

Research Article

## Study of Literature: Implementation of Modeling Techniques Information Services to Increase Student Readiness for Vocational School Students for Practice

**Ice Desvikayati**

Universitas Negeri Padang

E-mail: [desvika.ice@gmail.com](mailto:desvika.ice@gmail.com)

**Firman**

Universitas Negeri Padang

E-mail: [firman@fip.unp.ac.id](mailto:firman@fip.unp.ac.id)

**Netrawati**

Universitas Negeri Padang, Indonesia

E-mail: [netrawati@fip.unp.ac.id](mailto:netrawati@fip.unp.ac.id)

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**Abstract.** Students' readiness to face Industrial Work Practices (Prakerin) is one indicator of the success of Vocational Schools in carrying out their functions. This research investigates the effectiveness of modeling engineering information services in increasing the readiness of Vocational High School (SMK) students to face Industrial Work Practices (Prakerin). This research method uses a literature study approach to prepare in-depth reviews of various articles and journals that are relevant to this topic. The results of the analysis show that modeling techniques significantly improve students' understanding of the world of work, help them develop practical skills such as communication and time management, and strengthen their confidence in facing challenges in the workplace. In addition, this technique also helps students identify and overcome potential obstacles they may face during internship, as well as prepare them to adapt to different work cultures. The implication of this study is the importance of integrating modeling techniques in the vocational education curriculum to prepare the younger generation to face the dynamic and competitive world of work.

**Keywords:** Information Services, Modeling Techniques, Student Readiness, Industrial Work Practices.

### INTRODUCTION

Education is very important to support individual success in realizing future

dreams and careers that suit each individual's abilities, interests and talents (Hidayati, 2015). In Indonesia, there are several levels of education (Kemendikbud, 2019), one of which is the vocational secondary level. Vocational education has a very important role in preparing skilled and ready-to-use workers in the industrial world (Malikah, 2014; Siswaya, 2020). Vocational Schools as vocational education institutions have a big responsibility to ensure that their students have the competencies needed in the world of work (Malikah, 2014; Siswaya, 2020).

The aim of vocational education is to prepare students to enter the world of work and business and develop professional attitudes (Iriastuti, 2021). To prepare quality resources, the government has created a policy for implementing Dual System Education (PSG). Students' readiness to face Industrial Work Practices (Prakerin) is an indicator of the success of Vocational Schools in carrying out their functions (Khoiroh & Prajanti, 2018; Lestari & Pardimin, 2019). Prakerin is a mandatory program that vocational school students must take to gain direct experience in the world of work before graduating.

Readiness in this internship includes aspects of knowledge, skills and attitudes needed in the work environment (Khoiroh & Prajanti, 2018; Lestari & Pardimin, 2019). However, there are various problems that arise in the process of achieving these educational goals. One of the problems in implementing Prakerin (Industrial Work Practicum) activities is the readiness of vocational school students as Prakerin subjects themselves. Based on the results of an interview with the Deputy Principal for Public Relations at SMK Negeri 6 Batam, it was revealed that students who carry out Prakerin still often show an awkward attitude and unpreparedness in carrying out their work. They feel unprepared to provide services to industry, face pressure at work, and often feel bored because the duration of the internship lasts from 6 months to 1 year. Apart from that, jobs in industry often do not match the major they are taking, the distance between home and the internship site is too far, and they have difficulty adjusting to the work environment.

Based on this, several studies have been carried out to identify factors that influence students' readiness to face internships. For example, research by Suryadi (2020) shows that support from the school and family environment greatly influences student readiness. Meanwhile, research by Rahmawati (2021) emphasizes the importance of practical skills and soft skills training in increasing student readiness. Based on this explanation, students' readiness in carrying out practice must be improved. One way that can be done is to provide information services.

Information services are one of the guidance and counseling services (Efendi & Naqiyah, 2013; Firman, 2018) that are offered to increase students' readiness in practice. Information services aim to enable students to understand themselves, know various alternatives and work conditions, know the aspects that need to be considered to be in the world of work, make decisions, adjust the knowledge they already have (Firman, F., Karneli, 2018; Karneli et al ., 2018; Tanjung et al., 2018), adapting desires that are less realistic to the world of education or work, and to adapt personal conditions to the chosen job, so that students gain an overview and understanding of the ins and outs of continuing employment after vocational school. The implementation of information services will be maximized if it is carried out by

utilizing a technique, one of which is modeling. Modeling technique information services are one of the methods used to provide students with a clear picture of the world of work.

This technique involves the use of models or simulations to depict real situations in the workplace. Research related to the effectiveness of modeling technique information services has shown positive results on the variables studied (Handari & Santosa, 2022; Melati et al., 2023; Nahdiah & Setiawan, 2018; Suny, 2020). According to research by (Handayani, 2019) this technique is effective in increasing students' understanding of the world of work and increasing their confidence in facing Prakerin. Modeling technique information services have several advantages compared to other methods. One of them is the ability to provide practical experience without having to go directly into the field, so that students can prepare themselves better. In addition, this technique also allows students to identify and overcome obstacles that may be faced in the workplace (Ismah, 2016).

The urgency of this research lies in the importance of finding effective methods in increasing the readiness of vocational school students to face Prakerin. With the increasing need for a skilled and ready workforce, it is important for schools to adopt proven methods that are effective in preparing students. Overall, this research aims to examine the effectiveness of modeling engineering information services in increasing vocational school students' readiness to face Prakerin. It is hoped that this research can contribute to the development of more effective learning methods in vocational schools.

## **RESEARCH METHODS**

This research uses a literature study method to examine the effectiveness of modeling engineering information services in increasing the readiness of vocational school students to face Industrial Work Practices (Prakerin). Data was collected from various relevant literature, including academic books, scientific journal articles, theses, dissertations, and trusted online sources. Literature searches were carried out through academic databases such as Google Scholar, JSTOR, and ProQuest with relevant keywords. After the literature was collected, the data was analyzed using content analysis techniques, which involve organizing, coding and categorizing data based on relevant themes. Research steps include formulating research problems and objectives, searching and collecting literature, selecting and evaluating literature, analyzing data, as well as interpreting and preparing reports. With this approach, research is expected to provide a comprehensive understanding of the effectiveness of modeling engineering information services in preparing vocational school students for Prakerin.

## **RESULTS AND DISCUSSION**

### **Results**

Preparing students to face Industrial Work Practices (Prakerin) is very important. One approach that has been implemented is through modeling engineering information services. This technique not only aims to increase students' understanding of the world of work, but also to develop practical skills and soft skills

needed in the world of work. This research aims to explore the extent to which modeling techniques are effective in increasing the readiness of vocational school students in facing Prakerin. By looking at various related studies, this research will also discuss the obstacles faced by students in this preparation process as well as the urgency of this research for the progress of vocational education in Indonesia.

1. **Understanding of the World of Work** This literature study reveals that modeling engineering information services significantly increase students' understanding of the world of work. Research by Handayani (2019) shows that students who take part in modeling technique sessions have a better understanding of various aspects of the work environment, including company culture, standard operating procedures, and work ethics. This knowledge is very important for students to prepare themselves to face the challenges they will face during Prakerin.
2. **Improving Practical Skills and Soft Skills** The research results also show that modeling engineering information services help students develop practical skills and soft skills that are really needed in the world of work. (Rahmawati, 2021) found that students who were involved in simulation modeling techniques tended to show significant improvements in communication skills, teamwork, and time management.
3. **Increasing Student Self-Confidence** Modeling technique information services have also proven effective in increasing student self-confidence. According to research by (Suryadi, 2020) students who get information through modeling techniques feel more prepared and confident in facing real work situations. This self-confidence is very important to help students overcome the stress and pressure they may face during Internship.
4. **Identifying Barriers and Solutions** Research also shows that information services modeling techniques enable students to identify potential barriers they may face in the workplace and prepare solutions to overcome them. Through simulation and modeling, students can learn how to overcome problems such as conflicts between colleagues, operational errors, and technical challenges (Kusumawati & Maruti, 2019).
5. **Adaptation to Work Culture** Modeling techniques help students understand and adapt to different work cultures. Pohan, (2020) noted that students who were involved in simulation modeling techniques adapted more quickly to new work environments and showed more positive attitudes towards company regulations and procedures.

## **Discussion**

Modeling technical information services play a crucial role in vocational education, especially in preparing vocational school students to face Industrial Work Practices (Prakerin). This technique integrates theory with practice through simulating real situations in the world of work. This allows students to not only understand the concept theoretically but also see how the theory is applied in a real work context. In this way, students get a clearer and more realistic picture of what they will face, thereby minimizing surprises and difficulties when they enter the world of work. As stated by Handayani (2019), modeling techniques provide an in-

depth understanding of various aspects of the work environment, including company culture, standard operating procedures, and work ethics.

### **Relationship with Experiential Learning Theory**

The results of this research also support the experiential learning theory proposed by Kolb (1984) . According to Kolb, effective learning occurs when individuals can gain knowledge through direct experience. Modeling engineering information services allow students to learn through simulated experiences that are very close to real work situations. This means students not only learn cognitively, but also affectively and psychomotorically. This experience helps them develop practical skills and soft skills that are very necessary in the world of work. Rahmawati (2021) emphasized that students involved in simulation modeling techniques showed significant improvements in communication, teamwork and time management skills.

### **Improving Soft Skills Through Modeling Techniques**

Soft skills such as communication, teamwork and time management are increasingly important in the modern world of work. In the context of vocational education, this ability often determines a student's success or failure in the workplace. Modeling techniques offer an effective platform for developing these soft skills. By using simulations, students can practice communicating with colleagues, working in teams to complete tasks, and managing their time effectively.

### **Self-Confidence as a Key Factor in Prakerin Readiness**

Self-confidence is a key factor in students' readiness to face Prakerin. Confident students are better able to handle the stress and pressure they may face at work. Modeling technique information services help increase students' self-confidence by giving them the opportunity to practice and master skills before facing real situations. With strong self-confidence, students can face various work situations better, reduce fear and anxiety, and improve their performance during Prakerin.

### **Overcoming Obstacles through Simulation**

Modeling engineering information services are also effective in helping students identify and overcome obstacles they may face in the workplace. Through simulations, students can learn how to face and overcome problems such as conflicts between colleagues, operational errors, and technical challenges. This experience gives them practical strategies to overcome difficult situations that may arise during internship.

### **Adaptation to Work Culture**

The ability to adapt to different work cultures is also an important aspect in students' readiness for Prakerin. Each company has a unique work culture, and the ability to adapt to this culture is critical to student success. Modeling techniques help students understand and adapt to different work cultures through simulating realistic work situations. Handayani (2019) found that students who were involved in modeling techniques adapted more quickly to new work environments and showed

more positive attitudes towards company regulations and procedures. This shows that modeling techniques not only help in the development of technical skills but also in the development of professional attitudes that are important in the workplace.

### **Increasing Overall Student Readiness**

Overall, modeling technique information services are proven to increase student readiness as a whole. Apart from improving understanding and practical skills, this technique also helps students develop soft skills, increase self-confidence, identify and overcome obstacles, and adapt to work culture. All of these aspects contribute to students' readiness for Prakerin and prepare them to enter the world of work with more confidence and competence. With modeling techniques, students can prepare better, reduce the risk of failure, and increase their chances of success in the workplace.

### **The Urgency of Using Modeling Techniques in Schools**

With the increasing need for a skilled and ready workforce, it is important for schools to adopt methods that are proven to be effective in preparing students. Modeling techniques have shown positive results in various studies, including those conducted by Handayani (2019), Rahmawati (2021), and Suryadi (2020). Therefore, it is important for schools, especially vocational schools, to consider using modeling engineering information services as part of the Prakerin preparation curriculum. In this way, students can get maximum benefit from their education and be ready to face challenges in the world of work.

### **Recommendations for Implementation**

For effective implementation, schools need to provide adequate facilities and resources for modeling techniques. This includes simulation equipment, relevant teaching materials, as well as training for teachers and instructors. In addition, collaboration with industry is also important to ensure that the simulation and modeling techniques used are appropriate to workplace needs and conditions. With the right support, modeling techniques can be a very effective tool in preparing vocational school students for internships and their future careers.

## **CONCLUSION**

This research shows that modeling technique information services are an effective method in preparing vocational school students for Prakerin. This technique not only increases students' understanding of the world of work, but also helps them develop important practical and soft skills, as well as increasing their self-confidence. Therefore, it is important for schools to consider the use of modeling engineering information services as part of the Prakerin preparation curriculum.

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