



Vocational Learner Skills in the 21st century: The Emphasis on Professional Competence

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Abstract

This paper aims to present the essence of the skills of vocational learners in the 21st century so that they can prepare and develop themselves to enter the world of work in accordance with the changes in the digital economy and society and the need of business establishments. In this paper, the changing world of work, skills that respond to future changes, skills required in the industrial sector, and approaches to organizing learning skills in the 21st century are presented.

Keywords: 21st Century Skills, Vocational Students, Professional Competence

Introduction

The world is changing rapidly. The growth in socio-economic information tends to be a disruptive change. All these phenomena are called the VUCA World—volatility, uncertainty, complexity, and ambiguity. The United States Armed Forces used this term to call the turbulent and volatile situations in the wars of Africa and Iraq. Now the VUCA World is used to describe today's world that is as turbulent and volatile as it is in war and rapidly changing economic environment (Gkies, sunnie, 2518). These rapid changes also affect the business, industrial, and service sectors, especially the labor forces. Therefore, it is necessary to develop and upgrade skilled workers to keep pace with technological and digital innovation. Workers shall have specialized skills or be trained to specialize in technological and digital innovation. This is considered to be the most important opportunity and competitiveness for vocational education that focuses on practical learning and mastery of occupation. Vocational institutions shall produce and develop graduates who possess the combination of academic



competence in technology and innovation with the development of 21st-century learning skills to meet the needs of industrial and service establishments (Somporn Pandam, 2022, p. 10).

Changing World of Work

The World Economic Forum (WEF) has published a report on the Future of Jobs 2020 to introduce knowledge-based jobs and new skills in the future world. Moreover, the perspectives of business leaders who are at the forefront of decisions on human capital revealed an interesting conclusion as follows: (Kamonmas Jitkuntiwong & Sutthicha Chanintradusit, 2022).

1. Technology deployment continues to develop. Cloud computing, Big Data, and e-commerce are important for business operations. Moreover, business sectors are more interested in adopting data encryption, robotic, non-humanoid robots, and artificial intelligence (AI) systems.

2. The automation era and recession are considered double-disruption. Technology deployment has been predicted to change work nature and working skills by 2025. The WEF survey showed that 43 percent of businesses are planning to reduce their workforce due to more technology adaptation.

3. Skill gaps are wide when employers call for reskilling. The top skills required by employers are critical thinking, analysis, problem-solving, and self-management. It is estimated that around 40 percent of employees need to learn new skills, or reskill, within 6 months or sooner. Additionally, 94 percent of employees are expected to reinforce new skills related to their jobs.

4. Online office workers are the front line. WEF indicated that the future of digital jobs will happen to the white-collar who work online first. Employers should prepare to digitize the work process timely. Work processes tend to switch to remote work.

5. A tighter labor market reduces opportunities for reskilling and upskilling. The restricted labor market includes employees who work in the same position and those who are at risk of lay-off due to economic downturn. They lost opportunities to upgrade or retrain their existing skills. In this case, employees who hold the position will face the changing of



basic skills up to 40 percent in the next 5 years. Additionally, 50 percent of employees need to learn new skills at least 4 percent of their skills).

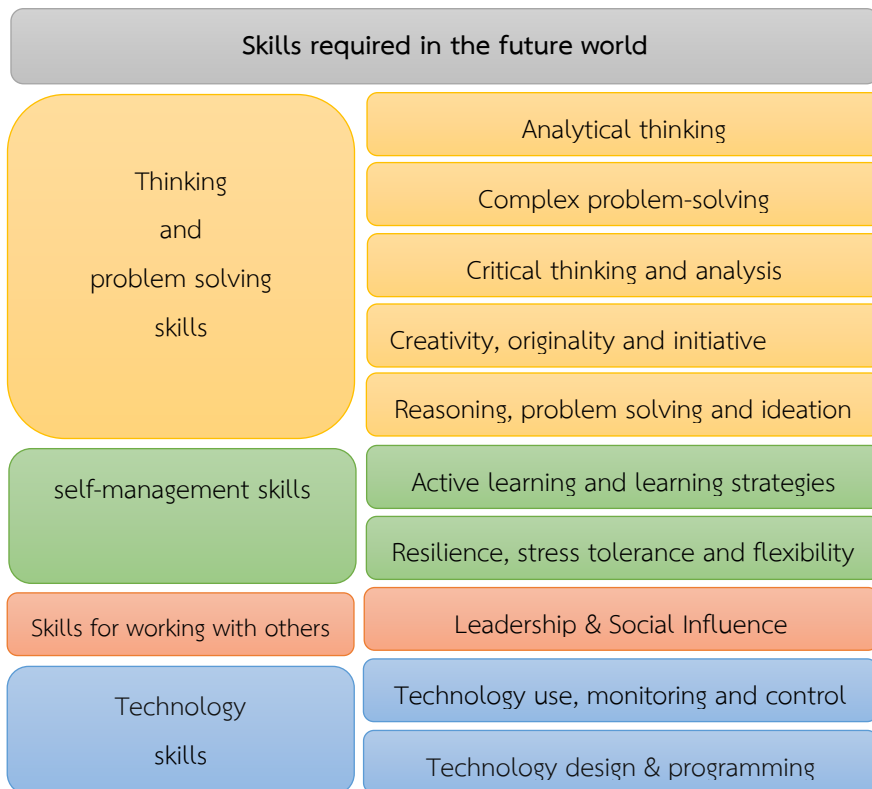
6. Employers continue to invest in people despite the economy downturn. The survey revealed that employers expected the return from investment in upskilling and reskilling to employees within 1 year. Employers are expected to organize new skill training and strengthen existing skills for employees by 2025. However, the number of participating employees is small, with only 42 percent attendance.

7. Business sector needs to invest more in human and social capital. Business leaders recognize that providing employee upskilling in the industrial sector and public-private partnerships create positive benefits for cost-effective use of resources, and for organization, society, and wider business community.

8. The public sector must support reskilling and upskilling. The public sector must organize incentives to attract more investment in the market, create new jobs for the future, build a strong support system for the unemployed, and address delays in the development of training and education system. Moreover, the public sector should consider taking measures to support the labor market in the long term.

Skills Required in the Future World

The world of work is going to face “double disruption” from Covid 19 and the use of automation to replace human employment. Therefore, future labors need to develop required skills and competencies to meet the challenges of working flexibility and efficiency in the future world.



Skills for the future world can be divided into 4 groups (Praornpit Katchwattana, 2021)

1. Thinking and problem-solving skills comprise:
 - 1.1 Analytical thinking and innovation
 - 1.2 Complex problem-solving
 - 1.3 Critical thinking and analysis
 - 1.4 Creativity, originality, and initiative
 - 1.5 Reasoning, problem-solving, and ideation
2. self-management skills comprise:
 - 2.1 Self-learning, active learning, and learning strategies
 - 2.2 Skills in problem resilience, stress tolerance, and flexibility
3. Skills in working with others, including leadership and social influence
4. Technology skills comprise:

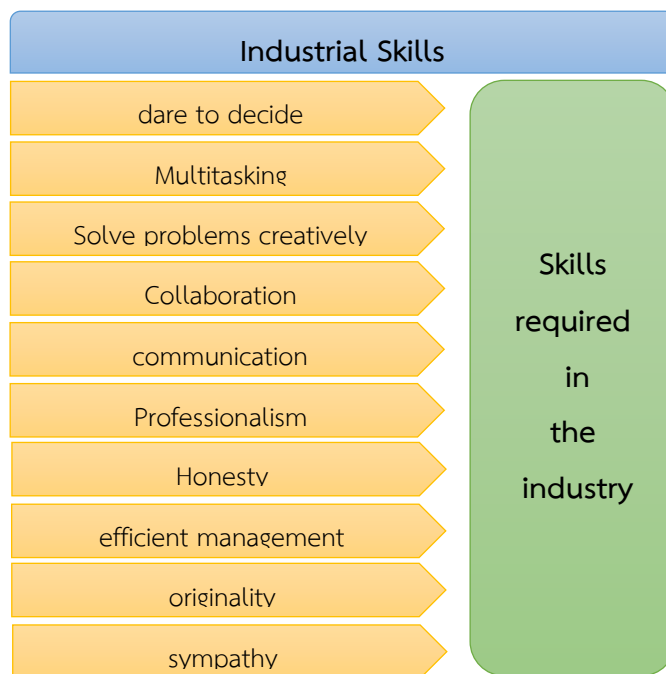


4.1 Skills in using, monitoring and controlling technology

4.2 Skills in technology design and programming

Skills required in the industrial sector

Having flexible work skills can support success in work operation. Work skills that bring success in every industry are as follows: (Birt, 2022)



1. Dare to decide refers to good decision-making, able to analyze the situation, and predict the outcome of the action.

2. Multitasking refers to the ability to manage multiple responsibilities at once, and the promotion of teamwork and work efficiency.

3. Solve problems creatively refers to ways to solve the problem by thinking outside the box on complex issues to overcome problems at work.

4. Collaboration refers to good team working and willingness to compromise to build a quality contribution to the team.



5. Communication refers to good communication that helps to achieve success in all fields by setting clear goals with managers, colleagues, and work environment.

6. Professionalism refers to serious working with timeliness, politeness, and organization among many other habits and attitudes.

7. Honesty refers to integrity and reliability which are the key qualities in a career. Producing honest people and supporting others can help build networks and find job opportunities.

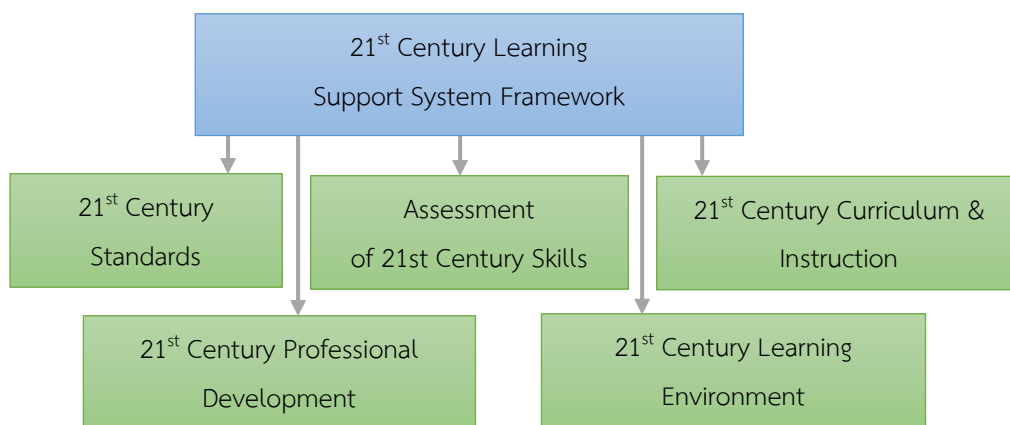
8. Efficient management refers to delegating tasks and planning to carry out goals. Strong management often influences the success of the organization.

9. Originality refers to an initiative that motivates oneself to pursue new tasks and produce a high-quality work. Initiatives demonstrate commitment to the job.

10. Sympathy refers to Having empathy and actively listening to the ideas of colleagues. This promotes teamwork and creates a company culture that is open to growth and new ideas.

Approaches to organizing 21st-century learning skills with emphasis on professional competencies

The organization of professional competency-based learning skills to improve 21st-century skills adheres to the framework of the 21st-century learning support system.





The framework of the 21st-century learning support system is as follows: (Kittiphum Mee Pradit, n.d., online).

1. 21st-century standards are the use of data from the observation process, knowledge integration, and building skills in searching, gathering and building knowledge, generating more in-depth understanding, building expertise based on learners' proficiency and interest, and applying high-quality evaluation principles.

2. Assessment of 21st-century skills is a qualitative assessment—e.g., knowledge, career aptitude, work and career attitudes, application of reflection on learners' actions to improvement by using authentic assessment tools, use of technology to enhance performance measurement and evaluation, and creation and development of standardized and quality portfolios and career path systems.

3. 21st-century curriculum and instruction is teaching management to create 21st-century learning skills by focusing on interdisciplinary knowledge application and building a competency-based and problem-based learning system (PBL).

4. 21st-century professional development is the integrated practice of knowledge and ability in problem-solving, critical thinking, and continuous assessment of learners to build skills and learning improvement.

5. The 21st-century learning environment is the provision of professional support to the community in terms of education, learning participation from practices, and creating opportunities to access quality materials, technologies, tools, or learning resources.

Conclusion

Vocational learners in the changing world of the 21st century must develop and upgrade themselves to have learning skills, especially professional competencies in innovation, which are developed from knowledge creation through the use of technology. Additionally, they should possess skills in information and communication technology, entrepreneurial skills, skills in seeking knowledge and lifelong learning, cross-cultural communication skills, as well as having morality and living happily with others. In work contexts, flexible work skills and industrial work skills support career success. The



development of 21st-century learning skills of vocational learners should adhere to the framework of the 21st-century learning support system, consisting of the learning standard system, skill assessment system, curriculum system, professional development system, and learning environment system. All these systems will make it possible to develop vocational learners to meet the needs of both industrial and service establishments.

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