

A new paradigm of factors affecting the implementation of vocational education policy

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Abstract

Emphasis on the goals of vocational education policies reflects the transition from traditional knowledge to a new paradigm, which introduces more comprehensive and appropriate factors. This study reviewed the literature on various vocational theories and concepts as a base for educational direction. The method of factor composition analysis was based on a sample of 300 students in the coordinating center for vocational workforce production and development in Thailand. The study found 4 key factors, namely (1) acceptance and adaptation, (2) planning and preparation, (3) understanding and (4) awareness, and publishing and collaboration. The achievement of the study also focuses on the development of students' potential to have skills that are in line with the demands of the labor market. The school administrators must try to build cooperation with the industry and show a common point in the development of the country. Therefore, when societies and stakeholders can expect the outcome of vocational education policies will lead to ways of raise up the country's economy.

Keywords: Development paradigm, Vocational factor, Economic development

The study of facts about the phenomenon of vocational education is a societal approach to reducing unemployment resulting from the record-breaking increase in youth (Fuller, 2015). Of course, the goals of vocational education are often reflected in the direction of national development. This is because Technical Vocational Education and Training (TVET) is a proven key that can support productivity and workforce development while increasing employment opportunities for economic upgrading (Bhurtel, 2015). Nevertheless, because of the heterogeneity in different national contexts, it is a challenge for developing countries to try to characterize vocational education to create policy transitions in different dimensions (Cedefop, 2017).

From the researcher's point of view, the question arises whether the quality of vocational education comes from a socially perceived structure or through the integration of ideas. This is because vocational success has had a consequence since high school (ETF, 2020)

and requires a process of cultivating engagement from interest and enthusiasm for a passion for the field (Niittylahti, Annala, & Mäkinen, 2021), which is one of the guidelines for building social expectations. In addition, in many countries from North America, Europe, and Asia that have been affected by the economic crisis, Vocational education plays an important role in creating opportunities that help fill the skills gap for the younger generation (Pilz, 2017). This means that factors affecting vocational education should be studied in order to create a wider awareness and understanding.

The answer to the above question indicates that the answer to factors affecting vocational education is often influenced by policy, practice, personnel, and environment (Sivageerattana & Meechai, 2021), including student decision-making, parents' household income, place of residence, and baseline assessment resources (Rahmat et al., 2016). These responses need to be in line with the government's desire to significantly increase the

number of skilled workers (Setyowati & Wiyono, 2018). As the achievement of vocational education arises from the ability to systematically transfer academic knowledge into practice (Li & Pilz, 2020), it is necessary to establish a training model in conjunction with the establishment and create assessment indicators by labor market demands under the direction of national development (Chalapati & Chalapati, 2020).

As a result, the researchers seek to identify factors that affect the implementation of vocational education policies that are appropriate under the pressure of the COVID-19 situation, which will not only disrupt education and training—but also innovate distance learning (ILO, 2021). In other words, the crises that come with learning opportunities can help to improve VET alignment with labor market demand (OECD, 2021). Furthermore, entering the era of globalization has created a manifestation of rapid technological change (Spoetl & Loose, 2015). Thus, the dimension of transition under the pressure of unpredictable circumstances is the inevitable test of vocational management in the search for new approaches.

However, a study of the new paradigm of factors affecting the implementation of vocational education policy, the researcher began by reviewing the literature to identify factors and results of implementing vocational workforce production and development policies. The study results were divided into two parts: The first is the factors that have undergone a component analysis to come up with new factors that are appropriate and consistent with their application to other vocational education. The second is the achievement of the vocational education policy obtained by collecting questionnaires with students. It provides information and priorities of the factors corresponding to the direction of needs, expectations, and possibilities for vocational development in developing countries' transitions. This leads to overcoming the labor crisis and raising the national economy.

Theory

The study of factors affecting vocational education

The importance of education in the issue

of factors affecting vocational education is to create an understanding of the response to labor market demands, especially in learning life-related skills (Setyowati & Wiyono, 2018) and challenges that cannot be expected to produce results (Daiva, 2016). Furthermore, because of the training environment that relies on the interaction between teachers and students, it is necessary to Technology-Enhanced Learning (TEL) (Hamalainen & Cattane, 2015). In addition, the current dynamics of vocational education need to consider the composition of factors contributing to the quality of education, such as parents, educators, teaching styles, industry (Roslina et al., 2019).

Theoretically, factors affecting vocational education are vital in assessing the effectiveness of education (Sahu et al., 2008). Nevertheless, as student decision-making is critical to training attendance, professional advancement, and future social relationships (Sarri et al., 2013), it is necessary to create shared expectations among all stakeholders. In addition, the recognition and discovery of students' potential or talents by their choice of major should have an appropriate mentorship (Alishiri & Saadatmand, 2016), which requires planning and preparation of strategies for enhancing vocational education is a priority socially and have a good image at the national level (Omar et al., 2020). It is considered as one of the mechanisms for strengthening sustainable vocational education.

Nevertheless, as the foundation of vocational education aims at the social and economic development of the country, it has been under pressure to make efforts to change the skills and knowledge of youth (Billett, 2009). In particular, the communication and cultural hegemony of social opportunity creation must be determined by the relationship between TVET and the country's value structure (Eze, 2013). In addition, the transition of vocational education needs to focus on international benchmarks, ideas, and projects aimed at delivering practical lessons for developing countries (Oeben & Klump, 2021).

However, the study of factors affecting vocational education confirms the phenomenon that occurs in society. It shows the link between the goals and limitations of development, which tends to shift under the occupational background to the national goals' formulation of vocational

education management. In addition, the differences in social contexts like multiculturalism are long-established and challenging to change. Therefore, factors affecting vocational education must be considered in conjunction with social geography, which has a mechanism of acceptance and support from society as a basis for the country's long-term development.

The study of factors affecting vocational education policy

The importance of studying the factors affecting the implementation of vocational education policies is to identify the challenges posed by the inevitable constraints of vocational program implementation (Agufana & Ndavula, 2011). Of course, the factors contributing to the success and failure of vocational education policies are very sensitive, and there is a wide range of interrelationships in each context; therefore, there is no one-size-fits-all approach. Nevertheless, it is essential to recognize the possibility of finding answers from the credible factors of different theories depending on the policy area and context (Cerna, 2013). Therefore, to obtain the factors affecting vocational education policy, it is necessary to synthesize as many factors as possible and cover the education goals as much as possible.

Theoretically, studies should begin with understanding the details and content of the policies linking actors under programs, projects, and missions, demonstrating clarity of objectives, practical feasibility, and the process of resource allocation (Ali, 2018). Subsequently, when it comes to the implementation process, it will go into the process of policy transformation or policy transfer to educational institutions based on organizational structure, organization size, and coordination (Anumanratchathon, 2009), individual-level factors related to competence, experience, number of personnel, and the correct implementation of assigned programs (Anuradha & Fernando, 2017). In addition, the VET system embedded in the economic structure is associated with budgets, the flexibility of employment, and the impact of the labor market (Hoeckel, 2008). Furthermore, the social and vocational dimensions are now inseparable due to the discourse used for competitive terrain (Kaiser & Krugmann, 2018).

Although many factors affect vocational policy, external environmental factors also arise from demographic changes, globalization, and changing social and economic norms (Bjornavold, 2018). Therefore, the policy environment is one of the cornerstones of policy improvement and enables practical public service provision guidance (Mthethwa, 2012). However, the challenges of education also show the universality of the quality of learning and advancement of vocational education, which faces various barriers (Tognatta, 2014). This is an important reason that leads to pondering to find a decision-making guide to determine the direction of the country's development.

However, the factors affecting the implementation of the vocational education policy arising from the integration can be summarized as 6 factors, namely (1) policy, (2) organization, (3) operation, (4) resource, (5) support and acceptance, and (6) external environment. This reflects the composition of factors related to driving the vocational education policy.

The achievement of vocational education policy

The importance of studying vocational policy assessment issues is related to the preparation of the workforce to enter the labor market. However, due to the pressures of globalization, educational institutions are faced with changes, especially curricula improvements, to meet economic goals (Mouzalitis, 2010). This reflects that there is still a lack of comprehensive assessment of educational achievement and that the gap in social expectations cannot be narrowed. Despite the continuous change and development of education policies (Nurhadi et al., 2017), the importance of vocational education is closely related to the world of work (Beddie, 2015). Therefore, it can be considered from the theory that it is related to the achievement of vocational education and is consistent with the goals of developing countries (Khan, et al., 2018).

Theories used to explain the effectiveness of vocational education policies are still lacking in VET research and little to explore in theory (McGrath, 2012). In this study, the emphasis was placed on consideration in conjunction with the context of the production

policy and vocational workforce development. It was found that vocational assessments were moved from the program to policy evaluations (Viertel et al., 2004). Nevertheless, policy evaluation is essentially associated with awareness of alternatives, systematic cost assessments, and unintended consequences (OECD, 2008). This is important for determining the achievement of all vocational education policies.

We look at assessing the achievement of vocational education policies from developing countries that emphasize national action plans for vocational reform (Kingombe, 2011). It is a new challenge and opportunity for understanding. The researcher uses the concept of Sihvonen (1999) as the basis for determining the assessment criteria, namely: (1) efficiency is an assessment of the supply of education in accordance with labor market needs and the standards of in teaching and learning management, (2) the effectiveness was assessing the consistency between educational goals and student learning achievements, and (3) the economy was the assessment of national patterns of production and resource allocation by focus on students to work in the targeted industries as intended by the country.

It can be said that education on vocational issues is related to Sustainable Development Goals (SDGs) as it prepares for ecological challenges. In particular, the integration of development and training with industries responsible for driving the economy (Lambini et al., 2021). However, the scope of the vocational policy outcomes study remains focused on efficiency, effectiveness, and economy. Therefore, it is considered universal and covers the goals of vocational education very well.

Method

Participants

The sample group was collected to collect questionnaires with 3rd-year students, 300 people studying in 18 vocational workforce development and production coordinating centers throughout Thailand by using a simple random sampling method based on the probability proportional to size (PPS). The function of the coordinating center is to promote

an increase in the number of vocational learners, collect and analyze demand side and supply side data for workforce planning (TVET Career Center, 2021).

Measures

In this study, the two researchers began by researching and reviewing credible literature on the issue of factors affecting the implementation of vocational education policies in various dimensions, which uses the integration of academic knowledge to conclude the most relevant factors for this study. Of course, the study's objectives were (1) to analyze new components of factors affecting vocational education policy and (2) to study the achievement of vocational workforce development policy implementation. This is to be in line with the goals of comprehensive education.

Researchers have focused on finding verifiable answers under theory and public Support (Zoellner, 2013). By a quantitative method, the research tool was verified content validity by three experts to determine the Item Objective Congruence (IOC) of 0.93 and determine the reliability has an alpha value of 0.77. For the determination of the sample group using the concept of Hunington (2015) that proposed the rule of thumb

The study results were measured by applying concepts and theories as to the basis for determining the fundamentals. It focuses on testing the existing factors from the analysis and synthesis process to derive a new paradigm of factors affecting the implementation of vocational education policies. Of course, fundamentals were also qualitatively utilized for interviews with administrators and government agencies, mainly for discussion.

The fundamental factors used to confirm the success of a policy are the most important after policy formulation (Tezera, 2019). This study includes policy, organization, operation, resources, support and acceptance, and the external environment. The questions in each factor will be different depending on the context of the content. Nevertheless, the outcomes of vocational education policies, including efficiency, effectiveness, and economics, have shown a relationship of variables affecting their

implementation (Bliuc et al., 2012).

However, the results obtained from the study will reflect the educational innovation of the existing measures for better outcomes (UNEVOC, 2020) and bring a different perspective under the definition or the national concept of VET and its change over time (Cedefop, 2017). All these processes will create a strong foundation for thinking and moving towards vocational education management.

Analysis

The analysis of data on vocational issues is a joint effort between academics and VET policymakers to achieve goals for national development (Yasin et al., 2013). Nevertheless, the authors focus on creating a new paradigm based on the existing concept of basic factors for this data analysis. Exploratory Factor Analysis (EFA) was used as a tool for careful development and validation of theories

(Watkins, 2018). Along with the naming of the new factor, it is considered to prevent the independent variables of the regression analysis from being correlated.

In addition, the authors used the data obtained from the elemental analysis and processed it by using layered hierarchical regression analysis for all variables/questions in order to be able to define a set of predictors that will predict the predictive variables after the data analysis (Petrocelli, 2014). The researcher chooses to add independent variables stepwise and use the technique to enter. To consider the relationship between independent variables and dependent variables, the method of variables remove to get the most suitable results. However, the analysis of the data will reveal the linkage of the components from the new factors affecting the achievement of vocational education policies as follows:

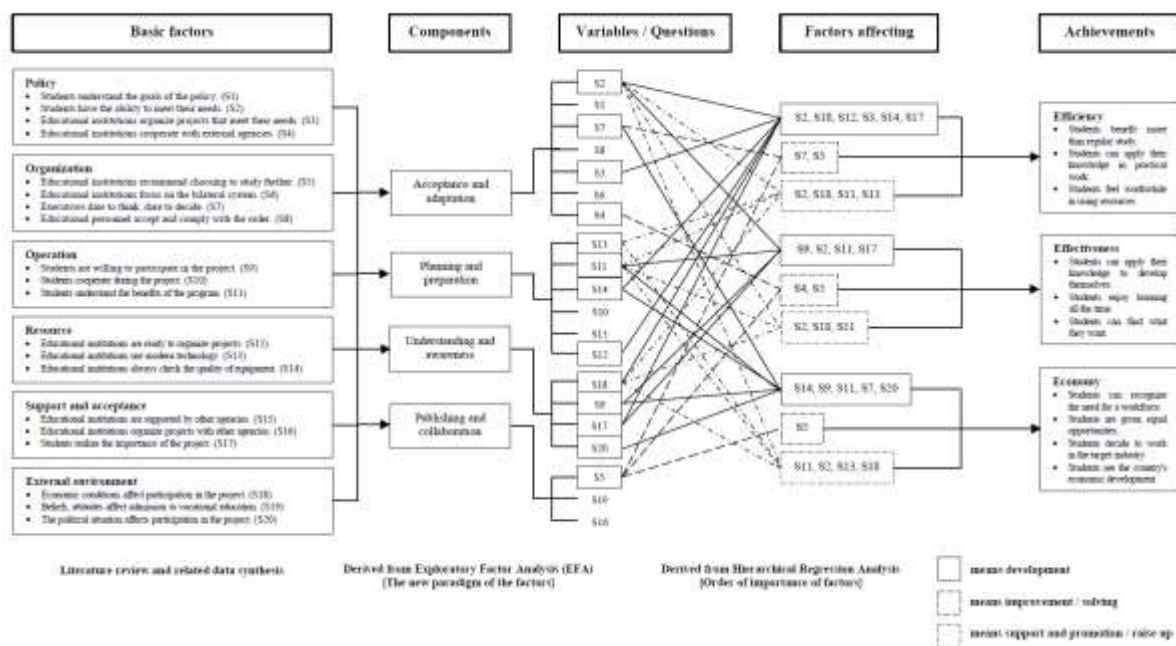


Figure 1 New components analysis of factors affecting the achievement of vocational education policy

Results

From the study of factors affecting the implementation of vocational education policy, 6 basic factors were identified, and the statistical process analyzed 4 new components. Along with

the authors' named factors that are consistent with the question and context of the policy of production and development of vocational workforce as follows:

Acceptance and adaptation

The factors affecting the implementation of the vocational education policy on acceptance and adaptation are listed in component 1 with initial eigenvalues of 8.428. The most important variable was the student's knowledge and competence to meet the needs of today's industry (S2). Followed by students being able to recognize and understand the implementation of policies to increase the number of vocational students (S1), educational institution administrators dare to think, dare to make decisions, and be able to structure the educational institution to suit the teaching and learning process (S7), educational personnel accepts and be ready to implement the vision of the school administrator (S8), educational institutions have training and capacity building programs in line with the needs of the target industry (S3), educational institutions have rules, regulations, values, and organizational culture that facilitate bilateral teaching and learning (S6), and educational institutions cooperate with external agencies to provide teaching, inspection, monitoring, and evaluation (S4), respectively.

Planning and preparation

The factors affecting the implementation of vocational education policies in planning and preparation are listed in component 2 with initial eigenvalues of 1.701. The most important variables were that the educational institutions used modern technology, materials, and equipment in the training program (S13). Followed by students being able to recognize and understand the benefits that will be gained from studying or participating in activities provided by the educational institutions (S11), educational institutions continuously and regularly monitor the quality of materials and equipment used in the training program (S14), students cooperate during the implementation of a project or activity (S10), educational institutions receive support/assistance from external agencies in organizing training programs (S15), and educational institutions have sufficient information, budget, educational personnel, and places to organize training programs (S12), respectively.

Understanding and awareness

The factors affecting the implementation of the vocational education

policy on understanding and awareness are listed in component 3 with initial eigenvalues of 1.186. The most important variable was economic conditions affecting participation in educational training programs or activities (S18). Followed by students willing or unwilling to participate in a training program consistent with the needs of the target industry (S9), students recognize the importance of participating in a training program (S17), and political pressures and conflicts affect cooperation in organizing activities or projects requiring inter-agency participation (S20), respectively.

Publishing and collaboration

The factors affecting the implementation of vocational education policies in dissemination and cooperation are listed in component 4 with initial eigenvalues of 1.146. The most important variable was the establishment of public campaigns, demonstrations, or recommendations that led to increased interest in vocational admissions (S5). Followed by social beliefs and attitudes affecting the choice of vocational education and future work (S19), and educational institutions had previously organized projects with external agencies or had coordinated in various ways (S16), respectively.

Discussion

Factors affecting the achievement of vocational education policy on efficiency

1) Efficiency development

Development of the efficiency of the implementation of vocational education policies should focus on developing students' potential by the labor market demands. In particular, the preparation of curricula both in the education system and outside the education system to support the industry (Yoto, 2016) which requires students to recognize the importance of the project. It is a work learning approach that emphasizes creativity, problem-solving, and interaction between students and peers to gain new knowledge (Indrawan et al., 2020). However, educational institutions must be well prepared to organize projects from the preparation stage, topic selection, creation and

testing, presentation, and evaluation (Nilsook et al., 2021) to create a process for effective implementation of the policy.

2) Efficiency improvement

Improvement of vocational policy implementation efficiency should focus on vocational administrators' rational and transparent decision-making (Olcum & Titrek, 2015). This requires the training of vocational managers and supervisors to achieve their goals within the constraints of educational resources (Egbunefu et al., 2018). However, educational institutions must build strengths in recommending valuable alternatives to vocational education to parents or people interested in reducing future youth unemployment (Eichhorst et al., 2012).

3) Support and promotion of efficiency

Support and promote the efficiency of vocational policy implementation should examine the need of industry to produce students with social skills both adaptive and communicative (Dwiyanti et al., 2018). This is a preparation for training under a bilateral program influenced by Germany as a developed country (Wiriadidjaja et al., 2019). As in developing countries like Thailand, efforts are needed to reengineer tools and technological measures for student skills and abilities. However, it also fills the gap for poverty reduction (Ogbuanya & Izuoba, 2015), which leads to raising citizen awareness for the country's economic and social development.

Factors affecting the achievement of vocational education policy on effectiveness

1) Effectiveness development

Development of the effectiveness of vocational policy implementation should focus on the decisions made by vocational students and the social opportunities that affect their participation in bilateral programs (Tarat & Sindecharak, 2020). The preparation of training courses must take into account the student's interests and the direction of the industry together in order to prepare them for employment (Kennedy, 2011). In addition, the achievement of vocational policy goals requires the integration and application of blended

learning concepts to develop individual student potential (Shi & Xie, 2020) and towards the strengthening of vocational education for the country's sustainable development.

2) Effectiveness improvement

Improvement of vocational education policy implementation effectiveness should focus on building cooperation between educational institutions and enterprises by improving the course titles and course content to suit the current situation (Isgoren et al., 2009). In addition, educational institutions must campaign to create a positive image of TVET in society regarding attitudes, career paths, investments, and decision-making in vocational education (Clement et al., 2014; Shahid, et al., 2020). However, the dynamism of vocational education is partly due to the responsibility of teachers (Omar et al., 2019) to improve and develop skills to achieve their goals.

3) Support and promotion of effectiveness

Support and promote the effectiveness of implementing vocational education policies should focus on lifelong learning and internships among students in a real work environment (Nissila et al., 2015). Students need to understand the internship goals that affect career paths and their chances of having a good quality of life (Odio et al., 2014). The school is responsible for assessing the curriculum on students' personal growth and professional skills (Anjum, 2020). However, the current economic climate needs to create a balance between the VET and the labor market. Governments should enhance social innovation to achieve acceptance and prioritize effective policy implementation (Shala & Badivuku, 2021).

Factors affecting the achievement of vocational education policy on economy

1) Economic development of the country

The country's economic development under the implementation of vocational education policies should focus on the educational quality management system and focus on driving more engaging activities (Wiesner & Yuniarti, 2018). In addition, efforts must be made to motivate students to understand their educational identity so that they can

participate in activities (Fuller & Macfadyen, 2012) and create a learning exchange process in career development goals (Soika, 2020). However, higher education administrators must play their roles as corporate leaders to build good relationships in all dimensions (Tas, 2017). It also has to adapt to the complexities of the education system and the political challenges associated with resource allocation and curricula (Agi et al., 2016) to set clear guidelines and be in line with the country's economic development.

2) Solving the problems of the country's economy

Implementing vocational education policy that can solve the country's economic problems should pay more attention to the educational structure and management of educational institutions that focus on social activities (Saglik & Aykac, 2018). By opening a space for an exchange of knowledge and studying trends in vocational education choices to shape contemporary policies (Haltia et al., 2021). However, vocational education is also a preparation for the unpredictable economic crisis that requires cooperation from all parties involved.

3) Raise up the country's economy

The implementation of vocational education policy that can raise the country's economy should focus on the production of labor force coupled with the use of technology in production. In addition, there is an ongoing process of transferring professional skills to students (Dahil et al., 2015), and curricula must be tailored to students with special needs (Nanjwan & Eke, 2019). In which educational institutions must apply the knowledge and operational guidelines received from stakeholders and apply consensus (Bathmaker, 2013) to provide vocational training processes that increase productivity and labor efficiency for participation in upgrading the national economy (Khilji et al., 2012).

Conclusion

Education is an important foundation for determining the direction of the development of world society. As the dynamic socio-economic crisis encompass the allocation of

educational resources (Abuselidze & Beridze, 2019). This has led to an opportunity for the vocational sector to see the context of development under the policy of driving the production and development of the vocational workforce. Along with this study, a new paradigm of factors affecting (1) acceptance and adaptation, (2) planning and preparation, (3) understanding and awareness, and (4) publish and collaborations. These factors can be applied to studies on other policy issues. In this regard, the achievement of the implementation of the policy on (1) efficiency must focus on the school administrators to drive the process of developing students' potential in accordance with the needs of the current industry, (2) effectiveness must focus on educational institutions building partnerships with industry that are linked to the interests and skills necessary for students' future careers, (3) economy must focus on educational institutions to review and allocate up-to-date resources to prepare them for economic development goals. However, vocational education must play an important role in planning for the country's sustainable development under inevitable opportunities and challenges.

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