Jurnal Manajemen Pelayanan Publik Vol. 09 No. 03, October 2025
http://dx.doi.org/10.24198/jmpp.v9i3.65596

Public Service Management Approach to Teaching Factory Design at SMK Wahidin Cirebon for Soft Skills Improvement through Work Culture in Retail Education

[a] Nurhasanah; [b] Eeng Ahman; [c] Dadang Dahlan; [d] Hari Mulyadi

[a,b,c,d] Economic Education Study Program, Faculty of Economics and Business Education, Universitas Pendidikan Indonesia, Bandung, West Java, Indonesia

ABSTRAK

Penelitian ini bertujuan untuk merancang model pembelajaran Teaching Factory (TeFa) berdasarkan prinsip-prinsip budaya kerja untuk meningkatkan soft skills siswa dalam pendidikan ritel, dengan fokus pada Manajemen dan Organisasi Pelayanan Publik. Penelitian ini dilakukan di SMK Wahidin Cirebon dan sekolah kejuruan mitra, model ini memberikan siswa pengalaman langsung dalam kegiatan ritel yang autentik dan berorientasi pada layanan yang mencerminkan lingkungan tempat kerja yang nyata. Penelitian ini menggunakan pendekatan Penelitian dan Pengembangan (R&D), mengadaptasi model Borg & Gall (2003) menjadi Model Empat-D (Define, Design, Develop, Disseminate). Peserta termasuk 396 siswa Bisnis Ritel kelas 11 dari SMK Wahidin Cirebon dan lima sekolah kejuruan di Jawa Barat. Model ini mengintegrasikan budaya kerja berbasis Kaizen; yaitu Seiri, Seiton, Seiso, Seiketsu, dan Shitsuke; ke dalam pembelajaran teaching factory untuk mensimulasikan standar industri pelayanan publik. Validasi mengonfirmasi bahwa model TeFa BK memenuhi kriteria kualitas, sementara uji coba menunjukkan kepraktisannya (kinerja guru), efektivitasnya (peningkatan keterampilan lunak siswa), dan respons positif siswa. Siswa mencapai peningkatan keterampilan lunak rata-rata sebesar 18,36 poin ($p < 0,001$), dengan hasil yang konsisten di seluruh sekolah. Kebaruannya terletak pada penerapan prinsip-prinsip manajemen dan organisasi layanan publik dalam budaya kerja berbasis Kaizen, yang menghasilkan model Teaching Factory yang terukur dan efektif untuk pendidikan ritel vokasional.

ABSTRACT

This research purposed to design a Teaching Factory (TeFa) learning model based on work culture principles to enhance students' soft skills in retail education, focusing on Public Service Management and Organization. The research was conducted at SMK Wahidin Cirebon and partner vocational schools, the model provided students with hands-on experience in authentic, service-oriented retail activities reflecting real workplace environments. The study used a Research and Development (R&D) approach, adapting Borg & Gall's (2003) model into a Four-D Model (Define, Design, Develop, Disseminate). Participants included 396 11th-grade Retail Business students from SMK Wahidin Cirebon and five vocational schools in West Java. The model integrated Kaizen-based work culture; which are *Seiri, Seiton, Seiso, Seiketsu,* and *Shitsuke*; into teaching factory learning to simulate public service industry standards. Validation confirmed that the TeFa BK model met quality criteria, while trials showed its practicality (teacher performance), effectiveness (improved students' soft skills), and positive student responses. Students achieved an average soft skills improvement of 18.36 points ($p < 0.001$), with consistent results across schools. The novelty lies in applying public service management and organization principles within a Kaizen-informed work culture, producing a scalable, effective Teaching Factory model for vocational retail education.

ARTICLE HISTORY
Submitted: 23 07 2025
Revised: 30 07 2025
Accepted: 01 08 2025
Published: 03 10 2025

KATA KUNCI
Public Service Management and Organization, Teaching Factory; Budaya Kerja; Soft Skill; Bisnis Ritel

KEYWORDS
Public Service Management and Organization; Teaching Factory; Work Culture; Soft Skills; Retail Business

Correspondence Nurhasanah Email : nurhasanah861@upi.edu

INTRODUCTION

Vocational education is expected to produce graduates who are not only technically skilled but also equipped with strong soft skills to adapt to dynamic service industries. The retail business sector, as one of the fastest-growing service industries, demands human resources who possess not only mastery of operational tasks but also professional work ethics, communication abilities, teamwork, and problem-solving skills (Siregar, et al., 2024). This necessity highlights the importance of integrating work-based learning with a structured cultural approach that simulates real-world public service environments. One of the most promising innovations in vocational learning is the *Teaching Factory (TeFa)* model, which merges classroom instruction with industrial practices. However, conventional implementations of the Teaching Factory often focus more on hard skills and less on the behavioral dimensions critical in service industries. Therefore, this research proposes a development of a work culture-based Teaching Factory model grounded in Public Service Management and Organization principles, specifically tailored for the Retail Business subject at *SMK Wahidin Cirebon* (Trilling & Fadel, 2009). Soft skills encompass non-technical abilities such as effective communication, teamwork, adaptability, critical thinking, leadership, and emotional intelligence. In the workplace, many companies now consider soft skills to be equally important, if not more important, than hard skills, as employees are not only required to be able to perform their duties but are also expected to be able to solve problems, innovate, and build good working relationships (World Economic Forum, 2020). Research by Robles (2012) also shows that business executives rank communication, work ethic, and teamwork as key soft skills required for the modern workforce. In educational settings, students who master soft skills tend to be more successful because they are able to manage their time, lead groups, and learn independently and interact effectively (Luthfiana, et al., 2025). Soft skills also help individuals cope with pressure, make wise decisions, and adapt to rapid changes in various aspects of life. Therefore, developing soft skills from an early age is a key requirement to prepare individuals to holistically face the challenges of the 21st century.

The issue of low soft skills among the young workforce in Indonesia is increasingly attracting attention from various stakeholders, including the government and industry. Data from the Central Statistics Agency (BPS) indicates that by 2025, approximately 9.9 million young people aged 15–24 will be unemployed, with one of the main causes being weak non-technical or soft skills, such as communication, teamwork, and time management (Medcom.id, 2025). This aligns with a statement from the Ministry of National Development Planning/Bappenas, which revealed that many individuals from Generation Z are being laid off not because of a lack of hard skills, but rather due to a lack of interpersonal skills, such as effective communication and the ability to adapt to a dynamic work environment (Kompas.com, 2024).

Furthermore, a national survey conducted by the research firm Intelligent identified several key reasons for new employees' failure to adapt to the workplace, including low work motivation (50%), poor communication (39%), unprofessionalism (46%), difficulty accepting criticism (38%), and weak problem-solving skills (34%) (Medcom.id, 2025). Similar findings were also revealed by a LinkedIn report (DetikEdu, 2025), which stated that more than a third of the Indonesian workforce lacked basic skills such as communication, problem-solving, and leadership. Even at the higher education level, a survey of 500 CEOs cited by Harian Bhirawa (2015) showed that undergraduate graduates in Indonesia still lacked critical thinking, reading, writing, and work ethic—all key elements of soft skills. These data demonstrate a gap between the output of educational institutions and the actual needs in the workplace, especially in the soft skills aspect, which is increasingly crucial in facing the challenges of modern, collaborative and complex work. Vocational High Schools (SMK) were chosen as the research object for several strong, data-driven reasons. First, the open unemployment rate among SMK graduates is the highest

compared to other levels of education, reaching 9.01% in August 2024 according to the Central Statistics Agency (BPS, 2024). The selection of *SMK Wahidin Cirebon* as the central site for this research is based on several strategic, academic, and contextual considerations that align with the objectives of developing a work culture-based Teaching Factory model in the field of Retail Business learning. Furthermore, *SMK Wahidin Cirebon* provides a suitable academic environment for implementing and testing a Teaching Factory model oriented toward retail service competencies and soft skills. The curriculum structure already emphasizes practical training, making it an ideal context for integrating public service management and organization principles. The school has courageous institutional commitment to innovation in teaching and learning. It possesses adequate infrastructure, such as a mini market laboratory, simulation rooms, and partnerships with local industries, which support the development of authentic learning models like the Teaching Factory. Furthermore, the school leadership and teaching staff have expressed a willingness to collaborate in research-based development efforts. In addition, SMK Wahidin Cirebon is actively engaged in character education and behavioral development programs, which creates a receptive environment for the introduction of Kaizen-based work culture values *(Seiri, Seiton, Seiso, Seiketsu, and Shitsuke)*. This alignment supports the integration of workplace ethics and discipline into classroom instruction and school culture. Thus, SMK Wahidin Cirebon represents the characteristics of a typical Indonesian vocational high school that balances academic and industrial needs. As such, findings from this school are expected to be applicable and adaptable to other vocational schools with similar profiles across the country.

This figure indicates a mismatch between the competitiveness of SMK graduates and the needs of the labor market. Second, the gap in non-technical or soft skills between SMK graduates and the industrial world is very significant. The results of an exploratory study in 16 provinces showed the largest gap in the aspects of honesty, discipline, communication, initiative, and teamwork (Eti Salafas et al., 2023). A similar condition was also revealed by the perceptions of industry and SMK students, who stated that field work practice (PKL), although useful, was not enough to improve students' self-confidence and communication skills (Romi et al., 2024). Furthermore, research from Padang State Vocational High Schools indicates that although soft skills readiness is categorized as "ready," there is substantial variation across aspects, particularly in communication, leadership, and time management, indicating the need for greater attention in vocational learning patterns (Rahmat Hidayat et al., 2024).

Soft skills are life skills that enable individuals to develop relationships with themselves, their groups, or society, as well as with the Creator. Having soft skills will enable a person to benefit the environment and those around them. These soft skills include communication, emotional skills, language skills, teamwork skills, ethics and morals, and spiritual skills (Borges & Souza, 2024). Soft skills are specific abilities, including social interaction, non-technical skills, and managerial skills. These abilities are essential for every student entering industry and the workforce (Almeida & Buzády, 2022). This model is designed to instill a workplace culture inspired by *Kaizen*, emphasizing the continuous improvement values of *Seiri, Seiton, Seiso, Seiketsu, and Shitsuke*. By embedding these values into vocational learning, students are provided with authentic experiences that prepare them for the behavioral demands of the retail service industry. The integration of public service management into teaching factory design ensures that students not only learn to operate in retail contexts but also internalize customer-centric values, discipline, and professional demeanor.

To evaluate students' soft skills, the research employed a combination of performance-based assessments, structured observation checklists, self-assessment questionnaires, and peer evaluations. The instruments were developed based on key indicators such as communication,

teamwork, problem-solving, adaptability, and work ethic. Content validity was ensured through expert judgment involving vocational education specialists and retail industry practitioners, who reviewed the relevance and clarity of each item. Construct validity was tested through factor analysis to confirm that the items appropriately represented the intended soft skill dimensions. Reliability was measured using Cronbach's Alpha, with all instruments achieving coefficients above 0.80, indicating high internal consistency. Additionally, inter-rater reliability was established by training assessors and calculating agreement scores to ensure consistency in observational ratings.

With the growing gap between vocational education outcomes and industry expectations, particularly in the soft skill domain, this model aims to bridge that gap by providing a structured, research-based framework. The implementation and testing of this model are conducted at SMK Wahidin Cirebon and several partner vocational schools to ensure its relevance, scalability, and effectiveness. To ensure that students' soft skills are well-ingrained in educational institutions, they must provide continuous soft skills training. Human success is determined by how well a person manages their emotions. The goal of learning soft skills is to provide individuals with the opportunity to learn new behaviors and improve interpersonal relationships (Jackson & Bridgstock, 2019). Soft skills have many benefits, such as improving work quality and professional ethics, which are beneficial for career development. Moreover, the authors confirm that this study was conducted independently, with no financial, institutional, or personal relationships that could have influenced the research process or its outcomes.

Literature Review

Public Service Management

The field of study and practice emphasizes the principles of accountability, efficiency, responsiveness, transparency, and citizen-centered services; the paradigm encourages public institutions to adopt strategies from private-sector management, with a strong focus on outcomes, performance measurement, and customer satisfaction. In the context of education, especially vocational schools, public service management can inform how institutions are organized and managed to deliver value not only to students but also to communities and industries. Vocational schools like SMK Wahidin Cirebon, which are part of the public education system, are responsible for producing graduates who are ready to serve the public interest through professional competence and civic responsibility. Organizationally, a public service approach highlights the importance of stakeholder engagement, collaboration with industries, and continuous institutional improvement. When applied to the Teaching Factory model, this perspective ensures that schools function not only as academic institutions but also as semi-public service organizations that provide professional training aligned with societal and industrial needs (Austen and Zacny, 2015).

Key concepts from organizational theory—such as systems thinking, organizational learning and service orientation which are critical in designing a TeFa model that is responsive, adaptive, and sustainable. Schools that embrace public service values foster a culture of professionalism, participatory leadership, and ethical governance, all of which are essential for modeling a productive and service-oriented work environment for students (Hotaran, 2011).

Teaching Factory (TeFa) is a pedagogical model that simulates real industrial environments in educational settings. It bridges the gap between theory and practice by engaging students in production or service activities under the guidance of educators and

industry professionals. TeFa model supports experiential learning, industry relevance, and student competency development. The models are especially effective in vocational schools where practical skill mastery is essential. However, many implementations have been criticized for focusing solely on technical skills without adequately addressing behavioral or organizational competencies, such as communication, adaptability, or service ethics. The integration of public service management into TeFa design offers an opportunity to shift focus toward institutional behavior, service delivery quality, and professional soft skills. In this context, the school becomes a miniature service organization, where students not only learn how to perform tasks but also how to operate within organizational systems guided by rules, ethics, and a public-serving mindset (Andhika, 2025).

Work culture, particularly in public institutions and service industries, is defined by shared values, norms, and practices that govern behavior in professional settings. In the vocational education context, embedding work culture into the curriculum is vital for preparing students for real-world challenges. Soft skills, such as communication, teamwork, emotional intelligence, and customer service orientation, are increasingly seen as essential competencies in the retail sector. Soft skills are among the most in-demand workplace competencies in the 21st century. In vocational schools, however, soft skills are often underdeveloped due to curriculum constraints, lack of authentic practice settings, and limited emphasis on service behavior. The Teaching Factory model, when designed as a public service organization, can serve as a training ground for soft skills by simulating professional roles, organizational protocols, and customer interactions. Research by Nurhayati et al. (2021) found that structured learning environments that simulate workplace behaviors are more effective in cultivating student self-confidence, responsibility, and customer engagement. Furthermore, when students are engaged in service-oriented activities governed by organizational structures, they develop habits that align with both industry expectations and public service values.

Constructivist Learning Theory

Constructivist learning theory, proposed by Piaget, emphasizes the learning process by enhancing students' active role in constructing conceptual understanding of the material independently through experience and contextual reflection (Dahar, 2010). Experiences are built on the realities of everyday life, enabling students to engage in an educational process that allows them to construct their own knowledge (Putrayasa, 2013). Constructivist learning theory understands learning as the process of constructing information or knowledge received by the learner. Knowledge resides within the learner (Schunk, 1986). In other words, because the formation of information or knowledge is an active role of the learner, students must be directly involved during the learning process. They must actively think, conceptualize, and give meaning to what they are learning (Orozco et al., 2019). In this case, the most crucial factor in the realization of learning is the learner's own intention to learn. Meanwhile, in constructivist learning theory, the teacher's role is as a facilitator, helping students develop information or knowledge smoothly (Mulyasa, 2007). Educators do not transfer existing knowledge but rather assist students by providing guidance and direction to develop their own knowledge and are required to better understand their own way of thinking or perspectives on learning (Caeiro-Rodriguez et al., 2021).

According to the constructivist paradigm (Dahar, 2010), knowledge tends to be subjective because it is temporary and subject to socially and culturally mediated developments,

acquired through concrete, collaborative, and interpretive experiences. Learning is an active activity by students to construct their own knowledge. Students are independently responsible for their learning activities and outcomes. Students independently process information through selection, organization of experiences, and integration of that information with prior knowledge (Jong et al., 2006). According to constructivist learning theory, educators act as facilitators, not only providing knowledge to students but also providing opportunities and facilities for students to seek information independently, thereby developing their abilities by applying their own ideas related to learning strategies to gain a deeper understanding based on their direct experiences (Nur, 2003).

In constructivist theory, the most important aspect of active learning is that students gain knowledge through direct experiences, thereby developing their abilities (Yardley et al., 2012). With the assistance of educators as facilitators, students need to know and understand the learning objectives and the criteria for achieving them to be able to carry out the learning process independently (Mulyasa, 2007). Referring to those theories, constructivist learning theory emphasizes the learning process on the role of students in constructing knowledge based on their own understanding, integrating it with previous experiences, leading to more complex future experiences (Pridham et al., 2012). Educators act solely as facilitators, not imparting their own knowledge but rather helping students streamline the learning process by monitoring their progress and learning outcomes, providing motivation, guidance, direction, and feedback to achieve the learning objectives. The characteristics of constructivist learning proposed by Driver and Oldhan (1994) are as follows:

a. Orientation, where students are given the opportunity to develop motivation in studying a topic by providing opportunities for observation.
b. Elicitation, where students express their ideas through discussions, writing, making posters, and so on.
c. Restructuring ideas, where students clarify ideas with those of others, develop new ideas, and evaluate new ideas.
d. Implementation of new ideas in every situation, where existing ideas or knowledge need to be applied to a variety of situations.
e. Review, where existing ideas need to be revised by adding or changing information to apply knowledge.

According to Putrayasa (2013), one way to make the learning process more effective is by providing students with incentives to develop their potential by stimulating their curiosity. The characteristics and principles of constructivist learning are as follows:

a. Developing alternative strategies for obtaining and analyzing information. Students need to be accustomed to accessing information from various sources, such as books, magazines, newspapers, observations, interviews, and the internet. In accordance with the students' level of thinking ability, they need to learn to analyze information, determine its accuracy, the assumptions underlying it, how to classify it, and simplify large amounts of information. In other words, students are trained in how to process information.
b. Enable multiple perspectives in the learning process. During the learning process, diverse opinions, perspectives, and experiences will emerge. In explaining a phenomenon, differences of opinion will arise among students, influenced by their experiences, culture, and thought structures.
c. The primary role of students in the learning process, both in regulating and

controlling their own thought processes and when interacting with their environment. In an effort to develop understanding, students must be active in collaborative learning activities. Students need to be trained to listen and carefully digest the opinions of both students and educators. In accordance with their emotional and thinking development, they need to be able to analyze these opinions in relation to their existing knowledge.

d. The role of educators is more as tutors, facilitators, and mentors to support the smooth and successful learning process for students. In this case, a paradigm shift occurs from educator-oriented learning to student-oriented learning. Students are expected to be able to consciously and actively manage their own learning.
e. The importance of authentic learning activities and learning evaluation. Authentic learning activities are defined as how closely the activities relate to real-life situations and the problems that students face in society when attempting to apply certain knowledge.

Constructivist learning theory emphasizes the view that students, as individuals, possess prior abilities that serve as a foundation for beginning new learning. These initial abilities will become the basis for constructing new knowledge. Therefore, even if a student's initial abilities are very simple or do not align with the teacher's perspective, they should be accepted and used as the basis for learning and guidance. Educators play a crucial role in the interactions that occur during the learning process, acting as facilitators with the following roles:

a. Teachers must be able to foster student learning independence by providing opportunities for students to make decisions and take action.
b. Teachers must be able to foster students' ability to make decisions and take action based on the formation of new knowledge and skills acquired by students.
c. Teachers must provide a support system by facilitating learning so that students have optimal opportunities for practice.

Constructivist learning theory assumes that students can interpret information in their minds, integrating it with prior knowledge or experience. Educators can help students form new understandings based on new information they get from various sources.

Behaviorist Learning Theory

Learning theories are used to assist educators and students in designing learning to facilitate the achievement of predetermined learning objectives. One such theory is behaviorist learning theory, which is essentially a learning theory used by educators to assist the learning process in achieving learning objectives, thereby resulting in changes in student behavior in line with the learning objectives (Winataputra et al., 2011).

Learning theories are used in the learning process by considering material development and selection, as well as designing learning appropriately to help students easily follow the learning process and understand the lessons presented by the educator. The success of learning cannot be measured solely in terms of hard skills, but can also be seen in positive behavioral patterns towards students, also known as soft skills. Behaviorist learning theory is a learning theory often used in vocational schools to train skills resulting from stimulus and response, emphasizing behavioral changes (Ratnawati, 2016).

Behaviorist learning theory can be used in the learning process to train behaviors in such a way that behavioral changes occur in the form of habits that are mastered by the individual (Suyono & Hariyanto, 2011: 59). This means that learning must be able to train individual students using stimuli and responses so that the result of the learning is a change in behavior that can be mastered by the student (Ho, 1999).

According to Edward Lee Thorndike, behaviorist learning theory is a learning process that occurs due to the relationship between stimulus and response. Furthermore, according to John Broadus Watson, a stimulus is a form of behavior that can be observed (Ratnawati, 2016). Therefore, a process is considered learning if it can create observable stimuli and responses, and this learning process can help students master learning outcomes. Therefore, learning requires stimulus responses, practice, and conditioning the learning situation (Hergenhahn & Olson, 2008).

According to Sanjaya (2008), behaviorist learning theory views learning as a process of behavioral change resulting from the interaction between stimulus and response. According to behaviorist psychology, learning is an instrumental control caused by the environment. Thus, an individual's learning process is influenced by conditional factors provided by their environment (Siregar & Hartini, 2011). The *law of exercise* states that the more frequently a behavior is repeated, practiced, and practiced, the stronger the association becomes. The principle of the law of exercise is that the connection between a stimulus and an action becomes stronger through practice, but weakens if the connection is discontinued or terminated. The primary principle of learning, according to the law of exercise, is repetition of behavior. The more frequently it is repeated, the more a person will master the material (Rahyubi, 2014: 36).

The *law of effect* states that the stimulus-response relationship tends to be strengthened if the consequence is pleasant, and conversely, it tends to be weakened if the consequence is dissatisfying. According to the law of effect, if a response results in a satisfying situation, the connection between the stimulus and response will strengthen (Hergenhahn & Olson, 2008: 66). This aligns with Rahyubi's (2014) opinion, which explains how the connection strengthens or weakens as a result of the action. An action accompanied by a pleasant consequence tends to be maintained and repeated. Conversely, an action tends to be stopped and not repeated if the action results in something unpleasant. According to the law of attitude, a person's learning behavior is not only determined by the relationship between stimulus and response, but also by the individual's internal circumstances, including attitudes, knowledge, and skills (Rahyubi, 2014). Therefore, responses to external situations depend on the individual's condition and the influence of the environment. Something that one individual finds interesting and satisfying may be perceived differently by another.

Teaching Factory Based on Work Culture

This Work Culture-Based Teaching Factory is a research and development project conducted by researchers implementing a teaching factory learning model that instills work culture values in industry and the workplace in order to improve skills and their implications for students' soft skills (Berybe et al., 2023). The development of the Work Culture-Based Teaching Factory learning model is designed for implementing teaching factory learning by instilling work culture values in industry and the workplace. Learning to understand concepts in the knowledge aspect is conducted using a constructivist learning theory approach, while learning to understand concepts in the skills and attitudes aspect is conducted using a behaviorist learning theory approach (Spinelli & Martinovich,

2023).

Educators need to take several steps to optimize the implementation of the work culture-based teaching factory model, starting with planning, implementing the learning process, and evaluating the planning and implementation of learning (Kemp & Foster, 1995; Thomas & Menz, 1997; Jackson & Bridgstock, 2019; Mourtzis et al., 2022). The activities are as follows:

a. Planning

At this stage, educators need to determine learning materials and objectives, including hard and soft skills, integrated with the hard skills that students must master. Furthermore, after establishing learning objectives, comprehensive assessment instruments are needed, along with the necessary supporting facilities and infrastructure, teaching materials, and learning steps.

b. Learning Implementation

Educators provide students with a comprehensive learning experience encompassing knowledge, industry-standard hard skills, and work-culture-based soft skills by providing hands-on experience through actual practice. Educators ensure the achievement of comprehensive learning objectives, including knowledge, industry-standard technical skills, and work-culture-based soft skills, during the learning process and/or at the end of the learning process.

c. Evaluation of Learning Planning and Implementation

Educators evaluate learning planning and implementation after the learning process has been completed, through reflection and continuous improvement activities to maximize the quality of the subsequent learning process and comprehensively improve student learning outcomes.

This Work Culture-Based Teaching Factory Model appears in the fifth stage which can be implemented in the learning process by providing real direct experience carried out in the teaching factory laboratory with learning procedures starting from preliminary activities, core activities and closing activities with a series of learning activities presented in table below.

Table 1.
Teaching Factory Learning Procedures

No.	Activities	Divisions of activities		Description
		Educators	Students	
1	Introduction/preparation	Educators as instructors condition the work area, provide direction and motivate students as workers.	Students prepare themselves to take part in work activities and interact directly with educators regarding the work preparations that	Hard skill and soft skill aspects

No.	Activities	Divisions of activities		Description
		Educators	Students	
			must be carried out.	
		Educators as instructors convey work targets or indicators for achieving work targets and the importance of the work targets to be achieved and work procedures.	Students as workers' pay close attention to work targets or indicators of achievement of work targets to be achieved and pay attention to work procedures.	Hard skill and soft skill aspects
		Educators as instructors check or examine the readiness of students as workers.	Students as workers answer questions about the tasks that must be done.	Hard skill and soft skill aspects
2	Core/ Implementation of the work	Educators as instructors monitor the work of arranging products carried out by students as workers. Students as workers carry out the work of arranging products according to work procedures.	Educators as instructors monitor the work of arranging products carried out by students as workers. Students as workers carry out the work of arranging products according to work procedures.	Hard skill and soft skill aspects
		Educators as instructors monitor customer service work carried out by students as workers. Students as workers carry out customer service work according to work procedures.	Educators as instructors monitor customer service work carried out by students as workers. Students as workers carry out customer service work according to work procedures.	Hard skill and soft skill aspects
		Educators as instructors monitor the	Educators as instructors monitor the *stock*	Hard skill and soft skill aspects

No.	Activities	Divisions of activities		Description
		Educators	Students	
		stock opname report work carried out by students as workers. Students as workers carry out *stock opname* report work according to work procedures.	*opname* report work carried out by students as workers. Students as workers carry out *stock opname* report work according to work procedures.	
		Educators as instructors monitor the work on business orders carried out by students as workers. Students as workers carry out the work on business orders according to work procedures.	Educators as instructors monitor the work on business orders carried out by students as workers. Students as workers carry out the work on business orders according to work procedures.	Hard skill and soft skill aspects
3	Closing/ Evaluation and follow-up	Educators as instructors direct students as workers to formulate work results correctly. Students as workers formulate work results correctly.	Educators as instructors direct students as workers to formulate work results correctly. Students as workers formulate work results correctly.	Hard skill and soft skill aspects
		Educators as instructors carry out assessments of the work results of students as workers. Students as workers receive or pay attention to the results of the work assessment.	Educators as instructors carry out assessments of the work results of students as workers. Students as workers receive or pay attention to the results of the work assessment.	Hard skill and soft skill aspects
		Educators, acting as instructors, conduct	Educators, acting as instructors, conduct	Hard skill and soft skill aspects

No.	Activities	Divisions of activities		Description
		Educators	Students	
		reflection by asking students, acting as workers, to provide comments on the work process they have carried out.	reflection by asking students, acting as workers, to provide comments on the work process they have carried out.	
		Educators, as instructors, provide corrective follow-up to students as workers related to the work activities they have performed. Students receive corrective follow-up related to the work activities they have performed.	Educators, as instructors, provide corrective follow-up to students as workers related to the work activities they have performed. Students receive corrective follow-up related to the work activities they have performed.	Hard skill and soft skill aspects

Source: Hybrid Teaching factory models (Mourtzis et al., 2022)

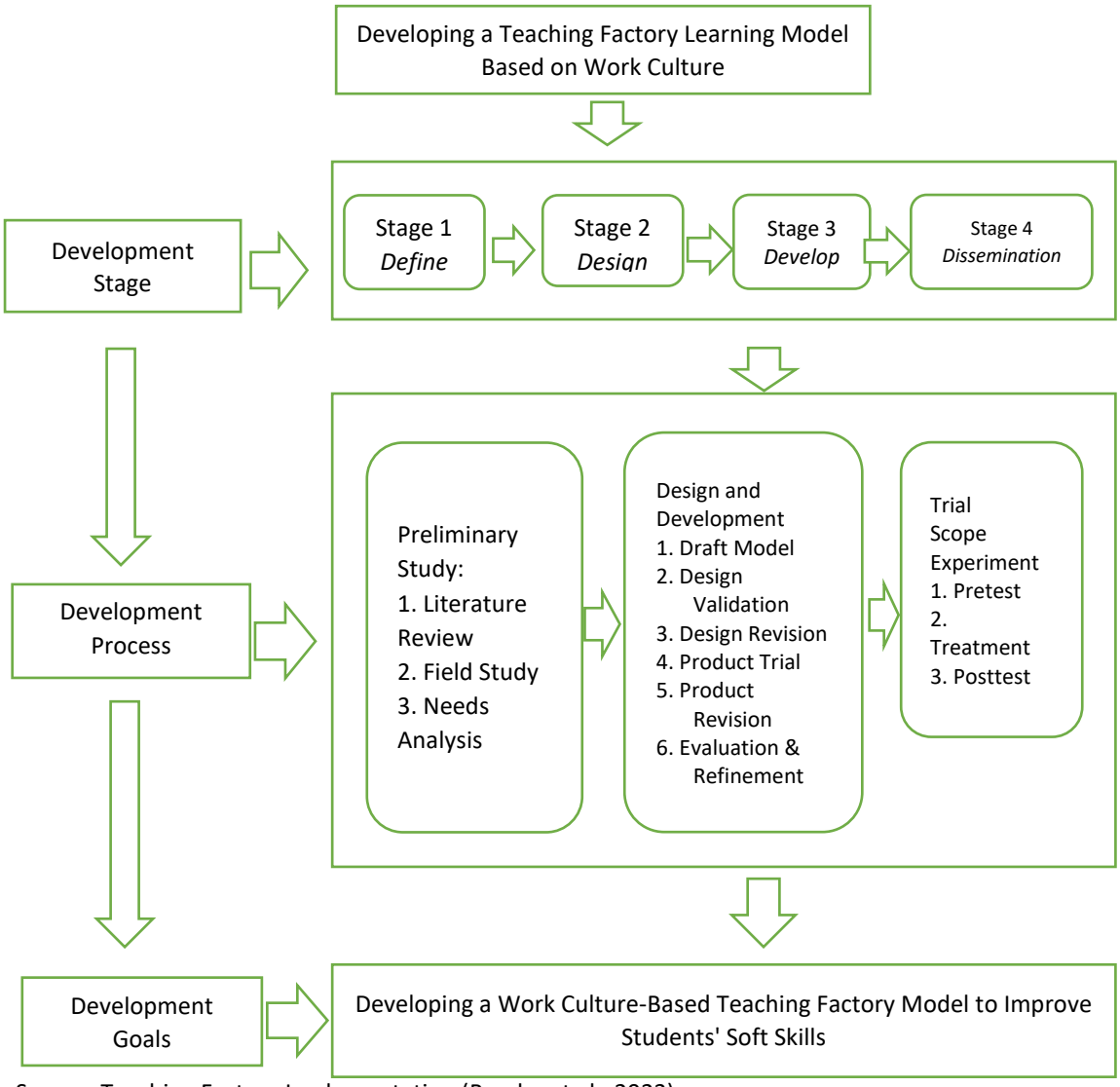
The results of a study by M Burhan and R Wijaya (2013) entitled "Teaching Factory Management Model for Vocational High Schools." Based on the results of the study, it can be concluded that the TEFA management model for vocational high schools (SMK) meets the needs of the business and industrial world. It was formulated and tested jointly with the model group (teachers, vocational high school managers, and stakeholders/industry). The TEFA Management Guidelines for vocational high schools (SMK) were formulated and tested jointly by the model group (teachers, vocational high school managers, and stakeholders/industry) and the impact group, meeting the needs of the business and industrial world and were effectively and efficiently implemented. This study used the Research and Development method.

Based on the results of the study, it can be concluded that vocational high schools (SMK), as one of the players who play a vital role in preparing the workforce, are required to always be able to respond to evolving market needs. Graduates find it difficult to compete in industry and the world of work because schools in Indonesia have not yet produced graduates who have two skills, namely hard skills and soft skills. To produce graduates who are ready to become competent workers, vocational schools can implement the following activity programs: (1) learning programs through the teaching factory model; (2) establishing cooperation with industry in terms of: internships, internships, industrial visits, workforce recruitment, industrial classes; and (3) Socialization and coaching from stakeholders related to employment.

Hypothetical Model

The hypothetical model in this study contains a draft model to be developed. The hypothetical model in this study is the development of a Work Culture-Based Teaching Factory Model to improve students' soft skills in retail business learning at vocational schools. The hypothetical model design in this research and development can be seen in the following figure:

Figure 1.
Hypothetical Model



Source: Teaching Factory Implementation (Berybe et al., 2023)

The role of educators is more as tutors, facilitators, and mentors to support the smooth and successful learning process for students. In this case, there is a paradigm shift from educator-oriented learning to student-oriented learning. Students are expected to be able to consciously and actively manage their own learning. Authentic learning activities and learning evaluations are important. Authentic learning activities are defined by how closely the activities are carried out to real life and the problems that occur in society that students face when trying to apply certain knowledge. Learning according to behaviorism theory can be done through repeated practice in such a way that it becomes a habit or character that is mastered by the individual.

RESEARCH METHODS

The type of research used in this study is research and development or known as R&D (research and development) adapted from Borg & Gall which consists of 10 stages carried out in developing and conducting validation, particularly: (1) collecting information (conducting literature reviews, conducting classroom learning observation surveys, designing a research framework); (2) conducting research design which includes formulating research objectives, estimating the required funds and time, and compiling research work procedures; (3) developing the initial product form (designing the initial product draft); (4) conducting preliminary field tests; (5) revising the main product; (6) conducting main field tests; (7) revising the main field tests; (8) conducting operational field tests; (9) revising the final product; and (10) disseminating and implementing the product (Borg, W.R and Gall, 2003).

The Research and Development (R&D) study by Borg and Gall (2003) was modified into a 4-D model (Thiagarajan et al., 1974) which consists of 4 (four) phases, namely defining, designing, developing, and disseminating, with the following activity stages:

1. The definition phase, or research and information collection, includes a preliminary study to gather initial data in the form of literature reviews, field studies, and needs analysis.
2. The design phase, or planning phase, includes the design of the initial product, including preliminary research instruments and research instruments in the form of tests and non-tests, observation sheets, and validation sheets. Questionnaires are used to determine the need for learning model development, a questionnaire to assess the implementation of the learning model, and a questionnaire to assess student responses regarding the implementation of the learning model. Interviews consist of interviews during the preliminary study and fieldwork. Observation sheets are used to obtain information regarding student and teacher behavior. Validation sheets are needed to gather expert opinions or perspectives on the development of a work culture-based teaching factory learning model.
3. The product development phase, or developing a preliminary form of the product, involves developing the initial product through discussions to obtain expert opinions or perspectives. The product is then tested on a limited basis and revised to refine the initial product based on evaluation of the limited trial results, followed by a broader trial. 4. The dissemination phase includes the dissemination of products that have been well tested based on the results of the development phase by conducting extensive testing.

In the definition stage, the researcher conducted a needs analysis in the classroom during the learning process. The researcher gathered various information in the field, from previous research, and other sources as a literature review related to the teaching module that would be developed using the Teaching Factory learning model. In the definition stage, the researcher conducted five activities as outlined by Thiagarajan et al. (1974):

a. Front-end Analysis

The researcher conducted an initial analysis to obtain a factual overview and solutions to the problems encountered. In this study, the front-end analysis stage assisted in determining and selecting the learning model to be developed.

b. Learner Analysis

In this stage, the researcher analyzed the characteristics of the target students, namely, the characteristics of grade XI students in the odd semester at a vocational high school in Cirebon. These student characteristics included their academic abilities, motivation, cognitive development, and other aspects related to the development of the Teaching Factory learning model based on work culture.

c. Task Analysis

The researcher and the teacher observed the main tasks that students must master, namely having balanced competencies in both hard and soft skills. This analysis included core competency (KI) analysis, basic competency (KD) analysis, and character analysis of the material to be developed in the work culture-based Teaching Factory learning model for the Retail Business concentration on Salesperson Jobs.

d. Concept Analysis

The concept analysis in this study was created in the form of a concept map of the salesperson job learning material, which will be used as a means of achieving specific competencies by identifying and organizing the main components of a salesperson's job in the retail business.

e. Specifying Instructional Objectives

The researcher analyzed the flow of learning objectives regarding the salesperson job material to determine indicators of learning achievement. By formulating learning objectives, the researcher was able to identify the Teaching Factory learning model that can be developed to improve students' soft skills, design observation tools, and develop questionnaires for both teachers and students.

After conducting preliminary studies in the form of literature and field studies, the next stage is to design the development of the Teaching Factory learning model based on work culture to improve students' soft skills, including the design of the initial product in the form of preliminary research instruments and the design of the learning model. The preliminary instrument consists of test questions on the initial soft skills of students. Meanwhile, the actual research instrument is a validation sheet for the learning device development of the teaching factory learning model based on work culture and an observation sheet for the implementation of the teaching factory learning model based on work culture.

RESULTS AND DISCUSSIONS

Results

Researchers conducted research with the aim of developing a work culture-based teaching factory learning model for the Retail Business subject. The development used a 4D model approach. The syntax for developing the 4D model includes the stages of define, design, develop, and disseminate, as recommended by Thiagarajan et al. (1974). The following is an explanation of the syntax for developing a work culture-based teaching factory learning model.

This research and development of a work culture-based teaching factory model, applied to retail business learning for 11th-grade vocational high schools (SMK) with a marketing expertise program in Cirebon City, Cirebon Regency, Kuningan Regency, and Sumedang Regency, was conducted to develop a learning model equipped with teaching modules.

Observations of the learning process indicate that the teaching factory model has not optimally

provided soft skills learning. Industry and the workplace place high expectations on vocational high schools (VHSs) to produce competent graduates with both technical and non-technical skills, including a balance of hard and soft skills. This ensures that the soft skills possessed by vocational high school graduates can complement their hard skills when they enter the workforce, as this is crucial for building and enhancing productive work.

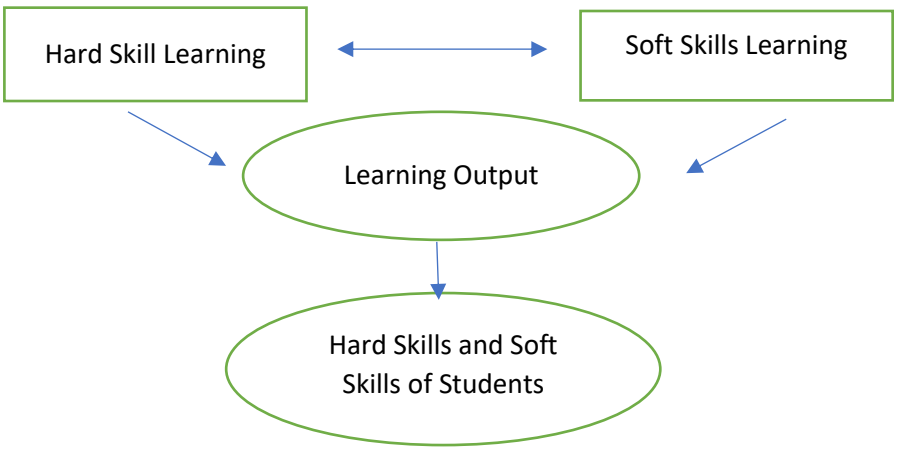
Meanwhile, a preliminary study conducted through interviews with several educators of the retail business specialty at Wahidin Vocational High School in Cirebon City revealed that educators stated they had not optimally developed soft skills during lesson planning, including analyzing learning objectives, preparing teaching materials, and preparing assessment instruments. Most focused more on achieving the technical skills learning targets that students must master.

Observations and interviews with educators of the retail business specialty at Wahidin Vocational High School in Cirebon City revealed that the suboptimal development of students' soft skills was due, among other things, to: 1) a lack of attention from educators to developing students' soft skills during the learning process; 2) educators prioritize achieving technical skills targets that students must master; 3) educators do not set learning objectives from a soft skill perspective; 4) educators do not integrate soft skills into hard skill learning; 5) educators do not prepare teaching materials on soft skills aspects that are integrated with hard skills. This has the impact of creating a gap between graduate competencies and the competencies required by industry and the world of work.

The initial state of learning planning can be identified by analyzing the learning tools in the form of teaching modules developed by the educators participating in this study. Respondents generally developed learning plans in the form of teaching modules, which included the formulation of learning strategies, learning objectives, learning steps, teaching materials, student worksheets, and learning assessment tools.

The preliminary study results indicate that respondents developed learning tools in the form of teaching modules prior to the lesson, which served as guidelines for the implementation of the lesson to ensure effective learning and achieve the learning objectives in accordance with the formulated learning targets.

Figure 2.
TeFa BK Mapping Concept



Source: From the factory model to the classroom-workshop (Spinelli, H., & Martinovich, V., 2023).

In general, in their learning planning, respondents formulated learning strategies using the teaching factory model, which focused more on developing students' technical skills, while not maximizing the soft skills aspect of their learning planning. In formulating learning objectives, learning steps, teaching materials, student worksheets and learning assessment tools, teachers have compiled them according to the technical skill targets that must be achieved by students, supported by planning the facilities and infrastructure needed in the teaching factory model, but educators have not maximized planning that leads to the achievement of students' soft skills needed by industry and the world of work, both in the formulation of learning objectives, learning steps, teaching materials and assessment tools prepared by students.

Table 2.
Results of Validation of Learning Tools, Learning Observation Instrument, Educator Response, Questionnaire, and Student Response Questionnaire

No.	Summary	Validator				Mean	Criteria
		V1	V2	V3	V4		
1.	Teaching Module	3,58	3,74	3,74	3,58	3,66	Very valid
2.	Educator Observation Instrument	3,6	3,9	3,9	3,6	3,75	Very valid
3.	Educator Participant Observation Instrument	3,5	3,88	3,88	3,5	3,69	Very valid
4.	Educator Response Questionnaire	3,6	3,9	3,9	3,6	3,75	Very valid
5.	Student Response Questionnaire	3,6	3,9	3,9	3,6	3,75	Very valid

Source: Author (2024)

The validation results from four validators showed that the average validation score for the learning devices and instruments was very good, so the learning devices and instruments, both observation sheets and questionnaires, were considered valid. The validators' assessment of the development of the learning devices used in this study was based on the indicators contained in the validation sheet for the development of the learning devices. In general, the trial class at SMKS Wahidin Cirebon ran according to the teaching factory learning process. The educators who served as models for this limited trial performed well in understanding and carrying out their assigned tasks. They were able to guide students at the beginning of the lesson in the retail business class, which served as a practical learning environment. During the core activities, students directly implemented product arrangement, customer service, stocktaking reports, and order forms. Evaluation of the work was conducted at the end of each lesson. Learning assessments were conducted throughout the learning process, including the opening, main, and closing activities. A pre-test was administered in the first lesson session and a post-test in the third session, using existing assessment tools and soft skills assessment tools developed in the TeFa BK model.

The educators provided a learning process that emphasized a balanced delivery of technical and non-technical skills (hard skills and soft skills) with the same achievement targets, in accordance with the learning outcome indicators specified in the lesson plan. Educators in using the model have fully mastered the phases in the TeFa BK model and mastered the soft skill assessment techniques developed in the TeFa BK model, but educators need to get used to implementing the hard skill and soft skill learning process in a balanced manner because these two aspects have an equally important role in shaping students into professional workers.

Discussions

The TeFa-BK model has strong potential for scalability across vocational schools due to its adaptable structure and alignment with industry needs. However, its successful implementation in different school environments may face several challenges. Variations in infrastructure,

availability of industry partners, and institutional commitment can affect the model's effectiveness. Schools with limited facilities or weak links to industry may find it difficult to replicate authentic workplace experiences. Additionally, teachers may require intensive training to adopt constructivist and behaviorist strategies effectively, which could be a barrier in schools with limited professional development resources. Cultural differences between regions and industries may also require contextual adjustments to ensure that kaizen-based values and public service principles are relevant and accepted. These factors highlight the need for phased implementation, capacity building, and localized adaptation to ensure the model's sustainability and effectiveness when scaled to diverse educational contexts.

The learning process, through direct experience, through thinking from the job orientation stage, through job implementation, and evaluation of work results, in the TeFa BK model is a constructivist activity process, while the direct experience process, conducted repeatedly over an extended period, is a behaviorist activity process. The TeFa BK learning model facilitates educators to develop technical and non-technical skills (hard skills and soft skills) in a balanced manner. Both hard skills and soft skills receive equal attention from educators, allowing students to develop soft skills that support their hard skills.

The TeFa BK model shapes and develops students' soft skills, supporting their hard skills, which are practically needed by industry and the workplace. TeFa BK helps develop soft skills through learning by directly performing both technical and non-technical work and solving problems that arise during the work, both technical and non-technical. Vocational high school students are particularly relevant for developing the TeFa BK model.

This aligns with the findings of Widarto et al. (2012: 410) which states that students as educational products are required to have eight competencies, namely: (1) communication skills (2) critical and creative thinking (3) inquiry reasoning thinking (4) interpersonal skills (5) multicultural/multilingual literacy (6) problem solving (7) information digital literacy and (8) technological skills. These competencies not only concern hard skill competencies but also soft skill competencies.

Expert validation results indicate that the Work Culture-Based Teaching Factory (TeFa-BK) model meets the validity criteria, with a high average validation score across all model components. This confirms the TeFa-BK model's suitability for implementation in retail business learning at vocational schools to improve students' soft skills. Based on the three effectiveness criteria, all aspects were met during the trial: student activity, student response, and order processing tests. Because all three effectiveness criteria were met, it can be concluded that the learning model is effective. Previous research by Martawijaya (2011), which produced the 6-Step Teaching Factory (TF-6M) learning model, demonstrated that the TF-6M learning model effectively improves student competency in productive subjects. The six steps of one TF-6M learning cycle are: receiving an order, analyzing the order, stating readiness to work on the order, working on the order, conducting quality control, and submitting the order. Before implementing the model, teachers and students agreed to create an industrial climate in the school, conduct communication exercises, and practice analyzing orders. This study also found that the TF-6M model was able to improve students' soft skills and hard skills through six steps of model activities.

The TeFa BK model effectively integrates constructivist and behaviorist learning theories. The constructivist approach allows students to actively construct knowledge and skills through direct experience, while the behaviorist approach shapes behavior through repetition and reinforcement. The integration of these two theories strengthens the development of soft skills, which are based not only on conceptual understanding but also on the formation of positive

habits.

The development of the TeFa BK model is based on a strong integration of constructivist and behaviorist learning theories, providing a solid theoretical foundation for the learning model. The TeFa BK learning model is based on constructivist learning theory, which emphasizes the learning process by enhancing students' active role in constructing conceptual understanding of the material independently through experience and contextual reflection. Experiences are built on the realities of everyday life, allowing students to engage in an educational process that allows them to construct their own knowledge.

Meanwhile, behaviorist learning theory is used in the learning process to train behaviors in such a way that behavioral changes occur in the form of habits that are mastered by the individual. Learning must be able to train individual students using stimuli and responses so that the result of learning is behavioral changes that can be mastered by the student. The integration of these two theories in the TeFa BK model supports findings in recent research as cited by Orozco et al. (2019) which emphasizes the need for a clear conceptual framework for integrative learning, distinguishing between process dimensions (intentionality, time, locus) and outcome dimensions (goals, logic, locus). This dual approach involving 48 participants revealed that effective integration between theory and practice is crucial for vocational success, in line with constructivist and behaviorist principles.

Several original findings emerged from this research, including:

1. This research resulted in the TeFa-BK learning model that integrates the *kaizen* work culture into the conventional teaching factory model. This model was developed to address the gap between vocational high school graduates and industry needs, particularly in the soft skills aspect of Retail Business learning.
2. The TeFa-BK model was developed using a research and development (R&D) method modified from Borg & Gall into a 4-D model, encompassing: define, design, develop, and disseminate.
3. This model integrates constructivist and behaviorist learning theories in its implementation. Constructivism theory is applied when students independently construct and shape new knowledge and skills through direct experience, while behaviorism theory is applied through repetition and habituation to develop positive work behaviors.
4. The TeFa-BK model has proven effective in improving students' soft skills in retail business learning. The model's effectiveness is demonstrated by meeting three criteria: a. The educator's ability to implement learning in a minimum of a good category, b. Positive student response to the learning model, c. Significant improvement in students' soft skills.
5. The TeFa-BK model provides a learning experience that strikes a balance between hard and soft skills required by industry. This aligns with industry demands, which indicate that approximately 80% of success in the workplace is determined by soft skills, while only 20% is determined by hard skills.
6. The TeFa-BK model makes a significant contribution to retail business learning by creating a learning environment that mimics real-world conditions in the retail industry. Students gain hands-on experience handling tasks such as product layout, customer service, stocktaking reports, and order processing, while also implementing the values of the kaizen work culture. This model helps bridge the gap between vocational high school graduates and the needs of the modern retail industry, which requires a workforce with a balance of hard and soft skills. With an integrated learning approach,

students not only master technical skills but also develop soft skills such as communication, teamwork, initiative, creativity, and critical thinking, which are highly sought after in the retail industry.

The implementation of the TeFa-BK model has important implications for vocational education policy, particularly in the context of the implementation of the Independent Curriculum in vocational high schools. This model supports efforts to create a link and match between the vocational high school curriculum and the needs of the industrial world, in line with the goal of revitalizing vocational education in Indonesia. The TeFa-BK model also aligns with the strategy of the Directorate General of Vocational Education regarding the transformation of vocational high schools into Centers of Excellence through enhancing workplace learning to strengthen soft skills and employability.

CONCLUSION

Based on the research results and discussions outlined above, the following conclusions can be drawn:

1. The state of retail business learning in vocational high schools (SMK) before the implementation of the Work Culture-Based Teaching Factory (TeFa-BK) model showed that educators placed greater emphasis on hard skills learning and less attention to the development of students' soft skills. This is evident in learning planning that failed to optimize soft skills development, both in the formulation of learning objectives, the development of teaching materials, and the assessment instruments for learning outcomes. As a result, students' soft skills remained adequate, while industry and the workplace require graduates with an adequate balance of hard and soft skills.
2. The development of the Work Culture-Based Teaching Factory (TeFa-BK) model was conducted through research and development methods, adapting the 4-D model, consisting of the stages of defining, designing, developing, and disseminating. The TeFa-BK model integrates the kaizen work culture (5S/5R: Concise, Neat, Clean, Maintain, Diligent) into conventional teaching factory learning. This model applies constructivist and behaviorist learning theories with four learning phases: (1) orientation, (2) carrying out the work, (3) evaluating the work results, and (4) repeating the work. The integration of work culture into the TeFa-BK model provides students with direct experience in applying industrial work culture values to retail business learning.
3. The effectiveness of the Work Culture-Based Teaching Factory (TeFa-BK) model in improving students' soft skills has been proven through the results of limited and extensive trials. Educators' ability to manage learning using the TeFa-BK model was in the good category, with an average score of 4.15 in the limited trial and increasing to 4.3 in the extensive trial. Student responses to the TeFa-BK model were very positive, with an average score of 3.6 on a scale of 4, indicating high interest and motivation in participating in the learning process. Significant improvements in students' soft skills were seen after implementing the TeFa-BK model, particularly in aspects of kaizen work culture, communication skills, teamwork, initiative, creativity, and critical thinking.

The results of the study indicate that the implementation of TEFA based on work culture consistently improves students' soft skills achievement across various vocational school contexts. This confirms that soft skills are not solely formed through technical learning activities, but are strongly influenced by the reinforcement of work culture values integrated into the learning process. The significant difference in achievement between the control and experimental classes also indicates that the conventional TEFA learning model is not yet

effective enough in developing non-technical competencies essential for the workplace. Therefore, vocational learning needs to be directed not only at hard skills but also at cultivating consistent and systematic professional work attitudes and values.

REFERENCES

Agus, W, and Hamrin. *Menjadi Guru Berkarakter: Strategi Membangun Kompetensi Dan Karakter Guru*. Yogyakarta: Pustaka Pelajar.

Almeida, Fernando, and Zoltan Buzady. 2022. "Development of Soft Skills Competencies through the Use of FLIGBY." *Technology, Pedagogy and Education* 31(4): 417–30.

Amar, Akhmad F, Dadang Hidayat, and Amay Suherman. 2016. "Penerapan Model Pembelajaran Teaching Factory 6 Langkah (Model Tf-6M) Untuk Meningkatkan Motivasi Berprestasi Siswa Di Smk." *Journal of Mechanical Engineering Education* 2(2): 189.

Andhika, Lesmana Rian. 2025. "Public Service Management: An Emerging Research Trend." *Jurnal Borneo Administrator* 21(1): 61–74.

Andriyani, Fera. 2015. "Teori Belajar Behavioristik Dan Pandangan Islam Tentang Behavioristik." *Syaikhuna* 10(2): 165–80.

Angulo, P S, J Galindo-Melero, S De-Diego-Poncela, and Ó Martín. *Promoting Soft Skills in Higher Engineering Education: Assessment of the Impact of a Teaching Methodology Based on Flipped Learning, Cooperative Work and Gamification*. Education and Information Technologies.

Asplund, Stig Börje, Nina Kilbrink, and Hamid Asghari. 2022. "Teaching and Learning How to Handle Tools and Machines in Vocational Educational Workshop Sessions." *Journal of Curriculum Studies* 54(6): 809–31.

Attanasio, Orazio, Arlen Guarín, Carlos Medina, and Costas Meghir. 2017. "Vocational Training for Disadvantaged Youth in Colombia: A Long-Term Follow-Up." *American Economic Journal: Applied Economics* 9(2): 131–43.

Austin, Agata, and Bogna Zacny. "The Role of Public Service Motivation and Organizational Culture for Organizational Commitment." *Management* 19(2).

Azwar, S. *Reliabilitas Dan Validitas*. Yogyakarta: Pustaka Pelajar.

B.N.S.P. "Standar Kompetensi Kerja Nasional Indonesia."

B.P.S. *Keadaan Ketenagakerjaan Indonesia Agustus 2021*. Badan Pusat Statistik.

Berybe, Gregorius Antariksa, Maksimus Diamat, and Yohanes Paulus Hanny Wadhi. 2023. "Analysis of Teaching Factory Implementation in Vocational School Case Study: Public Vocational High School 1 Labuan Bajo." *JURNAL PAJAR (Pendidikan dan Pengajaran)* 7(3): 548.

Bhirawa, Harian. "Menyoal Rendahnya Soft Skills Lulusan S1 Indonesia." https://harianbhirawa.co.id/menyoal-rendahnya-soft-skills-lulusan-s1-indonesia.

Borg, W R, and M D Gall. *Educational Research: An Introduction*. 7th ed. Boston: Pearson Education.

Borges, Giovana Giardini, and Rogéria Cristiane Gratão de Souza. 2024. 168 Information and Software Technology *Skills Development for Software Engineers: Systematic Literature Review*. Information & Software Technology.

Bruguera, Carles, Carmen Pagés, Mitchell Peters, and Àngels Fitó. 2025. "Micro-Credentials and Soft Skills in Online Education: The Employers' Perspective." *Distance Education* 46(1): 56–76.

Burhan, M, and R Wijaya. 2013. "Model Pengelolaan Teaching Factory Sekolah Menengah Kejuruan." *Jurnal Penelitian Pendidikan* 30(2): 2013.

Byrom, John, Cathy Parker, and John Harris. 2002. "Towards a Healthy High Street: Identifying Skills Needs in Small Independent Retailers." *Education + Training* 44(8/9): 413–20.

Caeiro-Rodriguez, Manuel et al. 2021. "Teaching Soft Skills in Engineering Education: An European Perspective." *IEEE Access* 9: 29222–42.

Catur. "Soft Skill." *Diakses dari*. http://caturdp.wordpress.com/2009/12/19/soft-skill/.

Cheang, Michael, and Georgia Lynn Yamashita. 2020. "Employers' Expectations of University Graduates as They Transition into the Workplace." *European Journal of Social Science Education and Research* 7(3): 27.

Chi, Xiaoni et al. 2024. "Research on the Construction and Practice of Four-Dimensional Teaching System of Ideologies and Politics in Automobile Courses in Higher Vocational Institutions." *Applied Mathematics and Nonlinear Sciences* 9(1).

Chin, Mellisa. 2023. "The Zero Reject Policy: A Way Forward for Inclusive Education in Malaysia?" *International Journal of Inclusive Education* 27(4): 526–40.

Chiu, Ya Ling, Li Xu, Yuan Teng Hsu, and Jying Nan Wang. 2024. "Soft Skills Unveiled: A Comprehensive Exploration of Employer Preferences and Employability Essentials." *Assessment and Evaluation in Higher Education* 49(8): 1105–20.

Choo, Chan Bee. 2007. "Activity-Based Approach to Authentic Learning in a Vocational Institute." *Educational Media International* 44(3): 185–205.

Commission, European. *A New Skills Agenda for Europe*. Brussels: European Commission.

Costa, Marcelle Feitoza Bassi, and Carla Martins Cipolla. 2025. "Critical Soft Skills for Sustainability in Higher Education: A Multi-Phase Qualitative Study." *Sustainability (Switzerland)* 17(2).

Dadelo, Stanislav. 2025. 18 Creativity Studies *Possibilities for Evaluation to Foster the Soft Skills of Critical Thinking, Creativity, and Communication in Higher Education*. Creativity Studies.

Dahar, R W. *Teori-Teori Belajar Dan Pembelajaran*. Jakarta: Erlangga.

Deep, Sadia et al. 2020. "The Problem-Based Learning Approach towards Developing Soft Skills: A Systematic Review." *Qualitative Report* 25(11): 4029–54.

DetikEdu. "Menurut LinkedIn, Keterampilan Ini Sulit Didapat Dari Tenaga Kerja RI." https://www.detik.com/edu/detikpedia/d-7798531.

Devadason, Evelyn Shyamala, Thirunaukarasu Subramaniam, and Esther Gnanamalar Sarojini Daniel. 2010. "Final Year Undergraduates' Perceptions of the Integration of Soft Skills in the Formal Curriculum: A Survey of Malaysian Public Universities." *Asia Pacific Education Review* 11(3): 321–48.

Diwangkoro, E., and S. Soenarto. 2020. "Development of Teaching Factory Learning Models in Vocational Schools." In *Journal of Physics: Conference Series*,.

Djiwandono, S E. *Psikologi Pendidikan*. Jakarta: Depdikbud.

Driver, R, and V Oldham. *Konstruktivist Approach to Curriculum Development*. Leeds: Centre for Studies in Science and Mathematics Education, The University.

Elfindri, dkk. *Soft Skills Untuk Pendidikan*. Baduose Media.

Fetherston, Tony. 2001. "Pedagogical Challenges for the World Wide Web." *AACE Journal* 9(1): 25–32. http://www.editlib.org/p/10270/.

Fitra, A, and Dkk. "Analisis Penerapan Konsep 5s Di Bidang Proses Maintenance PT." *Traktor Nusantara. Jurnal Teknik Industri* 2(2): 213–214.

Fong, M, and P Ling. "Preparing Students for the Modern Workplace: The Importance of Work-Integrated Learning." *International Journal of Work-Integrated Learning* 21(4): 331–335.

Forum, World Economic. "The Future of Jobs Report 2020."

Ghodrati, A. "A Conceptual Study on the 5S Principles in Service Organisation." *Journal of Advanced Research in Management* 4(1).

Hama Kareem, J. "The Impact of 5S Strategy on the Safety Climate & Productivity at Small Scale Industries." *International Journal of Research in Industrial Engineering* 5(1).

Hergenhahn, B R, and M H Olson. *Theories Of Learning: Teori Belajar*. Jakarta: Kencana Media Group.

Herr, Meryl. 2017a. “The 4D-R Method of Imagining the Future, Part 1: Implications for Vocational Discipleship.” *Christian Education Journal* 14(2): 405–20.

Herr. 2017b. “The 4D-R Method of Imagining the Future, Part 2: Considerations on Design, Development, and Use.” *Christian Education Journal* 14(2): 421–36.

Hirano, H. *5S for Operators: 5 Pillars of the Visual Workplace*. New York: Productivity Press.

Ho, S K M. “5-S Practice: The First Step towards Total Quality Management.” *Total Quality Management & Business Excellence* 10(3).

Hoppe, Magnus. 2016. “Policy and Entrepreneurship Education.” *Small Business Economics* 46(1): 13–29.

Hotaran, Illinica. “Service Management –Modern Approach between Past and Future.” *Business Excellence and Management* 1(ue 1).

Hurrell, Scott A. 2016. “Rethinking the Soft Skills Deficit Blame Game: Employers, Skills Withdrawal and the Reporting of Soft Skills Gaps.” *Human Relations* 69(3): 605–28.

Illah, S. *Pengembangan Soft Skill Di Perguruan Tinggi*. Bogor: Dirjen Pendidikan Tinggi.

Illah, S. *Pengembangan Soft Skills Di Perguruan Tinggi*. Jakarta: Kemenristekdikti.

Indrawati, E M. “Peningkatan Pencapaian Kualitas Lulusan D3 Teknik Elektro Dengan Model Teaching Factory.” *Jurnal Penjaminan Mutu* 3(1): 43–52.

Jaca, Carmen et al. 2014. “Learning 5S Principles from Japanese Best Practitioners: Case Studies of Five Manufacturing Companies.” *International Journal of Production Research* 52(15): 4574–86.

Jackson, Denise, and Ruth Bridgstock. 2019. “Evidencing Student Success and Career Outcomes among Business and Creative Industries Graduates.” *Journal of Higher Education Policy and Management* 41(5): 451–67.

Jackson, Denise, and Anna Rowe. 2023. “Impact of Work-Integrated Learning and Co-Curricular Activities on Graduate Labour Force Outcomes.” *Studies in Higher Education* 48(3): 490–506.

Jackson, Paul, Diane Robertson, and Glenda Verrinder. *Reflections on Experiential Learning in the Bachelor of Public Health*. Environmental Health.

Jaramillo, A, and J Lizarazo. “Analyzing the Skills Gap in Spain: The Role of Vocational Education and Training.” *Journal of Vocational Education & Training* 72(2): 206–227.

Johnson, D W. *The Role of Cooperative Learning in Assessing and Developing Social Skills*. eds. R J Gillies, A Ashman, and J Terwel. New York: Springer-Verlag.

Jones, Kiku, Lori N.K. Leonard, and Guido Lang. 2018. “Desired Skills for Entry Level IS Positions: Identification and Assessment.” *Journal of Computer Information Systems* 58(3): 214–20.

Jong, J.A.de S, R F A Wierstra, and J Hermanussen. “An Exploration of the Relationship between Academic and Experiential Learning Approaches in Vocational Education.” *British Journal of Educational Psychology* 76.

Kebudayaan Republik Indonesia, Kementerian Pendidikan. *Revitalisasi Pendidikan Kejuruan*. Jakarta: Kemendikbud RI.

Kemp, Ian, and Kay Foster. 1995. “From Ivory Towers to Factory Floors.” *Education + Training* 37(2): 26–32.

Kim, Jun Woo, Jin Sung Park, and Soo Kyun Kim. 2020. “Application of FlexSim Software for Developing Cyber Learning Factory for Smart Factory Education and Training.” *Multimedia Tools and Applications* 79(23–24): 16281–97.

Koivisto, Jaana Maija et al. 2024. 67 International Social Work *Designing and Developing a Virtual Reality Escape Game for Youth Vocational Rehabilitation*. International Social Work.

Kompascom. “Desember 10). Gen Z Banyak Kena Layoff, Bappenas: Karena Soft Skill Lemah.” https://www.kompas.com/edu/read/2024/12/10/150006671/gen-z-banyak-kena-layoff-bappenas-karena-soft-skill-lemah.

Kregel, Ingo. 2019. “Kaizen in University Teaching: Continuous Course Improvement.”

International Journal of Lean Six Sigma 10(4): 975–91.

Kunandar. *Guru Profesional Implementasi KTSP Dan Sukses Dalam Sertifikasi Guru*. Jakarta: Rajawali Press.

Kusumastuti, R, Ngadiman, and Sohidin. "Upaya SMK Bidang Studi Bisnis Manajemen Dalam Memenuhi Kebutuhan Softskill Dunia Industri." *Jupe UNS* 1(3): 1–13.

Lee, Yin Fah Elliot, Tzu Hua Wang, Ming Tay Foo, and Kee Fui Turner Lam. 2023. "Embracing DDMT Teaching Model and Design Thinking for Organization Development." *Sustainability (Switzerland)* 15(11).

Listiani, Teni. 2010. "Penerapan Konsep 5S Dalam Upaya Menciptakan Lingkungan Kerja Yang Ergonomis Di STIA LAN Bandung." *Jurnal Ilmu Administrasi: Media Pengembangan Ilmu dan Praktek Administrasi* 7(3): 204–14.

Luthfiana, Yusrina, Sujarwoto Sujarwoto, and Moh. Said. 2025. "Evaluating Public University Service Quality and Its Influence on Student Satisfaction and Loyalty: The Disjoint Two-Stage Approach." *Jurnal Manajemen Pelayanan Publik* 9(2): 392–410. https://jurnal.unpad.ac.id/jmpp/article/view/61990.

Ma, Beifang, Maximilian Krötz, and Esther Winther. 2024. 17 Vocations and Learning *Domain-Linked and Domain-Specific Competence: A Validation Study of a Two-Dimensional Model of Economic Vocational Competence in Germany*. Vocations and Learning.

Machwati, Azzi, and Udik Budi Wibowo. 2015. "Pengaruh Budaya Kerja, Komitmen, Motivasi Kerja Guru Terhadap Iklim Organisasi Sd." *Jurnal Akuntabilitas Manajemen Pendidikan* 3(2): 156–72.

Malakolunthu, Suseela, and Nagappan C. Rengasamy. 2012. "Education Policies and Practices to Address Cultural Diversity in Malaysia: Issues and Challenges." *Prospects* 42(2): 147–59.

Manning, P, and C Smith. "Workplace Readiness: Bridging the Gap Between Education and Employment." *Workforce Solutions Review* 2(1): 29–30.

Mariah, S, and M Sugandi. *Kesenjangan Softskill Lulusan SMK Dengan Kebutuhan Tenaga Kerja Di Industri*. Jakarta: Kemendikbudristek.

Marsudi, Almatius Setya, and Yunus Widjaja. 2019. "Industri 4.0 Dan Dampaknya Terhadap Financial Technology Serta Kesiapan Tenaga Kerja Di Indonesia." *Ikraith Ekonomika* 2(2): 1–10.

Martawijaya, Dadang Hidayat. 2012. "Developing a Teaching Factory Learning Model To Improve Production Competencies Among Mechanical Engineering Students in a Vocational Senior High School." *Journal of Technical Education and Training* 4(2): 45–56.

Masaaki, I. *Gemba Kaizen: A Commonsense Approach to a Continuous Improvement Strategy*. New York: McGraw-Hill Professional.

Mavrikios, D., N. Papakostas, D. Mourtzis, and G. Chryssolouris. 2013. "On Industrial Learning and Training for the Factories of the Future: A Conceptual, Cognitive and Technology Framework." *Journal of Intelligent Manufacturing* 24(3): 473–85.

Medcomid. "BPS: 9,9 Juta Gen Z Menganggur, Soft Skills Rendah Jadi Penyebab Utamanya." https://www.medcom.id/pendidikan/jobseeker/5b2w9rek.

Mourtzis, Dimitris, Nikos Panopoulos, and John Angelopoulos. 2022. "A Hybrid Teaching Factory Model towards Personalized Education 4.0." *International Journal of Computer Integrated Manufacturing* 36(12): 1739–59.

Mukhidin, Mukhidin, and Jonah Mupita. 2018. "Bridging the Skills Gap Through Teaching Factory (TEFA)." In *International Conference on Aptekindo*,.

Mulyasa, E. *Standar Kompetensi Dan Sertifikasi Guru*. Bandung: PT. Remaja Rosdakarya.

Mulyono, I. *Dari Karya Tulis Ilmiah Sampai Dengan Soft Skills*. Bandung: Yrama Widya.

Muqowim. 2012. PT Pustaka Insan Madani *Pengembangan Soft Skills Guru*. Yogyakarta: Pedagogia.

Nasution. *Berbagai Pendekatan Dalam Proses Belajar Mengajar*. Jakarta: Bumi Aksara.

Nasution. *Motivasi Belajar Siswa*. Jakarta: Bumi Aksara.

Neff, Thomas J, James Citrin, and Paul B Brown. 1999. *Lessons from the Top : The Search for America's Best Business Leaders*. New York: Doubleday Business.

Nhat, Truong Tran Minh, and Duong Thi Kim Oanh. 2023. "The Role of Community Service-Learning on the Development of Technical Students' Essential Soft Skills: Case Study at Industrial University of Ho Chi Minh City, Vietnam." *Research Journal in Advanced Humanities* 4(2).

Nicholson, Michael, and Dennis Moss. 1990. "Matching the Curriculum to the Needs of Industry." *Education + Training* 32(6): 3–8.

Nickson, Dennis et al. 2012. "Soft Skills and Employability: Evidence from UK Retail." *Economic and Industrial Democracy* 33(1): 65–84.

Nickson, Dennis, Robin Price, Hazel Baxter-Reid, and Scott A. Hurrell. 2017. "Skill Requirements in Retail Work: The Case of High-End Fashion Retailing." *Work, Employment and Society* 31(4): 692–708.

Nur, M. *Pendekatan-Pendekatan Konstruktivis Dalam Pembelajaran*. Surabaya: Universitas Negeri Surabaya.

O.E.C.D. *Skills for Social Progress: The Power of Social and Emotional Skills*. Paris: OECD Publishing.

O.E.C.D. *The Future of Education and Skills: Education 2030*. Paris: OECD Publishing.

Organization, International Labour. *Global Employment Trends for Youth 2020: Technology and the Future of Jobs*. Geneva: ILO.

Orozco, Mariana, David Gijbels, and Christiane Timmerman. 2019. "Empirical Conceptualisation of Integrative Learning. A Focus on Theory-Practice Integration in Technical Vocational Education and Training." *Vocations and Learning* 12(3): 405–24.

Perdana, Novrian Satria. 2019a. "Analisis Permintaan Dan Penawaran Lulusan Smk Dalam Pemenuhan Pasar Tenaga Kerja." *Refleksi Edukatika : Jurnal Ilmiah Kependidikan* 9(2).

Perdana, Novian Satria. 2019b. "Evaluasi Pelaksanaan Pembelajaran Model Teaching Factory Dalam Upaya Peningkatan Mutu Lulusan." *Jurnal Serunai Administrasi Pendidikan* 7(1).

Peterson, Michael. 1986. "Work and Performance Samples for Vocational Assessment of Special Students: A Critical Review." *Career Development for Exceptional Individuals* 9(2): 69–76.

Pineda-Herrero, Pilar, and Óscar Mas-Torelló. 2015. "How to Measure the Efficacy of VET Workplace Learning: The FET-WL Model." *Education and Training* 57(6): 602–22.

Poizat, Germain et al. 2024. 17 Vocations and Learning *Enactive Design-Based Research in Vocational and Continuing Education and Training*. Vocations and Learning.

Polakova, M et al. "Soft Skills and Their Importance in the Labour Market under the Conditions of Industry 5.0." *Heliyon* 9(9).

Prashar, Anupama. 2014. "Redesigning an Assembly Line through Lean-Kaizen: An Indian Case." *TQM Journal* 26(5): 475–98.

Pratama, M, and A Mulyana. "The Effectiveness of Merdeka Belajar Policy in Vocational Schools: A Pilot Study." *Journal of Vocational and Technical Education* 25(2): 113–124.

Pridham, Bruce, Simon O'Mallon, and Vaughan Prain. 2012. "Insights into Vocational Learning from an Applied Learning Perspective." *Vocations and Learning* 5(2): 77–97.

Purnamawati, P. "Pengembangan Model Pembelajaran Bidang Keahlian Elektronika Industri Berbasis Metakognisi."

Purwanto, N. *Psikologi Pendidikan*. Bandung: Remaja Rosdakarya.

Putra, R. C. et al. 2018. "Design Learning of Teaching Factory in Mechanical Engineering." In *IOP Conference Series: Materials Science and Engineering*,.

Putrayasa, I B. *Landasan Pembelajaran*. Bali: Undiksha Press.

Rahyubi, H. *Teori-Teori Belajar Dan Aplikasi Pembelajaran Motorik: Deskripsi Dan Tinjauan Kritis*. Bandung: Nusa Media.

Ratnawati, D. “Kontribusi Pendidikan Karakter Dan Lingkungan Keluarga Terhadap Softskill Siswa SMK.” *Jurnal Keguruan dan Ilmu Tarbiyah* 1(1): 23–32.

Ratnawati, E. “Karakteristik Teori-Teori Belajar Dalam Proses Pendidikan (Perkembangan Psikologis Dan Aplikasi.” *Edueksos: Jurnal Pendidikan Sosial & Ekonomi* 4(2): 1–23.

Robinson, P, and T Judge. *Organizational Behavior*. 17th ed. New York: Pearson.

Robles, Marcel M. 2012. “Executive Perceptions of the Top 10 Soft Skills Needed in Today’s Workplace.” *Business Communication Quarterly* 75(4): 453–65.

Rohman, A. *Educational Policy in Decentralization Era*. Yogyakarta: Pustaka Pelajar.

Romanenko, Yulia N., Maria Stepanova, and Nadezhda Maksimenko. 2024. “Soft Skills: Students and Employers Crave.” *Humanities and Social Sciences Communications* 11(1).

Rüdele, Kai, and Matthias Wolf. 2024. “Industrial Management Meets Environmental Reporting – How a Learning Factory for Engineering Education Is Used to Teach Accounting of Greenhouse Gas Emissions.” *International Journal of Sustainability in Higher Education* 25(9): 397–418.

Rusdiyani, I et al. “Multi-Cultural and Local Wisdom-Based Curriculum Development Model in the Independent Campus Learning Program to Improve Graduates’.” In *Micro Skills. Evolutionary Studies in Imaginative Culture*,.

Rusman. *Model-Model Pembelajaran: Mengembangkan Profesionalisme Guru*. ed. 2. Jakarta: Rajawali Pers.

Rusuli, I. “Refleksi Teori Belajar Behavioristik Dalam Persepektif Islam.” *Jurnal Pencerahan* 8(1): 38–54.

Sailah, I. *Pengembangan Soft Skill Di Perguruan Tinggi*. Jakarta: Departemen Pendidikan Nasional.

Samarthyam, Ganesh, Girish Suryanarayana, Arbind Kumar Gupta, and Raghu Nambiar. 2012. “FOCUS: An Adaptation of a SWEBOK-Based Curriculum for Industry Requirements.” In *Proceedings - International Conference on Software Engineering*, , 1215–24.

Sani, R A. *Teaching Factory*. Jakarta: Bumi Aksara.

Sanjaya, W. *Kurikulum Dan Pembelajaran: Teori Dan Praktik Pengembangan Kurikulum Tingkat Satuan Pendidikan*. Jakarta: Prenada Media Group.

Schunk, D H. “Verbalization and Children’s Self-Regulated Learning.” *Contemporary Educational Psychology* 11(4): 347–369.

Setiani, Fani, and Rasto Rasto. 2016. “Mengembangkan Soft Skill Siswa Melalui Proses Pembelajaran.” *Jurnal Pendidikan Manajemen Perkantoran* 1(1): 160.

Shalahuddin, M. *Metodologi Pengajaran Agama*. Surabaya: Bina Ilmu.

Sharma, A. *Professional Development for Teachers*. New Delhi: Deep & Deep Publication.

Simon, S I. “Achieving Corporate Culture Change through Safety Leadership.” In *Contemporary Ergonomics*, London: Taylor & Francis, 59–63.

Siregar, E, and N Hartini. *Teori Belajar Dan Pembelajaran*. Bogor: Ghalia Indonesia.

Siregar, Muhammad Yamin, Ahmad Rafiki, and Nasrullah Hidayat. 2024. “Analysis of Service Quality, Entrepreneurial Marketing, and Intellectual Capital to Increasing SME’s Performance.” *Jurnal Manajemen Pelayanan Publik* 8(3): 1042–56. https://jurnal.unpad.ac.id/jmpp/article/view/58483.

Slameto. 2003. *Belajar Dan Faktor-Faktor Yang Mempengaruhinya*. Jakarta: Rineka Cipta.

Spinelli, Hugo, and Viviana Martinovich. 2023. “From the Factory Model to the Classroom-Workshop: Learning from Practice in the Fields of Health and Education.” *Global Public Health* 19(1).

Suardi, M. *Buku Pedoman Guru*. Jakarta: PT Indeks.

Suardipa, I Putu, I Ketut Widiara, and Ni Made Indrawati. 2021. “Urgensi Soft Skill Dalam Perspektif Teori Behavioristik.” *Edukasi: Jurnal Pendidikan Dasar* 2(1): 63–74.

Suárez-Barraza, Manuel F., and Francisco G. Rodríguez-González. 2015. “Bringing Kaizen to the

Classroom: Lessons Learned in an Operations Management Course." *Total Quality Management and Business Excellence* 26(9–10): 1002–16.

Succi, Chiara, and Magali Canovi. 2020. "Soft Skills to Enhance Graduate Employability: Comparing Students and Employers' Perceptions." *Studies in Higher Education* 45(9): 1834–47.

Sudirman, I. *Budaya Organisasi*. Bandung: PT Remaja Rosdakarya.

Sugiyono. *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*. Bandung: Alfabeta.

Sukmawaty, Wahyu Eka Priana, and Sri Purwani. 2020. "Pengembangan Model Pembelajaran Tf-P5M Pada Program Studi Tata Busana." *Didaktika : Jurnal Kependidikan* 14(2): 203–18.

Sulistyo, B., I. Siswanto, Tawardjono, and N. Widodo. 2019. "The Effects of a Teaching Factory Learning Model on Students' Competency: An Empirical Study at the Department of Automotive Engineering Education of Universitas Negeri Yogyakarta." In *IOP Conference Series: Materials Science and Engineering*,.

Supriyadi, D, and Triguno. *Budaya Kerja Organisasi Pemerintah*. Jakarta: Lembaga Administrasi Negara.

Surya, M. *Psikologi Pembelajaran Dan Pengajaran*. Bandung: Pustaka Bani Quraisy.

Suryanti, H H S, and S Supeni. "A Problem Based Learning (PBL) Model in Developing Students' Soft Skills Aspect." *The International Journal of Higher Education* 8(8).

Suryaputra, N A. *Super Student*. Surabaya: PT. Integer Indonesia.

Sutil-Martín, Dolores Lucía, and F. Javier Otamendi. 2021. "Soft Skills Training Program Based on Serious Games." *Sustainability (Switzerland)* 13(15).

Suwondo, C. "Penerapan Budaya Kerja Unggulan 5s (Seiri, Seiton, Seiso, Seiketsu." *Shitsuke) di Indonesia. Jurnal Magister Manajemen* 1(1): 32–38.

Suyono, and Hariyanto. *Belajar Dan Pembelajaran*. Bandung: PT. Remaja Rosdakarya.

Tahir, R, and Z Abdullah. "Shaping Industry 4.0 Ready Talent: TVET Experts'." In *Strategies in Content Selection - NGT and ISM Approach. Evolutionary Studies in Imaginative Culture*,.

Thiagarajan, S, D S Semmel, and M I Semmel. *Instructional Development for Training Teachers of Expectional Children*. Bloomington: Indiana University.

Thomas, Dale F., and Frederick E. Menz. 1997. "Validation of the Vocational Assessment Protocol." *Journal of Head Trauma Rehabilitation* 12(5): 72–87.

Thompson, W G. *The Effects of Character Education on Student Behavior*. Digital Commons East Tennessee State University.

Tisch, M. et al. 2016. "Learning Factory Design: A Competency-Oriented Approach Integrating Three Design Levels." *International Journal of Computer Integrated Manufacturing* 29(12): 1355–75.

Triguno. *Budaya Kerja: Menciptakan Lingkungan Yang Kondusive Untuk Meningkatkan Produktivitas Kerja*. 6th ed. Jakarta: PT. Golden Trayon Press.

Triguno. *Budaya Kerja*. Jakarta: PT. Golden Trayon Press.

Trilling, B, and C Fadel. 2010. "21St Century Skills: Learning for Life in Our Times." *Choice Reviews Online* 47(10): 47-5788-47–5788.

Tsirkas, Konstantinos, Alexandra Paraskevi Chytiri, and Nancy Bouranta. 2020. "The Gap in Soft Skills Perceptions: A Dyadic Analysis." *Education and Training* 62(4): 357–77.

U.N.E.S.C.O. *Transforming Technical and Vocational Education and Training: Building Skills for Work and Life*. Paris: UNESCO.

Utaminingsih, S. "Pengembangan Softskill Berbasis Karir Pada SMK Di Kota Semarang." *Jurnal Pendidikan Ekonomi Dinamika Pendidikan* 6(2): 119–133.

Vokasi, Direktorat Jenderal Pendidikan. *Kurikulum Merdeka*. Jakarta: Kemendikbudristek.

Wafudu, Satumari John, Yusri Bin Kamin, and Daniel Marcel. 2022. "Validity and Reliability of a Questionnaire Developed to Explore Quality Assurance Components for Teaching and Learning in Vocational and Technical Education." *Humanities and Social Sciences*

Communications 9(1).

Wagner, U., T. AlGeddawy, H. ElMaraghy, and E. Müller. 2015. "Developing Products for Changeable Learning Factories." *CIRP Journal of Manufacturing Science and Technology* 9: 146–58.

Wahjusaputri, Sintha, and Bunyamin Bunyamin. 2022. "Development of Teaching Factory Competency-Based for Vocational Secondary Education in Central Java, Indonesia." *International Journal of Evaluation and Research in Education* 11(1): 353–60.

Wahjusaputri, Sintha, Somariah Fitriani, Tashia Indah Nastiti, and Ahmad Syukron. 2020. "Teaching Factory Model for Increasing the Competency of Vocational Secondary Education Students in Indonesian Territory." *International Journal of Innovation, Creativity and Change.* 11(1): 49–63. www.ijicc.net.

Wahjusaputri, Sintha, Somariah Fitriani, and Ihsana El Khuluqo. 2017. "The Implementation of Teaching Factory and Its Implication to Vocational High School Student's Competence in the Industrial Area of Jakarta Province, Indonesia." *Proceeding Kolokium Doktor dan Seminar Hasil Penelitian UHAMKA* 1(2): 21–28.

Wahyuni, S, and D Suryadi. "The Implementation of 'Merdeka Belajar' Policy in Vocational Education Curriculum Reform in Indonesia." *Journal of Education and Instruction* 3(2): 155–162.

Wardiman, D. *Pengembangan Sumber Daya Manusia Melalui Sekolah Menengah Kejuruan*. Jakarta: Jayakarta Agung Offset.

Wibowo, N. *No Title*. Upaya Memperkecil Kesenjangan Kompetensi Lulusan Sekolah.

Wibowo, Nugroho. 2016. "Upaya Memperkecil Kesenjangan Kompetensi Lulusan Sekolah Menengah Kejuruan Dengan Tuntutan Dunia Industri." *Jurnal Pendidikan Teknologi dan Kejuruan* 23(1): 45.

Wicaksono, P T. "Pengaruh Faktor-Faktor Hard Skill Dan Soft Skill Terhadap Kinerja Karyawan PT Semen Gresik (PERSERO." In *Tbk Di Gresik. Skripsi*, Jember: Fakultas Ekonomi Universitas Jember.

Widarto, Pardjono, and N Widodo. "Pengembangan Model Pembelajaran Soft Skills Dan Hard Skills Untuk Siswa SMK." *Cakrawala Pendidikan* 31(3): 409–423.

Winataputra, U S, and dkk. *Teori Belajar Dan Pembelajaran*. Jakarta: Universitas Terbuka.

Wolniak, Gregory C., and Ernest T. Pascarella. 2007. "Initial Evidence on the Long-Term Impacts of Work Colleges." *Research in Higher Education* 48(1): 39–71.

Wong, David S.K., Hlwan Moe Zaw, and Zhen Jun Tao. 2014. "Additive Manufacturing Teaching Factory: Driving Applied Learning to Industry Solutions." *Virtual and Physical Prototyping* 9(4): 205–12.

Yardley, Sarah, Pim W. Teunissen, and Tim Dornan. 2012. "Experiential Learning: Transforming Theory into Practice." *Medical Teacher* 34(2): 161–64.