



# The Effectiveness of One Page 3P-PTA Method in Executing Final Year Project a Study among Vocational Education Students

Rabindarang, Siva

Kolej Vokasional Slim River, Slim River, 35800, MALAYSIA

\*Corresponding author email: [siva\\_smtsr@yahoo.com](mailto:siva_smtsr@yahoo.com)

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**Abstract:** The final year project is a compulsory course and students must pass to enable to graduate. Students need references and additional methods to select, implement and reporting the final year project. Thus, the One Page 3P-PTA method was developed using ADDIE model involving analysis, design, development, implementation and evaluation. The study is to identify effectiveness of One Page 3P-PTA method as a teaching aid for executing final year project in vocational education. The mixed method technique involving quantitative and qualitative method applied in this study. A total of 28 respondents from final year students participated for quantitative method. Meanwhile, 4 respondents participated for qualitative method. Quantitative data was collected using questionnaire containing demographic section, effectiveness and suitability. The quantitative data analyzed using descriptive statistics. The data from semi-structured interviews were analyzed using content analysis technique. Interview data were collected and analyzed by transcribing the interviews verbatim, coded and categorized according to the themes. The findings of the study show that the One Page 3P-PTA method is effective and suitable in the selection, implementation and reporting of final year projects. The findings also show that the One Page 3P-PTA method is easy to understand, suitable to use, helpful, informative and clear. This One Page 3P-PTA method contributes to the importance and need in the selection, implementation and reporting of final year projects, especially for the real projects.

**Keywords:** One Page 3P-PTA, final year project, Vocational education, ADDIE model and undergraduates

## 1. Introduction

Technical and vocational education is important because it prepare students with specific competencies for a specific job. Technical and vocational education is always facing changes and transformations due to the current demands in the field of education (Izekor & Ojeaga, 2021; Oviawe, 2020; Adamu, 2016). The development of technical and vocational education refers to the Malaysia Education Development Plan 2013-2025 (Izekor & Ojeaga, 2021) which is the master plan that is being implemented in the development of education in Malaysia. Technical and vocational education curricula must always be relevant to changes and current requirements. Therefore, students of technical and vocational education must always be prepared for changes and current requirements with the demands of the evolving and competitive industry.

The final year project is one of the compulsory courses in technical and vocational education, especially in Vocational Colleges. Students need to pass the course in order to graduate (Ministry of Education Malaysia, 2020). Final year projects are executed by students during their final year (Ministry of Education Malaysia, 2020; Rashid et al., 2020; Muhammad Baba Gusau & Mohamad, 2020; Salirawati et al., 2020). Students need to apply all the skills and experiences gained throughout the study for the execution of final year projects (Alex, 2020; Oviawe & Anetekhai, 2020; Jacek, 2015). The execution of final year project must be industry based (MBOT, 2019). Students are also advised to apply the latest techniques and skills that is related to the industry requirements.

The final year project covers the elements of selection, implementation and reporting (Rabindarang, 2020; Alex, 2020). These elements must be completed within two semesters or one year. Throughout this process, students will be assisted by a project supervisor from the field (Qasim & Zayid, 2019; Oviawe & Anetekhai, 2020). Students will execute the final year project by referring to the guidelines that have been set by the institution (Ministry of Education Malaysia, 2020; Oviawe & Anetekhai, 2020).

In addition, project supervisors need to be creative and facilitate students to execute their final year projects. This can be applied using various techniques and meaningful approaches such as methods, strategies and resources (Lawy & Bloomer, 2003). In fact, students also need support materials, methods and references (Rashid et al. 2020a; Rashid et al., 2020b; Muhammad Baba Gusau & Mohamad, 2020; Qasem & Zayid, 2019; Leung, Lai, & Yuan, 2015; Lawy & Bloomer, 2003) particularly for the execution of final year projects.

Thus, a method namely One Page 3P-PTA has been developed to assist and facilitate the implementation of final year projects that focuses on real projects. This method is intended to assist and facilitate the selection, implementation and reporting of final year projects so that students can complete within the stipulated time period. This method has also been expanded and has received good input from students, project supervisors and panel of evaluators involved with the final year project. Besides that, the One Page 3P-PTA method was registered for copyright with Intellectual Property Corporation of Malaysia.

## 1.1 Research Background

The final year project is one of the parts that need to be completed by the students from the diploma level onwards. The project execution must be in the study's field and theme that has been set by an institution (Muhammad Baba Gusau & Mohamad, 2020). Students are exposed to various challenges and problems throughout the execution of final year projects (Muhammad Baba Gusau & Mohamad, 2020; Salirawati et al., 2020). The execution of the final year project also requires understanding as well as supporting materials in order to be completed within the stipulated time period (Salirawati et al., 2020). According to Din et al. (2010) students should be guided with additional method or references in the selection, implementation and reporting final year projects. This is important so that the quality of the final year project reaches the standards and quality set by an institution.

Meanwhile, according to Rashid et al. (2020a) lack of understanding the concepts and guidance affect the execution of final year project. This leads to unguided learning and has negative implications for final year projects (Rashid et al., 2020b). In fact, students also frequently make mistakes in the selection, implementation and reporting of final year projects (Qasem & Zayid, 2019). According to Ali et al. (2019) students need techniques, tips and guidelines to execute final year projects. Oviawe & Anetekhai (2020) stated that the execution of the final year project is still at a moderate level due to lack of understanding and guidance.

One Page 3P-PTA is innovated to guide students in selection, implementation and reporting of final year projects. Thus, this research is carried out to study the impact of One Page 3P-PTA in selection, implementation and reporting of final year projects.

## 1.2 Research Objectives

This study is aimed to determine the effectiveness and suitability of the One 3P-PTA method in the selection, implementation and reporting of final year projects. This study is based on the findings of data analysis as well as views from the students.

The following are the objectives of this study;

- a. Identify the effectiveness of the One Page 3P-PTA in the selection, implementation and reporting of final year projects.
- b. Identify the suitability of the One Page 3P-PTA in the selection, implementation and reporting of final year projects.
- c. State the views of students on the importance of One Page 3P-PTA method in the selection, implementation and reporting of final year projects.

## 1.3 Research Questions

Referring to the objectives, the following are the questions of this study;

- a. Is the One Page 3P-PTA method effective in the selection, implementation and reporting of final year projects?
- b. Is the One Page 3P-PTA method suitable in the selection, implementation and reporting of final year projects?
- c. What are the views of students on the importance of One Page 3P-PTA method in the selection, implementation and reporting of final year projects?

## 2. Literature Review

Final year projects must cultivate creative ideas and in accordance with the needs of the industry (Muhammad Baba Gusau & Mohamad, 2020; MBOT, 2019). In fact, final year project is a platform that creates opportunities for students to establish the knowledge and skills they have acquired throughout their studies (Alex, 2020; Salirawati et al., 2020; Jacek, 2015). Executing final year project is a challenge for students to select, implement and report the final year projects. Rather than that, it should be innovative, impactful and meaningful (Salirawati et al., 2020). In addition, students have the opportunity to select methods, equipment and make logical decisions throughout their final year project process (Alex, 2020; Salirawati et al., 2020).

Usually, the educational institution will prepare and provide guidelines to all students and project supervisors so that the final year project is implemented in accordance with the standards that have been set. Therefore, the final year project must be implemented based on the criteria and standards that have been set so that quality is guaranteed and can be completed as planned.

Throughout the final year project execution process, students will encounter various things as well as gain new knowledge (Jacek, 2015). There are elements that students do not learn or gone through (Jacek, 2015). Therefore, the project supervisor must always guide and assist students throughout the final year project execution process. The role of the project supervisor is very high and they should always guide students in order to complete the final year project as planned. The project supervisor is responsible and has a role in ensuring the effectiveness of the project as well as assisting students. The project supervisor also serves as a facilitator and builds the formation of students' experiences independently as well as guiding for the final year project (Rashid et al., 2020b). Thus, the project supervisor should be from the field of studies (Shafie et al., 2008) so that the execution of the final year project is smooth.

The final year project is a compulsory course. Therefore, it is a need to provide guidance to students so that the project can be completed. As a project supervisor, they need to provide guidance and assistance by applying various methods or meaningful approaches (Rusdin & Ali, 2019). In fact, it is necessary to use various resources, methods or techniques to assist students in executing the final year project.

The One Page 3P-PTA method was developed referring to problems and needs to facilitate students for executing the final year project. One Page 3P-PTA method was developed referring to the ADDIE model involving analysis, design, development, implementation and evaluation. Furthermore, this method was improvised from previous method in executing the final year project. Problems were identified in the analysis process, whereby students not able to select, implement and report the final year projects effectively. The design process is based on the project objectives of selecting, implementing and reporting final year projects. The development of One Page 3P-PTA refers to benchmarking to educational institutions such as universities, polytechnics, industry and agencies. Discussion, feedback and evaluation were conducted on the students in developing the One Page 3P-PTA method. The One Page 3P-PTA method covers each component in final year project selection, implementation and reporting using 5W1H and SWOT analysis. An evaluation process was implemented on students to identify the effectiveness and suitability of the One Page 3P-PTA method.

### 3. Methodology

This study is a combination of quantitative and qualitative methods. A descriptive quantitative study was conducted using a questionnaire that was distributed to final year students. A total of 28 construction technology students were involved in this study. The questionnaire instrument included five questions to determine the suitability of the One Page 3P-PTA method. While, fifteen questions about the effectiveness of the One Page 3P-PTA method were asked. The questionnaire was evaluated and validated by two experts in the field of technical and vocational education. Table 1 shows the questionnaire distributed to the students that were involved in this study.

**Table 1: Questionnaire**

No.	Category	Questions
1	Effectiveness of One Page 3P-PTA	<ul style="list-style-type: none"> <li>• I can choose my final year project clearly</li> <li>• I get information in final year project selection</li> <li>• I get help in selecting final year projects</li> <li>• I am able to select an appropriate final year project</li> <li>• I can choose final year projects easily</li> <li>• I can implement final year projects clearly</li> <li>• I get information on the implementation of the final year project</li> <li>• I get help in the implementation of the final year project</li> <li>• I am able to implement appropriate final year projects</li> <li>• I can implement final year projects easily</li> <li>• I can report final year projects clearly</li> <li>• I get information in the final year project report</li> <li>• I get help in final year project reporting</li> <li>• I am able to report on appropriate final year projects</li> <li>• I can report final year projects easily</li> </ul>
2	Suitability of One Page 3P-PTA	<ul style="list-style-type: none"> <li>• The One Page 3P-PTA method is very clear</li> <li>• The One Page 3P-PTA method is very informative</li> <li>• The One Page 3P-PTA method is very helpful</li> <li>• The One Page 3P-PTA method is very suitable to use</li> <li>• The One Page 3P-PTA method is easy to understand</li> </ul>

Qualitative research is also suitable for technical and vocational education because data can be obtained face to face, accurately and efficiently. A total of 4 students were selected as respondents for this study. The purpose of selecting 4 students because the total student is only 28 and this qualitative research is to support the quantitative findings. The selection of respondents for this study was consistent with the minimum requirements required in a qualitative study (Creswell & Clark, 2011). Study respondents were selected with purposive sampling technique with students that were directly involved with the final year project.

Interviews were used in the study which is a method that can provide information in detail (Creswell & Clark, 2011). The interview method can also help the researcher to obtain information that is appropriate and useful for the study (Creswell & Clark, 2011). The researcher was able to gather appropriate and as much as information as possible for this study. The question instrument was designed with reference to past references and the appropriateness of this study. The questions are processed based on the problems and objectives of the study. Question processing was carried out with the advice of an identified reference expert. Study respondents were coded from 'SD1' to 'SD4' for the purpose of confidentiality ethics. All personal information of respondents is kept confidential to maintain the ethics of the study. Respondent participation was voluntary.

Interviews' data were collected and analyzed. Analysis of interview data was performed by transcribing the interviews' verbatim. Transcription is the result of an interview between the author and the respondent in the form of raw data that is recorded and then rewritten. Data is coded and categorized by data filtering. The screening of this data is based on the themes that have been set in the study. Data screening is the process of reducing the amount of data especially those that are less relevant to the objectives of the study. This process is ongoing so that the data are relevant and can be used in this study. Themes were analyzed separately to answer the research questions that were determined in this study.

#### 4. Findings

The study data was obtained by descriptive analysis to answer question 1 and question 2. Meanwhile, the study data of question 3 was obtained by interviewing the students who were coded from SD1 to SD4.

##### 4.1 Research Question 1: Is the One Page 3P-PTA Method Effective in The Selection, Implementation and Reporting of Final Year Projects?

The findings of the study were from 28 students involved with the final year project. Fig.1 shows detailed information about the study findings.

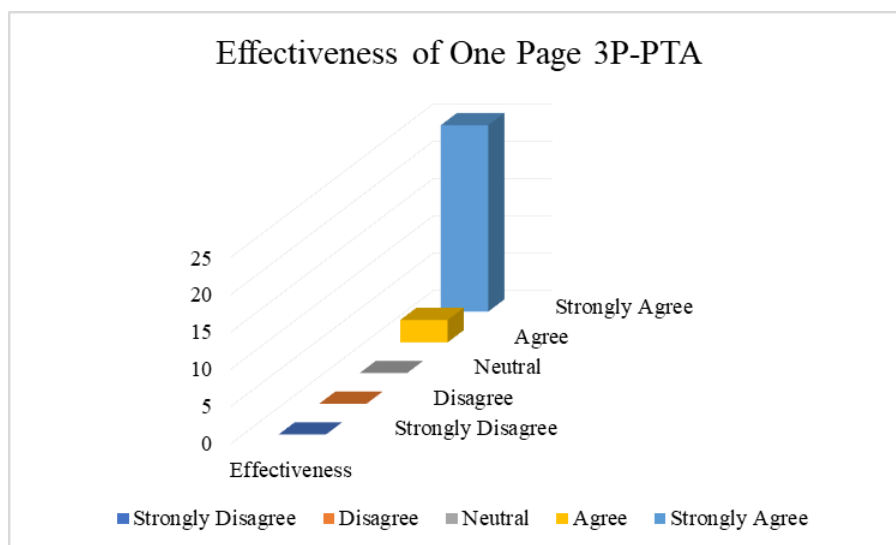
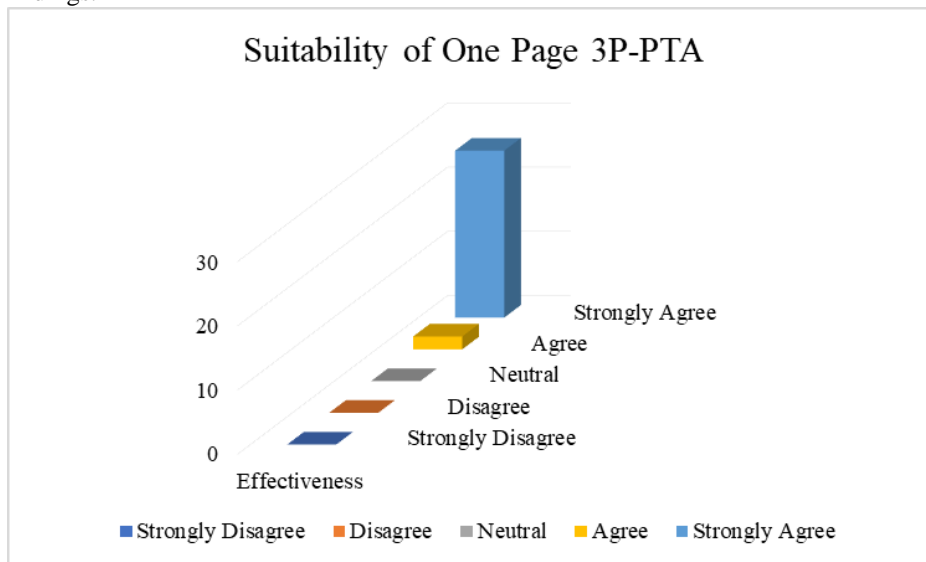


Fig. 1: Effectiveness of one page 3P-PTA

Referring to Fig. 1, an average of 25 students expressed strongly agreed with the effectiveness of One Page 3P-PTA method in the selection, implementation and reporting of final year projects. They strongly agreed because this method able to help them in selecting, implementing and reporting final year project. Meanwhile, 3 students agreed with the effectiveness of One Page 3P-PTA method in the selection, implementation and reporting of final year projects.

##### 4.2 Research Question 2: Is the One Page 3P-PTA Method Suitable in The Selection, Implementation and Reporting of Final Year Projects?

The findings of the study were from 28 students involved with the final year project. Fig. 2 shows detailed information about the study findings.



**Fig. 1: Suitability of one page 3P-PTA**

Referring to Fig. 2, an average of 26 students strongly agreed with the suitability of One Page 3P-PTA method in the selection, implementation and reporting of final year projects. They strongly agreed because this method easy to understand and applied. Meanwhile, an average of 2 students agreed with the suitability of One Page 3P-PTA method in the selection, implementation and reporting of final year projects.

### 4.3 Research Question 3: What Are the Views of Students on the Importance of One Page 3P-PTA Method in the Selection, Implementation and Reporting of Final Year Projects?

The semi-structured interview sessions that were conducted on 4 students showed that the One Page 3P-PTA method was helpful, simple, easy to understand and suitable to use in executing final year projects. Here are the findings from the semi-structured interview session.

According to respondent SD1;

*"... for me, the method is easy to understand. It is also obviously very helpful. I lack exposure in the method of choosing a project. Make it easy for me"*.

According to respondent SD2;

*"... ok. Very suitable. Can give an explanation for choosing a project title. So, it makes it easier for me to choose a project"*.

According to respondent SD3;

*"... it's easy to use to write one chapter at a time. Suitable for real projects. Very effective and helps everyone"*.

According to respondent SD4;

*"... very suitable. This method very helpful. Because choosing a project is not easy. We need extra references and guidance"*.

All respondents showed a positive reaction and stated that the One Page 3P-PTA method was very effective in the selection, implementation and reporting of final year projects. The One Page 3P-PTA method is suitable as a reference and resource in final year projects. Thus, the findings show that the One Page 3P-PTA method helps and facilitates the selection, implementation and reporting of final year projects.

## 5. Discussion

The One Page 3P-PTA method is suitable for the selection, implementation and reporting of final year projects. According to (Salirawati et al., 2020; Amri et al., 2019; Ali et al., 2019) teaching and learning methods are important as a guidance and references. One Page 3P-PTA method is in line with the recommendations of previous studies, as a reference and

additional material. With these supporting materials and references, quality and standards of final year project are always improvised (Jawitz, Shay, & Moore, 2002). Therefore, this method is a support and reference material that can facilitate and help the execution of the final year project. The findings also show that students strongly agree and agree with the effectiveness and suitability of One Page 3P-PTA method. The One Page 3P-PTA method also helps to cultivate the understanding of the final year project process. This can be seen in the findings that most of the students mentioned One Page 3P-PTA method is easy to understand, effective and helpful. The implications of the study indicate that students need a method in the selection, implementation and reporting of final year projects. The One Page 3P-PTA method is an additional material as well as a reference in executing final year project especially real projects.

## 6. Conclusion

Studies show that students need a method or technique in the selection, implementation and reporting final year projects. The One Page 3P-PTA method becomes an additional material or reference to assist and facilitate the execution of final year projects. In addition, this method helps to ensure final year projects are executed as planned and on time. Referring to the strength aspects of the One Page 3P-PTA method, it has been shared in KPM education TV program and registered for copyright with Intellectual Property Corporation of Malaysia (MyIPO). Referring to the objectives in this study, One Page 3P-PTA method assists students in selecting, implementing and reporting final year projects. The results of this study showed that all those involved stated that this method is very helpful and suitable for use. This is in line with the recommendation of previous study that there is a need for various methods, resources or meaningful approaches in helping the execution of learning and facilitation. Thus, the One Page 3P-PTA method is in line with the recommendations and requirements in the execution of final year projects.

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