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The Application of Design Thinking in Understanding the Profile of Pancasila in the Elementary School Teacher Education Study Program

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Abstract

This study was motivated by knowing the application of design thinking in lectures in the PGSD study program. The benefit of this research is to know and become material for evaluating lecture activities carried out with the design thinking model. This research method is applied research. The data used is a combination of qualitative and quantitative data (mixed method). This research is the subject of research on 3rd semester students of the PGSD study program where these three courses are related to the formation of attitudes, knowledge and skills for elementary school teachers. As many as 80% of students who took the course had succeeded in making teaching media products independently and obtained topic ideas from ideas and arguments that had been latent, 100% of students stated that they were happy with the experience, this can be seen from each stage of the application of design thinking starting from the empathy, define, idea, prototype, implementation stages running well and fun. And succeeded in shaping the profile of Pancasila students with critical reasoning.
Keywords: D*esign Thinking, PGSD Lectures, Pancasila Student Profile*

Abstrak

Penelitian ini dilatarbelakangi mengetahui penerapan *design thinking* dalam perkuliahan di prodi PGSD. Manfaat penelitian ini adalah mengetahui dan menjadi bahan evaluasi kegiatan perkuliahan yang dilakasanakan dengan model *design thinking*. Metode penelitian ini adalah penelitian penerapan/applied research. Data yang digunakan adalah penggabungan data kualitatif dan dan kuantitatif (mixed method). Penelitian ini subyek penelitian pada mahasiswa semester 3 prodi PGSD dimana ketiga mata kuliah ini berhubungan dengan pembentukan sikap, pengetahuan dan keterampilan bagi guru SD. Sebesar 80% mahasiswa yang mengambil mata kuliah tersebut telah berhasil membuat produk media ajar secara mandiri dan memperoleh ide topik dari gagasan dan argument yang selama ini terpendam, sebesar 100% mahasiswa menyatakan senang dengan pengalaman, hal ini dapat dilihat dari setiap tahapan penerapan design thinking mulai dari tahap empaty, define, idea, prototype, implementasi berjalan dengan baik dan menyenangkan. Dan berhasil dalam membentuk profil pelajar Pancasila bernalar kritis.

Kata Kunci: *Design Thingking*, Perkuliahan PGSD, Profil Pelajar Pancasila

Introduction

Education in the 21st century is marked by the massive development of digital technology. Technological developments have brought major changes to human life, including in the educational aspect. The presence of technology has brought about a major change in human life, namely the discovery of Artificial Intelligence (AI), which is currently called Revolution 5.0. Human needs are expected to be fast, cheap, easy, practical and without risk, so scientists around the world are competing to create tools called robots. Humanistic values are starting to be eroded by the so-called viral which sometimes overrides common sense, where what is viral is a form of existence in a digital social system.

Therefore, to deal with this situation, educational human resources are needed who understand the spirit of the times. To achieve this goal, the government always strives to find the right curriculum to be able to respond to the demands of the times by paying attention to superior and quality educational resources. For this reason, the Merdeka Campus - Merdeka Belajar curriculum is the right solution in prioritizing strengthening pedagogical competence, personality competence, social competence and professional competence through clinical practice or field practice programs that are integrated in lectures in understanding the Pancasila Student Profile (Maryadi, U. And Marzuki. 2019). This independent learning curriculum was created to provide students with a wide learning space, in order to form critical understanding and have problem solving skills. Students are invited to have the ability to face problems and solve problems in their lives both as individuals and socially. In the PGRI Palembang Elementary School Teacher Education Study Program, the MBKM curriculum began to be implemented in 2019. In implementing this curriculum, the study program forms an outline of the implementation direction in accordance with the established vision and mission. In essence, this curriculum places more emphasis on student needs (SCL). So in implementing this curriculum the lecturer only plays a role as a guide, example and initiator. The concept of a lecturer who is crazy, likes to get angry, has a lot of paper assignments, is starting to be eliminated and replaced with collaborative activities between students and lecturers in implementing the Tri Dharma of Higher Education. One learning model that can be used to develop problem solving abilities for students is design thinking (Loescher, 2019).

Design Thinking is a line of thinking framework in defining problems that focus on humans (humanistic) (Roterberg, 2018). Through steps of empathy, developing solution prototypes creatively and collaboratively, and testing these prototypes in literacy repeatedly, prospective teachers can find the best solutions to solve problems faced by students in understanding the Pancasila Student Profile. Design Thinking seeks to accompany the journey of prospective teachers to create learning that is friendly, effective, and in accordance with the specific needs of students systematically in facing various problems today (Presman, 2019).

Based on the results of face-to-face interviews with approximately 120 students conducted in semester 3 of the Elementary School Teacher Education study program at PGRI University in Palembang. In this research, three courses were selected, namely the Fine Arts Education course in elementary school, Elementary Civics Development course, and Elementary Science development course. Students were still found who did not have problem solving skills during the lecture. Many students do not realize the purpose of the courses they are taking or the assignments they are doing. This is because lecturers still apply the TCL learning approach, where the lecturer becomes the center/learning resource center. Lecturers only give paper assignments and presentations in lectures, so that students do not understand the substance of the material being taught. As a result, students do not have sharp problem solving skills or critical reasoning in completing lectures. Students cannot understand the essence of each course they take, without understanding the purpose of this lecture, of course this will have an impact on learning outcomes. Even though it is clear, it has been arranged in the CPMK lectures in the Merdeka Belajar Kampus Merdeka curriculum in the PGSD Study Program. There needs to be a new design in lectures that is in line with the needs of students. Where the aim of education is to liberate humans according to their nature, so that students will later become educators for children in elementary school. Therefore, to provide alternative solutions in lectures in this research, we will discuss the Application of Design Thinking in Understanding

the Pancasila Student Profile in the Elementary School Teacher Education Study Program, as a form of implementing the Independent Campus Learning Curriculum.

Method

The data used in this research is a combination of qualitative and quantitative data (mixed method) (Soegiono, 2020). This research was conducted in October-November 2023 in lectures on Elementary Civics Development, Elementary Science Development, and Fine Arts Education in Elementary School courses. The key informants in this research were 120 PGSD Semester 3 Study Program students. The data collection technique uses IDI (In-depth interview). IDI is a qualitative research method that only requires a small sample tailored to your needs (Rutledge et al., 2020). IDI is carried out in the form of observations and interviews. The results obtained from various tests will be analyzed descriptively quantitatively in accordance with the development procedures carried out.

Results and Discussion

Design Thinking is a learning model that is used to solve a problem. This model is used in learning activities that use a PBL approach, such as in elementary school PKN development, elementary science development, and elementary fine arts education courses. Design thinking is a design process approach method that offers solutions to a problem. This approach greatly influences the way decisions are made which will produce new and innovative ideas in the field of education. The following section discusses the design thinking approach in education by focusing in more depth on design thinking in education through a pedagogical approach. Design thinking is often referred to as a new paradigm for addressing problems in many professions and fields, including information technology, business, research, innovation, and education. Therefore, design thinking can be considered a great tool to use in teaching and learning to develop twenty-first century skills (Glen et al., 2014), because it involves collaboration to solve problems by finding and processing information, taking into account the facts- field facts, experience and feedback from the stakeholders involved, and by applying creativity, critical thinking and communication (Ray, 2020). In some literature, design thinking is sometimes referred to as "design-based learning", which can be understood as "a model for increasing creativity, resilience, participation and innovation" (Dolak et al., 2013). The benefits of design thinking in pedagogy refer to how to "make students able to learn well in teams and be guided in a structured manner in the design stages of solving everyday problems" (Kijima et al., 2021). K.H. Ahmad Dahlan believes that education should produce strong people who are ready to face future problems (Citraningsih, 2021). For this reason, education is a massive system and is designed collectively. The school was designed and built with functionality in mind. However, the limitations of the traditional school system have inspired serious efforts to make breakthroughs in how education should produce a generation capable of overcoming current challenges, and challenges that may arise in the future. In addition, it is also important to enrich the scope of teacher education, as teachers are increasingly challenged to be creative and use new practices for the educational context of the twenty-first century.

Implementing Design Thinking in College Classes.

Design thinking skills can also be developed through various activities at school, especially in group work and projects, because one of the prerequisites for design thinking is team work and open communication between team members (Kijima et al., 2021). Ray (2020) suggests that working in small groups, and consists of the following six steps: 1) identify opportunities; 2) design; 3) create a prototype; 4) get feedback; 5) scale and spread; and 6) presentation.

Figure 1. Stages of empathy activities in lectures (Photo: Puji, 2023)

This step can be done as an in-class activity, or as group work. During this stage, students must

identify the need for the problem to be solved, as well as who will benefit from the solution. Then students select several people who are affected by the problem, to share their experiences. Students must interview them. This can be done privately, involving activities outside the classroom; alternatively, these people can be invited to participate in lessons or interviews can be held via an online platform.

Figure 2. Formulation and ideation stage in the group
(Photo: Puji, 2023)

Step 2: Design Process. During this phase, students review the interview results obtained in step 1, and look for various alternative solutions. One way that can be taken in this step is to take advantage of social phenomena in the field of education and let them brainstorm solutions. In this stage, students are encouraged to say "Yes" when they agree with each other's ideas, and "Yes, but..." when they disagree. This is done so as not to discourage other students from expressing their opinions, and from looking for alternative ideas.

Figure 3. Stages of creating a prototype type in a Project
(Photo: Puji, 2023)

Step 3: Prototype. Next, the team held a discussion to discuss the ideas they had collected and selected a prototype. The selected prototype must be able to solve one aspect of the problem. At this point, students will focus on one solution offered to solve a particular aspect of the given problem. Then students choose the next aspect of the problem and approach it in the same way repeatedly. To visualize the thought process, it is recommended to draw a picture in the form of a diagram or graph showing this process. This diagram can also be made by sticking sticky notes on paper. Step 4: Feedback. In this stage, the team presents their solution to external parties or other teams to get feedback. It is recommended to have at least two experts or teachers who have an interest in the problem being solved.

Figure 4. Product Testing and Evaluation Stage
(Photo: Puji, 2023)

Step 5: Scale and spread. During this stage students work in teams to find the best solution from the feedback received from the previous stage. In this process, teacher assistance in guiding students' ideas is very necessary to sharpen the results obtained. If the team receives many views from experts or teachers, the group can be divided into several small groups, with each group working on one problem. Sub-groups can then come together and agree on the final result for presentation.

Figure 5. Prototype Presentation of the Product
(Photo: Puji, 2023)

Step 6: Presentation. Teams present their solutions to the problems they solve. This presentation session can present stakeholders who were interviewed by students during the stage. This kind of structured learning activity is an opportunity for students to solve real-world problems and offer solutions to people who need them. There are no bad or wrong

solutions, because according to the theory of the design thinking approach, problems can be solved in different ways. The challenge for teachers is that this activity takes time and cannot be done in one lesson. As with project-based activities, these take place over a longer period of time, so teachers can guide the process by setting firm time limits for each part of the activity that must be carried out. Teachers can adapt existing materials to students' pedagogical needs to motivate student learning.

Evaluation of the Implementation of Design Thinking in Courses.

After we carry out design thinking activities in student lecture activities in MBKM, we can carry out evaluations to find several things that we can improve in the next lecture. In this activity, observations were made of implementation activities in class, the results of which were as follows. Observation Instrument for the Implementation of Design Thinking in PKN Subjects in Elementary Schools, Natural Sciences in Elementary Schools, Fine Arts Education for Semester 3 Students of the PGSD Study Program with a Sample of 3 Classes with 120 Students.

Table 1. Observation Results of Design Thinking Activities

NO	ALUR DESIGN THINKING	ASPEK YANG DIAMATI	SKOR 100 %	Deskripsi
1.	EMPHATIZE	1. Mahasiswa memahami permasalahan yang dihadapi mengenai penggunaan media pembelajaran yang sesuai pada pembelajaran	87	Memahami
		2. Mahasiswa menuangkan pemahaman permasalahan dalam "*emphatize map*".	86	
2.	DEFINE	1. Mahasiswa mendalami permasalahan melalui sumber yang ada seperti buku teori, artikel jurnal, internet, maupunsumberlain.	90	Mendalami
		2. Mahasiswa merumuskan akar solusi kebutuhan dari permasalahan yang dihadapi.	93	
3.	IDEATE	1. Mahasiswa mengidentifikasi produk sebagai solusi baru pemecahan masalah.	89	Memahami
		2. Mahasiswa merancang model produk dengan ide baru berupa media pembelajaran.	92	
4.	PROTOTYPE	1. Mahasiswa merancang alat, bahan dan cara pembuatan media pembelajaran di SD yang berbeda dari yang pernah ada.	87	Memahami
		2. Mahasiswa merancang produk dengan alat dan bahan yang telah ditetapkan	88	
5.	UJI COBA PROTOTYPE	1. Mahasiswa mempresentasikan hasil produk media pembelajaran di SD hasil di depan kelas	89	Memahami
		2. Mahasiswa mencatat kritikan dan solusi yang diberikan oleh teman maupun dosen mengenai produk media pembelajaran yang dihasilkan.	90	

Based on the table above, it can be seen how the flow of activities for implementing design thinking in courses in semester 3 can be well received by lecturers and students. Students understand the problems they face. Students hold discussions or brainstorm ideas to identify the problems they face to find solutions. This is what is called the diamond dabel theory (two diamonds) in the design thinking learning model.

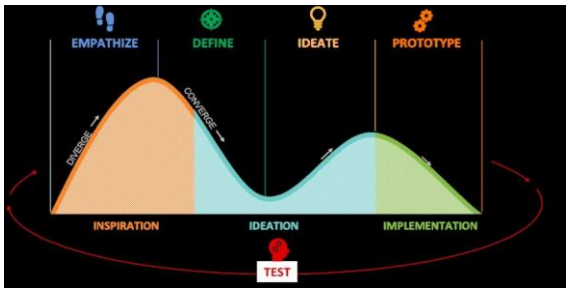

Figure 6. Evaluation results of Design Thinking activities.

Based on the results of this research, it shows that learning using the design thinking model is relevant to be applied in elementary school PKN, elementary science and fine arts education courses in elementary school for students in the third semester of the PGSD study program. As many as 80% of students who took this course have succeeded in creating teaching media products independently and obtained topic ideas from ideas and arguments that had been hidden for a long time. 100% of students stated that they were happy with this experience, and were motivated to repeat the same experience in other courses.

Conclusion

Implementing the MBKM curriculum in elementary school teacher education study programs, lecturers and students can apply the Design Thinking learning model. This model is an iterative process in which students seek to understand users, challenge assumptions, and redefine problems in an effort to identify alternative strategies and solutions that may not be immediately apparent with the student's initial level of understanding. At the same time, Design Thinking provides a solution-based approach to solving problems. Design Thinking helps students in the questioning process: questioning problems, questioning assumptions, and questioning relationships. Design Thinking is very useful in solving unclear or unknown problems, by reframing the problem in a human-centered way, generating lots of ideas in brainstorming, and adopting a hands-on approach in prototyping and testing. Design Thinking also involves ongoing experimentation: sketching, making prototypes, testing, and trying

out various concepts and ideas that students have. Critical reasoning is an ability that is formed from the application of design thinking for 3rd semester PGSD students. This aims to form the competency of prospective elementary school teachers who have attitudes, knowledge and skills including pedagogical competence, personality competence, social competence and professional competence. The formation of this ability is very important, so collaboration between lecturers and students is highly expected in forming a profile of superior and high-quality PGSD graduates. By implementing design thinking, the learning system is based on the needs of students to form professional teachers.

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