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The Urgency of Transferable Skills Development for Vocational Teacher

A literature review study in Indonesia

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***Abstract*— Transferable skills are very crucial for the future employment workforce. Vocational teachers whose transform their competency to the students should develop their abilities not only limited on technical skills but also on the transferable skills in accordance with the future industry's needs. The objective of this study was to investigate the transferable skills development of vocational teachers by identifying the specific employability skills that helping students compete in a rapidly social changing and economic environment. This study was used literature review for research procedure from the online database. Finding revealed that transferable skills include communication, collaboration, problem-solving, entrepreneurship, and learning to learn. Finally, some suggestions were proposed for future research on reforming and improving vocational teacher transferable skills development.**

Keywords*— *Indonesia; literature review; transferable skills; vocational teachers

I. INTRODUCTION

Education is an important step for an individual in developing their potential skills. Through the learning process, students change their potential skills into competencies, and that reflect their ability to perform tasks. Schools should facilitate students to participate in advancing their competencies. However, it is widely believed that schools have not really known the needs of students because each student has their own characteristics.

In fact, the individual must understand individual talents and the intelligence and application of potential that generalise students is intended to direct students to think differently. The generalisation of students' abilities has an adverse effect on the fact that students do not have the opportunity to maximise their own potential ability. Education cannot develop their potential optimally, because students are unique personalities, have different talents or opportunities. Thus, everyone should be selective in identifying skills and knowledge to learn. When learning the teaching-learning process, the learning process is still focused on the teacher, and the learning process has not yet focused on the students.

Teaching is a complex task [1]. There are twelve roles that have been identified and these can be grouped into several fields in the model presented: information providers in learning, and in a clinical context; role models on-the-job, and in more formal teaching settings; student appraiser and curriculum evaluator; curriculum and course planners; and resource creators, and study guide producers.

The learning process still relies on the traditional way of only accepting students to fulfil the obligations given by the teacher, and the parents and its should be immediately changed. The learning trend, which always emphasises this scholastic aspect, will affect the younger generation, such as; Just waiting for instructions; Just scared; Shyness precedes others; Just follow; Wrong, but still brave (irresponsible); Easily confused because of unbelief, And it is not environmentally sensitive. In addition, these generations have the characteristics of stationary; they want to succeed even with labels, lack of respect for process, irritability, causing riots and battles.

The approach to learning is very concerned with academic aspects that tend to emphasise developing intelligence confined to the cognitive aspects so that students have been reduced to just the cognitive aspects. This condition triggers the occurrence of social problems caused by weak social capital so that young people do not have the skills to live.

With the change of teaching and learning method, the question arises. The question is, what kind of educational personnel with the qualifications of knowledge and skills, experiences, attitudes and values of what kind should be owned? How can they live with the ever-changing world community that will continue to happen? What are the commitments, and what technical skills are needed so that educators can bring their learners to a ready world?

Therefore, we need professional designers (instructional designers) who are truly experts in designing individual instructional patterns. Teachers are expected to master the skills of teaching students so that learners master the core competencies which then develop into higher skills as a tool of life.

II. Literature Review

A. Transferable Skills

UNESCO (2015) [2] defines three types of skills, (1) core competencies, (2) transferable skills or transversal skills and (3) engineering and vocational skills, all of which are necessary for adolescents to access jobs. This refers to the foundation of competence, to the most basic, as "the reading and numeracy skills necessary to get a job that pays enough to meet daily needs"; transferable skills as "various skills that can be transferred and adapted to different needs and work environments", and technical and vocational skills that can be considered "specific technical knowledge" [3]. Transferable skills or life skills, soft skills are essential for today's youth and the future. In the school where the main objective is to prepare students to enter the verb, transferable skills are even more important for students. Researchers has shown that employers prefer to hire employees with excellent transfer skills [4]. He added that in the 21st century, transferable skills needed to be even more considerate by advancing the use of technology. Some essential components of transferable skills are self-management, planning and organising, communicating, working with others, problem-solving, initiative and enterprise, applying numeracy, design and technological skills, and learning.

Referring to the Curriculum Guidance, life skills are included in the school curriculum which defines each component of self-management, planning, communicating, working with others, and solutions. In addition, students must also have initiative and enterprising, apply numeracy, design and technological skills, and learning skills. The following are descriptions of each as listed in the curriculum [5]. They are (1) Self-Management. Students can recognise their strengths and weaknesses and find ways to improve their performance. It also helps students manage their time professionally and more efficiently. (2) Planning and Organizing. Students can plan and perform tasks correctly and safely. (3) Communicate. Students can use four language skills (listening, speaking, reading and writing), non-verbal communication and visual techniques to receive and present information effectively. (4) Team work. The students can interact harmoniously with colleagues and develop mutual respect and teamwork between them. (5) Problem Solving. Students can identify problems and solve them in creative and innovative ways. (6) Initiatives and Enterprise. It helps students develop their ability to decide and act on their own without waiting for someone to tell them what to do especially in difficult and challenging situations. It also helps students to create their ability to discover new and innovative solutions and determine the best way to solve problems. (7) Implement Counting, Design and Technology Skills. Students can use numeracy, design and technology skills to prepare, process and complete tasks. (8) Life long learning. Expose learning that can be seen as an ongoing process throughout their lives to produce overall improvement.

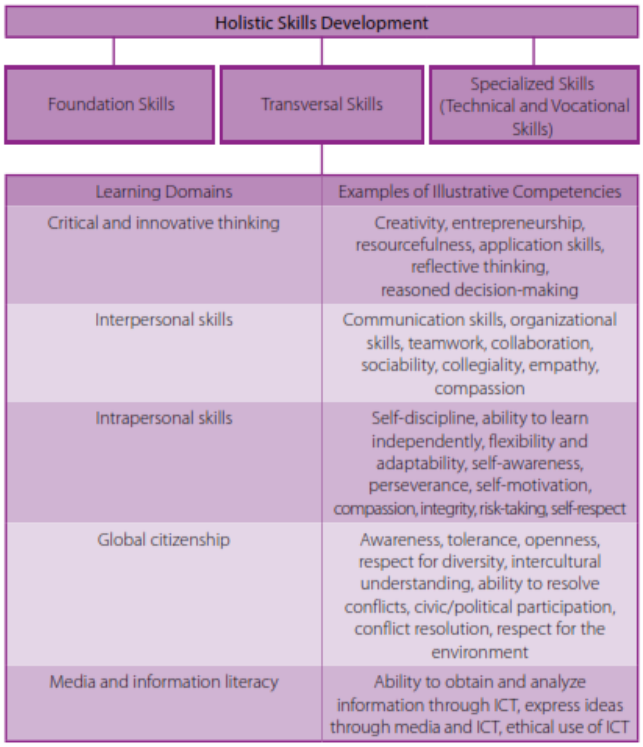

Figure 1. Conceptual framework of transversal skills developed by eri-net

The ERI-Net research program has developed a conceptual framework (see Figure 1) that goes deeper into defining transversal skills. According to the framework, transversal skills include five domains of learning - critical and innovative thinking, interpersonal skills, intrapersonal skills, global citizenship, and media and information literacy, together with foundations and special skills all need to be considered for the overall development of the individual (UNESCO, 2015)

B. The specific set of core skills

There are a specific set of core competencies that all graduates must have and can apply at the European and international level [6]. They include:

- Cognitive skills - critical thinking, analysis and synthesis. The student needs, for example, to be able to identify assumptions, evaluate reports regarding evidence, examine argument logically.
- Problem-solving skills and decision-making - quantitative and qualitative. The student should be able to identify, formulate and solve business problems, and generate and evaluate options, apply ideas and knowledge to various situations.
- Research and investigative skills - and use to solve business and management problems, both individually and then as part of a team. The student should be able to identify relevant business data and research sources and research methodologies.
- Information and communication technology skills - The student should be able to use a variety of business applications in any job.

- Numeracy and quantitative skills - data analysis, interpretation and extrapolation. The student should be able to use business model issues and to draw inferences from the information.
- Communication skills - verbal and written, using a variety of media. The student needs, for example, to be able to write a business report.
- Interpersonal skills - speaking and listening, presentation, persuasion and negotiation. The student needs to be able to engage with various people, including colleagues and customers effectively.
- Teamwork skills - leadership, team building, influence. The student needs to be able to manage or contribute to the project team.
- Personal management skills - planning time, motivation, initiative - a clear need for these skills.
- The skills learned - reflective, adaptive and collaborative. The student must be motivated to learn and be able to do it effectively in a variety of contexts.
- Self-awareness - sensitivity and openness to others. The student needs to be wary of how others will react to the situation - the significance of 'emotional intelligence' is now becoming recognised.

A detailed description of the different implementation categories for each sub-skill for each of the seven soft skills [7].

TABLE 1. Soft skills and must-goog

No.	Soft Skills	Must Have Elements (Sub-Skills)	Good To Have Elements (Sub-Skills)
1.	Communicative Skills	Ability to deliver idea clearly, effectively and with confidence either orally or in writing Ability to practice active listening skill and respond. Ability to present clearly and confidently to the audience.	Ability to use technology during presentation. Ability to discuss and arrive at a consensus. Ability to communicate with individual from a different cultural background. Ability to expand one?s own communicative skill. Ability to use non-oral skills.
2.	Critical Thinking and Problem Solving Skills	Ability to identify and analyze problems in difficult situation and make justifiable evaluation. Ability to expand and improve thinking skills such as explanation, analysis and evaluate discussion. Ability to find ideas and look for alternative solutions.	Ability to think beyond.. Ability to make conclusion based on valid proof. Ability to withstand and give full responsibility. Ability to understand and accommodate oneself to the varied working environment.
3.	Team Work	Ability to build a good rapport , interact and work effectively with others. Ability to understand and play the role of a leader and follower alternatively. Ability to recognize and respect other?s attitude, behavior and beliefs.	Ability to give contribution to the planning and coordinate group work. Responsible towards group decision.
4.	Life-Long Learning & Information Management Skill	Ability to find and manage relevant information from various sources. Ability to receive new ideas performs autonomy learning.	Ability to develop an inquiry mind and seek knowledge.
5.	Entrepreneurship skill	Ability to identify job opportunities.	Ability to propose business opportunity. Ability to build, explore and seek business opportunities and job. Ability to be self-employed.
6.	Ethics, Moral & Professional	Ability to understand the economy crisis, environment and social cultural aspects professionally. Ability to analyze make problem solving decisions related to ethics.	Ability to practice ethical attitudes besides having the responsibility towards society.
7.	Leadership skill	Knowledge of the basic theories of leadership. Ability to lead a project.	Ability to understand and take turns as a leader and follower alternatively. Ability to supervise members of a group.

III. Finding and Discussions

In short, two important skills criteria join in the above analysis: the breadth of work experience and the ability to handle problems. Under these two criteria, an example of four skill levels can be identified for assembly workers from non-supervisory ranks in the car industry [8]. Level 1 worker can be a way out only one ordinary operation of a job, simple and without delay, regardless of defects. Two groups of workers are included in this level: beginners who are just beginning to work for car manufacturers and temporary workers who are seasonal agricultural workers or who prefer short-term jobs.

Level 2 includes ordinary workers with two or three years of experience who can carry out two or three different jobs in the workshop, and be able to identify defects and place red tape at appropriate points to indicate where it is broken. Rapid production streams and lack of adequate skills do not allow them to correct defects. Even so, showing defects is a big help in facilitating improvements at a later stage.

Level 3 workers, who have much experience covering some work in the workshop, can not only identify defects but also

understand the cause. They fix the reasons of the defects if they have time, so there is likely to be a repetition of those particular defects in the production flow.

Level 4 workers, who have extensive experience extending even to adjacent workshops, can design new operational procedures as well as make decisions about deployment of equipment. They can also serve as instructors at overseas plants.

There are needed on the integration of transferable skills in teaching and learning [9]. Namely:

- Reductionist

In reductionist approaches to teaching where it is educational to transmit from knowledge, presented in A fixed sequence for that learner, not the scope of trial and error is to be avoided, the pressure on the individual to absorb knowledge as presentation.

- Constructivist

In a constructivist approach, the process through exploring, interacting with and applying knowledge.

IV. Conclusions and Recommendations

To make the teaching of a little Skillful Being a regular and effective learning activity, it involves engaging parties to become aware of the importance of the few Skills and responsibly participate in this training [2]:

- The school added rich skills to providing Students with Hard Skills, it helps them not only easy to find a job but also immediately integrate into it work environment at the workplace.
- The school needs to be to build programs, curriculum actively, preparation for staff and facility materials to teach Soft Skills to the students.
- The teacher when teaching professional Subjects should try to integrate transferable Skills but also learn soft Skills through the teaching Teachers method; for example, group teaching, teaching on raising issues, teaching projects.
- The students need to Learn on their own, improve themselves, and train Life Skills, Gentle Skills for them self.

The lack of experience is often the last reason people are not offered a job, according to the recruiting company [10]. If they change careers, students will be glad to know that experienced professionals often sell out the potential rather than experience in job hunting. Companies seeking personal qualities that they know tend to be present in their most effective professionals, such as communication skills, initiative, perseverance, organisational and time management skills, and creativity. Often companies try to discover: personality types, talents, abilities, talents, and potentials rather than seeing actual experiences. Attitude, enthusiasm, personality, and track record of achievement in this type of work are the main indicators of success that employers are seeking.

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