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Various Consulting Project Lecture Problems In Non-Educational Study Programs In Response to the Freedom of Learning Independent Campus

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ABSTRACT

The Freedom of Learning Independent Campus (MBKM) policy encourages students to take lectures outside their study program and do activities outside the campus. Recognition of learning experiences as an implementation of MBKM results in a reduction in core courses in study programs, thus encouraging study programs to reposition their curriculum. One of the results of the curriculum repositioning is the existence of the Consulting Project course, which is a compulsory course for students of the Non-Education Study Program at the Universitas Pendidikan Indonesia (UPI), which aims to train students to become part of the solution to the world of work, industry, government agencies, or certain community groups. Learning uses the case method and team-based project. The qualitative descriptive method was chosen, describing in detail the research problem by optimally studying an event. The research participants were 120 students of the UPI Mathematics Study Program. The purpose of the study is to describe various problems in implementing lectures, support for achieving the Main Performance Indicators of the study program, and benefits for students. The problems are categorized into the unavailability of a memorandum of understanding, partner problems, student competencies, and group formations. The establishment of cooperation between study programs and partners and the implementation of lectures with a case method and team-based project approach indicates that lecturers have a major role in achieving Key Performance Indicators. The benefits for students are gaining new knowledge, increasing communication and teamwork competencies, knowing various things related to the company, and gaining new experiences.

Keywords: Case Method; Team-Based Project.

INTRODUCTION

To support the Freedom of Learning Independent Campus (MBKM) program launched by the Ministry of Education and Culture, every study program in Indonesia is restructuring its existing curriculum. This needs to be done because the recognition of learning experiences outside the study program or the campus as the implementation of MBKM results in a reduction in the study program's core subjects. One of the things that has been done to overcome this problem is to reposition the curriculum and introduce new courses as replacement courses so that the competencies that characterize the study program are maintained.

Within the Universitas Pendidikan Indonesia (UPI), Consultancy Projects are a mandatory subject for non-education study program students. This course weighs four credits with the aim of training students to become part of solutions for the world of work, industry, government agencies, and certain communities. This statement is in line with O'Leary (2015), who recommends consultancy projects as a platform for use in higher education institutions as a basis for improving graduate employability and student experience.

The Consultancy Project course emerged because of concerns about the loss of knowledge and experience related to the world of work, in particular, generally problems that occur in society. Knowledge and experience related to the world of work have been borne out of the learning outcomes of Field Experience Program (PPL) courses. PPL initially had mandatory status and changed to non-compulsory because it became one of the conversion courses to recognize student learning activities outside campus.

Four elements differentiate consultancy project courses from other courses, namely: (1) aspect of independence, students are required to understand problems based on data and information from third parties (from now on, third parties are called partners); students propose solutions or create a product that can help partners become more developed and better; (2) leadership aspect, students act as prospective consultants so that their role is not as a subordinate but more closely as an assistant to the leader of a particular unit; (3) the target aspect of achieving competency, a more holistic ability required by students through field observation activities, interviews, and problem exploration, analysis of partner problems, formulating solutions and creating products, and presentations in front of partners in the form of reports; and (4) aspects of activity steps, case method and team-based project learning models are the models used in the Consultancy Project course.

Learning in the Consultancy Project course uses the case method and team-based project. Approximately 70% of lecture activities are carried out on campus. Therefore, the Consultancy Project is not an internship, work practice, or industrial visit activity (Supriatna et al., 2021). Visits to partners in specific categories of industry, agency, institution, or community in the economic, social, cultural, legal, or political fields aim to collect data, understand the partner's problems, and design the solutions or products needed (Supriatna et al., 2021). This condition aligns with the opinion of Lycko and Galanakis (2021), who say that consultancy projects highlight the learning outcomes students wish to achieve during the consultation process. These outcomes may be cognitive, including integrating previous knowledge with practical, affective, and behavioral insights and developing communication skills and transferable management.

The potential for Consultancy Project courses to support Key Performance Indicators (IKU) 6 and IKU 7 is quite significant, as mandated by the Decree of the Minister of Education and Culture of the Republic of Indonesia Number 754/P/2020 (Dirjen Dikti, 2023). Support for IKU 6 is possible because one of the outcomes of the Consultancy Project course is the establishment of collaboration with various partners. Support for IKU 7 is likely to be met by the Consultancy Project course because, in practice, the lectures use the case method and team-based project models.

The case method and team-based project approaches can be applied in higher education; this statement aligns with research, which concludes that students can use the team-based project model to solve problems and develop their competencies (Riyaningrum et al., 2021). The discussion process carried out during problem-solving is quite effective in producing various alternative solutions to partner problems; these results are in line with the opinion that the key to the success of the case method lies in the discussion process itself (Christensen & Hansen, 1987; Merseth, 1991b; Richardson, 1991; Welty, 1989).

Learning is a complex process involving students, teachers, and content. Various models can be selected to achieve the set goals. Case-based learning packaged in a team is the recommended learning to be implemented. Through cases, learning is designed so students in groups are trained to solve various complex problems. In their research, Spiro et al. (1987, 1989) concluded that case-based learning can help prospective teachers overcome the complexity of domains surrounding teaching and learning in schools. Each group member's various experiences, backgrounds, and interests can color the course of discussions in case method and team-based project learning. Case method and team-based project learning can also help solve practical problems that occur in society; this is in line with the research results of Prawira, et al. (2022), which concluded that case method and team-based project learning strategies can overcome problems packaging design so that products produced by the entrepreneurial community can be mass produced. The research results of Prawira et al. (2022) provide information that the case method and team-based project models are efforts that can be made to improve the quality of learning and as an effort to strengthen study program competencies, in addition to developing partnership networks.

While solving cases, each group member actively interacts with each other, discusses, analyzes, agrees, and decides on the best solution. This statement is in line with Levin (1995), who stated that discussion is an essential variable in case-based learning, and is also in line with Vygotsky (Verrawati & Mustadi, 2015), who stated that complex thinking processes depend on social interaction with students. During project implementation, it is also possible to reveal students' potential in self-realization, interaction with other people, and development of critical thinking (Telegina et al., 2019).

Previous studies have answered several problems regarding implementing the case method and team-based project models. No research has been found regarding the various problems of this model in the Consultancy Project course, especially about the achievement of Key Performance Indicators in Non-Educational Study Programs at the Universitas Pendidikan Indonesia as a response to the Independent Learning-Free Campus policy from the Ministry of Education and Culture.

RESEARCH METHODS

A qualitative descriptive design was used in this research, focused on describing the phenomena arising from the implementation of Consultancy Project lectures. The phenomena referred to in this research are various problems with implementing Consultancy Project lectures and their support for achieving the study program's Main Performance Indicators. A qualitative descriptive research design was chosen because the researcher will explore various problems arising from implementing Consultancy Project lectures. Apart from this, the support of the Consultancy Project course on the achievements of the study program's Main Indicators related to partnerships and collaborative, participatory classes will also be explored.

The research participants consisted of two groups. The first group is students who are taking Consultancy Project courses in the UPI Mathematics Study Program. They are in semester five and have taken approximately 50% of the total number of credits that must be completed. The second group consists of several partners, and students carry out lecture activities outside the campus. Activities carried out include observation, interviews, data identification, problem determination, and Focus Group Discussion (FGD) of possible alternative solutions. The data used comes from observations, questionnaire results, and document studies. The collected data is then analyzed through the stages of identification, clarification, reduction, and verification and then presented in a descriptive narrative manner.

The stages carried out in this research follow the flow as presented in Figure 1 below:

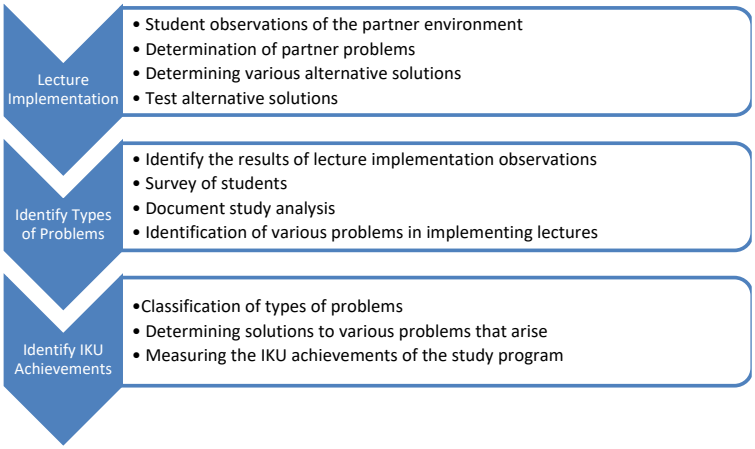

Figure 1. Research Stages

RESULTS AND DISCUSSION

Result

The repositioning of the Non-Educational Study Program curriculum within the Universitas Pendidikan Indonesia was carried out in response to the launch of the Freedom of Learning Independent Campus (MBKM) program by the Ministry of Education and Culture. The MBKM policy gives students the right to study for one semester (equivalent to 20 credits) outside the study

program at the same university and a maximum of two semesters (equivalent to 40 credits) to study at a different university and study outside Higher Education (Dirjen Dikti, 2020). The Mathematics Study Program is one of the non-educational study programs within the Universitas Pendidikan Indonesia, and it also responds to the MBKM policy by repositioning the curriculum. The curriculum repositioning carried out includes placing core study program courses in the first five semesters, introducing Consultancy Project Courses, and placing elective courses in semesters 6 and 7; with this repositioning, the curriculum is seen as being quite adaptive to the dynamics of the Ministry of Education policies and the changes and demands of the ever-changing times.

In its mechanism, MBKM requires institutions to provide awards to students in the form of recognition of student learning experiences in semester credit units. The recognition given is a system of appreciation for insight, knowledge, skills, values, and attitudes that reflect the abilities possessed by students as a result of activities outside the study program or campus. It will also reduce the burden of studies that must be taken. The student learning experience in question is the experience gained after students have participated in or actively participated in various activities outside the study program or the campus. Recognition of learning experiences from MBKM activities will be converted into courses in the study program curriculum structure with the appropriate credit weight.

MBKM has a goal: to help students become strong individuals according to the demands of the times. As a result of this policy, the Field Experience Practice (PPL) course, which had provided students with competencies related to the world of work, was lost because the course was converted from recognition of MBKM activities outside campus. Suppose many students take part in MBKM activities that are less relevant to their area of expertise in their study program. In that case, students will not gain practical field experience that matches their study program expertise. Concerns arise that non-education study program students do not have experience related to the world of work. Based on this, the university's Curriculum Development Team designed a replacement course and named it the Consultancy Project, which aims to train students to become part of solutions for the world of work, industry, government agencies, and certain communities. The two learning models used in lectures are the case method and the team-based project (Supriatna et. al., 2021). Through partner problems, students make them the main cases of the projects they will complete in teams.

The curriculum was repositioned at the beginning of 2021 and applied to students from the class of 2021. The Consultancy Project course is in its fifth semester, so 2023 will be the first year that the class of 2021 students will take this course. In the first year of implementation, various problems arose, and the course might have been inappropriate or slightly shifted from the initial objectives. Based on the analysis carried out, the problems that occurred can be categorized into four groups, namely (1) the unavailability of a memorandum of understanding between the university and various partners, (2) partner problems, (3) student competence, and (4) effectiveness of group formation.

Universitas Pendidikan Indonesia is a tertiary institution with two types of study programs: 1) study programs that produce prospective teacher graduates and 2) study programs that produce non-teacher graduates who are oriented towards solving problems in the world of work or problems of society in general. UPI has collaborated with city/district and provincial education offices for study programs oriented toward producing prospective teachers. This condition makes it easier for study programs to place students in teaching practice, and generally, schools are very welcoming of university programs. The variety of partners' work fields for non-educational study programs means that the university does not yet have formal collaboration with various partners. This condition makes it difficult for non-education study program students to explore collaboration with partners. Students visit partners randomly to explore collaboration without any recommendations from the university. Student groups face obstacles when targeted partners are unwilling to collaborate for various reasons that the partners put forward. This condition will, of course, have an impact on study programs that require students to carry out activities outside the campus, as well as directly impact achieving IKU, especially regarding partnerships.

The second problem is related to partners, namely: 1) partners are generally not used to accepting students with job descriptions such as consultants (who are expected to help solve and find alternative solutions to partner problems); in general, partners accept students with job descriptions as internships whose job is to help with activities partner operations; 2) several partners are willing to

accept students carrying out related activities and are willing to express the problems they face, but due to various conditions some partners appear less responsive, this situation makes it challenging to develop a solution plan designed by students; 3) some partners do not understand the job description of Consultancy Project lectures, the technical work carried out at partners is equivalent to an internship, making the course load heavier, students not only solve consultancy project problems but also work on partners' technical work.

The next problem is related to the competency of student groups: 1) the level of difficulty of cases/problems that partners in each group have is different, giving rise to differences in the experience gained by each group; 2) differences in field conditions, often the problems that partners have are beyond the student's ability to solve them; 3) the knowledge that has been learned in lectures is insufficient because the problems that arise for partners are not linear with the knowledge that has been studied in the study program; 4) differences in the competence of each group member, some group members have minimal competence, resulting in an unbalanced distribution of group tasks; 5) some group members take less of a role in resolving partner problems; 6) the emergence of concerns from students regarding the failure or incompatibility of the solutions offered with the partners' needs or problems.

Another problem is related to the effectiveness of group formation; the number of group members ranges from 7 - 12 people, as suggested by the guidebook for implementing Consultancy Project courses (Supriatna, 2021). This number is considered too large by each group, so that some people are not actively involved in solving partner problems. It is necessary to think about the most effective formulation so that each group member can work together optimally and hone their potential through the problems their partners have. Apart from the number of members in each group, the role of each group member needs to be designed well so that each member has the same awareness of the demands of solving group problems.

Apart from the problems students face, lecturers also have limited knowledge because their educational background is less relevant to the partner's complex problems. This condition results in lecturers' efforts to help students make solution plans, conduct trials, and determine the best solution to partner problems to be less than optimal. Lecturers need to improve their competence regarding various problems that may arise as a consequence of implementing Consultancy Project courses. These competencies may be different and outside their area of expertise, but they will strengthen student competencies in accordance with the student's learning achievements for which they are responsible.

The project takes quite a long time to complete because the stages involved are numerous and complex. The stages in resolving partner problems are presented in Figure 2.

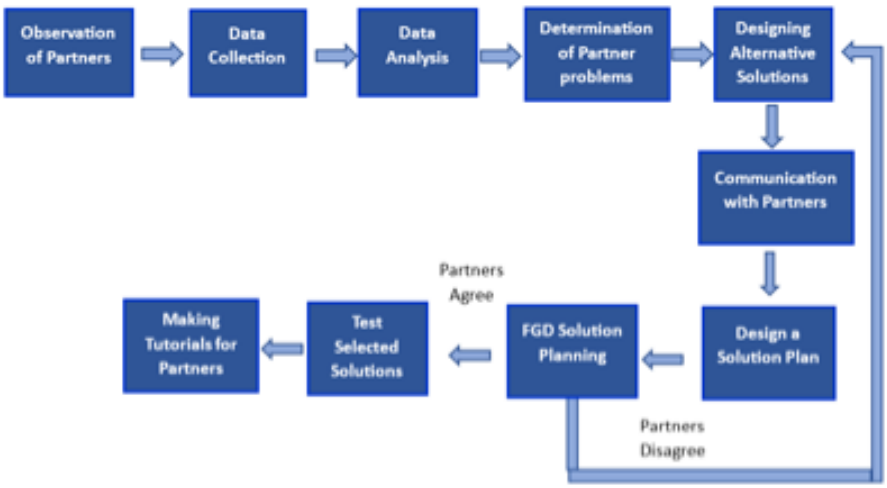

Figure 2. Stages in Resolving Partner Problems

The series of stages of partner problem-solving can be divided into three parts: 1) initial, 2) alternative solutions, and 3) results. In the initial part, students observe the partner environment,

explore various data and information, identify data, and determine partner problems. Alternative solution stage: At this stage, the student group determines various alternative solutions to the problem, creates alternative problem solution designs, and then communicates with partners. Communication is carried out to avoid different interpretations from students regarding partner problems. In the final stage, students carry out further discussions and communication with partners regarding the selected solution design/product, testing the best solution.

The solution provided by the student group may be new, making it difficult for partners to implement the technique. Based on this problem, there are two stages carried out by students: 1) providing a direct tutorial and 2) creating a guidebook or video tutorial related to the technical implementation of the alternative solutions offered. With these two stages, it is hoped that partners will genuinely feel the benefits of student involvement in helping solve problems.

Regarding the lack of effectiveness of the team due to too many members, in the first year of implementing lectures, the Mathematics Study Program consultancy project surveyed lecture participants. From 120 participants, information was obtained that 58% of participants said that the number of students in one group who were considered quite effective was between 3 and 5 people. As many as 37% of participants said the effective number of students in one group was more than five people, and 5% of participants said the effective number of group members was two people.

Respondents who answered that 3 to 5 group members were the most effective number believed that with this number, they could share tasks with relatively equal weight, and coordination was easier. While respondents answered that the adequate number of group members was more than five people, a more significant number of members was needed if the scope of the problem being resolved was broader and more complex.

Regarding achieving the study program's leading performance indicators related to partnerships and collaborative, participatory classes, the implementation of Consultancy Project lectures has made quite a significant contribution. Various collaborations between study programs and partners have resulted from consulting project lectures. This collaboration, apart from being demonstrated by the partner's willingness to accept students to carry out activities required by the Consultancy Project course, is also marked by the issuance of a Cooperation Agreement (SPK) between the study program and the partner. As an output of the Consultancy Project, 2023, 12 collaborations will be established, marked by the publication of a Cooperation Agreement Letter. Partner categories include 1) Small, Medium, and Micro Enterprises operating in the culinary, fashion, building materials, and culinary raw material suppliers; 2) Schools, with categories of general schools and schools for children with special needs; and 3) Service providers, with the category of household services and other services.

Students' opinions regarding the benefits obtained from implementing consultancy project lectures were collected through a questionnaire. Based on the results of the questionnaire, information was obtained that the benefits obtained by students were divided into four groups, namely: 1) Gaining new knowledge; 2) Obtain information on various matters related to the company; 3) Strengthen competencies in the field of communication and teamwork; and 4) Gaining new experiences.

The first benefit is that students gain a variety of new knowledge. This conclusion was obtained based on students' opinions, namely: Gaining new knowledge in Excel formulas which may not be known to many people in general; Has the output of an application; Gain new experience and knowledge in the world of education for children with special needs; If you want to run a business or business that grows, it must be based on data, not just feelings, one way is with the help of appropriate applications; Can analyze problems that occur with partners, this is useful as a provision of experience for entering the world of work; Know how to make financial reports for an organization or company; Gain experience as a consultant in modeling the distribution of School Operational Assistance (BOS) funds; Know how to establish a work contract and become a consultant; Know how to create website applications; Have experience in creating an online shop and increase courage when offering services as a consultant; Train project management skills; Training the ability to input and process data; Improve soft skills and hard skills. Other opinions regarding gaining new knowledge and experience are: Can increase knowledge outside of lectures (for example knowledge about VBA Excel, design skills using Canva and Adobe Illustrator), hone time management skills; Can find out what problems a company is experiencing, learn more about using various features in Microsoft Excel;

Understanding data base collection, understanding business problems in the scope of import and export; Can develop website creation skills and create User Interface (UI) and User Experience (UX) designs; Know some of the other features in WordPress (a place to create partner websites); Become more understanding of how to operate and create coding for a website; Knowing how to create a simple website that is not obtained in lectures; Faced directly with problem solving and re-honing programming; hone skills in creating applications; Gain a lot of new knowledge about what problems exist in a company, especially educational service companies for children under 5 years old.

The second benefit is that students obtain information on various things related to the company. This conclusion was obtained based on students' opinions, namely: Know more about the condition of a company; Understand the difficulties and bureaucratic flow of company work; Knowing that every company has an identity that cannot be changed much; Experience how to work and contribute to a company's work environment; Gaining new insights from companies that I rarely know about and understanding how a company solves problems when it experiences problems; Really know partner problems and can help solve them; Knowing the real problems in the business world; Learn more about the realities of the world of work and of course the valuable experience of meeting very supportive partners.

The third benefit is increasing students' abilities in the fields of communication and teamwork. This conclusion is based on students' opinions, namely: Knowing how to communicate well and correctly in the realm of work, working well between group members; From the course project I was able to build relationships with partners, and learn to analyze a partner's problems and find solutions; Can improve the ability to work together in a team, hone communication and compromise skills, hone the ability to solve problems in real life, and gain additional skills that are not obtained in the world of lectures; Gain experience in solving problems, gain experience working in groups, improve communication and discussion skills, improve critical thinking skills in solving problems, and increase relationships; Problem solving, teamwork, communication; Improve skills in solving problems, thinking critically to determine solutions; Experiencing direct involvement in solving problems with partners and practicing communication skills with external parties; Increase knowledge about surrounding environmental conditions, develop communication, organizational and relationship skills. Other opinions related to improving communication and teamwork skills were also expressed by the following opinions: Improving teamwork skills, namely communicating and executing work in a coordinated manner; Improve interpersonal skills, especially in establishing cooperation; Can have experience in solving or providing solutions to problems and practicing teamwork; Gain experience in the world of work by gaining the ability to think creatively, make decisions, ability as a consultant, communication and collaboration skills, and appreciate time and responsibility; The benefits obtained include training critical thinking, communicative, adaptive, team collaboration skills; Know and learn how to communicate with external parties well; Train to work together in a team; trained in problem solving, especially teamwork, these two things are certainly important skills in the real world of work; Increase insight regarding exports, increase relationships, and train cooperation between teams; gain experience in solving problems, improve critical and creative thinking skills, and improve the ability to communicate and collaborate; Benefits obtained, gaining new relationships, honing various types of skills such as cooperation, leadership, communication, critical thinking, problem solving, and so on; Can work together with a team to solve real problems in the world of work by applying the knowledge gained in lectures; Teamwork and communication; Creating relationships with partners; Creating solidarity between student groups, happy to have a new family; Increase good connections with partners, gain experience in working with companies; Gain experience in the world of work by gaining the ability to think critically, think creatively, solve problems, make decisions, ability as a consultant, communication skills, and collaboration skills; Increase connections with partners, increase experience in solving problems in the form of projects in groups; Increase connections with partners and experience solving problems in the form of projects in groups; Learn more about how to communicate professionally; Increase insight into how we can work together with partners, train problem solving skills; and increasing creativity, critical thinking in the problems faced.

The fourth benefit is that students gain new experience, which is not obtained during lectures. This conclusion is based on students' opinions, namely: Becoming a consultant in resolving partner

problems; Provide experience working as a consultant even on a small scale; learn to be a consultant who can solve problems and find solutions, which will be useful when entering the world of work; Gain experience on how to become a consultant for a company, find a solution to a problem that is solved together with a group, have experience working in the field; Increased knowledge, real work experience, industry understanding, development of analytical and problem solving skills; Get to know more about the application of knowledge gained on campus to real problems in the world of work; Have direct experience in the field to solve existing problems both as a team and individually; Train in providing solutions to problems and gain internship experience; Know the procedures for submitting cooperation agreements with partners; Gain experience to carry out analysis and think critically about problems that occur in the field; and know the implementation of mathematics in real everyday cases. Apart from that, several students gave opinions regarding gaining new experience, namely, Providing real experience working with third parties in the export sector regarding database, website, and company financing issues; Gain direct experience in the field to solve problems by implementing the knowledge gained in lectures; Learn more about the process of consulting with external parties, explore soft skills such as communicating, giving opinions, creating new relationships, knowing the company's culture; Learn how to create the appearance of a website using the HTML and jQuery programming languages; Better understand the PHP, CSS and HTML programming languages and understand how websites work; While solving the problems faced by conventional stores, I also learned how to sell on e-commerce, looking for ideas on how to create interesting content to bring in customers.

Discussion

Regarding the problems that arise, various efforts have been made by study programs, students, and supervisors. Some of the efforts made by the study program include 1) exploring collaboration with various partners and 2) carrying out outreach (by inviting partners) regarding the work description of the Consultancy Project course. Efforts made by students include: 1) discussing independently with fellow group members; 2) looking for relevant references through various media; 3) consulting with partners and supervisors. The supervising lecturer includes: 1) actively providing input and direction when students discuss problems with partners and providing several alternative solutions; 2) encouraging students to seek information/discuss with experts in their field tailored to the problem being studied.

It is hoped that establishing collaboration between study programs and various partners will positively impact both parties. The positive impacts of the study program are: 1) providing input for improving the quality of lectures; 2) as a consideration in restructuring the curriculum to be adaptive to problems in the world of work; 3) as a consideration for the study program in providing input to the university regarding the direction of implementing Consultancy Project lectures, as a mandatory university course entrusted to non-educational study programs. Meanwhile, the benefits for partners are: 1) providing various alternative solutions to their problems, 2) obtaining various applications at no cost because students made them, and 3) opening up opportunities for business development because there are applications that help with business management administration.

Contributions to IKU regarding the percentage of collaborative, participatory classes are possible because the Consultancy Project course uses two learning models: the case method and the team-based project. In the learning model, which is carried out simultaneously, cases that occur with partners are used as course projects. Each student group, under the guidance of the lecturer, analyzes, discusses, looks for alternative solutions, tests solutions, and determines the best solution.

Helle, et al. (2006) suggest that project-based learning includes different activities with different goals. Different activities and goals allow one person to consider something a problem and not another. This condition aligns with this research, which found various problems in implementing lectures. The establishment of collaboration with various partners in implementing Consultancy Project lectures aligns with the research results of Belwal et al. (2020), who concluded that collaborative projects between universities and industry build partnerships and provide opportunities to address real problems.

The implementation of consulting project lectures using a case method and team-based project approach provides benefits to students. Students experience various benefits, namely gaining new

knowledge, honing communication and teamwork skills, knowing various things related to the company, and knowing the application of mathematics in solving real problems. From the various opinions above, it can also be concluded that students are required to think critically, creatively, and collaboratively when looking for various alternative solutions that can help partners. Various alternative solutions include requiring students to think harder and learn new things that they did not learn in college. This experience will certainly provide benefits in preparing students to face the real world of work.

The case method and team-based project model in the Consulting Project lecture successfully encouraged students to think critically and creatively in designing various alternative solutions to partner problems; this condition is in line with the research results of Sahertian et al. (2022) and Saputra et al., (2022) which stated that the case method and team-based project learning aim to encourage students to understand learning content better and think at a high level.

CONCLUSIONS

Various problems arose during the implementation of the first year of the Consultancy Project lectures. The problems that occurred were categorized into (1) unavailability of a memorandum of understanding between the university and various partners, (2) partner problems, (3) student competency, and (4) effectiveness of group formation. Efforts to overcome this problem have been made by study programs, students, and lecturers. Establishing collaboration between the study program and various partners and implementing lectures using a case method and team-based project approach indicates that Consultancy Project lectures significantly contribute to achieving the study program's Key Performance Indicators, especially related to partnerships and participatory and collaborative classes. The various benefits that students feel are gaining new knowledge, improving communication and teamwork competencies, knowing various things related to the company, and knowing the application of mathematics in solving real problems.

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