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Tackling the Future: Optimizing TVET Students of Employability Skills Through Self-Regulated Learning and Self-Efficacy

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A B S T R A K

Artikel ini bertujuan untuk menggali lebih dalam, menganalisis dampak positif dari penerapan Self-Regulated Learning (SRL) dan Self-Efficacy (SE) terhadap perkembangan employability skills siswa di lingkungan pendidikan vokasional. Penelitian ini merupakan penelitian kuantitatif dengan pendekatan kausal komparatif, Pengumpulan data dilakukan dengan pendekatan survey melalui online forms pada 202 siswa di Pendidikan vokasi program keahlian accounting and financial institutions (AFI), motorcycle engineering and business (MEB), automotive light vehicle engineering (ALVE), computer and network engineering (CNE) pada 4 sekolah vokasional di Jawa Timur. The research applies a closed questionnaire consisting of five options on the Likert scale. The respondents are voluntary and anonymous. The analysist testing is applied with SPSS analytical tool to answer the research hypothesis. Hasil penelitian menunjukkan bahwa SRL dan SE berkontribusi secara simultan dalam membentuk kesiapan karir siswa, dengan SRL memengaruhi kemampuan manajemen diri dan pembelajaran mandiri, sedangkan SE memotivasi dan memperkuat keyakinan diri untuk mengaplikasikan keterampilan tersebut dalam konteks pekerjaan.

A B S T R A C T

This article aims to dig deeper, analyzing the positive impact of applying Self-Regulated Learning (SRL) and Self-Efficacy (SE) on the development of students' employability skills in the vocational education environment. This research is quantitative research with a comparative causal approach; data collection was carried out with a survey approach through online forms on 202 students in vocational education expertise programs accounting and financial institutions (AFI), motorcycle engineering and business (MEB), automotive light vehicle engineering (ALVE), computer and network engineering (CNE) at four vocational schools in East Java. The research applies a closed questionnaire consisting of five options on the Likert scale. The respondents are voluntary and anonymous. The analysis testing is applied with SPSS analytical tool to answer the research hypothesis. The results showed that SRL and SE contribute simultaneously to shaping students' career readiness, with SRL influencing self-management and independent learning abilities. In contrast, SE motivates and strengthens confidence to apply these skills in the context of work.

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1. Introduction

In an ever-evolving and challenging era, students' success in achieving skills that can advance their careers is becoming increasingly crucial. Equipping students to be ready for occupations can be done at the vocational education level because the demands result in learning outcomes as employers who can be accepted into the world of work (Rachmawati &; Kusumah, 2023). Vocational education will improve the quality of human resources in Indonesia, making them capable of competing in the labor market and abroad (Wijanarka, Wijarwanto & Mbakwa 2023). The unique design of vocational education institutions provides logical consequences for students to have provisions to compete in employment available. However, some findings found that students from vocational schools were not ready to enter the workforce due to slow upskilling policies in responding to changes (Ismoyo &; Wahjudi, 2023) (Amelia & Setyonaluri 2020)(Nuryanto 2020). This supports data that shows that during 2021 and 2022, SMK graduates contributed 11.45% and 10.38% of Indonesia's open unemployment rate (Rahman 2022). These empirical facts show that the objectives of implementing vocational education have not been achieved as expected. With these conditions, the vocational school has a job to improve the quality of graduates.

Vocational education should provide job adaptability in both soft and professional skills for entering the commercial and industrial worlds (Herlina, Hartono & Halim 2023). Graduates from vocational education need to show that they have employability skills (Chen 2022). Employability skills are a set of skills and abilities individuals need to succeed in the world of work (Australian Chamber of Commerce and Industry. 2004). For vocational education learners, it is essential to develop a combination of technical and soft skills to increase their competitiveness in the job market (Nguyen 2023). By having employability skills, vocational education students become technically skilled, able to solve problems, able to communicate effectively, able to collaborate and work in teams, have time management skills, have an initiative and creative attitude that is undoubtedly good at adapting, including accepting technological changes (Rashidi, Majid & Hashim 2023).

To meet these challenges, vocational education institutions must focus more on empowering students with relevant and in-depth knowledge and abilities. Self-regulated learning (SRL) and self-efficacy (SE) are applied as a foundation in the learning process. The ability of students to regulate themselves in the learning process can be developed through the concept of Self-Regulated Learning (SRL) (Rahmi &; Safitri, 2023). Ability self-regulated encompassing behavior, as individuals organize their actions to keep them focused on achieving goals (Y. L. Chen &; Hsu, 2020) (Moghadari-Koosha et al. 2020). Students are required to improve their learning efficiency and interpersonal skills through the process of planning, implementing, and assessing learning. They will become the kind of person they want to be by the growing world of work. For students, skills in SRL allow them to more easily adjust to the dynamic demands of work (Theobald 2021). Students' confidence in their ability to succeed includes the concept of Self-Efficacy (SE) relevant to the tasks assigned.

With the increase in SE, students become more motivated to achieve excellence and dare to face all kinds of challenges that can arise in careers (Permana, Fitriani & Aulia 2023) (Moghadari-Koosha et al. 2020)(Chen, Zhang & Chen 2022). Self-efficacy is one of the most influential aspects of self-knowledge in everyday life. This is due to Self-efficacy what is owned also influences individuals in determining actions to be taken to achieve a goal or success of a person, including estimates of various events that will be faced in the world of work (Lianto 2019). The use of SE measurement and reinforcement by vocational schools allows students to develop self-confidence on a large scale so that they are optimally trained in the face of fierce competition in the world of work (Ali Muhidin 2019). Employability skills occur not only in the classroom but also through practical experiences, internships, and projects that engage students directly with the real world of work. Effective vocational education should cover this entire spectrum to prepare learners for the workforce.

This study was conducted in four vocational schools located in East Java, a region that plays a significant role in Indonesia's industrial and economic landscape. East Java provides an excellent setting for vocational education that aims to generate qualified graduates ready for the workforce because it is home to a variety of businesses, from financial services to car manufacture. The East Java vocational education programs are specifically tailored to meet the unique needs of these industries, with a focus on fields like Accounting and Financial Institutions (AFI), Motorcycle Engineering and Business (MEB), Automotive Light Vehicle Engineering (ALVE), and Computer and Network Engineering (CNE). But even with its economic promise, East Java has its own set of problems. The high unemployment rates among East Javan graduates of vocational schools are indicative of a disconnect between the competencies demanded by employers and the abilities taught in the classroom. Because of this discrepancy, East Java is an ideal place to research how well educational treatments like Self-Regulated Learning (SRL) and Self-Efficacy (SE) improve employable skills.

In contrast to other areas, East Java's vocational schools boast a varied student body with differing degrees of access to resources and support networks. This variability offers a rich framework for investigating how SRL and SE might be customized to meet the demands of various student populations, possibly yielding insights that can be used to other areas facing comparable difficulties. As a result, carrying out research in East Java advances the conversation on enhancing the results of vocational education throughout Indonesia in addition to addressing the particular problems this area faces.

This article aims to dig deeper, analyzing the positive impact of applying Self-Regulated Learning (SRL) and Self-Efficacy (SE) on developing students' employability skills in the vocational education environment. With an emphasis on Self-Regulated Learning, this article will investigate how students' ability to organize and regulate their learning can influence the development of abilities employer's desire.

This article describes how students plan their learning objectives, track their progress, and evaluate their learning outcomes, which are all directly tied to employment success. Furthermore, the function of Self-Efficacy in developing students' attitudes and views about their potential to succeed in professional scenarios will be discussed in this study. By having strong self-confidence, students will be better able to overcome challenges, adapt to change, and make positive contributions in professional contexts. An in-depth analysis of the correlation between Self-Regulated Learning, Self-Efficacy, and employability skills will provide valuable insights into how vocational education can more effectively prepare students for career success. Thus, this article is not only a theoretical contribution to the vocational education literature but also provides practical direction for curriculum development and learning strategies in vocational institutions.

2. Methods

Research Design

This research is quantitative research with a comparative causal approach, which is intended to conclude the causal relationship that occurs from the variables set to be studied (Hayes & Darlington 2017). This study is intended to determine the effect of self-regulated learning and self-efficacy on students' employability skills. It is important to note that the study did not involve deliberate intervention or changes in the variables set. Instead, this study will provide a more in-depth picture of how certain variables interact and influence each other in the context of vocational education. Thus, this study will provide a strong empirical foundation for concluding and contributing to our understanding of the effect of Self-Regulated Learning and Self-Efficacy on students' employability skills in vocational education environments.

Population and Sample

The population is students at public vocational schools in the Kediri region, East Java, Indonesia. Samples from 4 schools, namely SMK Ngasem, SMKN 1 Semen, SMKN 1 Grogol and SMKN 1 Purwosari, with a concentration of student vocational programs consisting of 4 learning programs, namely the Accounting and Financial Institutions (AFI), Motorcycle Engineering and Business (MEB), Automotive light vehicle engineering (ALVE), Computer and Network Engineering (CNE) programs. Where most of the students who became respondents were students of the Accounting and Financial Institutions (AFI) program.

Research Variables

This study established an independent variable, self-regulated learning (Schunk & J.Zimmerman 2008) with metacognitive, motivational, and behavioral sub-variables and self-efficacy (Nabavi &; Bijandi, 2012) with sub-variables level, strength, and generality. The dependent variable is employability skills (Australian Chamber of Commerce and Industry. 2004). Sub-variable measurement communication skills, group work skills, problem-solving skills, initiation, and entrepreneurship skills, planning and organizing skills, skills in self-management, skills for learning, and technology skills.

Data Collection

The data were collected using a survey method where the questionnaire was distributed to students of four majors with concentrations of expertise in accounting and financial institutions (AFI), motorcycle engineering and business (MEB), automotive light vehicle engineering (ALVE), computer and network engineering (CNE), through online forms. The research applies a closed questionnaire consisting of five options on the Likert scale. The respondents are voluntary and anonymous. The analysis testing is applied with the SPSS analytical tool to answer the research hypothesis.

Data Analysis

Test the validity and reliability of research instruments using SPSS software version 23. With the criterion if r counts >r table, the instrument item is shown to be valid. But if r count > r table, then the instrument is said to be invalid. An instrument is said to be reliable if a person's answer to a question is consistent or stable over time and a variable is said to be reliable if it gives a value of Cronbach's alpha>0.60". Suppose the data is declared valid and reliable. In that case, it is continued by conducting a classical assumption test which includes: 1) Normality test (in this study using the Kolmogorov Smirnov test with decision making if the significance value is above 0.05, it is concluded that the distribution of data is stated to meet the normality assumption), 2) Multicollinearity test (if the tolerance is more than 0.1 and the VIF is less than 10 then multicollinearity does not occur), 3) Autocorrelation test (Durbin-Watson test, DW number between -2 to +2, means no autocorrelation), 4) Heteroschedicity test (If the dots spread out with an unclear pattern above and below the number 0 on the Y axis then heteroscedasticity problem does not occur).

The study used multiple linear regression analysis to predict the direction of how much influence the independent variables X1 (self-regulated learning) and X2 (self-efficacy) had on the dependent variable (Y) employability skills both simultaneously and partially. The multiple linear regression test in this study uses the Stata application, then the equation notation can be written on the multiple linear regression coefficient as follows:

$$Y = a + b_1X1 + b_2X2+\text{e}$$

Information:
a = constant
e = error
Y= employability skills
X1= self-regulated learning
X2= self-efficacy

In addition, analysis is also carried out using a partial test using a statistical test t-test to see how far the influence of the independent variable can partially explain the variation of the dependent variable. Test results can be consulted by making decisions on the calculated t value as well as on the level of significance (If the value of sig. is smaller than the alpha value of 0.05, the independent variable has a significant relationship with the dependent variable. If the calculated t value is greater than the table t, it can be concluded that the independent variable influences the dependent variable).

To determine the influence of the independent variable on the dependent variable concurrently (using the F test) (The independent variable has a significant effect on the dependent variable if the statistical value of significance is less than the significance threshold employed, which is 5% (sig<α). If consulted on the F table, the calculated F value must be greater than the F table value). To determine this model, it is worth using the coefficient of determination (R Square) to measure how far the ability of the model that has been compiled explains the variation of the dependent variable (Santosa, 2018). The coefficient of determination test can be used to see how well the regression line formed from the research model is arranged; the value of the coefficient of determination is in the range of 0 to 1. If the value of R2 is close to 1, the independent variable provides almost all the information needed to predict the dependent variable.

3. Results

This section discusses the research findings while providing a complete reflection. The results might be presented in figures, graphs, tables, and other legible formats (Baier et al. 2019; Flanagan, Cormier & Bulut 2020). The topic is also divided into different areas, which are described below.

Respondent Demographics

Demographics is one important part of this study, where the information reflects the characteristics of the respondents or students studied.

Table 1. Respondent Demography

No.	Characteristics	Frequency	Percentage
1.	**Age**	202	100
	16 years old	57	28.22
	17 years old	122	60.40
	18 years old	23	11.38
2.	**Sex**	202	100
	Female	89	44.06
	Male	113	55.94
3.	**School**	202	100
	SMKN 1 Ngasem	68	33.66
	SMKN 1 Cement	48	23.76
	SMKN 1 Grogol	37	18.32
	SMKN 1 Purwoasri	49	24.26
4	**Program (Concentration of Expertise)**		
	Accounting and financial institutions (AFI)	67	33.17
	Motorcycle engineering and business (MEB)	45	22.28
	Automotive light vehicle engineering (ALVE)	36	17.82
	Computer and network engineering (CNE)	54	26.73

The respondents were students at public vocational schools in Kediri, East Java, Indonesia. Regarding age, respondents were dominated by respondents aged 17 years, with a percentage of 60.40%. Most gender respondents are men spread from 4 schools, which are evenly distributed. The concentration of student vocational programs consists of 4 learning programs, namely the Accounting and Financial Institutions (AFI), Motorcycle Engineering and Business (MEB), Automotive Light Vehicle Engineering (ALVE), and Computer and Network Engineering (CNE) programs. Most of the students who became respondents were students of the Accounting and Financial Institutions (AFI) program.

Validity and reliability of the instrument

The validity and reliability test was applied to respondents outside the study, where this study was conducted to 36 SMKN 1 Kras, Kediri City, East Java students who had the same characteristics as the study respondents. This study follows the rules of validity and reliability of data referring to the survey by Ghozali (2018), with an overall validity result below >0.05 and Cronbach's alpha value >0.7.

Table 2. Validity and reliability measurement

Measurment	Number of item	Cronbach's Alpha
Employability Skills	52	0.986
Self Regulated Learning	28	0.977
self-efficacy	23	0.975

Based on the validity and reliability testing, it was determined that each variable met the predetermined criteria so that further testing could be carried out.

Classical Assumption Test

The classical assumption test is a prerequisite for conducting parametric statistical tests used in this study, so before multiple linear regression tests are carried out, it is required that the data meet the classical assumptions, as stated by Ghozali (2018) so it deserves further testing.

a. Normality Test

Before committing Testing Differentiation, testing of data normality has been carried out using an approach developed by Kline (2011) and Zainudin (2014), which states that the absolute slope value must be lower than eight or around the absolute value of 1.0 to indicate that the data is distributed normally.

Table 3. Normality Test

	Valid	Mean	Std. Deviation	Skewness	Kurtosis	Min.	Max.
Employability Skills	**202**	**123.59**	**36.39**	**0.553**	**-787**	**78**	**209**
Self Regulated Learning	202	78.51	21.7	-0.336	-0.118	42	115
Self-Efficacy	**202**	**64.04**	**18.24**	**-0.320**	**-0.988**	**35**	**98**

Note: ES= Employability Skills, SRL=Self Regulated Learning, SE= Self-Efficay

Based on statistical testing, the results of skewness and kurtosis are <1.0. Therefore, the data is distributed normally and can be continued with follow-up testing.

b. Multicollinearity

The Multicollinearity Test determines whether the regression model discovered a correlation between independent variables (Ghozali 2018). Most studies state that if the tolerance is more than 0.1 and the VIF is less than 10, multicollinearity does not exist.

Table 4 . Collinearity Test

	Self Regulated Learning	Self-Efficacy
Colliniearity Statistics		
Tolerance	0.440	2.275
VIF	0.440	2.275

Note: Dependent Variable: Employability Skills

Based on the results of the exam, the tolerance value of each observation variable has a value below 0.1 (Tolerance<0.1) and a VIF value of 2.275 or below 10 (VIF<10), thus, the data can be continued in the follow-up examination process.

c. Heteroskedasticity Test

The homogeneity of data, or the heteroscedasticity test, is carried out to test the occurrence of differences in variance from residual values in one observation period with other observation periods. In the context of this study, heteroskedasticity tests were conducted using a scatterplot approach. As for the results of the exam, the following results were obtained.

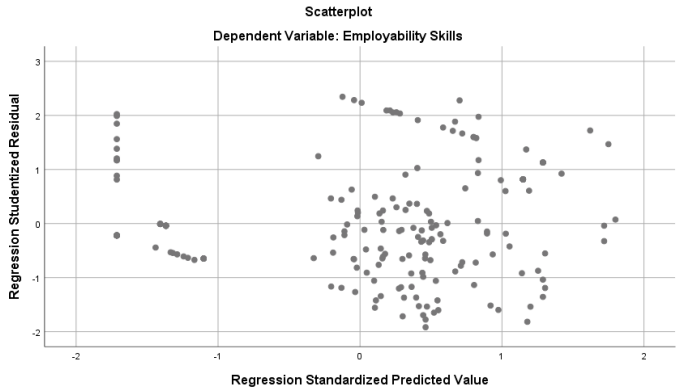

Figure 1. Heteroskedasticity Test Results

Figure 1 shows that the plots are scattered above and below the number 0, do not collect, or form patterns. These results indicate that the data does not occur heteroskedasticity so that the data can be continued for further data analysis.

d. Multiple Regression Testing

Based on multiple linear regression testing, self-regulated learning and self-efficacy significantly impact the employability skills of TVET learners. The exam results are as follows,

Table 5 ANOVA

Type	Sum of Squares	Df	Mean Square	F	Sig.
Regression	106290.508	2	53145.254	66.126	0.000
Residuals	159936.388	199	803.700		
Total	266226.896	201			

Table 6 Model Summary

Model Summary	
R	**0.632a**
R Square	**0.399**
Adjusted R Square	**0.393**
Std. Error	**28.349**
R Square Change	**0.399**
Durbin-Watson	**0.497**

Note: [a] Dependent Variable: Employability Skills,
Predictors: Self-Efficacy,
Self-Regulated Learning

Based on table 5 and table 6, it is known that the requirements for simultaneous examinations with F grade requirements must be more than 4 (F>4) and significant <0.05 based on studies by Ghozali (2018), has been fulfilled. Thus, simultaneously both independent variables affect the dependent variable. With an R Square value of 0.399 or 39.99%, self-regulated learning and self-efficacy affect employability skills (H1). The results of the ANOVA test in the table show a significance level of 0.000 or below <0.05, as well as an F value which shows a value above >4. In line with the opinions of Coolican (2018) and Kuonen (2004) Anova's testing results show that self-regulated learning and self-efficacy simultaneously impact employability skills. Thus, hypothesis testing (H1) is accepted and confirms the simultaneous relationship of the two variables to the employability skills variable.

Table 7 Coefficient

Measurement	Employability Skills	Self Regulated Learning	Self-Efficacy
Unstandardized Coefficient			
Beta	37.399	0.349	0.918
Std. Error	7.869	0.138	0.165
Standardized Coefficients			
Beta	-	0.209	0.460
T test	4.753	2.522	5.551
Sig.	0.000	0.012	0.00
(95%) Confidence Interval			
Lower Bound	21.881	0.076	0.592
Upper Bound	52.917	0.622	1.244

Note: Dependent Variable: Employability Skills

Partially, with a significance value of t of 0.012 (<0.05) and a t-test score of 2.522, it can be concluded that self-regulated learning has a significant impact on employability skills (H2). Similarly, with the self-efficacy variable, which has a significance value t of 0.00 (<0.05) and a t-test score of 5.551, self-efficacy shows a significant relationship with employability skills (H3). After partial testing, this study tested the simultaneous relationship of the two independent variables to the dependent variable. With a t-test score

of 5,551 and a reasonably high beta score, self-regulated learning is significantly dominant with Employability skills.

4. Discussion

a. The effect of self-regulated learning on the employability skills of SMKN students Employability skills

At various levels of education, including in SMKN, Self-regulated Learning (SRL) has an essential influence in improving students' Employability Skills. These findings are in line with research (Rashidi, Majid & Hashim 2023) (Anthonysamy, Koo & Hew 2020) that enhances employability skills. Self-regulated learning (SRL) strategies help students become more independent in the setting as well as monitoring of their personal learning process. It is recognized as its essential that SRL is not just a learning approach but also a basis for developing various abilities that are vital in the context of work. Students who can do SRL become more skilled in time management and determine priority scales in compiling important tasks in lessons that can undoubtedly support the achievement of goals in the academic field and also in their career (Muliasa & Wrahatnolo 2023).

The aspect of self-management which includes these skills, is a significant factor in a work environment that requires adherence to time and efficient use of resources. In line with several studies, SRL plays an important role in facilitating problem-solving abilities such as metacognition sub-variables in designing more efficient and relevant learning strategies (Sari et al. 2023) (Saadati, Zeki & Vatankhah Barenji 2023). Students who do SRL have a tendency to develop critical analytical skills and creativity if they have learning challenges. So that it can motivate to take superior actions in achieving career goals in the work environment. Students who apply SRL effectively can be skilled in group work because it has initiative and is innovative. In this case, there is a conformity with the demands of today's world of work, namely the need for individuals who can act quickly in solving problems and can adapt themselves to any changes (Taranto & Buchanan 2020).

The job demands also need to consider the students' social and communication skills. Through SRL situations, students often can collaborate on projects or group assignments. This can improve communicative competence and get the chance to develop personal adaptability and interpersonal approaches that are very valuable in a professional environment (Wang et al. 2022). With the existence of SRL following these sub-variables, a student can develop a strong and relevant portfolio of skills to enter and succeed in the world of work following the demands of the current era.

b. The effect of self-efficacy on students' employability skills

A critical factor that can drive students to succeed is students' self-efficacy – that is, confidence in their ability to achieve goals well. Several studies highlight the significant role of self-efficacy in educational success and career path selection. Many studies have been conducted, including research from (Čopková, 2021; Dodourova et al., 2020; Satrio &; Sahid, 2023; Zhao et al., 2019). It's been consistently proven that the level of self-efficacy has a significant influence on a person's decision to continue their career. The main focus in vocational education is the preparation of students to go directly into the world of work, and self-efficacy is an important factor that must be considered. Students' confidence in their ability to learn and grow in vocational fields has a considerable impact (Nastasia, Akhmad Tarigan & Mary 2022). In addition to increasing motivation in academic achievement, this also affects the decision-making process about future careers. By having confidence in their abilities, students can be more optimistic about career opportunities and get extra encouragement to pursue specific job paths.

By believing in their abilities, vocational program students tend to take risks and explore new challenges in the work environment. Thus, having a mature understanding of how personal effectiveness contributes to a professional educational setting can help encourage a student's development and prepare him well for a career (Lubis &; Khairani, 2021)—emphasizing the urgency of self-effectiveness when choosing a career path and illustrating the need to incorporate this concept in the future development of the vocational education curriculum. In producing vocational graduates who are ready and confident to face the complicated world of work, we need to focus on strengthening students' confidence.

Students who have strong self-efficacy can play an important role in having strength in a positive work environment and appropriate work dynamics. A high level of self-efficacy will provide confidence in following all developments, including the application of technology in the world of work (Braad et al. 2022)(Saadati, Zeki & Vatankhah Barenji 2023). By understanding the role of self-efficacy in the context of these skills, individuals can more effectively develop Employability Skills that are robust and relevant in the face of the demands of the evolving world of work.

c. The simultaneous effect of self-regulated learning and self-efficacy on students' employability skills

In the findings of this data, both Self-Regulated Learning (SRL) and self-efficacy contribute together to improving the ability to work in students. These two concepts share a vital role in shaping an individual's readiness to face challenges in the world of work. This is in line with research that self-employed, self-regulated learning (SRL) is very useful and important in helping develop personal skills (Pravesti et al. 2022). These skills are related to time organization well, every day, training problem-solving and mental resilience. In line with the findings of several other studies, students' ability to arrange learning patterns according to their needs has a positive impact, namely becoming intelligent and critical people and responsive to problems (Andriyani, Muhaimin & Syaiful 2021) (Tour et al., 2022). They also tend to be calm even when placed in stressful situations in the work environment. Thus, the presence of data indicating the need for SRL to improve job skills has an important role in understanding how independent learning can help prepare for a career.

In a shared context, Self-Efficacy (SE) also significantly impacts anyone's skills in finding a job. In line with research by having confidence in their abilities, students will tend to be more motivated to face challenges and achieve their goals (Wang et al. 2022). In the context of learning, participating in SE games is one of the effective methods to acquire interpersonal social skills such as communicating and cooperating with others. In line with research findings, someone with a high enough SE will become confident when socializing with others, convey his creative ideas, and help team development (Lianto 2019) (Moghadari-Koosha et al. 2020).

The results of the study concluded that there is a relationship between SRL and SE in helping to develop students' work skills following the results of other studies (Febriantoa et al. 2023) (Widiatmoko &; Herlina, 2021)(Demirören, Turan & Teker 2020). By acquiring a learning approach based on SRL, a person will have a strong foundation in improving his independent abilities and learning efficiently; at the same time SE will help foster enthusiasm and confidence to carry out its creativity in the work environment. Recognized as important, the simultaneous relationship between SRL and SE with work skills underscores the complexity of the interaction of these factors. To achieve success in the world of work, independent learning and self-confidence are two main factors that cannot be separated. These data findings provide a solid foundation to apply a holistic approach in designing curriculum and learning programs to improve students' career preparation. Effective integration between SRL and SE in the curriculum can be better understood by education policymakers and learning practitioners thanks to the results of this research.

5. Conclusion

This study concludes that Self-Regulated Learning (SRL) and Self-Efficacy (SE) have a significant influence on the Employability Skills of students in vocational education and technology (TVET). SRL and SE contribute simultaneously to shaping students' career readiness, with SRL influencing self-management and self-learning skills. At the same time, SE motivates and strengthens confidence to apply these skills in a job context. The implication of this study is the importance of including SRL and SE elements in the TVET curriculum. Educational institutions can improve learning approaches encouraging students to develop self-regulation, time management, and mental resilience skills. In addition, there needs to be an effort to build student confidence through learning experiences that provide challenges and support simultaneously.

This research recommends that TVET institutions should be able to design and implement learning programs specifically designed to improve students' SRL and SE. This involves implementing self-learning strategies, monitoring learning progress, and increasing confidence through relevant projects. Teachers in TVET need to receive training that allows them to guide students in developing SRL and SE. This includes teaching strategies that support independent learning, provide constructive feedback, and motivate students to take on challenges. And it is better to expand the range of close cooperation with the industrial world to ensure that students can apply SRL and SE in real work situations. TVET institutions should also conduct continuous evaluations of the effectiveness of implemented programs. This involves collecting data on students' SRL and SE development and measuring their impact on improving Employability Skills.

Further research can explore variables that can moderate the relationship between SRL, SE, and Employability Skills when associated with students' social status and internship programs. Advanced research may concentrate on developing more sophisticated and contextual measurement instruments for SRL and SE in the context of TVET. This instrument can be designed to understand its impact more precisely on specific aspects of Employability Skill to gain a more prosperous and contextual understanding of the role of SRL and SE in shaping the career readiness of TVET students, as well as providing a stronger

foundation for the development of more effective curriculum and learning strategies in vocational education and technology institutions.

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