



Activities of the practice teaching organization and vocational teaching facilities in collaboration between the vocational school and units employing

Tuan Van Nguyen¹

Hung Thanh Nguyen²

Chinh Danh Cao³

Hang Thi Thuy Vu⁴



(✉ Corresponding Author)

¹Ha Noi Metropolitan University, Hanoi, Vietnam.

Email: tuannv@daihocthudo.edu.vn

²University of Education, Hue University, Thua Thien Hue Province, Vietnam.

Email: nguyenthanhhung1980tgd@gmail.com

³Vinh University of Technology Education, Nghe An Province, Vietnam.

Email: caochinhkto@gmail.com

⁴University of Education, Vietnam National University Hanoi, Hanoi, Vietnam.

Email: hangvuthithuy@vnu.edu.vn

Abstract

The aim of this research is to evaluate the current level of preparation in the organization of practical training as well as the facilities that are available for practical vocational training. The collaboration in education between businesses and vocational schools is an effective strategy. As a result of the rapid transformation that has taken place in the socioeconomic context for professional skills and practical training among employees, a new educational strategy is required to address these demands in order to meet the needs of the workforce. A quantitative method was applied in this research. There were 570 individuals who were chosen at random. According to the findings, the majority of instructors and technicians possessed regulations for conducting practical teaching activities as well as suitable facilities and equipment for the purpose of vocational training. This study presents a number of suggestions for improving the standard of educational institutions as well as the professional growth opportunities available to teachers and lecturers. In addition, facility management and maintenance as well as optimize the instructional facilities and equipment are required.

Keywords: Collaboration, Facilities, Organization of practical training, Vocational training.

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Contribution of this paper to the literature

The study examined the current level of preparation for the organizing of practical training as well as the facilities available for practical vocational training. This study demonstrates methods for enhancing the quality of educational institutions and the opportunities for teachers' and professors' professional development.

1. Introduction

Youth now live in a society that values lifelong learning and high certification standards. Employers in this environment value skills learned in the workplace as well as those acquired through rigorous and professional learning and training. Youth face the problems of increasing unemployment and fast economic transformation. Significant problems include the high unemployment rate of vocational recruiting school graduates, conflicting policies, limited teacher capacity and inadequate assistance (Suharno, Harjanto, Handayani, & Sutanti, 2018). In addition, many young employees need help establishing themselves in the labor market. Therefore, joining the labor market leads to significant obstacles for young people in many countries. Most advanced countries are worried about the difficulties young workers face throughout the transition from school to work. An appealing approach to this transformation is to integrate students more closely with jobs through vocational education programs and company-sponsored apprenticeships (Ryan, 2001).

Institutional environments and public policies significantly impact the transition from education to employment. Numerous countries worldwide have connected their vocational education and training systems with the current demands of the labor market so that young individuals can experience a smooth transition into the labor market and progress into more productive and sustainable positions. Vocational training is a significant factor because it combines the skills of young people with the requirements of companies. Essential conditions for the employability and productivity of young people are various types of vocational training at school in the workplace or a combination of both in a "dual system". The vocational education provided within secondary education must be upgraded and complemented with internships or professional experience. Vocational education can facilitate the transfer of skills into the labor market. However, the acquired skills may quickly become obsolete. Therefore, the collaboration between vocational schools and companies within the educational system is crucial. This necessitates a fundamental academic change for vocational schools from focusing on prerequisites to the abilities necessary for actual employment.

Vocational education is also referred to as "vocational education and training, technological and vocational education and technical education and training". Vocational education is defined by Ireland (2008) as a series of courses and skills designed to prepare students for jobs. Vocational education is an important form of teaching organization.

As students participate in vocational education, their interest in learning is piqued and they develop their capacity to observe, evaluate and find solutions to real-world issues. On the other hand, vocational education is limited to young people and adults for a working career which is a process that is frequently regarded as being technical and practical in purpose (Clarke & Winch, 2012). Several countries are attempting to transform their educational systems so that students spend less time in the traditional classroom and more time collaborating with companies (Nelen, Poortman, Nieuwenhuis, & Kirschner, 2010). In every developed and developing countries, the purpose of the education system is to prepare students for the transition from the stage where they gain academic information in school to the stage when they are integrated into the labor market.

To solve the lack of skilled employees, it is critical to establish a direct and consistent interaction between educational programs in schools and the skill requirements of companies. This viewpoint is consistent with the research findings of Ramli and Abd Wahid (2021) who found that most participants were aware of the importance of the collaborative component with the industry. Collaborative education or dual vocational training refers to an organized educational strategy of combined classroom training and effective career practice in study (Cockrill & Scott, 1997).

Dual vocational training is the common approach from school to work and offers young people a relatively easy transition into the labor market. This type of training consists of two distinct but related forms of education. Dual vocational training is a form of vocational education in which students simultaneously obtain practical instruction in the workplace and theoretical education in school. Young people participating in vocational schools have a better chance of finding employment owing to collaborations between companies and vocational schools (Breen, 2005). For workers to master their professions and have high technical skills, there should be a direct association between theoretical learning and practice in the workplace (Guile & Young, 2003). When comparing countries, it was common to discover that some countries such as Austria, Denmark, Germany and Switzerland maintain "dual vocational training". These countries showed a smoother transition from school to the labor market with lower youth unemployment rates than in other countries (Quintini & Manfredi, 2009).

The transformation in the socio-economic framework has led to a thorough reform of all levels of education. Business skills training has become a quality and improvement of higher education. Therefore, organizing students' education is a vital element in developing a young generation. The ideal growth technique for this situation is to study and develop new and more effective ways, forms, methods and means to influence student instruction. Personalizing education, teaching learners' abilities, putting learning in real-world situations and offering technical information to the future workforce are significant problems in vocational education. Pedagogical practice is a diversified teaching technique that helps teachers satisfy the learning requirements of their students through the adoption of teaching strategies such as active learning and constructivist modeling allowing students to self-regulate (Harris & De Bruin, 2018).

It is the responsibility of teachers not only teach students new information and skills but also to stimulate students' interest in the field in which they work, to encourage students' natural curiosity and to direct students to study with orientation. Fleenor (1974) identified nine problems faced by vocational high school teachers in Indiana when implementing lesson planning. These problem groups included program planning, teaching planning, teaching content presentation, program evaluation, instructional evaluation, administration, guidance and support

program promotion and professional development. Several further studies have attempted to measure the efficacy and influence of preparation activities (Bowie, Chappell, Cottman, Hinton, & Partridge, 2009; Hanbury, Prosser, & Rickinson, 2008). Similarly, several colleges have mandated that incoming academics conduct initial curriculum development. Students' preparatory activities differ in scope, content, delivery, desired goals and intended audience. Reports published (Silverberg, Warner, Fong, & Goodwin, 2004) made recommendations for improvements in teacher training programs emphasizing curriculum development. These reports emphasized the importance of curriculum development teaching, instructional standards, technical assessment and the promotion of work experience programs for high school students. A teacher-led curriculum is a learning model that the teacher organizes so that teaching and learning activities attain their objectives and the preparation materials are part of that model.

The model consists of the following components: the provision of efficiency standards and indicators to evaluate academic achievement; the selection of essential materials, prerequisite knowledge, new knowledge and teaching means; the performance of activities including perception, discovery, reinforcement, attitude and behavior formation, evaluation and finally, the discussion of results of the model (Nurjaman, Sujiarto, Khoeriyah, & Khorri, 2021). The efficiency of a teacher's lessons depends on their level of preparation, teaching process, pedagogical strategies and ability to evaluate their teaching. The development of the teaching organization which will increase teaching effectiveness will be related to the renewal of the program system as well as the organic interaction between vocational institutions, universities and businesses. At the same time, this helps implement a wide variety of instructional strategies and materials that were shown to be effective in the appropriate teaching structure (Anderson, Smith, Olsen, & Algozzine, 2015).

The academic performance standards in schools are supported by four factors: the curriculum, the teachers, the students and the facilities. The education system is obliged to prioritize facilities and equipment in vocational schools as this is one of the most crucial stages. In addition to laboratories, libraries, scientific and technological equipment, classrooms, furniture sets and other props, facilities include laboratories, libraries, rooms or classrooms, and innovation and science equipment. Facilities are an indication of educational quality as they are one of the determinants of educational success (Herwan, Aswandi, & Chiar, 2018) because they support and facilitate the educational process.

Facilities are one of the factors that contribute to educational success. The availability, adequacy, utilization and administration of educational facilities are major factors that significantly impact the quality and level of educational facilities. Regarding the inadequate quality of the school facilities, Akinsolu (2004) contended that the educational curriculum could not be rational and well-functioning. As a result, the availability of facilities must be considered to the greatest extent possible. The availability and adequacy of learning facilities are essential for promoting quality education and enabling the effective implementation of learning programs (Bhebhe & Nxumalo, 2017; Ngwaru & Oluga, 2015). Similarly, Anosike and Oyebade (2012) claimed that the quality of education could be determined by the professional qualities of teachers and the facilities and resources required for teaching and learning. Appropriate facilities will enhance the learning environment and complement the educational process making learning simple and efficient (Sulasteri, Nur, & Suharti, 2021). Inadequate facilities can also affect students' studies (Ugwulashi, 2017). According to Alfred and Kayoma (2012); Okoye and Okwelle (2013); Singer (2012), poor facilities and equipment are one of the issues that impact the achievement of quality vocational education in Nigerian vocational institutions.

Due to inadequate facilities and equipment, some schools cannot conduct their activities successfully (Ratnani, Istiatin, & Sarsono, 2021). Le and Tran-Chi (2019) discovered a negative correlation between the supervisor and internship satisfaction at their place of practice. In addition to some vocational education institutions with good facilities and equipment, there are several reports indicating that the facilities at other schools are in poor condition. According to Umar and Ma'aji (2010), the facilities in vocational education and training institutions were poor with no scheduled maintenance methods for damaged equipment and insufficient funds to acquire equipment. The government, teachers and students are mostly unconcerned with the growth and extent of the school's facilities. Soeprijanto and Yahya (2019) research also indicates that private vocational high schools in East Jakarta have facilities in the form of classrooms and laboratories but these facilities are only partially supported.

The significance of activities to prepare for the organization of vocational training as well as the significance of facilities and equipment for the teaching collaboration between vocational schools, firms and businesses has attracted global attention from researchers and educators. In addition, a few studies have been carried out in Vietnam to assess the importance of vocational training coordination activities for the labor market and the career performance of students. According to research by Van Nguyen, Cao, and Nguyen (2022), students, teachers and technical staff at vocational schools and businesses were aware of the significance of collaborative teaching practices.

This collaboration enhances the nation's human resources (Van Hong & Luong, 2018). Therefore, vocational schools emphasize educating students on professional ethics, labor discipline, fundamental technical knowledge and professional skills. Through practice, businesses will assist students in developing their technical proficiency, professional ethics and industrial style. Accordingly, the socio-economic development strategy for the period 2011-2022 encourages the growth of human resources and skills enhances market institutions and constructs infrastructure (Tuan & Cuong, 2019). Although prior research has concentrated on the collaboration of vocational training between vocational schools and businesses, there have been few investigations into the preparation of practical teaching organization and evaluations of facilities and equipment. This study aims to investigate the actual state of preparation for the practical training of teachers and technicians as well as teachers', students' and technicians' assessments of the conditions of the facilities and equipment for teaching and practice activities.

2. Method

2.1. Participants

Table 1 presents the research that was carried out in four different provinces located in Northern Vietnam. The data were randomly collected from a total of 570 individuals. There are 125 managers and technicians at the firm

and company, 195 teachers who teach at vocational schools and 250 graduates of vocational schools employed at the enterprise.

2.2. Measurements

A quantitative approach was used in this study. The study aimed to assess perceptions of the significance of collaboration between vocational schools and companies in developing practical education sessions and facilities. The instrument was separated into two sections to evaluate the specific objective of this study. The first section of the survey evaluates how teachers and technicians have organized practical lessons for students. The second section of the survey consists of questions that evaluate the evaluations provided by teachers, technicians and students about the adaptability of facilities and equipment to serve vocational education on a rating scale that ranges from unacceptable to moderate and good.

2.3. Procedures

The collection of data is conducted at random. The study's participation was entirely voluntary. The participants in the study were provided with an explanation of the research's goal and assurances that the information they submitted would be kept confidential before the questionnaire was conducted. After that, the participants were asked a series of demographic questions such as their gender, name, school and age. After that, people started providing their responses to the questions in the survey. The survey should take 10 and 15 minutes to complete.

Table 1. Preparation for the practical training of technicians and teachers.

No.	Organizing steps for practical training	Fulfilled		Unfulfilled	
		N	Percentage (%)	N	Percentage (%)
1	Define objectives performance evaluation criteria.	320	100	0	0
2	Prepare materials and equipment and announce the lesson's content.	320	100	0	0
3	Arrange the physical setting.	175	54.7	145	45.3
4	Teachers demonstrate before students practice.	320	100	0	0
5	Organize practice step by step.	320	100	0	0
6	Organize guided practical.	320	100	0	0
7	Independent practice organization.	275	86.0	45	14.0
8	Organize periodic practice.	123	38.5	197	61.5
9	Organize practice sessions in a realistic setting.	67	21.0	253	79.0
10	Organize the inspection and assessment of practice results.	320	100	0	0
11	Organization of learned experiences.	117	36.6	203	63.4
12	Assign self-practice tasks.	78	24.4	242	75.6
13	Factory cleaning.	320	100	0	0

3. Results

Table 2 demonstrated that all teachers and technicians completed the specific steps for the organization of practical training: "Define objectives and develop criteria for performance evaluation", "prepare materials and equipment and announce the lesson's content", "teachers demonstrate before students practice", "organize practice step by step", "organize guided exercises", "organize the inspection and assessment of practice results" and "factory cleaning".

On the other hand, the results suggested that some content still needed to be adequately covered by the teachers and the technicians. "Organize practice exercises in a realistic environment" according to 79.0% of teachers and technicians who have not yet completed organizing vocational training. "Assign self-practice tasks" is 75.6%. "Organization of learned experiences" is 63.4 %. "Organize periodic practice" with 61.5%. "Arrange the physical setting" with 45.3%. Finally, the content about "independent practice organization" shows that 14.0% of the participants have not fulfilled the requirement of a practical training organization.

Table 2. Technicians, teachers and students' evaluations of the facilities and equipment in support of vocational training.

	Level (%)		
	Good	Average	Poor
Technicians	13.6	65.6	20.8
Teachers	12.8	61.5	25.7
Students	24.8	70.4	4.8

According to the results given in Table 2, teachers, technicians and students suggested that technical facilities and equipment were initially adequate for vocational education. 12.8% of teachers assessed it as a good response, 61.5% assessed it as having an average response and 25% assessed it as not meeting the vocational training task. For technicians, 13.6% of technicians reported that the facilities and equipment were adequate for vocational training, 61.5% of technicians evaluated it as average and 25.7% rated it as poor. Regarding students, 24.8% of students assessed it as good while 4.8% of students indicated that facilities and equipment are inadequate for vocational training.

4. Discussion

The primary objectives of this study were to: (1) evaluate the actual implementation of the process of organizing practical lessons or teaching practice by teachers and technicians in collaborations with vocational schools and companies and (2) investigate the ratings of teachers and technicians regarding vocational training facilities and equipment. The results of the study showed that most teachers and technicians engaged in

preparation activities for arranging practical teaching and learning. In addition, teachers and technicians indicated that vocational training facilities and equipment are responsive and adequately prepared for the collaboration of vocational training and companies.

The study's results reported that most teachers and technicians were prepared to arrange vocational training activities. However, more than half of the teachers and technicians need to prepare in terms of assigning self-practice assignments, organizing practice exercises in a realistic setting, organizing periodic practice, etc. This demonstrated the significance of vocational training to the educational teaching efficacy. Several studies have highlighted the usefulness and impact of preparation activities (Bowie et al., 2009) as well as recommendations for curriculum development and teaching organization (Silverberg et al., 2004). Teachers' teaching outcomes are influenced by their preparation for teaching, the teaching process, practical teaching methods and teaching evaluation. The organization of guided internships by teachers during company practice is also important for students to engage in a variety of practicum activities, experience the actual working environment become familiar with the company's management style and operating mechanism and cultivate professionalism and ethics (Kim, Woo, & Lee, 2017). Numerous studies have examined the significance of this work in knowledge transmission. A good transfer environment is one in which students are reminded, encouraged and rewarded for applying new abilities, assisted when problems emerge and supported by colleagues and supervisors (Blume, Ford, Baldwin, & Huang, 2010; Gilpin-Jackson & Bushe, 2007). Organizing a suitable learning environment would provide favorable conditions for students' professional development and social adaptation in the contemporary context.

The findings suggested that the facilities and equipment for the vocational training of teachers and technicians were sufficient. These results were supported by the research of Barky (2005) and the report contends that the availability of educational resources has a significant impacts on the selection of teaching materials and techniques. In addition, Owuamanam (2005) stated that the main challenges for the Nigerian education system is inadequate infrastructure and a lack of facilities maintenance. Technological teachers were limited in their ability to use demonstrative teaching approaches without facilities and equipment. According to research by McLean and Behringer (2008), collaboration between vocational schools and businesses provides numerous benefits to both parties particularly in terms of improving equipment and facilities. The development of collaborations between school education and the labor market was possible through an existing community framework that uses and empowers all potential and ownership resources including facilities (Bernal, Shellman, & Reid, 2004). There is an extremely intimate relationship between facilities, teachers and students. Students and teachers must appropriately use and maintain school facilities and infrastructure. In fact, facilities and infrastructure management in vocational schools are difficult. There are still challenges in this area such as inconsistencies in the management of facilities and equipment owing to a lack of knowledge regarding how to manage facilities, beginning with planning, procurement, inventory and maintenance. Inventory is essential for managing educational facilities. This inventory process allows the school to implement orderly administration, quickly identify existing equipment and assist in maintaining educational facilities and equipment.

5. Implications

This investigation provided several theoretical and practical implications. The research made theoretical contributions to global data and information systems especially in Vietnam. The study's findings could also be used as instructional materials and as a resource for future research. According to the study's findings, educators, policymakers and sociologists develop appropriate educational policies for vocational training collaboration between vocational schools and companies. To develop a high-quality workforce in the future, it is vital to expand programs focused on improving vocational education. This study is necessary to provide policymakers and practitioners with a strong commitment to developing and expanding this experience-intensive approach to education. This study contributes to the knowledge of the process of preparing teachers for vocational training organizations and emphasizes the necessity of evaluating the quality of education and the efficacy of teachers. The objective of the evaluation is to determine the present level of teaching quality and identify possible difficulties in vocational education. This research recommends several strategies for teachers to enhance their teaching organization activities based on theme analysis with a priority on professional development to improve the application of pedagogical concepts in practice. The school creates an environment appropriate for developing knowledge, skills and values and their application in practical circumstances. In addition to implementing appropriate policies and strategies to enhance the quality of education, educators should also improve the management of facilities and equipment to achieve the specified objectives. Based on the results of this study, it is proposed that schools optimize facilities and equipment for the teaching process. This will assist both direct and indirect teaching and learning. It is suggested that further research is required particularly on other elements that contribute to the effectiveness of school infrastructure and facility optimization.

6. Limitations

It is crucial to take into consideration the limitations of the investigation. First, the sample does not properly represent the demographics of Vietnam in terms of its ethnic composition or its geographical distribution. In future research, a sample that would be representative of the entire country should be used. Second, this is a cross-sectional study using a quantitative methodology, future research might benefit from longitudinal designs, qualitative research or experimentation. In the same manner, the utilization of a combination of several approaches to assessment will prove beneficial in further study. Another limitation of the research is that it only reveals the state of vocational training organizations composed of teachers and technicians. It needs to offer an evaluation of how effective vocational training organizations are for students attending vocational schools. Therefore, it is necessary to conduct more research that evaluates the efficiency, productivity and maintenance of vocational training. In addition, it is possible to conduct an investigation into the opinions represented by students concerning the educational program and organization of the teacher.

7. Conclusion

In conclusion, the collaborative teaching activities between vocational schools and businesses have an impact on the quality of human resources. This collaborative activity assists students in acquiring professional skills and adapting to market changes and new requirements. This study reports that most teachers and technicians were prepared for the organization of practical teaching activities. In addition, the facilities and equipment are adequate for the teaching and practice of vocational training. The study implies that researchers and policymakers should develop appropriate and consistent orientations, teaching methodologies and curricular frameworks. Teachers and technicians should enhance their professional abilities and modify teaching and learning activities to enhance educational quality and efficiency. In accordance with the financial environment, facilities and equipment should be managed, inventoried, maintained and updated. Teachers, students and technicians should be involved in the administration and maintenance of sustainable facilities.

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