TAHAPAN KORESPONDENSI

No	Tahapan	Tanggal
1	Submission Acknowledgement	Sabtu, 3 Desember 2022
2	Revisi 1	Jumat, 13 Januari 2023
3	Revisi 2	Senin, 20 Maret 2023
4	Revisi 3	Selasa, 28 Maret 2023
5	Revisi 4	Jumat, 08 September 2023
6	Revisi 5	Sabtu, 11 November 2023
7	Editor Decision "Accepted"	Jumat, 08 Desember 2023
8	Published	Jumat, 28 Juni 2024







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#26175 Review

SUMMARY REVIEW EDITING

Submission

Authors

Bambang Sudarsono, Prabandari Listyaningrum, Fatwa Tentama, Fanani Arief Ghozali 🖾 Developing learning and training within industry model to improve work readiness of vocational high school students

Section Educational Approaches

Editor

Rafael Denadai 🖃 (Review) Lena Lindenskov, Ph.D. 🖃 (Review) Maja Ljubetic, Ph.D. 🖃 (Review) Asghar Soltani, Ph.D. 🖃 (Review)

Peer Review

Round 1

26175-52202-1-RV.DOCX 2022-12-03 2022-12-05 Review Version

Initiated Last modified 2023-03-09

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Decision Accept Submission 2023-03-28

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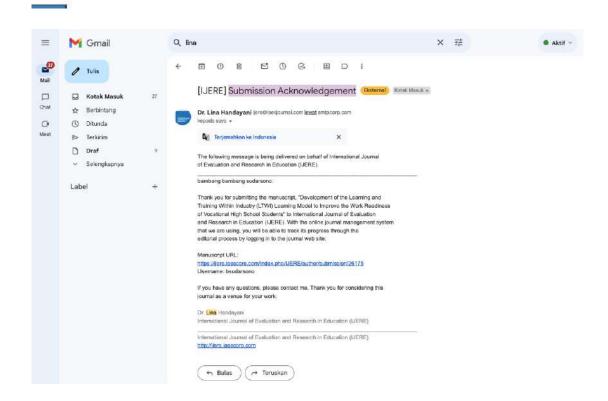
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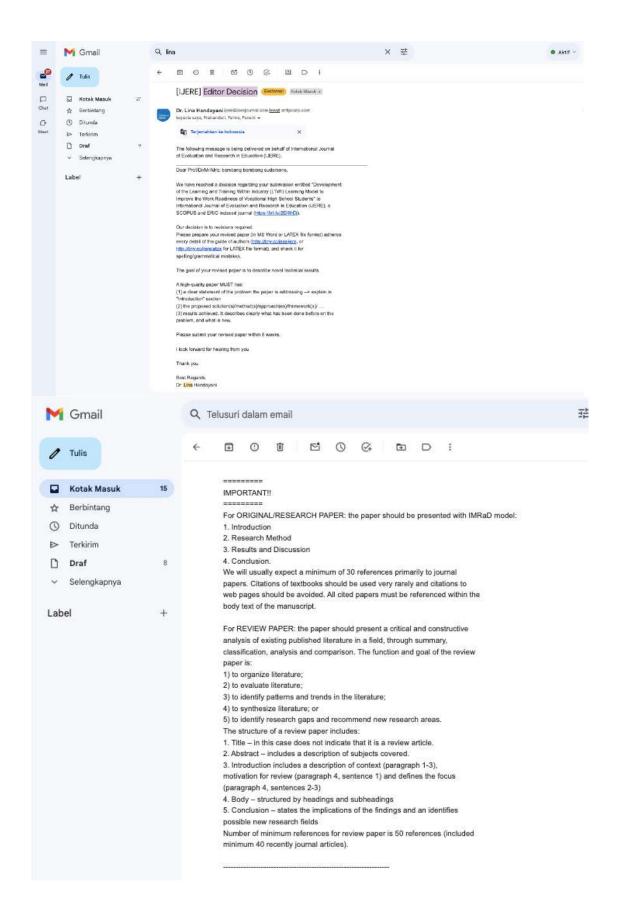
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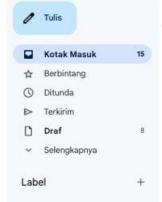
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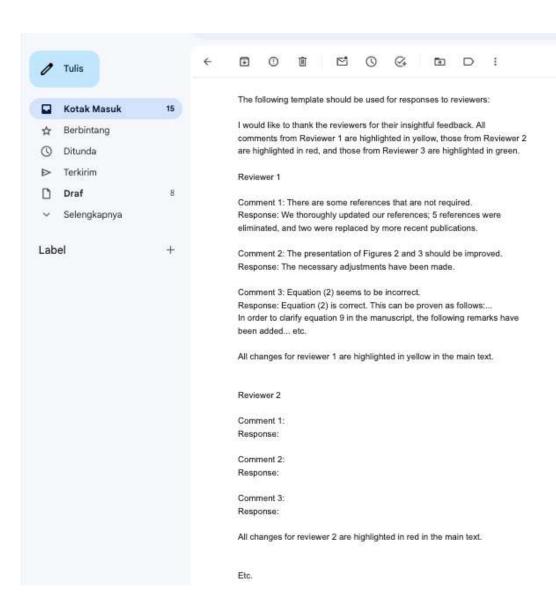
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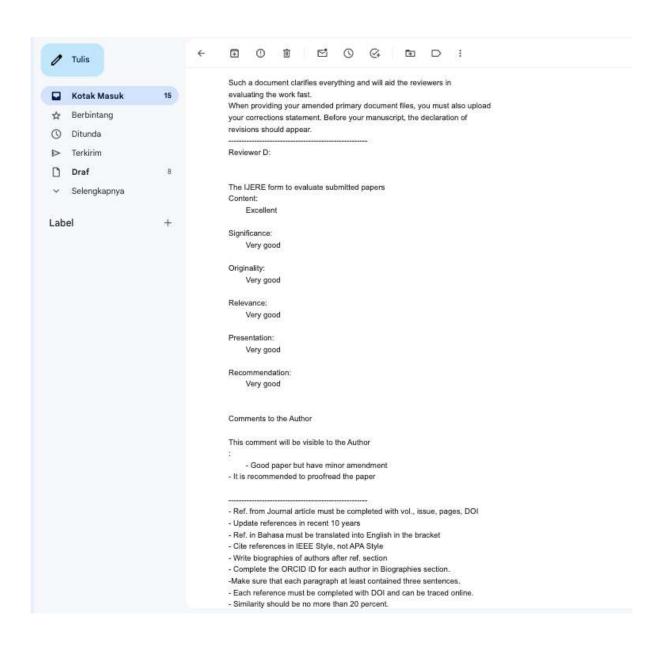
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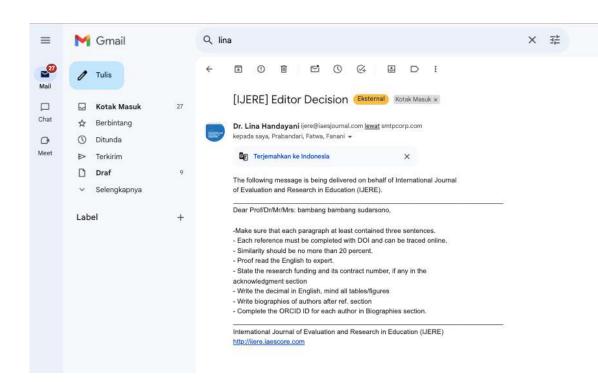
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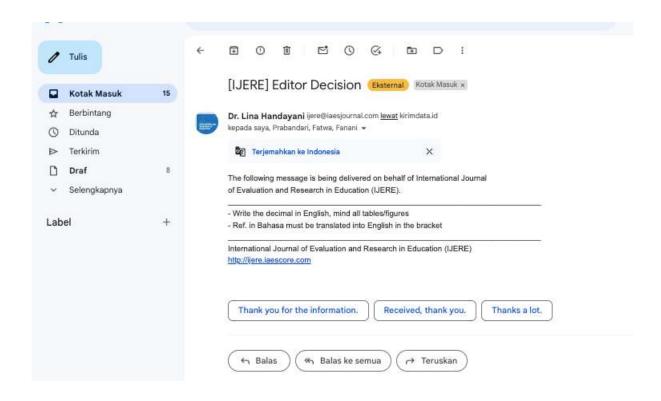
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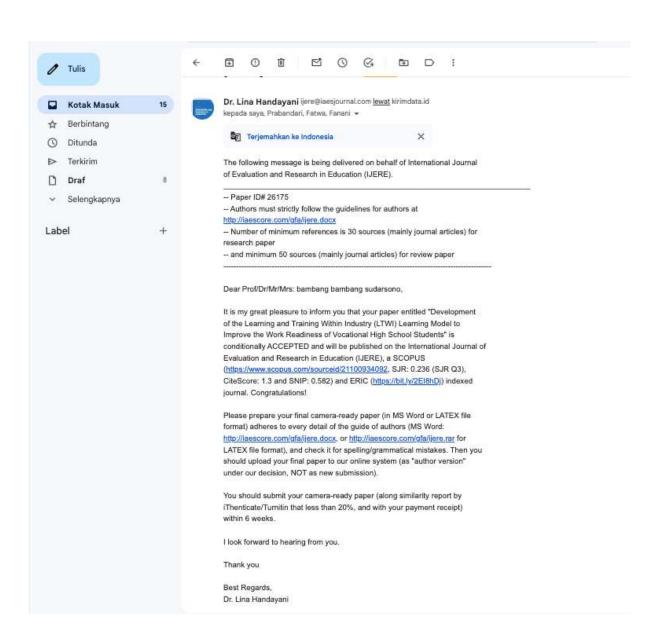
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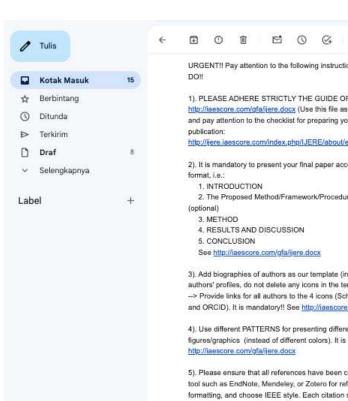












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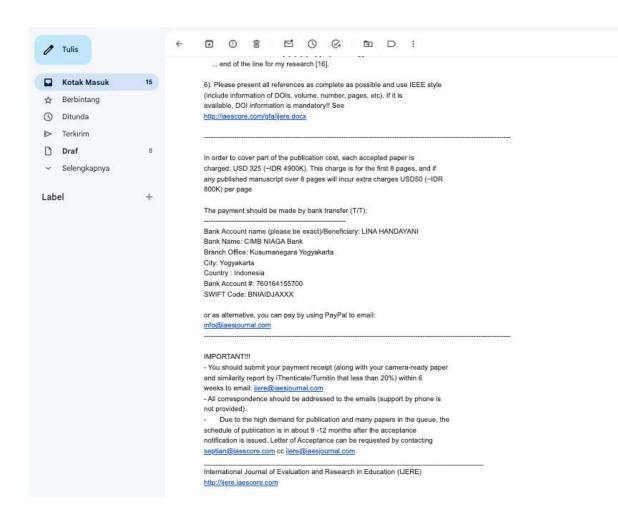
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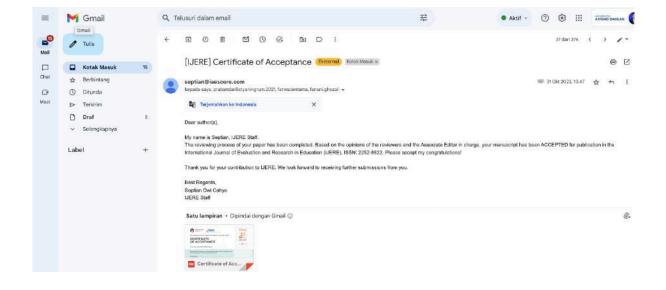
Development of the learning and training within industry learning model to improve the work readiness of vocational high school students

Authored by:

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Developing Learning and Training within Industry (LTWI)

Students

Model to Improve Work Readiness of Vocational High School

Bambang Sudarsono¹, Prabandari Listyaningrum², Fatwa Tentama³ Fanani Arief Ghozali⁴,

[†]Automotive Technology Vocational Education Study Program, Ahmad Dahlan University, Yogyakarta, Indonesia

[†]Departement Education Science Study Program, Yogyakarta State University, Yogyakarta, Indonesia

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Received mm dd, yyyy Revised mm dd, yyyy Accepted mm dd, yyyy

Keywords:

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ABSTRACT

Unemployment is still a national priority that needs to be addressed. In 2022, vocational high schools in Indonesia had the highest open unemployment rate is a result of vocational high school students' insufficient work readiness. Therefore, This research aims to develop a Learning and Training Within Industry (LTWI) model, and to evaluate the model's efficacy in increasing vocational high school students' work readiness. The research employed a research and development (R&D) design by Richey and Klein with the phases needs analysis, internal validation, and external validation. 12 teachers and 89 students from the automotive engineering department at SMK Muhammadiyah 1 Pakem and SMKN I Puring, as well as 6 instructors from the automotive industry (GAS Auto Service, Automotive Jogjakarta Center (OJC), Bengkel Barokah, and RND Auto Service) participated in the research. Data collection strategies adopted were interviews, questionnaires and performance tests. The data were descriptively evaluated, and the conclusions were drawn using a categorization formula. With an average score of 3.43, the LTWI model can be used to learning wery well. With an average final score of 3.37, the efficacy of the LTWI learning model falls into the category of "very good." The LTWI model can be applied effectively to learning in vocational high schools since it has a positive influence on students' work readiness.

**This is an open access article under the CC BY-SA license. Unemployment is still a national priority that needs to be addressed. In 2022,

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Email: bambang.sudarsono@pvto.uad.ac.id

1. INTRODUCTION

1. INTRODUCTION

Vocational High School (VHS) is an education level designed to generate a skilled and productive workforce [1-3]. The VHS offers a competency-based learning structure with work accomplishments [4], [5]. It is envisaged that VHS would contribute to the government's objective of lowering the unemployment rate. In actuality, however, VHS continue to have the highest unemployment rate in 2022, which is 9.42% [6]. In addition, many graduates of VHS work outside their disciplines. Graduates of VHS reported working outside the department due to a lack of work readiness acquired at VHS [7–10].

Work readiness is the most essential aspect that students must possess in order to work effectively [11,12]. Work readiness consists of the industry-required competencies. Graduating from a VHS with a high level of job preparation will influence self confidence at work, the capacity to get a career, and high levels of production [13,14]. In VHS, work readiness can be developed in phases through preparation, implementation,

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and evaluation of learning. Good learning in a VHS is linked and collaborative with the requirements of the industrial world. The industrial world serves as a reference since they can employ graduates of VHS [15–19].

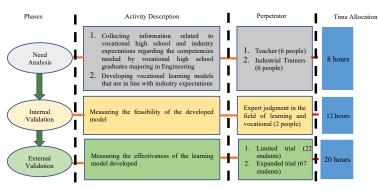
By implementing learning models, VHS has attempted to improve and increase the quality of learning. Industry-oriented learning models, including project-based learning, problem-based learning, and problem-solving, are presently frequently employed and used at VHS [19,20]. However, contemporary learning models continue to have limitations, most notably the lack of industry participation in learning and training. The present approach continues to be teacher-oriented, and is completely implemented in schools [21–23]. Good VHS learning is learning that is conducted using industrial replicas, competences based on industry standards, and taught by industrial instructors with knowledge in their respective professions [24–26].

To increase VHS students' work readiness, a learning model based on the concept of learning and training in industry, or Learning and Training Within Industry (LTWI), was established. LTWI is a development of the Training Within Industry (TWI) learning model, which has been applied to the industrial training model up to now. The United States Department of War launched TWI with the purpose of preparing armament specialists for the second world war in 1940. TWI is a model for the rapid and consistent training of entry-level professionals in the workplace. TWI develops relationships high integrity, cooperation, and responsibility. Beginner employees will soon acquire the abilities required for industrial employment. In addition, the TWI model develops beginner employees in leadership qualities [27]. The TWI model consists of the preparation phase, demonstration phase, imitation phase, practice phase, and evaluation phase. (a) Phase of preparation includes preparation activities and the creation of teaching resources. (b) Phase of demonstration includes activities in which industrial trainers demonstrate and exemplify the phases of work based on worksheets. (c) Phase of imitation includes the student application activities based on worksheet steps and trainer demonstrations in the workplace. (d) Phase of practice includes independent student repetitions of the imitation phase. (e) Phase of evaluation includes activities designed to evaluate the students' achievement I28.291.

The current TWI model has limitations, namely: (a) The TWI model contains weaknesses, particularly those connected to the integration of VHS curriculum and industrial world demands [30,31]. (b) The TWI approach does not involve industry in the preparation, implementation, and evaluation phases of learning. It affects the inefficient learning process. (c) The TWI model conducts only industry-based activities, hence influencing the amount of support for technical high schools, and (d) The TWI model focuses on enhanced components of students' skills [32,33]. The LTWI model is an expansion of the TWI model that addresses the limitations of the TWI model. Several properties of the LTWI model are projected to improve the TWI model, namely: (a) LTWI is consists of school and industry-integrated learning components. (b) LTWI focuses not only on skill development, but also on knowledge competency and attitudes, so that VHS students may become productive employees with character. (c) Contains work instructions that are standardized using industry expertise and school-approved.

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Figure 1 [Phases of learning model development[34]]
Figure 1 illustrates the phases of constructing the learning model. The developed study applied the research and development (R&D) design of Richey and Klein with the phases of need analysis, internal validation, and external validation.

2.2. Research subject

Teachers, students, and industrial instructors at Muhammadiyah 1 Pakem VHS and Puring 1 State VHS, a total of 44 teachers and 145 students, as well as industrial automotive in the Special Region of Yogyakarta and Central Java, a total of 10 industries, served as research subjects for this study. Using a strategy of purposive sampling, the study sample comprised 6 teachers and 6 industrial trainers for the need analysis phase, 22 students for the limited trial, and 67 students for expanded trial.

2.3. Research instrument

In this investigation, both non-test and test-type instruments are utilized. Utilized non-testing instruments include interview lists and questionnaires. While the test instrument employed is the performance test (practice). Before they are used, the designed research instruments and models are conducted to content validation testing to ensure their practicability. The content validity of a research instrument demonstrated its capacity to reveal or accurately reflect all the material to be measured [35]. Two experts in vocational learning serve to content validation assessors. In addition, the questionnaire instruments and practical performance assessments are tested for reliability using the Cronbach Alpha (a) test, with consistent results.

A grid of interview questions is utilized in focus group discussion (FGD) activities in order to collect information throughout the phase of requirements analysis. The interview question grid includes: (a) the quality of current VHS graduates; (b) the learning model that has been used so far; (c) competencies needed by VHS graduates; and (d) the learning model is expected to improve the work readiness of VHS students and (e) Expected model phases [36]. The next instrument that is not a test is a questionnaire for internal validation that attempted to evaluate the model's feasibility, and offered feedback on the learning model that had been created. The questionnaire grid includes: (a) according to government goals; (b) suitable for industrial purposes; (c) includes aspects of competence required by schools and industry; (d) easy to prepare infrastructure and learning tools; (e) easy to apply; and (f) easy to measure the success of learning [37].

The following phase was external validation. External validation includes the implementation of the created model with restricted and expanded trial phases. The practical exam test assessment instrument is developed by teachers and industry by adapting the Work-Based Learning Models Based on Work Readiness research instrument (WBL-WoRe) [10]. To evaluate the effectiveness of the LTWI model, practical tests were employed. The practice exam test instrument is displayed in Table 1

Table 1. Practical exam test instruments

Perfo	rmance Test Aspects	Description	
Attitude	Creativity	Ability to solve problems and get the right solution	
	Communication	The ability to establish cooperation and good social relations	
	Integrity	Consistency in work	
Knowledge	Understanding of components and how	Knowledge of the field of work and its characteristics	
	they work		
Skills	Completion of work with time	Complete the job correctly and in the time required	
	efficiency		
Occupational Safety and	Application of Occupational Health	Carry out occupational safety and health procedures at work	
Health (K3)	and Safety	according to safety procedures	

2.4. Data analysis technique

[10]

The results of questionnaires and practical performance tests are categorized to produce conclusions for each instrument. Categorization is displayed in Table 2.

Table 2. Categorization of questionnaires and practical performance tests

_	Formula	Score	Category
	$X \ge x + 1.SBx$	$X \ge 3.00$	Very good
	$x + SBx > x \ge x$	$3.00 > X \ge 2.50$	Well
	$x \ge x \ge x - 1.SBx$	$2.50 > X \ge 2.00$	Enough
	$X \le x - 1.SBx$	X< 2.00	Not enough
ī	381		

X = final score, SBx = standard deviation, x = average score, x = (1/2) (max. score – min. score), SBx = (1/6) (max. score – min. score), Ideal Max score =∑item x the highest score, Ideal Min Score =∑item x the lowest score.

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3. RESULTS AND 3.1. Needs Analysis RESULTS AND DISCUSSION

The requires analysis phase is the initial phase in developing LTWI learning model. The needs analysis phase aims to gather information regarding the condition of VHS graduates, the competencies requires and the learning model of VHS that are in line with industry expectations/needs. The requirements analysis phase contains interviews with FGD activities. FGD participants consisted of 6 teachers and 6 industrial practitioners. The FGD results are displayed in Table 3. A description of conceptual LWTI competence and learning is displayed in Table 4 and Figure 2.

Table 3.	Results	ot	needs	ana	lysis	phases
					Da	oulte

No	Indicator		Results
1	The quality of current VHS graduates	-	The industry concludes that graduates of this 4-year VHS experience a decline in work ethic and skills and less responsive and lazy to gain new knowledge
2	The learning model that has been used so far	-	The learning model that has been used so far has implemented product and competency-based learning.
		-	The weakness of the learning model so far is the participation of the industry in the learning phases.
3	Competencies needed by VHS graduates	-	The competencies needed for VHS graduates today include attitudes, knowledge, skills and work safety competencies.
4	The learning model is expected to increase the work readiness of VHS students	-	The expected learning model is a learning model that can adopt school and industry goals. $ \\$
5	Expected model phases	-	The phases that are expected to be implemented include: Material preparation phase and learning objectives and infrastructure, The phase of understanding student worksheets, The exemplary phase of the industrial instructor, The phase of practicing worksheets and directions from industrial instructors, Learning evaluation phase / performance test and Follow-up phase

Table 4. Competency aspects needed by industry and vocational high schools Description
Ability to solve problems and get the right solution
The ability to establish cooperation and good social relations Performance Test Aspects Attitude Creativity Communication Integrity
Understanding of components and how they work Consistency in work
Knowledge of the field of work and its characteristics Knowledge Skills Completion of work with time efficiency Complete the job correctly and in the time required Carry out occupational safety and health procedures at work according to safety procedures Application of Occupational safety and health Occupational Safety and Health (K3)

3.2. Internal Validation

3.2. Internal Validation

The internal validation phase aims to obtain feasibility and input from experts for the development of learning models to background expertise in the field of vocational learning with qualifications, namely: active as academics and practitioners in vocational education institutions for at least 10 years and have produced scientific work in the field of developing vocational models. From the results of internal validation, it can be concluded that the feasibility of the LTWI learning model is in the very high category with an average score of 3.43. Internal validation experts provide input regarding the LTWI model, including: (a) the LTWI model must be prepared in detail and optimally, especially during the preparation phase. (b) Infrastructure facilities are prepared so that they can be implemented sustainably. (c) The teacher monitoring process needs to be carried out at the phases of learning. The results of the LTWI learning model after expert input (hypothetical) are displayed in Table 5 and Figure 3. are displayed in Table 5 and Figure 3.

Table 5. Phases of the LTWI learning model

Phases	Activity Description	Perpetrator
Preparation Phase	- Industrial instructors and teachers meet to agree on learning objectives and learning	Industry instructors
	infrastructure.	and teachers
Problem	- Students understand student worksheets and find solutions to problem solving.	Industry instructor
Understanding		
Phase		
Exemplary Phase	 Industrial instructors demonstrate/ exemplify student worksheet steps. 	Industry instructor
Practicing Phase	- Students apply student worksheets.	Industry instructor
	 Industry instructors provide mentoring and monitoring. 	•
Evaluation Phase	- Students are tested for work readiness with a practical performance test	Industry instructor

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Follow-Up Phase - Industrial instructors and teachers jointly evaluate the learning process and make notes of improvement for the implementation of the next model. Industry instructors and teachers

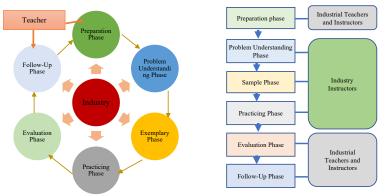


Figure 2. Phases of the conceptual LWTI learning model

Figure 3. Phases of the hypothetical LWTI learning model

3.3. External Validation

The external validation phase is carried out at the end of the development phase of the LTWI learning model. The external validation phase aims to test the effectiveness of the LTWI model in increasing the work readiness students. To find out the comparison of the increase in practice exam results, before limited trials and expanded trials, a pretest was carried out. The pretest was carried out at Muhammadiyah 1 Pakem VHS with a total of 25 students with the competency of removing the nozzle. Limited trials were implemented at Muhammadiyah 1 Pakem VHS with a total of 22 students. The work competency used is the dismantling of njection pumps. While the tryout was expanded to use the subjects of Muhammadiyah 1 Pakem VHS students and Puring 1 State VHS, a total of 67 students with competency expertise in injection system maintenance. The results of the pretest, limited trial and extended trial are displayed in Figure 4.

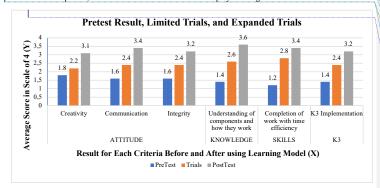


Figure 4. Pretest results, limited trials and expanded trials

3.4. Discussion

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The Learning and Training Within Industry (LTWI) learning model is a learning model developed from the Training Within Industry (TWI) learning model. The LTWI model has main characteristics, namely learning with industry-based competency standards, completeness in achieving learning competencies and tearning with industry-based competency standards, competeness in activering tearning competencies and being fully trained by the industry. Learning on an industrial basis will optimize student work readiness and shape the character of VHS students according to industry expectations [7], [38,39]. Learning provided by industrial instructors will provide knowledge based on work experience and have a positive impact on the motivation and learning outcomes of VHS students [40–42].

The LTWI learning model has excellent effectiveness in increasing the work readiness of VHS students.

Improved work readiness can be seen from the increase in the average score of the competency aspects of attitudes, knowledge, skills and occupational safety and health. Aspects of attitude competence consist of a creative attitude, communication and integrity. The attitude of creativity is students' ability to solve problems and get the right solution. The application of the LTWI learning model can improve creative attitudes very well. Industry-oriented learning models will encourage students to know real problems in the industry and get the right solutions from solving problems. The process of solving work issues will form creative competence

Communication attitude competence is the ability of students to establish cooperation and good social relations with other people. Applying the LTWI model properly will build a learning system as if working in an industry that prioritizes work communication in getting work done [40–42]. The next competency attitude an industy that prioritizes with communication in getting work utile [4–32]. The lack competency attitude of integrity. Attitude of integrity is student consistency in work or seriousness in studying and working. The LTWI learning model forms an attitude of integrity very well because the LTWI learning model has the main characteristics of learning and practicing with industry. An attitude of integrity will be formed with industry-oriented learning patterns that demand complete and complete work. The industry-oriented learning model will create a spirit of consistency in work because work in industry must be completed and

completely solve problems [43-45].

The LTWI learning model forms knowledge about the field of work gradually. Industry-oriented learning models with real work patterns will encourage students to collect new information and knowledge according to various problems [46–48]. Skill competence is the ability of students to complete the work correctly and according to the time needed. The LTWI learning model demands completion of work according to industry standards, that is, effective in work and time. The work is not only finished but must be correct, complete and have the right time to do it [49,50]. Competency aspects of implementing K3 which contain student abilities carry out K3 procedures at work according to safety procedures. The LTWI learning model shapes understanding and the importance of application K3 very well. The industrial-oriented learning model will be faced with activities related to machines and have high job risks. This will form the ability and awareness of students to apply K3 procedures properly[51-54].

4. CONCLUSION

4. CONCLUSION

This research produced a LTWI learning model that can be applied very well to VHS learning. The LTWI learning model is a model that was developed from the TWI learning model by adding several phases and treatments that focus on the involvement of teachers and industry in learning. The LTWI model which was applied in two trials very well increased work readiness which consisted of aspects of attitude competence, knowledge, skills and occupational safety and health (K3). At the phase of implementing the LTWI learning model two weaknesses were found, namely, it required a pre-application phase of the model which contained the selection of industries that collaborated and supported the goals of VHS. Second, the readiness of infrastructure facilities in VHS must be gradually improved according to industry criteria. The hope is that after the development of the LTWI learning model, the development of models that involve more industries will be continued for collaboration. The LTWI learning model is not only applied to VHS students but teachers need to try to implement it in order to increase the quality of teaching according to industry criteria.

- RENCES

 Z. Arifin, A. Imron, B. B. Wiyono, and Maisyaroh, "How did vocational high school in indonesia build cooperation with business and industry during the covid-19 pandemic?," Journal of Positive School Psychology, vol. 6, no. 4, pp. 4595–4608, 2022, doi:10.1088/1742-6596/1700/1/012092.

 R. Lawitta, L. Sihaloho, and J. Arianti, "Vocational high school in indonesia facing Asean Economic Community (AEC)," Advances in Social Science, Education and Humanities Research (ASSEHR), vol. 158, pp. 950–957, 2017, doi: 10.2991/ictte-17.2017.28.

 A. Rahayu, L. A. Wibowo, and S. Sulastri, "Analysis of link and match policies in improving work readiness of vocational student in West Java," Advances in Economics, Business and Management Research, vol. 117, no. 3, pp. 179–181, 2020, doi: 10.2991/acbmr.k.200131.039

 S. Suwandi, H. Hanafiah, Y. Iriantara, and R. Sulastini, "Dual based assessment in improving the quality of skills at the center of excellence vocational school," International Journal of Educational Research & Social
- [3]

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- Sciences, vol. 12, no. 3, pp. 1701-1707, 2022, doi: 10.2991/aebmr.k.200131.039.
- [5]

- Sciences, vol. 12, no. 3, pp. 1701–1707, 2022, doi: 10.2991/acbmr.k.200131.039.
 D. S. Wahyuni, "Developing competency-based assessment at vocational high school (VHS) in Bali," Jurnal Pendidikan Vokasi, vol. 11, no. 1, pp. 59–67, 2021, doi: 10.21831/jpv.v11i1.37383.
 Zulaili and I. Maipita, "The effect of open unemployment rate and level of vocational high education to poverty in North Sumatera Province," in Proceedings of The 2nd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL), 2017, pp. 315–319, doi: 10.2991/aisteel-17.2017.79.
 A. Hasan and P. Pardjono, "The correlation of higher order thinking skills and work readiness of vocational high school students," Jurnal Pendidikan Teknologi dan Kejuruan, vol. 25, no. 1, pp. 52–61, 2019, doi: 10.21831/jntky.3511.19118 [6]
- [7] 10.21831/iptk.v25i1.19118.
- [8]
- [10]
- [11]
- school students," *Jurnal Pendidikan Teknologi dan Kejuruan*, vol. 25, no. 1, pp. 52–61, 2019, doi: 10.21831/pjkv.25i1.19118.

 S. F. Nagari, S. S. Pamungkas, and I. Kristianti, "Can accounting practices, interests, and motivations increase work readiness for prospective accountants?," *Proceeding 7th Regional Accounting Conference (KRA 2020)*, vol. 173, no. 4, pp. 118–125, 2021, doi: 10.2991/aebmr.k2.10416.016.

 S. A. Ahmad and R. Mukhaiyar, "The relationship between motivation and student work readiness at SMK N I Lubuk Sikaping," *Jurnal Initah Pendidikan dan Pembelajaran*, vol. 4, no. 2, pp. 122–127, 2020, doi: https://doi.org/10.23887/jipp.v4i1.24174.

 B. Sudarsono, "Development of work-based learning models based on work readiness (WBL-WoRe)," *Jurnal Igra* v. vol. 7, no. 1, pp. 44–62, 2022, doi: https://doi.org/10.25217/ji.v7i1.2118.

 A. Afriadi, S. U. Sentosa, and M. Marwan, "The analysis of vocational studentsr work readiness in Pariaman and Padang Pariaman," *Advances in Economics, Business and Management Research*, vol. 57, no. 1, pp. 529–538, 2018, doi: 10.2991/picecba-18.2018.1

 C. L. Caballero and A. Walker, "Work readiness in graduate recruitment and selection: A review of current assessment methods," *Journal of Teaching and Learning for Graduate Employability*, vol. 1, no. 1, pp. 13–25, 2010, doi: 10.21153/ftlge2010vol1no1art546.

 A. Prianto, Winardi, and U. N. Qomariyah, "The effect of the implementation of teaching factory and its learning involvement toward work readiness of vocational school graduates," *International Journal of Instruction*, vol. 14, no. 1, pp. 283–302, 2020, doi: 10.29333/III.2021.14117.

 F. Tentama, S. Subardjo, S. A. Mulasari, and N. Merdiaty, "Self-confidence and hardiness towards work readiness: Study on vocational high school students," *International Journal of Research Studies in Psychology*, vol. 8, no. 2, pp. 139–2401.
- [13]
- 2019, doi: 10.5861/ijrsp.2019.4004.
 I. Nurjanah, A. Ana, and A. Masek, "Systematic literature review: work readiness of vocational high school graduates in facing the industrial 4.0 era," Jurnal Pendidikan Teknologi dan Kejuruan, vol. 28, no. 2, pp. 139–153, 2022, doi:https://doi.org/10.21831/jptk.v28i1.48522.
 Y. Vidiasturi and N. A. Purwanto, "Teaching factory management during the covid-19 pandemic," J. Pendidik. Vokasi, vol. 11, no. 2, pp. 294–304, 2021, doi: 10.21831/jpv.v11i3.39668.
 E. Herawan and S. Kuryadi, "The effectiveness of learning quality management of productive subject teachers in vocational high school," Advances in Social Science, Education and Humanities Research, vol. 258, no. 2, pp. 246–252, 2019, doi: 10.2991/icream-18.2019.50. [15]
- [16]
- [17]
- 240-222, 2019, doi: 10.2991/reteam-10.2019.30.
 M. N. Abdullah, A. Ahmad, and H. A. Gani, "Development of learning by doing governance model industry based on vocational middle school in Makassar," Asian Journal of Applied Sciences, vol. 10, no. 1, pp. 65-73, 2022, https://doi.org/10.1016/j.jcp.1016.0620. T181
- on vocational middle school in Makassar," Astan Journal of Applied Sciences, vol. 10, no. 1, pp. 65–73, 2022, doi: 10.24203/ajas.v10i.16850.

 D. A. Sudjimat, A. Nyoto, and M. Romlie, "Implementation of project-based learning model and workforce character development for the 21st century in vocational high school," International Journal of Instruction, vol. 14, no. 1, pp. 181–198, 2020, doi: 10.29333/III.2021.14111A.

 N. Kholifah, I. Irwanto, S. D. Ramdani, and M. Nurtanto, "Vocational skills learning model strategies during covid-19," Journal of Physics Conference Series, vol. 1700, no. 1, pp. 20–21, 2020, doi: 10.1088/1742-65061/3700/10.102002
- [20]
- 6596/1700/1/012092 6596/1700/1/012092.
 P. Linardatos, V. Papastefanopoulos, and S. Kotsiantis, "Explainable AI: a review of machine learning interpretability methods," *Entropy*, vol. 23, no. 1, pp. 1–45, 2021, doi: 10.3390/e23010018.
 S. Dhawan, "Online learning: A panacea in the time of covid-19 crisis," *Journal of Educational Technology Systems*, vol. 49, no. 1, pp. 5–22, 2020, doi: 10.1177/0047293520394018.
 I. Tuomi, "The impact of artificial intelligence on learning, teaching, and education policies," *Policies for the* [21]
- [23] I. Tuomi, "Tl Future, 2018.
- [24]
- Future, 2018.

 S. Muslim, E. Rahmadyanti, N. Kusumawati, and M. Supriyanto, "The effect of industrial work practice to work readiness of vocational high school (VHS) at Indonesia," American Journal of Humanities and Social Sciences Research, vol. 3, no. 10, pp. 203–210, 2019. doi: 10.23917/ijolac.v5i1.20033.

 Munawaroh, "The influence of teaching methods and learning environment to the student's learning achievement oferaft and entrepreneurship subjects at vocational high school," International Journal Of Environmental And Science Education, vol. 12, no. 4, pp. 665–678, 2017, doi: 10.5539/ics.v10n8p88.

 S. Sunggoro, H. F. Ghoer, and U. Kosasih, "Factory learning management in growing the entrepreneurship of vocational school students in Karawang District (case study at SMK Rismatek Karawang and SMK Lentera Bangsa Karawang)," Journal of Industrial Engineering & Management Research, vol. 3, no. 3, pp. 277–292, 2022, https://doi.org/10.7777/jiemar.v3i3.368.

 Elfizon, M. Muskhir, and Asnil, "Development of industrial electrical installation trainer nuanced to training within industry for students of electrical industrial engineering Universitas Negeri Padang," Journal of Physics Conference Series, vol. 1165, no. 1, 2019, doi: 10.1088/1742-6596/1165/1/012014.

 T. B. Hartoyo, Mardji, and A. Dardiri, "The influence of the within-industry training learning model (TWI) and [26]
- [28]

- industrial work practice experience on motivation and work readiness in the field of lathe engineering for vocational high school students machining engineering expertise competence throughout Gresik Regency)," Jurnal Pendidikan, vol. 1, no. 8, pp. 1633–1639, 2016, doi: http://dx.doi.org/10.17977/jp.v1i8.6690. F. Jacobs, W. Cain, R. Lu, and A. Daugherty, "Case study: teaching with industry (TWI) using new videoconferencing technology and innovative classroom setups," Education Science, vol. 12, no. 2, 2022, doi: 10.3390/eduesci 120.2012.8. [29] 10.3390/educsci12020128.
- [30]
- 10.399/cetuesci 12/20126.
 N. Lowe, G. Schrock, R. Jain, and M. Conway, "Genesis at work: advancing inclusive innovation through manufacturing extension," *Local Economic*, vol. 36, no. 3, pp. 224–241, 2021, doi: 10.1177/02690942211029518.
 L. Malmsköld, R. Örtengren, and L. Svensson, "Training Virtually virtual," *International Journal of Advanced Corporate Learning (IJAC)*, vol. 3, no. 3, p. 29, 2012, doi: 10.3991/ijac.v5i3.2201. [31]
- Corporate Learning (IAAC), vol. 5, no. 5, p. 29, 2012, doi: 10.3991/jac.v515.2201.

 F. Arifandani and F. Dorintan, "Differences in student learning outcomes between training within industry (TWI) and conventional learning in technical drawing training subjects at SMK N 1 Kaliange)," Jurnal Kajian Pendidikan Teknik Bangunan, vol. 3, no. 3, pp. 158–164, 2017, doi: 10.30738/natural.v6i1.4098.

 M. Matsuo, "Instructional skills for on-the-job training and experiential learning: An empirical study of Japanese firms," International Journal of Training and Development, vol. 18, no. 4, pp. 225–240, 2014, doi: 10.1116/j.ci.12025. [32]
- [33]
- 10.1111/ijtd.12035.
 J. D. Richey, R. C. & Klein, Design and Development Research: Methods, Strategies and Issues. New Jersey: [34]
- [35]
- J. D. Kichey, R. C. & Kiein, Design and Development Research: Methods, Strategies and Issues. New Jersey: Lawrence Erlbaum Associates, 2009.
 V. K. Shrotryia and U. Dhanda, "Content Validity of Assessment Instrument for Employee Engagement," SAGE Open, vol. 9, no. 1, 2019, doi: 10.1177/2158244018821751.
 A. A. Rowland, D. R. Dounas-Frazer, L. Rios, H. J. Lewandowski, and L. A. Corwin, "Using the life grid interview technique in STEM education research," International Journal of STEM Education, vol. 6, no. 1, 2019, doi: 10.1167/s1070-01.00.01076. [36] 10.1186/s40594-019-0186-z.
- 10. Househop Fird Lab. Mesesan-Schmitz, C. Stanciu, and M. C. Bularca, "Online teaching and learning in higher education during the coronavirus pandemic: Students' perspective," Sustainability, vol. 12, no. 24, pp. 1–22, 2020, doi: 10.3390/suit22410367.

 D. Mardapi, Engineering for Preparation of Test and Non-Test Instruments. Yogyakarta: Mitra Cendikia Offset, [36]
- [37]
- 2008.

 H. Rintala and P. Nokelainen, "Vocational education and learners' experienced workplace curriculum," Vocations

 10. 100 2009 32: 10.1007/s12186 010.00790.w [38]
- [40]
- H. Kintala and F. Nokciaimen, "Vocational education and learners" experienced workplace curriculum, Vocations and Learning, vol. 13, no. 1, pp. 113–130, 2020, doi: 10.1007/s1218-619-09229-w.

 I. Nurjanah and A. Ana, "Work readiness of TVET graduates in the context of industry 4.0," Advances in Social Science, Education and Humanities Research, vol. 651, no. 2, pp. 34–38, 2022, doi: 10.2991/assehr.k.220305.004.

 R. H. Rafiola, P. Setyosari, C. L. Radjah, and M. Ramli, "The effect of learning motivation, self-efficacy, and blended learning on students' achievement in the industrial revolution 4.0," International Journal of Emerging Technologies in Learning (IJET), vol. 15, no. 8, pp. 71–82, 2020, doi: 10.3991/ijet.v1508.12525.

 V. D. Tan "Does cooperative learning increase students' motivation in learning." International Journal of [41]
- Technologies in Learning (IBEI), vol. 13, no. 8, pp. 71–82, 2020, doi: 10.3991/ijet.V1308.12523.

 V. D. Tran, "Does cooperative learning increase students' motivation in learning?," International Journal of Higher Education, vol. 8, no. 5, pp. 12–20, 2019, doi: 10.5430/ijhe.v8n5p12.

 N. S. Prameswari, M. Saud, J. L. Amboro, and N. Wahyuningsih, "The motivation of learning art & culture among students in Indonesia," Cogent Education, vol. 7, no. 1, 2020, doi: 10.1080/2331186X.2020.1809770.

 J. G. Guerrero-Dib, L. Portales, and Y. Heredia-Escorza, "Impact of academic integrity on workplace ethical behaviour," International Journal for Educational Integrity, vol. 16, no. 1, 2020, doi: 10.1007/4079-020-0051-3. [42]
- [43]
- [44]
- [45] I. K. Enwereuzor, I. E. Onvishi, F. C. Albi-Oparaocha, and K. Amaeshi, "Perceived leader integrity as a media between ethical leadership and ethical climate in a teaching context," BMC Psychology, vol. 8, no. 1, pp. 1–11, 2020, doi: 10.1186/s40359-020-00420-6.
- c.ec-Post and H. Hapke, "Online learning integrity approaches: Current practices and future solutions," *Online traing Journal*, vol. 21, no. 1, pp. 135–145, 2017, doi: 10.24059/olj.v2111.843. [46]
- [47]
- [48]
- Learning Journal, vol. 21, no. 1, pp. 139–149, 2017, doi: 10.24059/oljv.2111.843.

 1. H. Sarker, "Deep learning: a comprehensive overview on techniques, taxonomy, applications and research directions," SN Computer Science, vol. 2, no. 6, pp. 1–20, 2021, doi: 10.1007/s42979-021-00815-1.

 1. H. Sarker, "Al-based modeling: techniques, applications and research issues towards automation, intelligent and smart systems," SN Computer Science, vol. 3, no. 2, pp. 1–20, 2022, doi: 10.1007/s42979-022-01043-x.

 L. Darling-Hammond, L. Flook, C. Cook-Harvey, B. Barron, and D. Osher, "Implications for educational practice of the science of learning and development," Applied Developmental Science, vol. 24, no. 2, pp. 97–140, 2020, doi: 10.1080/10888691.2018.1537791.

 P. Chung, R. C. Yeh, and Y. C. Chen, "Influence of problem-based learning strategy on enhancing student's industrial oriented competences learned: an action research on learning weblog analysis," International Journal of Conference of Conference of Property 10. 25, pp. 27–28, 283–273. (2016) doi: 10.1007/s10788.015.0368. [49]
- [50] P. Chung, R. C. Yeh, and Y. C. Chen, "Influence of problem-based learning strategy on enhancing student, industrial oriented competences learned: an action research on learning weblog analysis," International Journal of Technology and Design Education, vol. 26, no. 2, pp. 285–307, 2016, doi: 10.1007/s10798-015-9306-3.

 M. Manivannan and G. Suscendran, "Design an industry based curriculum for education and research," International Journal of Innovative Research in Applied Sciences and Engineering (IJIRASE), vol. 1, no. 4, pp. 106, 2017, doi: 10.29027/ijirase.vl.i4.2017.106-111.

 G. Katunge and R. Mbogo, "Maintaining health and safety at workplace: employee and employer's role in ensuring
- [51]
- [52] a safe working environment," Journal of Education and Practice, vol. 7, no. 29, pp. 1-7, 2016, [Online].
- a sate working environment, *Journal of Education and Fractice*, vol. 7, no. 29, pp. 1–7, 2016, [Online]. Available: www.iiste.org.

 M. I. Sánchez-Segura, G. L. Dugarte-Peña, A. De Amescua, F. Medina-Domínguez, E. López-Almansa, and E. B. Reyes, "Smart occupational health and safety for a digital era and its place in smart and sustainable cities," *Mathematical biosciences and engineering: MBE*, vol. 18, no. 6, pp. 8831–8856, 2021, doi: 10.3934/mbe.2021436. [53]