

A Systematic Review Analysis on Module Development: Systematic Review Analysis of Module Development in Technical Teaching and Learning for Technical and Vocational Education Systems

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Abstract

The issue of module development in teaching and learning needs to be emphasized in ensuring the continuity of achievement of the education system in Malaysia in accordance with the current situation of the country and the world, namely the Covid-19 pandemic situation which has forced educators to diversify teaching and learning methods. The development of modules in teaching and learning is important to ensure student achievement in the course or field being pursued. The systematic development of specific modules is also important for the teaching staff in ensuring that the teaching and learning process takes place at the best level. Therefore, this research article aims to analyze the relevant literature on issues related to the importance of module development in teaching and learning systems. Thus, the search effort produced a total of 15 articles that will be systematically analyzed. This study successfully summarizes the importance of module development in ensuring the continuity of the teaching and learning process which in turn will affect student achievement. Finally, some suggestions and views are presented at the end of this research for the reference of future scholars.

Keywords: Module Development, Teaching And Learning, Teaching Staff, Student Achievement

Introduction

The systematic development of specific modules for these students is very necessary to ensure that the teaching and learning process can be implemented effectively and efficiently. This is to show that the development of this module has an effect as a teaching aid that is needed among students. Equipment facilities, teaching aids and modules need to be provided so that challenges in the teaching and learning of subjects can be overcome.

Therefore, a study on the development of this module should be developed to ensure that the teaching and learning process is enhanced and further improve students' understanding and achievement (Ahmad et al., 2017).

Module development is a learning approach that can engage students through a more systematic comprehension process. In line with the need for modules to students in the current era of education, in stimulating students towards the teaching and learning process takes place. A review of the literature based on theory and past studies found that the module-based learning approach in the classroom ensures that the teaching and learning process takes place more seamlessly in ensuring student achievement. The teaching and learning process based on this module is more interesting and effective because this approach will give more effectiveness to the process of development and student performance. The findings from previous studies give a positive perspective to the research paper in the effect of module development on student achievement and the teaching and learning process by the teaching staff.

Methodology

Systematic literature review has been recognized as a popular method in research for over a decade. In recent years, searches are often searched on "Google Scholar" and "Scopus", such methods are becoming popular in Malaysia, as more researchers can use them in conducting and finding suitable research materials. A systematic literature review is an approach that involves identifying, reviewing documents relevant to a research question, analyzing and summarizing using systematic methods to select and critically evaluate relevant research (Cochrane Collaboration, 2008; Pettigrew & Roberts, 2006). Scholars have consistently emphasized the use of systematic surveys because it will provide space to justify their research, in particular studies that can be made to identify gaps and clues for future research.

This study was conducted by looking for previous studies to conduct the entire systematic review process; eligibility and exclusion criteria, procedures involved (identification, inspection, and eligibility) and data collection and analysis. In general, this study is designed in the context of Malaysia, an upper middle-income country that has high ambitions to compete with other developed countries.

The survey method of this study was conducted by using Google Scholar as the main journal database. Google Scholar is among the well-known and favourite database platforms of researchers, having the largest database of abstracts and citations of literature reviewed with more than tens of thousands of journals from thousands of publishers around the world. The database from Google Scholar spans from a variety of fields such as social sciences, education, environmental sciences, agriculture, biological sciences and more.

There are several stages involved in the systematic review process. The first stage is to identify the keywords used in the search process. Based on previous studies and thesauruses, similar and relevant keywords related to module development were used. Specifically, the keywords used in this study in a search on Google Scholar were: (*module development technical OR and OR vocational OR educational OR systems "teaching and learning"*)

For the first process, 17600 articles were found from the search database. The term is broad enough to track the most appropriate articles, and at the same time successfully remove the least appropriate articles. In the second stage, several eligibility and exemption criteria were determined. For the term, a period of 5 years was chosen (between 2015 and 2020).

The remaining articles were evaluated and analyzed. Efforts are focused on specific studies that respond to those studies. Data were extracted by reading the abstract first, then the complete (in-depth) article to identify appropriate themes and subthemes. In the end, an exclusion process was applied to the articles that had been obtained by selecting the most appropriate articles to be involved in this systematic literature review study.

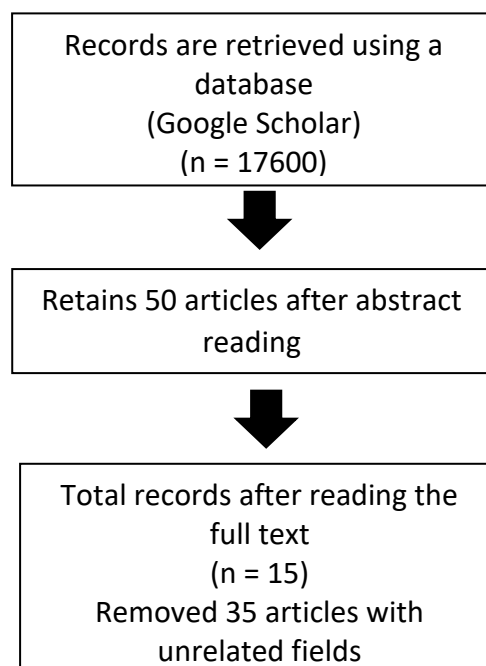


Figure 1: Search process

Findings

Past studies related to module development have been explored to further strengthen the meaningful search to this research. Findings from previous studies involved in this systematic literature review study are among those that describe that many researchers found the need for teachers to deliver teaching actively and creatively to achieve teaching objectives, however not necessarily many consider the effectiveness of module development on student achievement.

In showing the effect of the importance of modules on teaching aspects, Hashim (2015) details in his research paper that is Using Technology and Instructional E-Material among Technical Teacher and Student into Teaching and Learning: A Qualitative Case Study. This study shows that the development of instructional electronic materials or e-materials for electrical and electronic research has been developed by many companies and institutions. The planned quality and potential for use as a tool in teaching and learning however remains in doubt. The purpose of this study is to understand the use of technology and e-instructional materials among technical teachers and students in teaching and learning. Qualitative case

study methodology was used to collect and analyze data thoroughly through several interview activities, documentation analysis and observations by researchers. The research was conducted in two technical schools in Malaysia involving several students and teachers in those schools. His findings indicate that the use of technology in teaching and learning is preferred by technical teachers and students with e-materials as a tool to be used to understand electrical and electronic subjects. Of course, the teachers have skilfully integrated e-materials in their teaching process and used the students in their learning process.

The findings of Chedi (2015) in a research paper entitled technical drawing/graphic skills acquisition for teaching and learning and challenges in technology education found that current technological developments and changing demands in society and the labour market become the need for teaching and learning to overcome challenges in technology education especially in technical / graphic drawing this can only be achieved through voice pedagogy and computer information technology (ICT). The adoption of the use of technology will increase and maintain the marketability of students. Literature review and document analysis show that the use of multimedia approach for teaching drawing technique especially the use of Courseware and CAD software in general will further enhance the effectiveness of teaching and learning drawing technique. Innovative teaching methods using ICT such as the Computer Animation Module for Engineering Drawing will have a positive impact in the understanding of visualization problems to students.

The importance of the development of this module according to a study conducted by Mirkouei, Bhinge, McCoy, Haapala and Dornfeld (2016) has been described in a research paper entitled A pedagogical module framework to improve scaffolded active learning in manufacturing engineering education. Studies suggest the improvement of pedagogical approaches in science, technology, engineering, and mathematics (STEM) has prompted research at many universities. Several educational methodologies were studied, and it was found that there is a need to identify and understand the challenges of STEM education. This research aims to support student learning in the field of manufacturing engineering through real-time process evaluation. A pedagogical framework is presented that can assist engineering educators in developing learning modules to support this goal. The framework includes four steps, namely determining learning outcomes, creating teaching resources, creating active learning resources, and creating a summative assessment mechanism. This framework emphasizes the involvement of manufacturing engineering students in psychomotor learning which remains a challenge due to the high cost of instructional laboratories. This framework is applied to develop participatory pedagogy for manufacturing courses using computer numerical control of manufacturing operations and the monitoring, visualization, and analysis of machine power consumption data. The framework was developed for undergraduate and graduate-level manufacturing engineering courses at two universities (i.e., Computer-Aided Design and Manufacturing at Oregon State University and Precision Manufacturing at the University of California, Berkeley). A series of studies conducted found that the framework can support the development of effective learning modules in manufacturing engineering education.

The impact in module development has also been detailed in studies conducted to assist teachers who teach technical subjects. Yap (2016) in his research paper Transforming Conventional Teaching Classroom to Learner-Centered Teaching Classroom Using

Multimedia-Mediated Learning Module found that there are higher education institutions in Malaysia that are at the stage of transformation from teacher-centered teaching in the classroom to student-centered teaching environment. The process became slow due to lack of guidelines given and teachers lack confidence. This research addresses the difficulties or challenges faced by institutions of higher learning in such endeavours as well as further research on the impact of student-centered teaching. The case study was conducted at INTI International University, Malaysia where it was aware of the limitations of conventional teaching and has taken initiatives to encourage lecturers to adopt a more student-centered teaching approach. This research is found to be significant because there are many discussions that focus on various learning activities for student-centered learning, but less focus is given to teachers and what teachers can do to achieve student-centered learning especially for educational institutions that have begun to move towards a student-centered learning environment. With the help of technology, various learning tools or techniques are introduced and incorporated into the teaching and learning process. This includes an online learning environment that supports learning. Multimedia technology can also be used to design learning modules as it can gain better attention from students, increase student motivation, and increase its relevance rate. This research uses Weimer's Model which is student-centered teaching which is a key strategy to help educational institutions to achieve transformation in a more systematic approach by having clear guidelines for teachers. Through the activities performed, students are easier to remember because they see for themselves the process carried out. This study also states that the use of ABM in the PdP process is effective in enhancing students' understanding of various aspects.

The effectiveness of module development can also be found in the writing of Hairida's (2016) research paper entitled the effectiveness using inquiry based natural science module with authentic assessment to improve the critical thinking and inquiry skills of junior high school students. The purpose of this research was to examine the effectiveness of inquiry -based science modules with authentic assessment to develop students' inquiry skills and critical thinking. This research uses a quasi-experimental method with pre-test and post-test control group design. This research was conducted in 7 classes of one of the First Secondary Schools in Pontianak using 2 classes as a sample. Data were collected using inquiry skills observation sheets, critical thinking tests and interviews. The results showed that the mean of inquiry skills and critical thinking scores of the experimental group were higher than the control group and the significance score from using t-test was <0.05 , which means there were differences of inquiry skills in the experimental and control groups. The N-gain score indicated that the mean of the experimental group's engagement skills and the post-treatment critical thinking score were higher than the control group. This concludes that science learning by using inquiry -based modules with authentic assessment is effective for developing students' inquiry skills and critical thinking. The implication is that modules should be constructed to enhance students' mastery.

The importance of module development to students can be further proven in a study conducted by Abi Hamid, Aribowo and Desmira (2017) in their research paper Development of learning modules of basic electronics-based problem solving in Vocational Secondary School. This research aims to develop basic electronic learning modules based on problem solving, find out the response of students and teachers to basic electronic learning modules based on problem solving and find out the improvement of student learning outcomes on

Basic Electronics subjects. This research method uses the Research and Development approach for the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). The results of this research show that the basic electronic learning module based on problem solving developed is stated to be suitable for use, with the average validation result of the included material category is very qualified, and the average validation result of the included media category is also very good. Readability is included in the very good category and in terms of learning using modules is included in the very good category. Equipment facilities, teaching aids and modules need to be provided so that the challenges in teaching and learning of these technical subjects can be overcome and this leads to the study of module development for these technical topics becomes a necessity in ensuring the teaching and learning process is enhanced and in turn improve student understanding and achievement.

The study conducted by Siew and Ambo (2018) in writing a research paper entitled Development and evaluation of an integrated project-based and STEM teaching and learning module on enhancing scientific creativity among fifth graders. This research ensures that the PjBL-STEM teaching and learning modules developed are acceptable for good content reliability and validity. The PjBL-STEM module is appropriate and effective for fostering the dimension of the nature of scientific creativity among Fifth Grade. This research has highlighted the important role of the principles of explicitly integrating constructivist learning theory, engineering design process model, directed creative process model, scientific creativity structure model, cooperative learning (Number-Heads Together), and ADDIE instructional design model in developing PjBL teaching. -Integrated STEM and learning modules that are valid, reliable, appropriate, and effective in fostering Fifth Grade scientific creativity. This empirically proven integrated model can be enhanced or enhanced to serve as a reference model for those interested in developing learning modules that foster the five dimensions of the nature of scientific creativity.

The importance of module development in technical teaching and learning conducted by Kasim and Ahmad (2018) in a research paper entitled PRO-STEM module: The development and validation. This study was conducted to develop a PRO-STEM module for the teaching of Biodiversity and Ecosystem topics in Science for Form Two students. In this module, the concepts of Science, Technology, Engineering, and Mathematics (STEM) are integrated using a project-based learning approach to promote the application of high-level thinking skills and 21st century skills among high school students. This module is developed based on the Sidek Module Development Model. The results show that the PRO-STEM module has good validity and reliability and can be used as a teaching and learning module to integrate STEM in the science classroom. As a conclusion by expert consensus shows that the PRO-STEM module has good validity. A series of results from this study found that this module can help teachers to integrate STEM teaching among secondary school students.

The importance of module development in technical teaching and learning is also emphasized in the study of Syukri, Halim, Mohtar and Soewarno (2018). A research paper entitled the impact of engineering design process in teaching and learning to enhance students' science problem-solving skills was produced. This study aims to find out the effect of integration of engineering design process (ask, imagine, plan, make and improve) in electrical and magnetic modules to improve problem solving skills in physics among high school students in Aceh, Indonesia. A quasi-experimental study was conducted with 82 third

-grade students (aged 15 years) from a secondary school in Aceh Besar, Indonesia. The researchers randomly selected two classes as the experimental group and the other two classes as the control group. An independent sample t-test analysis was performed to determine the differences between the use of physics teaching and learning modules that integrate the five steps of the engineering design process and science commonly used in teaching and learning modules. The results of independent sample t-test analysis showed that the use of physics teaching and learning modules that integrate the five steps of the engineering design process is more effective compared to the use of existing modules in improving students' skills in solving physics problems. The results of the study show that the science learning approach is suitable to be used in teaching and learning to improve science problem solving skills among secondary school students. In addition, it can also be used as a guide for teachers on how to implement the integration of the five steps of the engineering design process in the teaching and learning of science.

The effectiveness of module development in teaching and learning is further evidenced by the results of analysis in the study data of Srisawasdi, Pondee and Bunterm (2018) namely in the research paper Preparing pre-service teachers to integrate mobile technology into science laboratory learning: an evaluation of technology-integrated pedagogy module. Studies state that with the rapid advancement and popularity of wireless communication and mobile technology, mobile learning pedagogy is becoming more important with pedagogical knowledge in the context of mobile learning being more emphasized in education. It is therefore a priority to prepare science teachers who are literate in the use of mobile technology in teaching practice. The researchers have implemented a framework to develop a technology-integrated pedagogy module, the Mobile Laboratory Learning in Science (MLLS). This study aimed to evaluate the impact of the MLLS module in enhancing the potential of 119 Thai Science teachers. The results of the study indicate that the MLLS module has an impact to the teaching and learning process of the Science teachers involved.

The effectiveness of module development in technical teaching and learning in technical and vocational education system is further proven in a study conducted by Martiningsih, Lisdiana and Susilowati (2019) in a research paper entitled Development of module based on scientific contextual material additives to increase learning outcomes and science process skills in junior high school. This study aims to improve students' learning outcomes and science process skills using modules based on the scientific context. This is a type of research and development with Sugiyono model development procedure with pre-experimental design method using post-test and pre-test one group. Based on the results of the analysis it can be concluded that the development of modules based on scientific context effectively improves student learning outcomes and science process skills. The results of the development of scientific contextual-based learning modules are stated to be very valid by the validator and suitable for use in learning activities. Learning activities using modules based on scientific contexts effectively enhance student learning outcomes.

The effectiveness of the development of this module is also evidenced from the results of the study of Kariman, Harisman, Sovia and Prahmana (2019) in a research paper entitled Effectiveness of Guided Discovery-Based Module: A Case Study in Padang City, Indonesia. The study was conducted for two years starting from finding the importance of module definition

to module development stage in 2015. This article is the final part of the study which aims to see whether there is an effect of module use on student learning outcomes. A total of 27 students were given a final test in the form of four questions that were validated by education experts. Then the data is processed, and statistical tests are performed (comparing student result scores before using the module). It can therefore be concluded that the use of Complex Analysis Module in lectures influences the learning outcomes. The use of modules is seen to improve student behaviour in problem solving and understanding of concepts.

The effect of module development was found in a study conducted by Setiyani, Ferdianto and Fauji (2020) in a research paper entitled *Designing A Digital Teaching Module Based On Mathematical Communication In Relation And Function*. The purpose of this study was to design digital modules based on mathematical communication skills. This is developmental research conducted to determine the poor use of learning media and students' low comprehensive skills in understanding mathematical topics related to relationships and functions. One of the solutions used to overcome this problem is to design digital teaching modules using media. Research and development methods consisting of Analysis, Design, Development, Implementation and Evaluation (ADDIE) were used to conduct this research. The results show that the digital module is very valid with a total expert validation of 95.1% and in the very good category. Student response to the digital module was in an excellent category, with an overall response criterion of 89.8%. Thus, the designed digital modules can enhance students' independence in learning as their use is not limited to the classroom. The variety of methods and the use of ABM in PdP sessions is necessary if there are weaknesses and improvements from the existing needs to ensure that students achieve results from PdP sessions.

The effectiveness of module development in the teaching and learning of technical and vocational education systems is evidenced in the results of the study of Mohammed, Khidhir, Nazeer and Vijayan (2020) entitled *Emergency remote teaching during Coronavirus pandemic: the current trend and future directive at Middle East College Oman*. The study noted that due to the worldwide outbreak of COVID-19, academic institutions have completely abolished face-to-face teaching including the use of laboratories and workshops. The string of various measures by higher education administrators have been implemented to implement social isolation strategies and online teaching followed by rapid curriculum transformation. Online delivery is easier because it can provide a dynamic and dynamic teaching and learning environment. However, due to time constraints, curriculum transformation is expected to take place without proper preparation. Therefore, in this study discussing the concept of emergency distance teaching module (ERT) including its application and evaluation is discussed comprehensively. The application of ERT in Middle East College Oman has been considered a case study. This study used the CIPP evaluation model to evaluate the effectiveness of the modules developed and qualitative data were collected online by taking a random sample of students and educators. In addition, also the responses of interviews and questionnaires, experiences, beliefs, and challenges faced by educators and students regarding emergency distance teaching were used and analyzed. In addition, also the weekly attendance of students separated by session mode, level and nature of the module is considered to assess student participation to online classes. The information collected was analyzed and based on the results of the analysis showed an improvement in student performance by following module-based teaching learning activities.

The importance of module development in technical teaching and learning conducted by Annisa, Lesmono and Yushardi (2020) in a study paper Comic-based andro-web development module to improve problem solving ability in physics in high school students. This research aimed to determine the validity of comic-based andro-web modules on ideal gas subjects and the improvement of physics students 'problem-solving ability after using andro-web comic-based modules. The research used the Nieveen development model design. In the evaluation phase the module was tested at 2 Jenggawah Secondary Schools. The quality product instrument is the instrument validation and problem-solving instrument capability improvement of physics students on pre -test and post -test solved using 5 problem -solving indicators. The results show that the comic-based andro-web module can be used in science class teaching materials and improve the ability of physics students to solve problems on ideal gas subjects.

From table 1 below, the publishing trend is seen from the listed cluster. In 2015, not many publications highlighted the idea of module development in their publications, however the number continued to increase from year to year. It can also be seen that the publication trend in the last 5 years shows that articles on the importance of module development in teaching and learning are widely published.

Table 1: Articles reviewed based on cluster and journal year

	2015	2016	2017	2018	2019	2020
TVET Education	/	/	/	/	/	/
Product Development	/	/	/	/	/	/
Module Development	/	/	/	/	/	/

Of the 17600 total articles that were found, a total of 15 research articles were reviewed in a systematic review analysis of the development of this module. The list of publications and analysis can be found in Table 2.

It can be concluded that from Table 2 which shows that the development of modules in teaching and learning affects the teaching and learning process conducted by the teaching staff and at the same time the development of this module affects student achievement. The impact on the teaching and learning process by the teaching staff and the impact on student achievement are emphasized because the effectiveness of a module developed is measured involving the teaching staff and students.

Table 2: Documents to analysis table

	Impact on the teaching and learning process by educators	Impact on student achievement
<i>Using Technology and Instructional E-Material among Technical Teacher and Student into Teaching and Learning: A Qualitative Case Study</i>	/	/
<i>Technical drawing/graphic skills acquisition for teaching and learning and challenges in technology education</i>	/	/

<i>A pedagogical module framework to improve scaffolded active learning in manufacturing engineering education</i>	/	/
<i>Transforming Conventional Teaching Classroom to Learner-Centred Teaching Classroom Using Multimedia-Mediated Learning Module</i>	/	/
<i>The effectiveness using inquiry based natural science module with authentic assessment to improve the critical thinking and inquiry skills of junior high school students.</i>	/	/
<i>Development of learning modules of basic electronics-based problem solving in Vocational Secondary School.</i>	/	/
<i>Development and evaluation of an integrated project-based and STEM teaching and learning module on enhancing scientific creativity among fifth graders.</i>	/	/
<i>PRO-STEM module: The development and validation.</i>	/	/
<i>The impact of engineering design process in teaching and learning to enhance students' science problem-solving skills</i>	/	/
<i>Preparing pre-service teachers to integrate mobile technology into science laboratory learning: an evaluation of technology-integrated pedagogy module.</i>	/	/
<i>Development of module based on scientific contextual additives material to increase learning outcomes and science process skills in junior high school.</i>	/	/
<i>Effectiveness of Guided Discovery-Based Module: A Case Study in Padang City, Indonesia.</i>	/	/
<i>Designing A Digital Teaching Module Based On Mathematical Communication In Relation And Function.</i>	/	/
<i>Emergency remote teaching during Coronavirus pandemic: the current trend and future directive at Middle East College Oman.</i>	/	/
<i>Comic-based module development andro-web to improve problem solving ability in physics in high school students.</i>	/	/

Discussion

Studies conducted related to the development of modules in teaching and learning are becoming increasingly common nowadays. This indicates that researchers are aware of the importance of this matter in the future. Therefore, module development is a learning approach that can attract students through a more systematic understanding process. In line with the need for modules to students in the current era of education, in stimulating students towards the teaching and learning process takes place. A review of the literature of previous studies found that the module-based learning approach in the classroom ensures that the teaching and learning process takes place more seamlessly in ensuring student achievement. The teaching and learning process based on this module is more interesting and effective because this approach will give more effectiveness to the process of development and student performance. The findings from previous studies give a positive picture to the study of the impact of module development and this systematic literature review.

In ensuring that the teaching and learning system in this new era of norms runs in line with the rapid advancement of the latest technology, the development of modules in the education system needs to be enhanced. This is to ensure that education continues to happen to every layer of society no matter what the situation. This is to ensure that the lessons can be enjoyed together by all whether urban or rural. No matter rich or poor, teaching and learning must continue to take place not recognizing the socio-economic gaps of life. This is to ensure the continuity of the development of education in Malaysia, which in turn affects the overall development of society in Malaysia.

The development of modules in teaching and learning not only affects student achievement but it also affects the process that will be carried out by the teaching staff. The delivery methods and methods used by the instructors play a considerable role for the teaching and learning process (PdP) of the students. The PdP process does not only depend on available information, in fact it is necessary to be creative with activities and materials to produce innovation for students to gain experience after the session is implemented (Blândul, 2014). Therefore, the results shown by students at the end of the course that is knowledge, skills, abilities, values, and attitudes do not depend on the educational process alone, but it also depends on the curriculum and approach implemented.

Conclusion

The teaching and learning process with the variety of uses of Teaching Aids (ABM) makes it easier for students to tend to remember things through tactile and visual stimulation methods. Students are easier to remember because they see for themselves the process carried out through the activities implemented. The use of ABM in the teaching and learning process is very effective in enhancing students' understanding of various aspects. The study of the effectiveness of the development of this module also shows that the teaching staff should have methods that are appropriate to the inclinations and needs of students in the teaching and learning sessions conducted. Therefore, as a lecturer who implements a teaching and learning session, the need for students to achieve the results of the teaching session is very important. The variety of methods and the use of ABM in teaching and learning sessions is necessary if there are weaknesses and improvements from the existing needs to ensure that students achieve results from teaching and learning sessions (Ahmad & Halim, 2019).

It can be concluded that the development of modules at present brings effectiveness to the development of Technical and Vocational Education (TVET) and the development of innovative products for Teaching Aids (ABM) and Teaching Aids (BBM). This can be evidenced by the trend of publications in the last five years shows that articles on the importance of module development in teaching and learning are widely published. The development of this module in teaching and learning can also be concluded to have brought effectiveness to the teaching and learning process handled by the instructors and at the same time the development of this module gives effectiveness to student achievement. The impact on the teaching and learning process by instructors and the impact on student achievement is emphasized because the effectiveness of a module developed is measured and tested involving student achievement in pre-test and post-test. The score data obtained were analyzed using Statistical Package for The Social Sciences (SPSS) software. It can also be concluded from the findings of previous studies for each year involved in this systematic literature review is that each module developed provides effectiveness in technical teaching and learning in technical and vocational education system as evidenced in studies conducted by each researcher.

The effectiveness of module development in technical teaching and learning in technical and vocational education systems is evidenced in the findings of previous studies on the importance of module development has greatly contributed to the development of this systematic literature review study. Based on the findings of the issues and problem statements, researchers feel that this study is very important to be implemented because it is an added value in the field of education especially to the development and continuity of Technical and Vocational Education in Malaysia.

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