and entrepreneurship programs also stimulate students to hone their creative thinking skills. The idea of MBKM in producing superior Human Resources (HR) by prioritizing the implementation of character values so that the thinking power and creativity of each student develop [10].

Students' understanding of the SDGs concept was captured through a questionnaire involving SDGs topics, namely quality education, access to affordable energy, reducing inequality, climate change, protecting terrestrial ecosystems, and revitalizing global partnerships. The results of students' perceptions of 6 topics. Most of the students in the Biology Education study program had a positive response to the statements made regarding the SDGs. The data shows that the MBKM program has a positive impact on students in achieving the SDGs. If seen in Figure 9, the MBKM program has the greatest influence on the topic of Reducing Inequality and Protecting Land Ecosystems by 3.47. The topic of Reducing Inequality is closely related to entrepreneurial activities carried out by students, which through the business activities carried out are expected to open up opportunities for economic improvement for the wider community. Meanwhile,

maintaining the terrestrial ecosystem is related to environmental-based KKNT and Apprenticeship activities through empowering the surrounding community.

Most of the students agreed that the MBKM program that had been implemented provided an opportunity for them to be able to improve the quality of education, carry out work practices at partner locations, seek solutions to problems found in partner locations, and be actively involved in finding ideas for handling climate change, community welfare. around the environment, and affordable energy issues. Merdeka Campus is a form of learning in higher education that is autonomous and flexible so as to create a learning culture that is innovative, unfettered, and in accordance with student needs [18]. MBKM activities that facilitate students to be able to carry out learning outside of campus are certainly a means for students to hone soft skills and develop the knowledge they have acquired in the campus world to be implemented in the real world.

## IV. CONCLUSION

The involvement of students from the Biology Education Study Program FKIP Unpak in filling out the questionnaire on the impact of MBKM on 21st Century Competence and SDGs was 96%. Of the total respondents, 82.6% had implemented the MBKM program, 69% already knew most of the contents of the MBKM policy, and 39% received information on MBKM policies through offline/online socialization activities organized by PT.

The MBKM program has an impact on the 21st century competence of Biology Education Study Program students, with an average score for critical thinking skills of 3.82, collaboration skills of 4.11, communication skills of 3.86, and creative thinking skills of 3.77. The MBKM program is needed in creating a more dynamic, challenging, and contextual learning environment to prepare students to have 21st Century Competencies so that they can increase the competitiveness needed in the future. The MBKM program also has a positive impact on students in achieving the SDGs, which has the greatest impact on the topic of Reducing Inequality and Protecting Land Ecosystems by 3.47.

Suggestions in this study are that it is necessary to disseminate effectively and thoroughly to students regarding the MBKM program starting from the central government level, PT, faculties to the study program level so that understanding regarding the MBKM program is fully accepted by students.

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