The Proposal of the "Classroom-Workplace" Model in University-Enterprise Joint Training in Vietnam

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The purpose of this article is to propose a solution for training oriented towards developing professional competence for the students, using the "Classroom - Workplace" model. The theoretical research is based on the theory of teaching for the development of professional competence. It utilizes modern teaching methods to provide a scientific basis for the innovation of teaching methods at the university. Practical research is conducted using a mixed method, combining qualitative and quantitative approaches to assess the current state of training quality through training products and propose a teaching model that combines the university with the business environment. Based on the research results, the article suggests the "Classroom - Workplace" model to implement teaching aimed at developing professional competence for students to meet the current labor market requirements.

Keywords: collaboration, "Classroom - Workplace" model, professional competence

INTRODUCTION

The fundamental and comprehensive renovation of education and training in Vietnam is taking place in the context of globalization in many fields such as economy, politics, culture, and education. Issues regarding objectives, contents, and education methods are reconsidered to match the development trend of this context. For higher education (HE), although there are no positive and strong changes such as general education, it has changes in training objectives by the tendency to satisfy the occupational needs of learners and meet the requirements of the labor market. The increasing demand for human resources through training in the developing economy, as in Vietnam urges the university to implement training links with enterprises. Linking training with enterprises involves many factors, from policy mechanisms to content, forms of linking, rights and responsibilities of both parties, ... This has become the challenging issues for the quality of University outputs. In this context, "the development of quality curriculum has become a matter of globalization. This is because the curriculum must match the training needs of the global economic market" (Shewakena, 2017, p. 36). Many countries have developed training programs in the direction of training links with enterprises to both leverage and exploit many socialized resources and reach an agreement between the school and society on the quality of training products. The curriculum is geared towards training objectives that meet labor market requirements and teaching methodology oriented towards student competences development.

Therefore, the issue of teaching and learning in the workplace has become a trend in HE, innovation in many countries, and a research topic on education in the 21st century. In Vietnam, in response to the requirements of improving the quality of HE in the context of innovation the training link between universities and businesses is seen as a solution. So, how to see the quality and effectiveness of training in association with businesses better than training in traditional methods? Which teaching model is suitable for training joint requirements of universities and enterprises in Vietnam? Answering this question is the article's purpose on building a "classroom-workplace" model to meet the above requirements.

THEORETICAL BACKGROUND

Training in the form of a teaching institution for students to study at work was of interest to many in the early 90s of the 20th centuries. According to Paivi Tynjala (2007) "the reason for this expansion is the unprecedented rapid change in society and working life that has taken place over the past few decades" (P. 131). The rapid development of information and communication technologies, along with the role of knowledge day, occupies an important position in the economy. The growing trend of internationalization and globalization has changed the structure of careers, in which the content of training and organization of work has become challenges not only HE institutions, but also labor organizations in many parts of the world. The problem with HE today is how to train people not only to achieve their job goals after completing the training, but to help them learn for life to adapt to the continuous development of Science and Technology and social advances. Therefore, vocational competency development training has become a global educational trend and has become the object of Contemporary Educational Science.

In the late 20th Century, Studies in teaching developed learners' abilities as a critique of traditional education. Resnick (1987) analyzed the difference between school learning and learning outside school to indicate the differences between these two forms of learning. That is: *First*, school activities are primarily based on individual activities, while many outside-of-school activities are socially shared. Although classroom teaching is organized in various group activities, students are often evaluated based on individual tasks and tests. On the contrary, experiential learning outside of school requires collaboration with students and others, and each person's ability to function successfully depends on the performance of some individuals. *Second*, school exercises emphasize mental activities while people use various tools in real life. *Third*, school learning is characterized by applying symbols, while other learning is characterized by contextual reasoning. People studying outside school often use objects and events directly in their reasoning without necessarily using symbols to represent them. On the contrary, learning in school is primarily based on symbolism, and relationships with symbolized events and objects are often lost. *Fourth*, school learning aims to gain general skills and principles, while learning outside the school develops situational-specific competencies.

Hager (1998) also pointed out differences between conventional and out-of-the-field teaching. Out-of-the-field teaching is less controlled by the duration of a particular education program that follows a potential plan, it is often complex and contextual, and the learning outcomes are unpredictable. Regular school instruction and on-site training are often formally organized, largely with clear plans, focusing on individual learning and often predictable outcomes. Different attributes of out-of-field teaching and on-site teaching can be considered weaknesses and strengths when considering them. After all, formal training aims to create general skills that can be applied and transferred to various situations. However, to become a real specialist in working life, one must develop forms of competence according to the specific situation, which is possible only in authentic situations. On the other hand, teaching in a particular situation can be very limited. Vaughan (2008, p.9) also studied this issue, arguing that "the opposite mindset of two types of knowledge - academic and vocational training - has tended to match the main schools of thought in education such as traditional, Orthodox education versus progressive and innovative education".

In the early 21st century, scientists were also critical of academic-focused training that was separate from professional competence. Tynjala and Virtanen (2005) made a point in their research, in which they asked students who practiced careers in businesses what they learned during on-site study. Many students say most of them have learned independence and career skills, but there are also negatives, such as bad

habits, disadvantages of work and how to evade their duties. Therefore, it should be remembered that learning is not always associated with the desired problems but can also strengthen the existing negative characteristics of the workplace. As Paivi Tynjala (2007) reviewed studies on workplace learning, "recent research on training outcomes, especially at the university level, has shown that there is a gap between the necessary knowledge in the workplace and the knowledge and skills generated through formal training" (P.131). Therefore, the University's curriculum must contain the content of studying at the enterprise, where the work of the future for students is taking place.

Recognizing the important role of out-of-the-field teaching, many researchers have developed different learning models. Hager (2004) emphasizes the need to develop workplace learning research from its starting point. He distinguished between the standard learning model and the "emerging" learning model. According to him, the standard model is based on the following main assumptions: focus on the mind, inner and transparency. The first point, focusing on the mind, refers to understanding learning as an individual cognitive process through which mental structures are improved and accumulated. The second point, the inner, relates to the first by separating spiritual life from the outside world. The most valuable form of learning is to focus on thought rather than action. The third point, important assumption of the standard model, the transparency of learning, implies measurable learning outcomes and the assumption that non-transparent learning creates some inferior implicit knowledge.

In contrast, the "emerging" model characterizes learning as an action in the real world. The change that learning brings takes place not only in the learner's mind, but also in the learner's environment. Therefore, the main result of learning is creating a new set of relations in an environment.

In the context of quality competition to meet the demands of the labor market, linking training with enterprises as a solution promotes the development of universities. Robertson (1998) claimed that the University should expand its reach beyond campus by organizing and encouraging workplace learning. In these workplaces, formal training plays an important role in developing and improving the quality of training. Therefore, recently, many models of classroom-workshop have been proposed by scientists.

The Teaching Factory (TF) model was developed by the Laboratory for Manufacturing Systems & Automation (LMS) and is applied to training facilities across Greek manufacturing and other European manufacturing sectors. The TF model offers a learning program where students, researchers, and companies work together to jointly develop skills and share expertise by co-creating solutions to challenges in industrial production. This will be achieved through a collaborative knowledge-sharing network of organizations (academia and industry) that can effectively exchange information.

FIGURE 1
TF MODEL

<table>
<tr><td colspan="3">Knowledge exchange network
* Network of links between industry and universities and academies.
* Methods of working together.
* Together develop skills, promote and share expertise.
* Multiple possible methods:
Teaching collaborative distance learning.
Solving the industrial challenge.
Training and skill enhancement.</td></tr>
<tr><td>Academic institutions</td><td></td><td>Industrial factory</td></tr>
<tr><td>Provide new concepts & approaches.</td><td>→ ←</td><td>Industrial practice for the classroom</td></tr>
<tr><td>Creating solutions to industrial challenges.</td><td>→ ←</td><td>Practical knowledge</td></tr>
<tr><td>Provides remote accessible measureme testing tools</td><td>→ ←</td><td>Requires the right to use (Test-Beds) to validate a concept.</td></tr>
<tr><td>Provide education and training.</td><td>→ ←</td><td>Requires training on a specific topic.</td></tr>
<tr><td>Provide access to new talent</td><td>→ ←</td><td>Industrial challenges need to be addressed.</td></tr>
</table>

Such a factory teaching model depends on the curriculum of each major and the volume of knowledge - skills corresponding to the duration in each module. Eraut (2004) has categorized 5 types of knowledge that professional education programs claim to provide as follows: (1) theoretical knowledge, (2) methodological knowledge, (3) practical skills and techniques, (4) general skills, and (5) general knowledge of the occupation in question. The duration of each type of knowledge – how that skill is regulated depends on the forms of teaching organizations that people perform. He said that although most of these types of knowledge are described as transferable, there is little evidence of the degree to which students acquire methodological knowledge, general skills, and general knowledge about a career as well as about the opportunities for theoretical knowledge and practical skills, which are then transferred into the workplace.

The 70: 20: 10 Model is a model that selects the method of out-of-the-field teaching to distribute the duration of the training program. The 70:20:10 model is called the learning & development model, designed from research at the Center for Creative Leadership in North Carolina beginning in the 1980s. Today, this model has become an L&D (Learning & Development) Strategy to improve training performance in the workplace.

The duration distribution of this model is as follows:

- 70% of experiential learning. Students' knowledge and practical skills are formed from work-related experiences. It happens through the daily tasks, challenges and practice of students.
- 20% of social learning. Learning through interaction with others, like colleagues and managers where students practice experiences. The effectiveness of social learning depends heavily on the school culture where students study, it is important to see how students can be supported and facilitate social learning. Social learning provides an opportunity for students to adapt to the future work environment. It can lead to a more productive and culturally stronger work environment through building teams that are willing to support and learn from each other.
- 10% formal learning. Only 10% of the knowledge is learned in the school, academic and in-depth knowledge. The misconception is that the 70: 20: 10 model is counter-training. Although lice account for 10%, formal learning is the foundation and starting point from which experiential and social learning can develop. If the student's formal learning background is solid, experiential learning and social learning will also be more positive and successful.

In general, the trend of training approaching professional competence in the world has moved teaching activities in schools to outside life, where students can experience, interact and interact in different situations, real situations rather than hypothetical situations in the formal classroom. Consequently, the elements of vocational competence are developed in students in a sustainable manner.

CASE STUDY IN VIETNAM

Essentially, Vietnamese universities have long implemented 'on-the-job training' or 'workplace learning' through organizing internships for students to complete program requirements. However, this only reflects the formal aspect of traditional education. In the current international integration context, the education quality in Vietnamese universities must be measured based on international standards. The following empirical studies aim to identify the quality of Vietnamese universities, including training programs, teaching methods, and training outcomes reflected in the level of professional skills.

Research Methods

Research Questions

(i) How are the content of programs, teaching methods, and training models for students in private universities in Ho Chi Minh City evaluated?

(ii) To what extent are the professional skills of students in private universities in Ho Chi Minh City assessed?

(iii) Which model is considered suitable for improving the professional skills of students?

Mixed Research Method

Combination of qualitative research (for research question 1) and quantitative research (for research question 2).

Research Participants:

+ Qualitative research group includes faculty members from universities in Ho Chi Minh City (including Hong Bang University, Ho Chi Minh City University of Economics and Finance, Van Hien University, Van Lang University) selected randomly, with a total of 30 people.
+ Quantitative research group consists of final-year students and alumni working in various companies (including 3 state-owned enterprises, 2 foreign-invested enterprises, 10 small and medium-sized private enterprises), selected randomly, with a total of 97 people.

Data Collection Tools

Qualitative data collection tools include interview questions and quantitative data collection tools include survey questionnaires.

+ Qualitative information is collected through interviews, focusing on training programs and their implementation. The survey aims to gather data on the time distribution between theory and practice, among different courses and within each course. It also investigates how lecturers conduct practical teaching, especially in courses with practical components, and the methods employed. Regarding lecturers collaborating with companies, the survey explores how teaching in factories occurs and at what level.
+ Quantitative information collection tool based on My Career Skills Toolkit (Lisa Young, 2016). Based on 8 assessment standards and criteria for each standard, we select the appropriate assessment standards for Vietnam with 8 groups of professional skills including: (1) Critical thinking skills, (2) Effective information and communication skills; (3) Teamwork skills; (4) IT and foreign language skills; (5) Leadership skills; (6) Professional and professional skills; (7) Career orientation and personal development skills; (8) Skills for cultural community interaction. Each skill corresponds to each criterion and each criterion has 05 answer options corresponding to 05 observed variables; each observed variable is assigned a different value, that is: 1 = weak; 2 = average; 3 = fairly good; 4 = good; 5 = excellent.

Processing Information:

+ Processing information from the survey through interviews: processing is done through a synthetic method based on consensus on a particular issue. We synthesize and calculate the percentage for each issue addressed in the survey content.
+ Process information of the survey by questionnaire using SPSS 20.0 to analyze and describe the survey data in 3 forms: general description, description of each professional skill, description by object (students and alumni). Average value classified by levels: weak: $1.00 \leq \overline{X} \leq 1.79$, average: $1.80 \leq \overline{X} \leq 2.59$, fairly good $2.60 \leq \overline{X} \leq 3.39$, good: $3.40 \leq \overline{X} \leq 4.19$, excellent: $4.20 \leq \overline{X} \leq 5.00$.

Findings and Discussion

The Current Implementation Status of Program Content, Teaching Methods, and Training Models for Students in Ho Chi Minh City Private Universities

Regarding the training programs in private universities in Ho Chi Minh City: comments on many academic programs at these universities indicate a focus on theoretical and academic knowledge, even in specialized subjects (76.7%). Students often have to study courses covering a wide range of fields (46.7%), with specialized courses having a lower proportion than theoretical and ideological courses (80%). Programs in foreign-invested universities (or international schools) are perceived to reduce the volume of

knowledge related to ideological subjects but increase courses in practical tools, such as foreign languages and mathematics (50%). Internships at the program's end are considered a low-weighted course (86.7%).

Concerning training methods: In teaching, instructors primarily interact with students and require students to interact with textbooks and materials (60%). Many courses with practical components are mainly conducted on campus, or students can choose their own facilities for practical training (73.3%). Some courses, if restructured, could be taught in the field or through simulated field teaching (86.7%). Some instructors are not accustomed to or have not taught in real-world situations (70%). Teaching tools are outdated or slow to be updated to align with the development of science and technology (63.3%).

Regarding the training model:

+ *Training linkage at the university with a combination of work and study*: Over the past half-century, this training model has been implemented in various universities. However, recently, this model has expanded uncontrollably. In response, the Ministry of Education and Training (MOET, 2017) issued a regulation on linking training at the university level. Accordingly, universities are allowed to collaborate and coordinate with other educational institutions, vocational training institutions, and state agencies (not applicable to internationally linked and distance learning programs) to jointly organize training for learners, most of whom are working and studying to enhance their professional knowledge or pursue another university program to align with their current jobs. Universities implement this collaboration in two forms: (i) Coordinated collaborative training: educational institutions collaborate to participate in part of the training program, coordinate the management of the training process, and ensure the conditions of the facilities. (ii) Classroom-based collaborative training: educational institutions establish training classes without participating in teaching, only coordinating management and ensuring the conditions of the facilities to carry out collaborative training.
+ *Collaborative training between universities and enterprises* is a current trend in education. It is an important factor in improving the quality of student training within the university to enhance the quality of the workforce for society. Collaboration between universities and enterprises is becoming more diverse: (i) Building a network of connections with relevant enterprises: Universities base their potential and training programs to develop plans to connect with enterprises in fields related to the university's training programs. Universities implement two tasks: internal collaboration between departmental staff to distribute enterprise issues to research groups; and external collaboration by sending representatives to enterprises for cooperation between the university and enterprises. (ii) Establishing a career development and specialized training department: Universities conduct surveys on the needs of enterprises to design training programs according to the current needs of enterprises. This training aims to update and supplement knowledge and skills for alumni and specialized labor in enterprises. With this training program, enterprises can participate in the training process through distance learning, combining work and study. (iii) Designing training programs based on enterprise needs: Since the first half of the 20th century, the University of Aalborg (Denmark) has proposed a problem-based training model to attract enterprises to participate in student projects (11/04/2021). From there, various training formats based on the practical needs of enterprises have emerged. Today, the invitation of enterprises to participate in designing training programs is becoming more common. It has become a method of collaboration between universities and enterprises, creating a tight integration between theory and practice. (iv) Establishing an industrial simulation center: Universities collaborate with enterprises to build realistic simulation rooms for students to practice and provide advanced training for engineers in enterprises. Both the university and the enterprise cooperate to transfer technological knowledge to the enterprise; simultaneously, the enterprise supports the university with equipment and facilities for students to practice professional skills.

For example, at the Saigon University of Technology, the curriculum design in the field of Business Administration combines theory (51.22%) and practical training (48.78%) (Saigon University of Technology, 2023); Meanwhile, at Van Hien University, the curriculum design in the field of Accounting combines theory (66.42%) and practice (33.58%) (Van Hien University, 2020). At Van Lang University, the curriculum design in the field of Psychology combines theory (78.46%) and practice (21.54%) (Van Lang University, 2022). The university's faculty is responsible for the theoretical part and teaching at the university. In contrast, the practical part and internships involve students in experiential learning at the university's practice base and at enterprises, guided by the university's practical faculty and enterprise technical staff. This creates a realistic learning environment and a close connection with enterprises. Through these collaborative models, universities become more flexible and help students acquire practical skills and knowledge, preparing them to work in a rapidly changing job environment.

Current Status of Professional Skills of Private University Students in Ho Chi Minh City

The level of attainment of professional skills by students at private universities in Ho Chi Minh City is reflected through survey results based on the My Career Skills Toolkit (Lisa Young, 2016). Based on 8 evaluation criteria and criteria for each standard, students self-assess when participating in the survey. The survey data is processed quantitatively for results as follows:

TABLE 1
SUMMARY OF EACH PROFESSIONAL SKILL LEVEL OF STUDENTS AND ALUMNI STUDENTS

	N	Min	Max	Mean	Std. Deviation
Critical thinking skills	97	1	4	2.60	.786
Information skills and communication skills	97	2	5	2.81	.755
Teamwork skill	97	1	4	2.47	.855
IT skills and foreign languages	97	1	4	2.98	.803
Leadership skills	97	1	4	2.40	.897
Professional skills	97	1	5	2.24	.922
Career orientation skills and personal development skills	97	1	4	2.26	.845
Community cultural interaction skills	97	1	5	2.53	.830
Valid N (listwise)	97				

According to **Table 1**, the level of achievement in each career skill of students and former students is not high, only at "average" and "fair good", there is no skill at the level of "weak". Among these skills, there are skills that are valued at "fair" such as: IT and foreign language skills ($\overline{X}$ = 2.98), and information skills and communication skills ($\overline{X}$ = 2.81). This shows that the quality of training in instrumental subjects and social activities is focused by schools. Many universities previously followed the Regulation on training of Universities and Colleges (Decision 43/2007/QD-BGDĐT) which stipulated the output standards for computer science and foreign languages. Accordingly, Computer Science and Foreign Languages subjects are taught with specified knowledge content and time allocations, so students have accumulated certain knowledge and skills in IT and foreign languages. Students' information and communication skills are primarily developed through educational activities or social activities. At the same time, universities also have various clubs for students to participate in collective activities, after the main class hours in the lecture hall. This accurately reflects the reality, showing that universities in Vietnam, besides providing knowledge and skills to students through the study of subjects in the training program, especially organize social activities to attract more student participation. According to **Table 1**, students' professional skills are still at the "average" level, which are skills that require students to be experienced through practical activities

or in classrooms organized in the field. : professional skills ($\overline{X}$ = 2.24), career orientation and self-development skills ($\overline{X}$ = 2.26), leadership skills ($\overline{X}$ = 2.4). For professional skills, it is required that students not only practice proficiently their professional skills in their professional work practices but also can guide and advise workers in the same industry when they lower level. With this skill, students have little chance to achieve a high level when only learning at school without experiencing through practice or in corresponding simulation models. This gives rise to a hypothesis that: the professional capacity of former students working in enterprises will be higher than that of fresh graduates.

TABLE 2
OCCUPATIONAL SKILL LEVEL OF EACH SUBJECT

	Object	
	Student Mean	Alumni Mean
Critical thinking skills	2.08	2.96
Information skills and communication skills	2.93	2.74
Teamwork skill	2.08	2.75
IT skills and foreign languages	3.05	2.93
Leadership skills	1.78	2.84
Professional skills	2.07	2.35
Career orientation skills and personal development skills	1.87	2.53
Community cultural interaction skills	2.03	2.88

According to **Table 2**, the value of measuring the professional skills of students and former students is different. Out of 8 professional skills, there are 7 skills that have higher measurement value than former students. There are two skills with a high degree of disparity: leadership skills and career-oriented and self-development skills (in the subject of students, the measurement value is within the limit of "weak"). From here, it can be affirmed that learning in the environment of professional activities is a condition for learners to form career motivations and simultaneously, an opportunity for learners to self-assess and arouse aspirations, advancement and creativity. Among those career skills, students' information technology and foreign language skills are higher than alumni's, although both are in the "good" range. Ly (2022) argues that foreign language skills play a crucial role in the tourism industry as it is one of the 'keys' influencing the quality of tourism products. Therefore, one of the labor recruitment criteria for tourism businesses is foreign language skills, with a preference for English. Alongside knowledge, basic skills, including foreign language and computer skills, are found to positively impact employability.

Additionally, foreign language and computer skills are also assessed by employers as having a relatively high level of importance. This explains why nowadays, most universities, when designing their training programs, aim to enhance students' foreign language and computer skills (Hằng, 2019). The question here is: have the computer science and foreign language subjects studied in university become tools for professional practice for all students after graduation? If so, this skill will be higher among alumni than among students. On the contrary, the reality is not so because many people still work in professions that do not need to use much information technology and foreign languages. Perhaps the macro management levels have recognized this problem, so in Decree No. 89/2021/ND-CP amending and supplementing a number of articles of Decree No 101/2017/ND-CP on training and retraining maintenance of cadres, civil servants, and public employees, the subject of Informatics and Foreign Languages is no longer a compulsory standard.

Some Lessons Learned From the Practical Study

The survey results indicate that the training model, including content and methods, determines the quality of education and vocational skills of graduating students. Therefore, the training model must be

emphasized and ensure consistency, organization, and management in coordination with the labor market - represented by businesses - to train students. Combining these factors in a unified system with the support of external forces participating in the training process will improve the quality of education.

Firstly, the training process results produce corresponding quality training products. The survey results on the vocational competence of students after completing the training course and those who have participated in professional activities in society yield the following outcomes.

TABLE 3
SUMMARY OF ASSESSMENT OF PROFESSIONAL CAPACITY OF STUDENTS AND ALUMNI

	N	Min	Max	Mean	Std. Deviation
Summary of capacity assessment	97	2	3	2.54	.384
Valid N (listwise)	97				

According to **Table 3**, the quality of HE in Vietnam is rated as 'average' and has the potential to shift to a 'good' position. These figures somewhat reflect the training quality of HE institutions in Vietnam on a global scale, not too low but also not high, falling in the middle range. In line with the global trend, attracting foreign direct investment (FDI) plays an increasingly crucial role in the economic development of developing countries, including Vietnam. In this context, high-quality human resources are considered a key factor in attracting FDI enterprises to invest in Vietnam (Tien & Thanh, 2020). Therefore, Vietnamese HE institutions need to improve their quality, raising the assessment scores of students' professional competence from 'average' to 'good' and 'excellent' to meet the demand for high-quality human resources in Vietnam, fulfilling the crucial, strategic, and necessary task of international integration (Pham, 2023).

Secondly, the model of training collaboration between universities and businesses is a suitable direction in the current context. This activity plays a crucial role in enhancing the quality and cultivating the professional skills for students (Tai, 2009). The collaboration between universities and businesses is an objective need arising from the interests of both parties. For its own benefit, the training activities of universities always aim to meet social needs, including the needs of businesses. Therefore, this partnership is essential and highly feasible in meeting the labor requirements of enterprises (Mai, 2008). It is an important factor contributing to improving the quality of the workforce for society (Government, 2021). Previous studies and the assessment data presented in this article affirm that the training collaboration between universities and businesses plays a significant role and acts as a driving force for better training quality. Moreover, learning through practical experience in businesses helps students develop better professional skills (Bình et al., 2019).

PROPOSED SOLUTION TO LINKAGE BETWEEN UNIVERSITY AND ENTERPRISE THROUGH THE 'CLASSROOM - WORKPLACE' MODEL

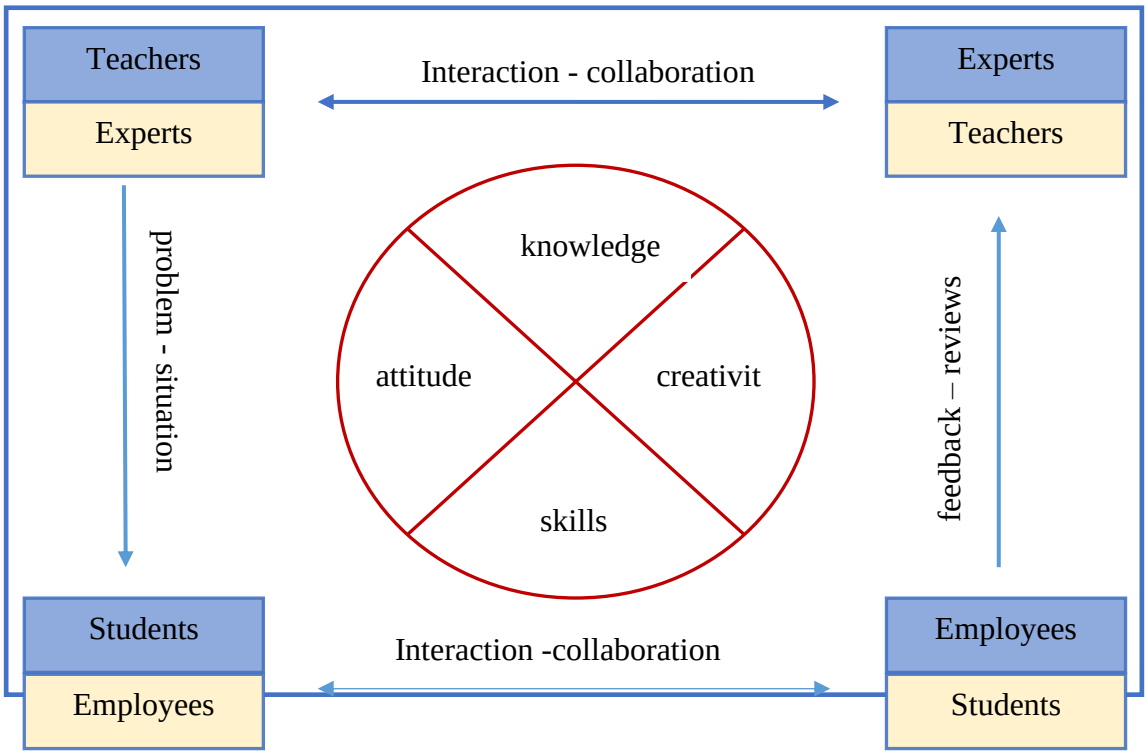
Significance and Objectives of the Solution

The "Classroom – Workplace" model is understood as a teaching method outside the classroom or a simulation of activities taking place in the workplace. In this model, participants in teaching activities include lecturers and students and various social forces participating with different roles and functions through exchange and interaction methods. This model describes the learning processes at the workplace or assumes activities where teaching is primarily a collective activity in which experts play the role of 'teachers,' and company executives and employees act as trainers.

Structure of the "Classroom – Workplace"

This model derived from the trend of organizing education for students to learn in the workplace, and based on research on training models as mentioned above, and arising from practical requirements, we propose the "Classroom – Workplace" model, represented in the following diagram:"

FIGURE 2
CLASSROOM- WORKPLACE MODEL



This is a self-contained structure that contains the elements of the teaching process. At the heart of this model is the goal of the teaching activity that includes its essentials: knowledge, skills, attitude, and creativity; and these elements are arranged in the form of symmetrical pairs. The relationship in each of these symmetrical pairs denotes its dialectic, just as the category pair "content – form". This objective structure governs the elements that revolve around them, requiring corresponding activity.

The subjects of each activity are also arranged in each corresponding pair and have a placement transformation for each other. To carry out this teaching activity, object A plays the main role as the subject and object B plays the secondary role as the supporter. When switching to teaching activities with other functions, subjects A and B interchangeably position each other to perform the role of each party according to the nature of teaching activities. To ensure functionality and role swaps in each position, the pairs of subjects have the right activities to achieve the goal. The normal classroom has only two subjects: teacher and student. In the classroom according to the CWT model is not 02 objects, but to 04 objects of the teaching process, when swapping positions and roles for each other, the number of objects increases to 08, depending on the functions of each activity.

Implementation of the Classroom – Workplace Model

The first interactive pair is the "Lecturer - Expert," where one person works within the academic institution, and the other works in a company or an external organization. In the first scenario, the teaching activities of these two entities occur externally, meaning the university collaborates with the company to train personnel for both parties. This implies a cooperative relationship between lecturers and experts. In the second scenario, if there is no collaboration between the university and the company, the lecturer must act as two individuals based on the teaching tasks and the organization of teaching activities. In this case, the relationship between the lecturer and the expert is interactive, meaning there is interaction within the assumed context. The outcome of this interactive-cooperative teaching approach creates situations and demands that learners solve these situations through activities targeting the elements of the goal.

The second interactive pair, the most crucial one, is the "Student - Employee" pair, involving someone from the educational institution and someone from a company or an external organization. In cases where the university collaborates with a company, employees from these companies can assist students in practical learning situations. In the second scenario, in a simulated manner, student learning activities should focus on group work and project-based learning to provide opportunities for practical experience and skill development. Student learning activities in this model rely on situations the lecturer presents or assigned tasks. Learning in this manner involves guidance and adjustments by the lecturer or expert to ensure that each student reaches the goal to the best of their abilities. The learning activities in the "Classroom - Workshop" model offer several advantages over traditional learning methods, primarily because students learn and collaborate with others more, overcoming limitations associated with the downsides of workplace learning, as discussed in the previous section.

In this model, when there is a collaboration between the university and the company, the roles of direct and indirect instructors depend more on the content and teaching conditions than on the training entity, which is the university. However, the role of the indirect instructor should not be underestimated. Billett (2004) highlights the importance of the distinction between direct and indirect guidance: "A novitiate in knowledge may struggle to learn if not supported by a more experienced and knowledgeable partner" (p. 111). Interaction and work under the guidance of lecturers, experts, and especially employees are crucial in the learning process because they are skilled workers, serving as role models for students to observe their work and participate in the professional community. The results of the students' learning process, with the support of employees in the "Student - Employee" pair, are compared to provide feedback to the "Lecturer - Expert" group to adjust methods and create more suitable situations.

Recommendations

The "Classroom - Workplace" model is successful when there is close cooperation between university lecturers and business experts. To achieve this, the training program needs to be adjusted and clarify the training content between theory and practice. Additionally, this program requires annual adjustments with the participation of lecturers and businesses, the direct labor users. The coordination between lecturers and experts is evident in the appropriate integration of theory and practice – experience in business.

CONCLUSION

In a study on collaborative training between universities and industrial facilities, Slotte & Tynjala (2003) asserted that the ability to learn through collaboration with others, both within and outside an organization, often differentiates success from failure. Employees who cannot connect with others to share and build knowledge will significantly lag behind their peers in possessing such abilities. Therefore, students not only learn in universities and achieve employment goals but must also engage in continuous learning, learning at the workplace, learning for personal advancement, and societal development. Training lifelong learners, individuals motivated to learn continuously and who identify learning as a vital task in a learning society, has created a competitive edge in the quality of internationally recognized education.

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