The Level Analysis of Student Employability Skill for the Needs of the Work Industry in Vocational Education in the VUCA World

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ABSTRACT

The purpose of this research is to analyze the level of employability skills of students in vocational education for the needs of the work industry (IDUKA) in the face of the VUCA world. The rapid development of the world has caused many changes in various sectors. The facts explaining the decreased absorption of Vocational High School (SMK) graduates in the world of work in the last five years illustrate that there are still many aspects that need to be addressed in the implementation of education that prepares a skilled workforce ready for work. So, this is a problem that needs to be fixed, considering that the world is entering the world of volatility, uncertainty, complexity, and ambiguity (VUCA). The survey study was designed using an online questionnaire. The questionnaire contains items about student skills in meeting IDUKA's needs related to employable skills. Google form-based online questionnaires were used to collect data. The research sample consisted of SMK and IDUKA students spread across Indonesia, with a total of 564 people, consisting of 516 students from SMK and 48 IDUKA. Descriptive statistics such as frequency distribution, mean, and standard deviation are used to analyze research data. In inferential statistics, the t-test was used to investigate differences between student self-assessments and IDUKA assessments of Field Work Practice students regarding student's skills in meeting IDUKA's needs. The results showed that student's skills in meeting IDUKA needs in vocational education in the VUCA world showed the same results, namely, being at the capable level in both employability skills. However, there are still aspects of yield that are low. This shows that vocational students have not yet achieved their full capacity in dealing with the world of work in the VUCA world and are able to compete with others. So that there is a need for collaboration between vocational education and industry in developing benchmarks and standards for determining skills that need to be taught and prepared by schools. In conclusion, most of the employability skills possessed by students are in accordance with what is required by IDUKA. Employability skills are skills that influence IDUKA. So that for the needs of the work industry, every human resource must have qualified soft skills in accordance with the needs of the company.

Keywords: Employability Skills, Vocational Education, VUCA, Work Industry (IDUKA).

1. INTRODUCTION

The development in the 21st century is marked by globalization or the era of openness, in which the century experiences fundamental changes that differ from the previous era's way of life [1] In facing the current situation, it is necessary to have Volatility, Uncertainty, Complexity, and Ambiguity (VUCA) competencies [2]. The contribution of this research considers the skills that students have and the ones required by IDUKA as input for policies involving stakeholders, both in designing future curricula and learning.

1.1. Skills Demands in the World of Work

In this era, there is a demand for adaptation and competitiveness in seeking job opportunities in the diverse world of work, so that good skills and abilities need to be mastered to face the world well [3]. The VUCA era presents a significant challenge, particularly in the world of work. Currently, Work Industry (IDUKA) require competent human resources capable of

competing to produce quality products. Therefore, IDUKA needs to be more careful in selecting prospective workers according to their expertise[4] [5]. In facing the world of work, prospective workers must have mature readiness. According to the World Economic Forum (2020), nearly 50% of employees who are hired will require retraining for core skills in the next five years. Readiness to face the world of work in this VUCA era needs to be considered by each Vocational Education in preparing graduates' competencies that are ready to compete with others[6].

1.2. The Role of Vocational Education in the VUCA Era

Vocational education is a formal education that focuses on improving skills according to the field of expertise chosen by individuals [7]. Vocational education is designed to prepare students to enter the workforce [8] [9]. Students are prepared to become professional workers who have expertise in their chosen fields[10]. Vocational education functions to organize students to improve their quality of life, self-development, and to have skills and courage to start their own businesses [11]. In addition, vocational education functions to prepare students to master science and technology[12]. The characteristic of vocational education is its curriculum which combines the functions of education and training[13]. It is expected that graduates of vocational schools can become human resources who are able to compete and directly enter the Industry and the world of work[14] [15] [16] [17]. Vocational schools can increase job opportunities because they provide training and work practices that are in line with the world of work, so that vocational school graduates can be more prepared to work[18]. To support flexibility, vocational education must provide the ability to transfer between jobs[19]. Vocational education is designed specifically for students so that they can have both soft skills and hard skills, with the hope of producing human resources who are ready to work in the world of work[20].

1.3. Soft skills and Hard skills

One of the considerations of IDUKA in selecting its human resources as prospective employees is their abilities, which include soft skills and hard skills. Soft skills are a person's ability to interact with others and manage oneself [21]. Soft skills are needed to help a person adapt so that they can handle the problems they face[22]. Soft skills will begin to be used by someone when they start interacting with others [23]. Hard skills are the core skills in producing something that can be directly observed [24]. Felipe Barrera-Osorio, in his 2021 research entitled "Hard and Soft Skills in Vocational Training: Experimental Evidence from Colombia," found

that hard skills can improve results/products at IDUKA, while soft skills can help workers maintain their jobs [24]. Soft skills and hard skills are assets that affect IDUKA. Therefore, in meeting the needs of the industry, every human resource must have excellent soft skills according to the company's requirements[25].

1.3.1. Employability Skills

Employability skills are a part of soft skills or non-technical skills required to maintain and enhance job-specific skills[26]. These skills are needed by individuals to compete in the increasingly competitive job market. The aspects of employability skills include problem-solving and adaptability, the ability to plan and organize activities, self-management skills, and the ability to use and leverage technology.

2. METHODOLOGY

To answer the research question on measuring vocational school students' skills in meeting IDUKA's needs in vocational education, this study employs a quantitative descriptive method. An online survey was conducted among several vocational schools across Indonesia, particularly those with Construction and Property Technology Vocational Programs and their industry partners.

2.1. Sample and Populations

The respondents in this study are vocational high school students in Indonesia who have experience/internship in their respective industries, with a total of 516 participants using purposive sampling technique. In terms of sample selection criteria, the students must meet the following criteria: 1) Vocational high school students, 2) Competency expertise: building design and modeling (DPIB); sanitation and building maintenance (KGSP); construction business and property (BKP), 3) Have undergone Field Work Practice (Prakerin), and 4) Located in the provinces of West Java, Aceh, and West Nusa Tenggara. For respondents from the industrial and employment sector (IDUKA), there are 48 participants who meet the following criteria: 1) Supervisor in the industry where the student underwent Field Work Practice (Prakerin), and 2) Partner industry with the school where the student underwent Field Work Practice (Prakerin).

2.2. Instrument

The survey itself consists of 18 statements on Employability Skills, which can be divided into four aspects: Initiative and problem-solving (5 items), Planning and organizing activities (5 items), Self-

management (4 items), and Using technology (4 items); as shown in Table 1.

Table 1. Student Skills in Meeting IDUKA's Needs in Vocational Education.

Skills	Aspects
A. Employable Skills	A1 Initiative and Problem Solving, A2 Planning and Organizing Activities, A3 Self-Management, A4 Using Technology

The survey was presented through a Google Form and distributed using email and WhatsApp. Each question had four levels of choices that determined "very capable," "capable," "not capable," and "very not capable." The questionnaire data was analyzed using SPSS version 26. The instrument was validated using a pilot survey involving 50 students who met the sample criteria. Based on the pilot survey, the validity test using Cronbach-alpha, all items in the instrument were valid with high reliability (0.951).

2.3. Data Analysis

The data was analyzed using mean, standard deviation, and frequency distribution to describe the students' skills in fulfilling the skills needed by IDUKA. An independent t-test was conducted to compare the overall results of students and IDUKA. Levene's Test was used to determine the difference between the two groups of data. To determine the level of students' skills, they were categorized into four levels, namely very incompetent (1-1.75), incompetent (1.76-2.50), competent (2.51-3.25), and very competent (3.26-4.00).

3. RESULT AND DISCUSSION

3.1. Respondent's Characteristics

The total number of respondents for this study was 564 people consisting of 516 student respondents and 48 IDUKA respondents, as shown in Table 2. Out of the 516 student respondents, 455 students (88.17%) were from West Java province, followed by 39 students (7.55%) from Aceh and 22 students (4.26%) from West Nusa Tenggara. The survey collected responses from 516 vocational high school students and 48 people from IDUKA. Out of the 516 student respondents, there were 275 male students (53.29%) and 241 female students (46.71%) who responded to the questionnaire. The majority of the respondents were dominated by 455 students (88.18%) from the Modeling Design and Building Information program. Furthermore, 60

respondents (11.63%) were from the Construction Business and Property program, while only 1 respondent (0.19%) was from the Sanitation Building Construction and Maintenance program.

For the IDUKA, 15 people (31.25%) came from national companies and the majority came from local companies, with 33 people (68.75%).

Table 2. Characteristics of the respondents (n = 564).

Dimension	Category	Frequency	Percentage (%)
4. Vocational school			
Province	West Java	455	88.17
	Aceh	39	7.55
	West Nusa Tenggara	22	4.26
Gender	Male	275	53.29
	Female	241	46.71
Expertise Program	Modeling Design and Building Information	455	88.18
	Sanitation Building Information program	1	0.19
	Construction and Property Business	60	11.63
5. The World of Industry			
Level	National	15	31.25
	Local	33	68.75

Based on table 2, the gender of vocational high school students is dominated by males, accounting for 53.29%. This could be due to certain fields of study being perceived as more challenging and therefore more attractive to males. This indicates that men are more likely to choose careers in the STEM (Science, Technology, Engineering, and Math) fields compared to women [22].

3.2. Discussion

3.2.1. Employable Skills

Table 3 shows that Employable Skills of vocational school students are at a competent level (M = 3.13, SD = 0.49) from the students' perspective and (M = 3.10, SD = 0.49) from the perspective of IDUKA. There is a significant difference between the students and IDUKA in Employable Skills based on the t-test [t(564) = -2.853, (p) = 0.004] (Figure 1).

Table 3 Group Statistics Employable Skills.

Code	The skills required by IDUKA		N	Mean	Std. Deviation
A	Employable skills	Student	516	3.13	0.49
		IDUKA	48	3.10	0.49
A1	Initiatives and Problems	Student	516	3.10	0.46
		IDUKA	48	3.21	0.56
A2	Plan and Organize Activities	Student	516	3.11	0.49
		IDUKA	48	3.25	0.55
A3	Self Managing	Student	516	3.20	0.50
		IDUKA	48	2.63	0.44
A4	Using Technology	Student	516	3.09	0.51
		IDUKA	48	3.31	0.42

Figure 1. Independent sample t-test for Employability Skill.

Figure 2. Comparison of Employability Skills between Students and IDUKA.

Figure 2 shows that the prominent difference is found in the aspect of "self-managing". According to IDUKA, the ability of students to self-manage is only 66.75%, which is significantly different from the students' self-assessment, which is 80%. Meanwhile, the other three aspects have less prominent differences, with "initiatives and problems" at 80.25% from IDUKA and 77.5% from students, "plan and organize activities" at 81.25% and 77.75% from IDUKA and students, and "using

technology" at 82.75% from IDUKA and 77.25% from students. In this era of revolution, it is essential for students to develop skills and knowledge that are relevant to industry needs. Therefore, education must adjust the curriculum to ensure that students are equipped with skills that are relevant to industry needs [27]. In addition, new graduates often struggle to find jobs due to a lack of experience and specific job-related skills[28]. The skills gap between graduates and actual industry job requirements is an important problem faced by the modern economy. To address this problem, efforts are needed to strengthen the relationship between education and industry [29].
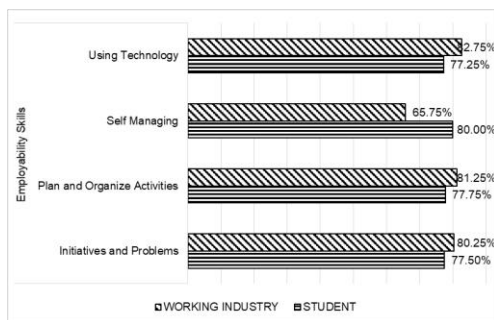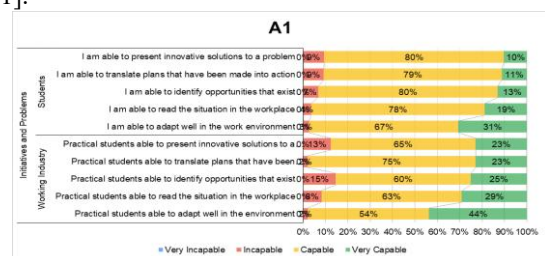
3.2.1.1. Initiatives and Problems

The results of Table 3 indicate that Initiatives and Problems among vocational high school students are at a proficient level (M=3.10, SD=0.49) according to the students and (M=3.21, SD=0.49) according to IDUKA. There is a difference between the students and IDUKA in Initiatives and Problems based on an independent t-test [t(564) = -2.048, sig=0.041] (Figure 3).

Figure 3. Independent samples t-test for Initiatives and Problems.

This has a similar meaning to Figure 4, which shows that in their self-assessment, students are most proficient in the aspect of 'present innovative solutions to a problem' and 'identify opportunities that exist' (80%), and there is no significant difference with the IDUKA's assessment. According to IDUKA, the level of students' ability in the aspect of 'translate plans that have been made into action' is greater than the other three aspects, which is 75%. Thinking skills are crucial for solving problems effectively and preventing failures in doing something [30]. Students must have problem-solving skills, as problem-solving ability is an essential aspect to face the main challenges when entering the workforce [31].

Figure 4. Level of Ability of Respondents in Initiatives Problems.

3.2.1.2. Plan and Organize Activities

The results of Table 3 indicate that plan and organize activities in vocational high school students are at a proficient level (M=3.11, SD=0.46) from the perspective of students and (M=3.25, SD=0.56) from the perspective of IDUKA. However, there is a difference between students and IDUKA in plan and organize activities based on the t-test [t (564) = -2.425, sig = 0.016], as shown in Figure 5 below

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95%Confidence Interval of the Difference	
									Lower	Upper
Plan and Organize Activities	Equal variances assumed	9.808	0.002	-2.425	562	0.016	-0.13188	0.05439	-0.23870	-0.02506
	Equal variances not assumed			-1.997	52.609	0.051	-0.13188	0.06604	-0.26437	0.00061

Figure 5. Independent sample t-test for Plan and Organize Activities.

In Figure 6, it is shown that in self-assessment of their ability to plan and organize activities, students are more proficient in the aspect of 'take initiatives and make decisions on the problem they face' (76%). According to IDUKA, the level of students' ability in the aspect of 'participate in the activity planning process and able to improve activities' is greater than other aspects, with a percentage of 69%. Both students and IDUKA rated the aspect of 'adjust existing resources to deal with unexpected changes during the implementation of activities' as capable with the lowest percentage compared to other aspects. In the industrial world, limited time and resources are common occurrences. Therefore, students need to be trained to plan and organize their activities in order to complete tasks in a short amount of time with available resources.[32]. This can also help students prioritize tasks that need to be completed first and avoid tasks that are not important.
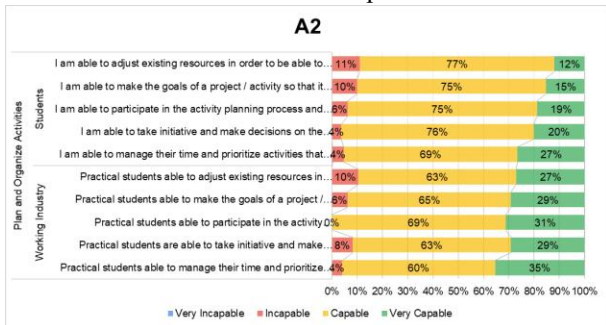

Figure 6. Level of Ability of Respondents in Plan and Organize Activities.

3.2.1.3. Self Managing

The analysis presented in table 3 shows that self-managing ability of vocational high school students is at a competent level (M=3.20, SD=0.50) according to the students, and (M=2.63, SD=0.44) according to IDUKA. There is no significant difference between the students and IDUKA in their assessment of self-managing ability based on the independent t-test [t (564) = -1.569, sig = 0.153], as shown in figure 7 below.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95%Confidence Interval of the Difference	
									Lower	Upper
Self Managing	Equal variances assumed	2.046	0.153	-1.569	562	0.117	-0.09060	0.05773	-0.20399	0.02279
	Equal variances not assumed			-1.441	54.358	0.155	-0.09060	0.06288	-0.21664	0.03544

Figure 7. Independent sample t-test for Self Managing.

In Figure 8 shows that according to both IDUKA and students, the aspect of 'responsible for every action they take' falls into the highly capable category. With a breakdown percentage of 48% according to IDUKA and 38% according to students. The aspect with the highest percentage falling into the capable category is 'make to make work plans coherently' at 75% according to IDUKA and for students at the same aspect, and 'self-evaluate in order to improve their performance' which has a percentage of 76%. Self managing is one of the skills that individuals need to possess in order to manage themselves well [33].
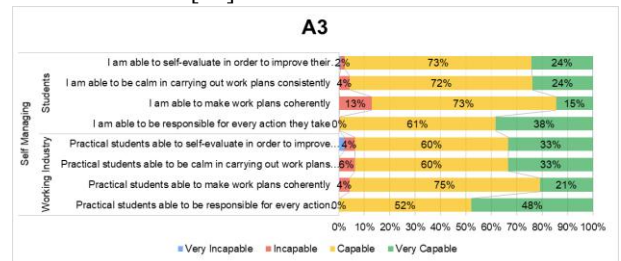

Figure 8. Level of Ability of Respondents in Self Managing.

3.2.1.4. Using Technology

The analysis presented in Table 3 shows that the level of using technology among vocational high school students is categorized as able (M=3.09, SD=0.51) by the students and highly able (M=3.31, SD=0.42) by the IDUKA. There is a significant difference between students and the IDUKA in terms of using technology, based on the independent t-test [t (564) = -3.459, sig = 0.0001], which can be seen in Figure 9 below.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95%Confidence Interval of the Difference	
									Lower	Upper
Using Technology	Equal variances assumed	3.624	0.057	-3.459	562	0.001	-0.21330	0.06166	-0.33442	-0.09218
	Equal variances not assumed			-3.353	55.425	0.001	-0.21330	0.06362	-0.34077	-0.08583

Figure 9. Independent sample t-test for Using Technology.

Figure 10 shows that according to IDUKA, students are highly capable in the aspect of 'using hardware to complete tasks on the job' at 48%, which is the highest percentage in the highly capable category compared to the other three aspects. Interestingly, this is also in line with the students' self-assessment (21%). In the capable category, the aspect with the highest percentage according to students is 'access sources of information effectively and efficiently' at 77%. Meanwhile, according to IDUKA, the category of students who are capable with the highest percentage is in the aspect of 'operate all software to support work' at 75%. Based on Table 8, it can be concluded that there are differences in students' technology skills from both the students' and IDUKA's perspectives. In today's workplace, the ability to use technology is required by workers [34]. This technology skill is one of the top applied skills that a worker must have [35]. According to industry perceptions, employability skills, including the ability to use technology, are important factors in work [36].
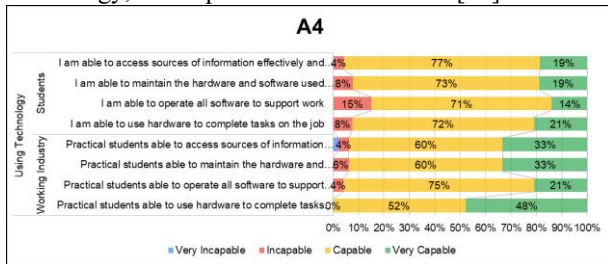

Figure 10 Level of Ability of Respondents in Using Technology

6. CONCLUSION

Based on the data analysis, it can be concluded that the skills of vocational school students in meeting the needs of IDUKA in the VUCA era show the same results, which are at the capable level in terms of employability skills of SMK students. However, there are still some aspects with low results. This indicates that SMK students have not fully reached the ability to face the working world in the VUCA era and be able to compete with others. Therefore, collaboration between Vocational Education and industry is needed in developing benchmarks and standards for the skills that need to be taught and prepared by schools. Work Practice Activities/Internship in the industry is an example of an activity that provides opportunities for SMK students to learn and experience work directly in the industry that matches their expertise. So, these activities become a stimulus for the students' professional performance. In this particular study, the focus was on examining the employability skills of students needed by IDUKA in the Property Construction Engineering competency. Therefore, in some other fields of expertise, additional skills within the scope of the skills needed by the industry can be developed and continued in further research.

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REFERENCES

[1] I. A. G. Azmi, R. C. Hashim, And Y. M. Yusoff, The Employability Skills Of Malaysian University Students, Int. J. Mod. Trends Soc. Sci., 1(3), 2018, pp. 1–14.

[2] H. Audunsson, T. V. Fridgeirsson, and I. Saemundsdottir, Challenging Engineering Students With Uncertainty In A Vuca Situation Challenging Engineering Students With Uncertainty, 14th Int. Cdio Conf., No. June 28-July 2, 2018.

[3] W. Lyu And J. Liu, Soft Skills, Hard Skills: What Matters Most? Evidence From Job Postings, Appl. Energy, 300, 2021, pp. 117307. DOI: https://doi.org/10.1016/j.apenergy.2021.117307

[4] A. Ana, Defining Vocational Teacher Competencies In Industry 4.0 From The Perspective Of Teachers And Lecturers, J. Eng. Educ. Transform., 35(2), 2022, pp. 39–46. DOI: https://doi.org/10.16920/jeet/2020/v34i0/157884

[5] F. Tentama And M. H. Abdillah, Student Employability Examined From Academic Achievement And Self-Concept, Int. J. Eval. Res. Educ., 8(2), 2019, pp. 243–248. DOI: https://doi.org/10.11591/ijere.v8i2.18128

[6] L. James and N. Bennett, What Vuca Really, Harv. Bus. Rev., Vol. 92, No. February, P. 2014, 2014.

[7] Suharno, N. A. Pambudi, and B. Harjanto, Vocational Education In Indonesia: History, Development, Opportunities, And Challenges, Child. Youth Serv. Rev., 2020, 115, No. January, pp. 105092.

[8] N. H. Jabarullah and H. Iqbal Hussain, The Effectiveness Of Problem-Based Learning In Technical And Vocational Education In Malaysia, Educ. Train., 61(5), 2019, pp. 552–567. DOI: https://doi.org/10.1108/et-06-2018-0129

[9] P. Pusriawan and S. Soenarto, Employability Skills Of Vocational School Students In Palu City For Entering The Work World, J. Pendidik. Vokasi, 9(1), 2019, pp. 33–42. DOI: https://doi.org/10.21831/jpv.v9i1.23351

[10] J. Caspersen, J. C. Smeby, And P. Olaf Aamodt, Measuring Learning Outcomes, Eur. J. Educ., 52(1), 2017, pp. 20–30. DOI: https://doi.org/10.1111/ejed.12205

[11] E. Ningrum, Pengembangan Sumber Daya Manusia Bidang Pendidikan, J. Geogr. Gea, 9(1), 2016.

[12] D. Apriana, M. Kristiawan, And D. Wardiah, Headmaster's Competency In Preparing Vocational School Students For Entrepreneurship, Int. J. Sci. Technol. Res., 8(8), 2019, pp. 1316–1330.

[13] A. Ana, Trends In Expert System Development: A Practicum Content Analysis In Vocational Education For Over Grow Pandemic Learning Problems, Indones. J. Sci. Technol., 5(2), 2020, pp. 246–260. DOI:

https://doi.org/10.17509/ijost.v5i2.24616

[14] S. Arifin and M. Muslim, Tantangan Implementasi Kebijakan "Merdeka Belajar, Kampus Merdeka" pada Perguruan Tinggi Islam Swasta di Indonesia, J. Pendidik. Islam Al Ilmi, 3(1), 2020, pp. 1–11. DOI: https://doi.org/10.32529/al-ilmi.v3i1.589

[15] A. Azman, W. Simatupang, A. Karudin, And O. Dakhi, "Link And Match Policy In Vocational Education To Address The Problem Of Unemployment," *Int. J. Multi Sci.*, Vol. 1, No. 7, Pp. 76–86, 2020,

[16] H. Rosina, V. Virgantina, Y. Ayyash, V. Dwiyanti, And S. Boonsong, "Vocational Education Curriculum: Between Vocational Education And Industrial Needs," *Asean J. Sci. Eng. Educ.*, Vol. 1, No. 2, Pp. 105–110, 2021.

[17] S. Patmanthara and W. N. Hidayat, Improving Vocational High School Students Digital Literacy Skill Through Blended Learning Model, J. Phys.: Conf. Ser., 1028, 2018, 012076. DOI: https://doi.org/10.1088/1742-6596/1028/1/012076

[18] M. Lamza-Maronić, J. Glavaš, and I. Uroda, The Role of Management in Career Development, 2014 37th Int. Conv. Inf. Commun. Technol. Electron. Microelectron. Mipro 2014 - Proc., 2014, pp. 669–673.

[19] V. O. Gekara and V. X. Thanh Nguyen, New Technologies And The Transformation Of Work And Skills: A Study Of Computerisation And Automation Of Australian Container Terminals, New Technol. Work Employ., 33(3), 2018, pp. 219–233. DOI: https://doi.org/10.1111/ntwe.12118

[20] R. Purba, H. Tampubolon, A. Rambe, R. Aritonang, and C. Azmi, Korelasi Antara Motivasi Belajar Dan Kepercayaan Diri Dengan Hasil Belajar PKL Siswa SMK, J. Pendidik. Tambusai, 2(3), 2018, pp. 2085–2093.

[21] T.S. Wibowo, Effect Of Hard Skills, Soft Skills, Organizational Learning And Innovation Capability On Islamic University Lecturers' Performance, Syst. Rev. Pharm., 11(7), 2020, pp. 556–569. DOI: https://doi.org/10.5555/ijosmas.v2i1.5

[22] A. Hegewisch and H. Liepmann, Occupational Segregation and The Gender Wage Gap In The US, Handb. Res. Gend. Econ. Life, 2013, pp. 200–217. DOI: https://doi.org/10.4337/9780857930958.00024

[23] J. S. Vogler, P. Thompson, D. W. Davis, B. E. Mayfield, P. M. Finley, and D. Yasseri, The Hard Work Of Soft Skills: Augmenting The Project-Based Learning Experience With Interdisciplinary Teamwork, Instr. Sci., 46(3), 2018, pp. 457–488. DOI: https://doi.org/10.1007/s11251-017-9438-9

[24] A. S. Putra, Examine Relationship Of Soft Skills, Hard Skills, Innovation And Performance: The Mediation Effect Of Organizational Learning, Int. J. Sci. Manag. Stud., 2020, pp. 27–43. DOI: https://doi.org/10.51386/25815946/ijsms-v3i3p104

[25] J. D. Bakos, Communication Skills For The 21st Century, J. Prof. Issues Eng. Educ. Pract., 123(1), 1997, pp. 14–16.

[26] H. B. Kenayathulla, N. A. Ahmad, and A. R. Idris, Gaps Between Competence And Importance Of Employability Skills: Evidence From Malaysia, High. Educ. Eval. Dev., 13(2), 2019, pp. 97–112. DOI: https://doi.org/10.1108/heed-08-2019-0039

[27] A. M. Lerner, Unraveling The Mysteries Of Acute Flaccid Myelitis: Scientific Opportunities and Priorities for Future Research, Clin. Infect. Dis., 72(11), 2021, pp. 2044–2048. DOI: https://doi.org/10.1093/cid/ciaa1432

[28] F. Suleman, Employability Skills Of Higher Education Graduates: Little Consensus On A Much-Discussed Subject, Procedia - Soc. Behav. Sci., 228, 2016, pp. 169–174. DOI: https://doi.org/10.1016/j.sbspro.2016.07.025

[29] P. H. Cappelli, Skill Gaps, Skill Shortages, and Skill Mismatches: Evidence And Arguments For The United States, Ind. Labor Relations Rev., 68(2), 2015, pp. 251–290. DOI: https://doi.org/10.3386/w20382

[30] Y. M. Heong, N. Hamdan, K. B. Ching, T. T. Kiong, and N. Azid, Development Of Integrated Creative and Critical Thinking Module In Problem-Based Learning To Solve Problems, Int. J. Sci. Technol. Res., 9(3), 2020, pp. 6567–6571.

[31] M. Mutohari, S. Suherman, and I. Rusdiyani, Penıngkatan Kognitif Bahasa Inggris Sıswa Dengan Pemanfaatan Media Interaktif Berbasis Metode Pembelajaran Cafe (Content, Activities,Facilitating, Evaluation) Menggunakan Permainan Petualangan, Mendidik: J. Kaji. Pendidik. Dan Pengajaran, 7(2), 2021, pp. 173–182. DOI: https://doi.org/10.30653/003.202172.190

[32] N. Apriyana, K. Herlina, and Abdurrahman, Pengembangan Lembar Kerja Siswa Berbasis Inkuiri Termbimbing Untuk Meningkatkan Kemampuan Berpikir Kritis, J. Pendidik. Fis., 7(2), 2019, pp. 92–96. DOI: https://doi.org/10.21067/jtst.v3i4.6172

[33] E. I. Eliasa, Increasing Values of Teamwork and Responsibility of The Students Through Games: Integrating Education Character In Lectures, Procedia - Soc. Behav. Sci., 123, 2014, pp. 196–203. DOI: 10.1016/j.sbspro.2014.01.1415

[34] R. Raja and P. C. Nagasubramani, Recent Trend Of Teaching Methods In Education, India J. Appl. Adv. Res., 2018(3), 2018, pp. 33–35.

[35] M. Osmani, V. Weerakkody, N. Hindi, and T. Eldabi, Graduates employability skills: A review of literature against market demand, J. Educ. Bus., 94(7), 2019, pp. 423–432. DOI: https://doi.org/10.1080/08832323.2018.1545629

[36] M. Rizwan, G. Mujtaba, S. A. Memon, K. Lee, and N. Rashid, Exploring the potential of microalgae for new biotechnology applications and beyond: A review, Renew. Sustain. Energy Rev., 92, 2018, pp. 394–404. DOI: https://doi.org/10.1016/j.rser.2018.04.034