




Mediating Role of Teachers' Self-Efficacy and Psychological Capital in determining Success during Learning Transition Periods in Vocational Education

Amat Jaedun¹ 
Muhammad Nurtanto²
Farid Mutohhari³
Nuur Wachid Abdul Majid⁴
Musyarrafah Sulaiman Kurdi⁵



(✉ Corresponding Author)

^{1a}Yogyakarta State University, Indonesia.

¹Email: jaedun@uny.ac.id

³Email: faridmutohhari.2020@student.uny.ac.id

²Sultan Ageng Tirtayasa University, Indonesia.

²Email: mnurtanto23@untirta.ac.id

⁴Indonesian Education University, Indonesia.

⁴Email: nuurwachid@upi.edu

⁵Islam Negeri Antasari University, Indonesia.

⁵Email: muqarramah@uin-antasari.ac.id

Abstract

Polemics on the low quality of teaching and learning outcomes during the period of transition from online to offline learning is an issue that must be addressed by vocational education institutions. This study aims to analyze the effects of retraining and teaching experience on successful learning outcomes during the transition period, either directly or through the involvement of self-efficacy and psychological capital as mediators. An ex-post-facto study that adopted a research design from Cohen, Lawrence & Keith (2011) was carried out with a sample of 247 vocational education teachers in Indonesia. Data on all variables were collected through a closed questionnaire method based on a four-point Likert-scale. The data were then analyzed using structural equation modeling (SEM) analysis techniques with path analysis and bootstrap methods. The results of the study reveal that retraining and teaching experience have a significant effect on the success of learning outcomes during the transition between online and offline teaching methods in vocational education. There is a significant indirect effect of the two exogenous variables through the mediating involvement of self-efficacy and psychological capital. In Vocational education it is very important to organize the retraining that is needed among teachers to improve the quality of learning in the learning transition period, in addition to providing more teaching experiences to strengthen self-efficacy and provide sufficient psychological capital so that the quality of learning outcomes can be enhanced and sustained.

Keywords: Learning transition, Psychological capital, Quality learning, Self-efficacy.

Citation | Amat Jaedun; Muhammad Nurtanto; Farid Mutohhari; Nuur Wachid Abdul Majid; Musyarrafah Sulaiman Kurdi (2022). Mediating Role of Teachers' Self-Efficacy and Psychological Capital in determining Success during Learning Transition Periods in Vocational Education. Journal of Education and e-Learning Research, 9(3): 207-215.

History:

Received: 14 July 2022

Revised: 6 September 2022

Accepted: 26 September 2022

Published: 7 October 2022

Licensed: This work is licensed under a Creative Commons

Attribution 4.0 License 

Publisher: Asian Online Journal Publishing Group

Funding: This study received no specific financial support.

Authors' Contributions: All authors contributed equally to the conception and design of the study.

Competing Interests: The authors declare that they have no conflict of interest.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained.

Ethical: This study followed all ethical practices during writing.

Contents

1. Introduction	208
2. Methodology	209
3. Findings	210
4. Discussion	212
5. Conclusion and Recommendation	213
References	213

Contribution of this paper to the literature

The results of this study confirm that retraining and increasing teaching experience strengthen teachers' self-efficacy and provide psychological capital. Moreover, retraining and teaching experience have a direct and high level of influence on success during the period of learning transition. Self-efficacy and psychological capital become indirect mediators that determine the quality of learning in vocational education.

1. Introduction

The shift in learning modes is currently happening again, along with changes in learning policies that started during the COVID-19 pandemic (Beukers & Bertolini, 2021; Lemay, Bazelais & Doleck, 2021). In Indonesia, currently, there have been at least 2 shifts as a result of changes in government policies, especially in the world of education (Ismail, Pawero & Umar, 2021). Before the pandemic, there was face-to-face learning, which shifted to virtual face-to-face learning using online platforms during the pandemic (Daniel, 2020). Online learning is widely assessed and perceived by various parties as resulting in a decrease in the achievement of learning objectives (Hamid et al., 2022; Prasetyo et al., 2021; Zapata-Cuervo, Montes-Guerra, Shin, Jeong & Cho, 2022). However, over time, various virtual face-to-face learning innovations have been discovered to overcome the problem of unsatisfactory learning achievements and some of these methods have proven to be effective (Arifin, Nurtanto, Warju, Rabiman & Kholifah, 2020; Astuti, Arifin, Nurtanto, Mutohhari & Warju, 2022; Bahasoan, Ayuandiani, Mukhram & Rahmat, 2020; Nurtanto, Kholifah, Masek, Sudira & Samsudin, 2021). However, as the spread of COVID-19 slowed down, the virtual face-to-face learning policy which had been practiced for about a year and a half began to shift back to the face-to-face mode again (Hanafi et al., 2021; Pacheco, 2021). The early period of this movement is known as the learning transition period (Surahman & Sujarwanto, 2021).

The successful transition of learning from online mode to face-to-face mode is an important issue at this time. Restoring normal learning well is an obligation for educational institutions (Ismail et al., 2021; Pacheco, 2021). Ideally, the learning transition period must be supported by sufficient readiness by education institutions (Miltiadous, Callahan & Schultz, 2020; Mithani, 2020). One of the most important steps is to equip teachers with competence to face the period of learning transition (Moorhouse & Wong, 2022). These competencies include learning management, student management and teacher psychological management (Chen, Mao-Shan & Ya-Han, 2021; Kennedy, Flynn, O'Brien & Greene, 2021; Thomsen, Karsten & Oort, 2016). In addition, another important factor that supports a successful learning transition is sufficient teaching experience (Bryson & Andres, 2020). However, past research have revealed many requirements that are not made ready for teachers during the periods of learning transition, especially vocational education teachers (Alea, Fabrea, Roldan & Farooqi, 2020; Kholifah, Sofyan, Pardjono, Sudira & Nurtanto, 2021; Majid, Fuada, Fajri, Nurtanto & Akbar, 2020; Scherer, Howard, Tondeur & Siddiq, 2021). Related research reveal the difficulties faced by teachers in adjusting to the needs of pupils during the transitional period of learning shifts (Delcker & Ifenthaler, 2021; Mutohhari, Sutiman, Nurtanto, Kholifah & Samsudin, 2021; Saripudin, Sumarto, Juanda, Abdullah & Ana, 2020). A number of studies reveal a lack of confidence or low self-confidence in teaching in the face of learning transformation (Pressley & Ha, 2021). In addition, the decline in psychological strength of teachers during the learning transition is also an important issue that has been revealed by many past studies (Ferradás, Freire, García-Bértoa, Núñez & Rodríguez, 2019).

The information in this study was obtained directly from the vocational education teachers. It was discovered that most of the vocational education teachers complained about a lack of self-confidence, especially when they had to return to face-to-face teaching practice again. The shift from online teaching to face-to-face teaching requires the need for teachers to learn to re-adapt. In addition, when faced with problems in learning, teachers were also seen to lack the readiness to come up with solutions. Furthermore, during the long period of online learning, the psychological strength of teachers decreased significantly. The teachers also confirmed that they needed mental and psychological strengthening as the main capital to carry out learning during this transition period.

The low levels of teachers' self-confidence, beliefs and psychological states when teaching during the learning transition period indicate that the teachers lack self-efficacy and psychological capital. The low levels seen in these two aspects were due to changes made to their previously used learning models. Research shows that the online learning process which resulted in minimal teacher interaction with students indirectly reduced self-efficacy slowly, so that over time vocational education teachers lacked efficacy and psychological capital (Nurtanto, Sudira, Sofyan, Kholifah & Triyanto, 2022; Pressley & Ha, 2021). This ultimately affected their success in managing learning during the transition from online learning to face-to-face learning again (Aldhahi, Alqahtani, Baattaiah & Al-Mohammed, 2022; Ferradás et al., 2019).

It is imperative that the low levels of self-efficacy and psychological capital of the teachers are resolved immediately. Various important aspects need to be seen to, to increase or restore self-efficacy and psychological capital. Various studies reveal the perceptions of teachers who need retraining to strengthen teaching competence (Alea et al., 2020; Mislia, Alim, Usuf, Tamsah, & Yusriadi, 2021; Prieto & Altmaier, 1994). In addition, teacher retraining is also perceived by vocational education teachers as an important step to raise confidence in solving problems or in completing teaching tasks that have shifted back to face-to-face learning (Delcker & Ifenthaler, 2021). The level of teaching experience greatly influences the self-efficacy levels of a teacher. In addition, good teaching experience also raises teachers' psychological capital which can be used as a teaching provision in the learning transition period (Prieto & Altmaier, 1994; Fawaid et al., 2022). On the other hand, teaching experience can also be directly affected by retraining, so in this case retraining of teachers is a vital aspect to be carried out to deal with problems faced during the learning transition period (Prieto & Altmaier, 1994).

Therefore, vocational education needs teachers to be equipped with teaching competencies, especially in the learning transition period. The aim is mainly to restore self-confidence and psychological capital that had decreased during the online learning period. Researchers are encouraged to examine structural models that can affect success in the implementation of learning in vocational education during the transition from online learning to face-to-face learning. This study aims to analyze the effects of teacher retraining and teaching experience on learning success in

the transition period through the mediating influence of self-efficacy and psychological capital. The proposed hypotheses are as follows.

- H1: There is a significant positive effect of retraining on success during the learning transition period.
 H2: There is a significant positive effect of retraining on self-efficacy.
 H3: There is a significant positive effect of retraining on psychological capital.
 H4: There is a significant positive effect of retraining on teaching experience.
 H5: There is a significant positive effect of teaching experience on success during the learning transition period.
 H6: There is a significant positive effect of teaching experience on self-efficacy.
 H7: There is a significant positive effect of teaching experience on psychological capital.
 H8: There is a significant positive effect of self-efficacy on success during the learning transition period.
 H9: There is a significant positive effect of psychological capital on success during the learning transition period.
 H10: There is a significant positive effect of retraining on success during the learning transition period mediated by self-efficacy.
 H11: There is a significant positive effect of teaching experience on success during the learning transition period mediated by self-efficacy.
 H12: There is a significant positive effect of retraining on success during the learning transition period mediated by psychological capital.
 H13: There is a significant positive effect of teaching experience on success during the learning transition period mediated by psychological capital.

2. Methodology

2.1. Research Design

This research used an ex-post facto research method with a quantitative approach. This study did not control or treat the independent variables directly because the data were collected based on events that had occurred. This ex-post facto research design adopted the design developed by Cohen, Lawrence & Keith (2011). This study emphasizes the results of structural analysis based on the direct influence of exogenous variables on endogenous variables as well as influences involving intervening variables as mediators.

2.2. Study sample

The samples in this study were chosen through the random sampling technique used on the population. The population in this study came from 8 vocational schools consisting of 416 teachers. Vocational education was selected for purposes of this study based on the following criteria: first, there has been a learning transition period from online learning to face-to-face learning again for more than 3 months. Second, Vocational education was also selected based on its status as having both public and private institutions, to get a representative ratio. The population identified to select the sample was only teachers who taught vocational skills subjects; a proportional random sampling technique that used a formula ($n = \frac{N}{1 + N(e)^2}$) with detail n = sample size, N = population size, and e = level of precision (%) was adopted (Yamane, 1967). As a result, 247 samples were identified as respondents. Table 1 presents the respondents' demographics:

Table 1. Respondents' Demographics

Dimensions	Category	Public School	Private School
		F (%)	F (%)
Gender	Male	74 (29.96)	57 (23.08)
	Female	62 (25.10)	54 (21.86)
Employment status	Civil servant	71 (28.74)	8 (3.24)
	Certified teacher	35 (14.17)	61 (14.17)
	Honorary teacher	14 (5.67)	58 (23.48)
Teaching experience	≤ 3 years	4 (1.12)	43 (17.41)
	4 – 6 years	10 (4.05)	41 (16.60)
	7 – 9 years	24 (9.72)	17 (6.88)
	10 – 12 years	30 (12.15)	20 (8.10)
	> 12 years	40 (16.19)	18 (7.29)

2.3. Data Collections

The data in this study were collected using a questionnaire technique via Google Form which was carried out from the beginning of November 2021 to the end of December 2021. To obtain accurate research data, an open questionnaire was used to limit respondents' choices. All variables were measured by participants' responses to questions/statements based on a four-point Likert-type scale ranging from strongly agree (SA), agree (A), disagree (D) to strongly disagree (SD). The instrument contained details of the respondents' identity in terms of gender, employment status and teaching experience. The Instrument was developed with the aid of expert opinion on each variable.

The success attained during the learning transition period in vocational schools was measured using indicators on the success of teaching and learning activities used by Horspool & Lange (2012); Idrizi, Filiposka & Trajkovijk (2021). There were 5 important indicators derived from these two sources, namely the achievement of learning competency standards, interactive learning, teacher skills in teaching, active involvement of students and learning technology literacy. The five indicators were further elaborated in the form of 10 sub-indicators based on the theme of each of the 5 indicators. The total number of learning transition success questionnaire items based on these indicators was 20.

Subsequently, the teacher self-efficacy items in the questionnaire were constructed based on indicators that referred to the theory of Bandura (1982) and Bandura (2010). These items came under the dimension of self-efficacy, namely level, generality and strength, which were then divided under 6 sub-indicators. The total number

of self-efficacy questionnaire items was 18. Next, the psychological capital questionnaire items construction was based on the indicators from Luthans, Avolio, Avey and Norman (2007). There were 4 indicators, which included hope, optimism, resilience and self-confidence. The four indicators were divided under 12 sub-indicators with a total of 18 questionnaire items. Theoretical opinions are cited for constructing the retraining indicators for teachers (Mcgrath, Mulder, Papier & Suart, 2019), in which four important indicators were compiled from expert opinion, namely the intensity of training, the relevance of the training to the teachers, the orientation of training towards learning management and stakeholder involvement. The total number of retraining questionnaire items was 10. Meanwhile, the teacher's teaching experience questionnaire was constructed from indicators quoted from Johnson & Maclean, (2008). Important indicators include participation in education and training, level of meaningfulness in teaching, outcomes achieved in teaching and teaching satisfaction. The total number of teaching experience questionnaire items was 10.

The questionnaire was tested before being used to collect data. To measure the validity and reliability of the instrument, confirmatory factor analysis was used to calculate the level of indicator strength of each variable and its Cronbach alpha value. Before testing the construct validity, the opinion of experts in the field were sought to determine content validity. Thus, the validity was more accurate, supported by expert advice and also tested directly in the field (Costa, Medina-Papst, Spinosa, Santo & Marques, 2019).

2.4. Data Analysis

Structural Equation Modeling (SEM) analysis was used to test the hypothesis on the influence between variables, both exogenous and endogenous. Path analysis was used to measure the direct effect of exogenous variables on endogenous variables. Meanwhile, the bootstrap method was used to measure the mediating role of self-efficacy and psychological capital. In this study, retraining and experience act as exogenous variables. Meanwhile, the success of the learning transition period becomes an endogenous variable, while self-efficacy and psychological capital function as intervening variables that act as mediators. Data analysis in this study used the Amos 18 software. The research hypotheses were formulated based on the support of relevant theories related to the line of influence of exogenous variables on endogenous variables directly or using mediation, as proposed in the literature review above.

3. Findings

3.1. Validity and Reliability of Instruments

Before testing the model using SEM analysis, confirmatory factor analysis was first performed to test the validity and reliability of the instruments and Cronbach's alpha to assess the feasibility and consistency of all indicators in the variables studied. The results of the validity test show that all indicators on all research variables have a loading factor value that exceeds 0.50. None of the indicators of any variables were dropped. All indicators on all instruments have met the criteria for validity and are ready to be used for research (Johnson & Wichern, 2007). Likewise, the reliability of the instruments shows that all indicators have high coefficients (Reid, 2014). Table 2 presents the results of the validity and reliability tests in detail.

Table 2. Validity and reliability of instruments.

Variables	Indicator	Validity		Reliability	
		LF	Decision	α	Category
Learning transition	LT 1	0.511	Valid	0.899	Very high
	LT 2	0.585	Valid	0.902	Very high
	LT 3	0.806	Valid	0.942	Very high
	LT 4	0.618	Valid	0.883	Very high
	LT 5	0.771	Valid	0.912	Very high
Psychological capital	PC 1	0.526	Valid	0.900	Very high
	PC 2	0.548	Valid	0.910	Very high
	PC 3	0.577	Valid	0.907	Very high
	PC 4	0.813	Valid	0.911	Very high
Self-efficacy	SE 1	0.612	Valid	0.926	Very high
	SE 2	0.768	Valid	0.916	Very high
	SE 3	0.570	Valid	0.907	Very high
Retraining	RT 1	0.732	Valid	0.912	Very high
	RT 2	0.571	Valid	0.922	Very high
	RT 3	0.740	Valid	0.936	Very high
	RT 4	0.688	Valid	0.899	Very high
Teaching experience	TE 1	0.579	Valid	0.924	Very high
	TE 2	0.507	Valid	0.927	Very high
	TE 3	0.634	Valid	0.876	Very high
	TE 4	0.690	Valid	0.915	Very high

Note: LF = Loading Factor and α = Cronbach's alpha.

3.2. Model Fit Test

The model suitability test is used to measure the level of conformity of the structural model used. The chi-square value obtained is a relatively small critical number. The probability obtained is a number that shows a high significance (> 0.050), Goodness of Fit Index (GFI 0.90) as a descriptive measure of model suitability, Adjusted GFI (AGFI), which is the Adjusted GFI value (≥0.90) and Root Mean Square Error of Approximation (RMSEA<0.08) as the approximation value of the mean square root of the error (Bentler, 1990; Bentler & Bonett, 1980; Jöreskog & Sörbom, 1982; Maydeu-Olivares, Shi & Rosseel, 2018; Tucker & Lewis, 1973). The results of the model suitability test obtained a chi-square number of 2.618 (small), a probability of 0.396 (≥0.05), a GFI of 0.960 (≥0.90), an AGFI of 0.912 (≥0.90) and an RMSEA of 0.041 (≤0.08). Based on these results, it can be concluded that

the model is fit based on the acquisition of values that are included in the goodness of fit category so that structural model analysis can be carried out (Johnson & Wichern, 2007). The following Figure 1 describes the results of the SEM analysis along with the value of the model suitability test.

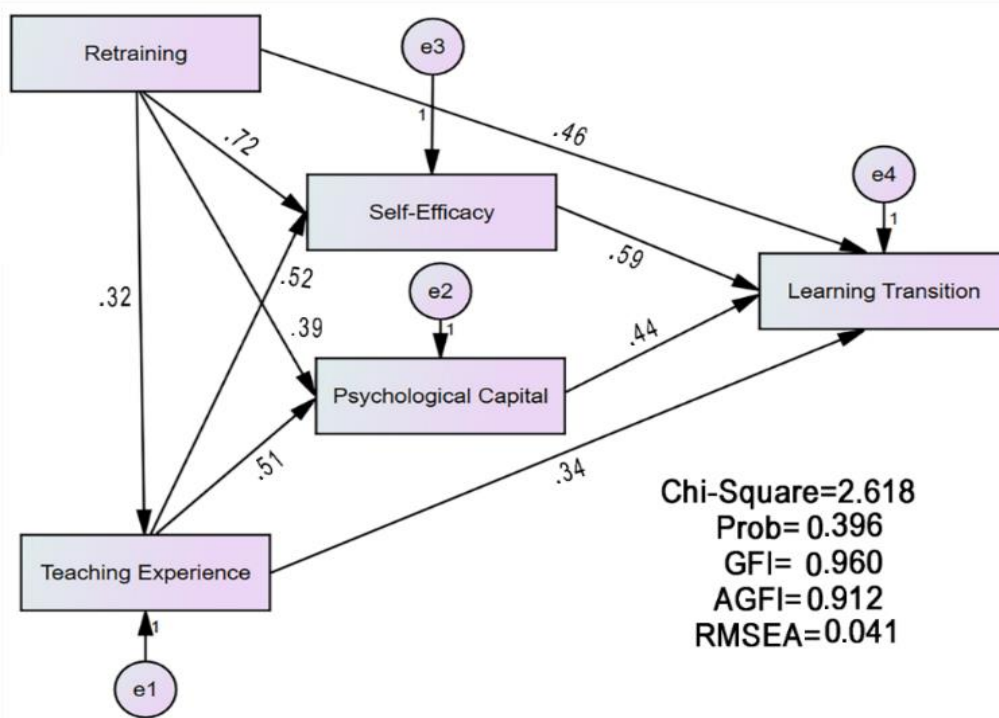


Figure 1. SEM analysis result.

3.3. Direct Effect Test

Hypothesis testing is seen based on the results of path analysis, to determine the estimated influence value and the significance value with a significance level of 5%. Hypothesis testing was conducted to determine the effect of self-efficacy on the success of the learning transition, determine the effect of psychological capital on the success of the learning transition, determine the effect of retraining on teaching experience and determine the effect of retraining, and teaching experience on self-efficacy, psychological capital and directly on the learning transition. The following Table 3 presents the results of hypotheses testing using path analysis.

Table 3. Path analysis test results

Path	Estimate	SE	CR	P
Retraining – learning transition	0.458	0.029	9.983	***
Retraining – self-efficacy	0.724	0.027	14.525	***
Retraining – psychological capital	0.392	0.016	8.094	***
Retraining – teaching experience	0.324	0.031	7.113	***
Teaching experience – learning transition	0.344	0.080	7.62	***
Teaching experience – self-efficacy	0.524	0.010	10.218	***
Teaching experience – psychological capital	0.509	0.077	9.921	***
Self-efficacy – learning transition	0.593	0.022	12.439	***
Psychological capital – learning transition	0.441	0.038	9.686	***

Note: *** is the level of significance at p value.

Retraining affects the success of the learning transition in vocational education with an estimated value of 0.458 and a significance value of 0.000***, so the first hypothesis is supported. Retraining affects self-efficacy with an estimated value of 0.724 and a significance value of 0.000***, thus supporting H2. Retraining affects psychological capital with an estimated value of 0.392 and a significance value of 0.000***, thus supporting H3. Retraining affects the teaching experience with an estimated value of 0.324 and a significance value of 0.000***, so H4 is supported. The estimated value of 0.344 and a significance value of 0.000*** on the effects of teaching experience on the success of the learning transition supports H5. Teaching experience affects self-efficacy with an estimated value of 0.524 and a significance value of 0.000***, thus supporting H6. Teaching experience affects psychological capital with an estimated value of 0.509 and a significance value of 0.000***, so H7 is supported. Likewise, H8 is supported as the effect of self-efficacy on the success of the learning transition has an estimated value of 0.593 and a significance value of 0.000***. Lastly, psychological capital affects the success of the learning transition with an estimated value of 0.441 and a significance value of 0.000**, so H9 is accepted.

3.4. Indirect Effect Test

The bootstrap method was used to test and analyze the level of involvement of the intervening variables in providing a mediating role. Table 4 shows the level of involvement of self-efficacy in mediating retraining and teaching experience in influencing successful learning transitions in vocational education. The indirect effect of retraining on the success of the learning transition through the mediation of self-efficacy with a 95% confidence level obtained an estimated value of 0.173 with a significance value of 0.008**. Thus, it can be concluded that retraining indirectly has a significant effect on the success of the learning transition through the mediation of self-efficacy, so H10 is supported. Likewise, the indirect effect of teaching experience on the success of the learning transition through the mediation of self-efficacy obtained an estimated value of 0.191 with a significance value of

0.003**. Thus, it can also be concluded that teaching experience has a significant indirect effect on the success of the learning transition through the mediation of self-efficacy, so H11 is supported.

Table 4. Mediating involvement of self-efficacy.

Standardized	Analysis	Bootstrapping BC 95% CI					
		RT → TE	RT → LT	TE → LT	RT → SE	TE → SE	SE → LT
Direct effect	Estimate	0.324	0.458	0.344	0.724	0.524	0.593
	Sig	0.000	0.000	0.000	0.000	0.000	0.000
Indirect effect	Estimate		0.173	0.191			
	Sig		0.008	0.003			
Total effect	Estimate	0.324	0.631	0.535	0.724	0.524	0.593
	Sig	0.000	0.000	0.000	0.000	0.000	0.000

Note: RT = retraining, TE = teaching experience, SE = self-efficacy, and LT = learning transition.

Table 5 shows the involvement of psychological capital in mediating retraining and teaching experience in influencing the success of the learning transition in vocational education. The indirect effect of retraining on the success of the learning transition through the mediation of psychological capital with a 95% confidence level obtained an estimated value of 0.166 with a significance value of 0.011*. Thus, it can be concluded that retraining indirectly has a significant effect on the success of the learning transition through the mediation of psychological capital, so H12 is supported. Likewise, the indirect effect of teaching experience on the success of the learning transition through the mediation of psychological capital obtained an estimated value of 0.208 with a significance value of 0.001**. Thus, it can also be concluded that teaching experience has a significant indirect effect on the success of the learning transition through the mediation of psychological capital, so H13 is supported.

Table 5. Mediating involvement of psychological capital

Standardized	Analysis	Bootstrapping BC 95% CI					
		RT → TE	RT → LT	TE → LT	RT → PC	TE → PC	PC → LT
Direct effect	Estimate	0.324	0.458	0.344	0.392	0.509	0.441
	Sig	0.000	0.000	0.000	0.000	0.000	0.000
Indirect effect	Estimate		0.166	0.208			
	Sig		0.011	0.001			
Total effect	Estimate	0.324	0.624	0.552	0.392	0.509	0.441
	Sig	0.000	0.000	0.000	0.000	0.000	0.000

Note: RT = retraining, TE = teaching experience, PC = psychological capital, LT = learning transition.

4. Discussion

Teacher competence during online learning during the COVID-19 pandemic, has been fluctuating or has been unstable (Wong et al., 2021). Studies show that most teachers experienced a significant decline in competence in the online learning period (Alasoluyi, 2021; König, Jäger-Biela & Glutsch, 2020). Moreover, vocational education teachers who have heavier tasks than general education teachers tend to experience a more significant decline in competence (Delcker & Ifenthaler, 2021; Suddeath, Baltrinic & Dugger, 2020). This is what causes unpreparedness in undergoing the learning transition period when the online mode switches to face-to-face mode again in vocational education (Scherer et al., 2021). This unpreparedness leads to a lack of self-confidence, a decrease in psychological conditions, and a decrease in teaching competence, so it is necessary to make improvements to the teacher sector as a learning manager (Moorhouse & Wong, 2022; Pressley & Ha, 2021).

One of the important steps that can be taken to fix teacher problems during the learning transition period is to provide retraining to teachers. The decline in pedagogical competence in managing learning during the online learning period is the main reason for the need for retraining (Aryani, Pandanwangi, Ida, Manurung & Pattipawaej, 2021; Nurtanto. et al., 2022). The results of this study prove that retraining is very supportive of the success of learning in the transition from online mode to face-to-face mode again. The estimated value of 0.458 with a significance value of 0.000*** is evidence of the significance of retraining in influencing the success of the learning transition. In influencing the success of the learning transition, retraining does not stand alone. Retraining indirectly also affects the self-efficacy of teachers in teaching (Prieto & Altmaier, 1994). This self-efficacy also has a role in mediating retraining in influencing the success of the learning transition. In other words, retraining teachers not only affects directly but there is self-efficacy that can also help retraining to leverage influence on the success of the learning transition through indirect influences (Esfandagheh, Harris & Oreyzi, 2012; Gao et al., 2021; Sutiman, Sofyan, Soenarto, Mutohhari & Nurtanto, 2022). This is evidenced by the results in this study which show an estimated value of 0.173 with a significance value of 0.008**. The significance of the involvement of self-efficacy in mediating the effects of retraining indicates that the importance of retraining is relevant to strengthening self-efficacy in managing ideal learning conditions during the learning transition. Vocational education institutions need to restore self-efficacy in teaching through retraining to attain success in the learning transition period.

On the other hand, the success of learning is also strongly influenced by the level of experience possessed by the teacher in teaching (Graham, White, Cologon & Pianta, 2020). Restoring teacher competence in learning management in the transition period requires good teaching experience as well. More teaching experience will provide good capital in managing learning and solving new problems, as revealed by previous research (Guasch, Alvarez & Espasa, 2010; Sánchez-Escobedo, Valdés-Cuervo, Contreras-Olivera, García-Vázquez & Durón-Ramos, 2020). In line with this, this study also confirms that the success of learning in the transition period is strongly influenced by the teacher's teaching experience. The estimated value of the effect is 0.344 with a significance value of 0.000***. As is known, the success of a teacher in teaching cannot be separated from the extent of his experience (Graham et al., 2020; Iwaki, Sato, Tsuda & Wyant, 2020; Mokoena, 2017). Some of these experiences are gained through retraining programs. Retraining is very influential in providing meaning and experience in

managing learning, especially in the transitional period of learning that was previously done online. Teaching experience is required when teaching face-to-face once again (Prieto & Altmaier, 1994). This is also proven directly through this study with the significance of retraining on teaching experience with an estimated value of 0.324 and a significance value of 0.000***. The process leading to the success of the learning transition is not limited; there is the role of involvement of self-efficacy which mediates the teaching experience in influencing indirectly the success of the learning transition (Wilson, Marks Woolfson & Durkin, 2020). Theoretically, self-efficacy is strong if there is good experience, so teaching success in the learning transition period is also brought about through teaching experience which is also in line with growing self-efficacy (Bandura, 1995; Wilde & Hsu, 2019); this is shown by an estimated value of 0.191 with a significance value of 0.003**. Likewise, previous research also strengthens these results with significant figures obtained on the effect of teaching experience both on self-efficacy and learning success (Rupp & Becker, 2021). Thus, this becomes an important recommendation for vocational education in facing the learning transition period, to always improve the teaching experience of teachers.

In line with the above reasoning, psychological capital is also capable of being involved in mediating retraining and teaching experience in influencing the success of the learning transition in vocational education (Chen et al., 2021; Freire et al., 2020). The results of this study reveal a significant indirect effect of retraining on the success of the learning transition involving psychological capital as a mediator with an estimated value of 0.166 and a significance value of 0.011*. Meanwhile, the significance of the indirect effect of teaching experience on the success of the learning transition through the mediating role of psychological capital obtained an estimated value of 0.208 with a significance value of 0.001**. These two gains indicate the important role of engaging psychological capital in helping to increase the impact of retraining and teaching experiences. Similar research findings strengthen the results of this study. Previous research has revealed that a lot of training and teaching experience in influencing the quality of learning is also based on the increase in the psychological condition of the teacher which also increases as teaching progresses (Abdullah & Osman, 2015; Chen et al., 2021).

This research is widely supported by similar past research on the significant effects of various important training that support the growth of experience, increase self-efficacy and provide psychological capital in teaching so that the quality of learning can be improved (Esfandagheh et al., 2012; Graham et al., 2020; Guasch et al., 2010). Other similar studies also confirm that during the transition period where there has been a decline in previous competencies, it is necessary to retrain and provide teachers with more experience (Mislia et al., 2021; Saripudin et al., 2020). Self-efficacy and psychological capital are at the heart and core, that can be important mediators of teacher retraining and experience in achieving learning success (Abdullah & Osman, 2015; Chen et al., 2021; Rupp & Becker, 2021). Finally, the study recommends that vocational education should always develop teacher competencies further, even though these competencies are already seen in teachers. This is based on the fact that old competencies are not refreshed in the return period, and competency levels tend to decrease when there is a learning transition in the new model.

5. Conclusion and Recommendation

The polemic of the low quality of learning that is focused on teachers during the transition from online to offline learning is an issue that must be addressed in vocational education. Strengthening self-efficacy and providing sufficient psychological capital through retraining and increasing teaching experience are steps that can be taken. Retraining and teaching experience have been shown to have a significant direct effect on the success of the learning transition in vocational education. Furthermore, the indirect influence of the two exogenous variables can also be seen through the involvement of self-efficacy and psychological capital as mediators. Thus, vocational education needs to organize the retraining needed to improve the quality of learning in the learning transition period and provide more teaching experiences to strengthen self-efficacy and provide sufficient psychological capital, so that the quality of learning can be well-achieved.

References

- Abdullah, M. Z., & Osman, R. (2015). The mediation effect of psychological experiences in relation to multi-skills in teaching duties and teacher work motivation. *Malaysian Journal of Learning and Instruction*, 12(1), 205–233. Available at: <https://doi.org/10.32890/mjli2015.12.10>.
- Alasoluyi, O. E. (2021). Teachers' Awareness and Competence in the Switch from classroom-based to online teaching during COVID-19 Pandemic in Lagos, Nigeria. *Interdisciplinary Journal of Education Research*, 3(2), 23–31. Available at: <https://doi.org/10.51986/ijer-2021.vol3.02.03>.
- Aldhahi, M. I., Alqahtani, A. S., Baattaiah, B. A., & Al-Mohammed, H. I. (2022). Exploring the relationship between students' learning satisfaction and self-efficacy during the emergency transition to remote learning amid the coronavirus pandemic: A cross-sectional study. *Education and Information Technologies*, 27(1), 1323–1340. Available at: <https://doi.org/10.1007/s10639-021-10644-7>.
- Alea, L. A., Fabrea, M. F., Roldan, R. D. A., & Farooqi, A. Z. (2020). Teachers' Covid-19 awareness, distance learning education experiences and perceptions towards institutional readiness and challenges. *International Journal of Learning, Teaching and Educational Research*, 19(6), 127–144. Available at: <https://doi.org/10.26803/ijlter.19.6.8>.
- Arifin, Z., Nurtanto, M., Warju, W., Rabiman, R., & Kholifah, N. (2020). The tawock conceptual model at content knowledge for professional teaching in vocational education. *International Journal of Evaluation and Research in Education*, 9(3), 697–703. Available at: <https://doi.org/10.11591/ijere.v9i3.20561>.
- Aryani, D. I., Pandanwangi, A., Ida, I., Manurung, R. T., & Pattipawaej, O. C. (2021). A training on the development of adaptive digital learning materials to improve teachers' competence during the COVID-19 pandemic. *Community Empowerment*, 6(9), 1600–1608. Available at: <https://doi.org/10.31603/ce.5120>.
- Astuti, M., Arifin, Z., Nurtanto, M., Mutohhari, F., & Warju, W. (2022). The maturity levels of the digital technology competence in vocational education. *International Journal of Evaluation and Research in Education (IJERE)*, 11(2), 596–603. Available at: <https://doi.org/10.11591/ijere.v11i2.22258>.
- Bahasoan, A. N., Ayuandiani, W., Mukhram, M., & Rahmat, A. (2020). Effectiveness of online learning in pandemic COVID-19. *International journal of science, technology & management*, 1(2), 100–106.
- Bandura, A. (1982). Mechanism of self-efficacy in human agency. *American Psychologist*, 37(2), 122–147.
- Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. *Self-Efficacy in Changing Societies*, 15, 1–45. Available at: <https://doi.org/10.1017/cbo9780511527692.003>.
- Bandura, A. (2010). Self-efficacy-Bandura. *The Corsini Encyclopedia of Psychology*, 1–3.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238–246. Available at: <https://doi.org/10.1037/0033-2909.107.2.238>.

- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588–606. Available at: <https://doi.org/10.1037/0033-2909.88.3.588>.
- Beukers, E., & Bertolini, L. (2021). Learning for transitions: An experiential learning strategy for urban experiments. *Environmental Innovation and Societal Transitions*, 40(1), 395–407. Available at: <https://doi.org/10.1016/j.eist.2021.09.004>.
- Bryson, J. R., & Andres, L. (2020). Covid-19 and rapid adoption and improvisation of online teaching: curating resources for extensive versus intensive online learning experiences. *Journal of Geography in Higher Education*, 44(4), 608–623. Available at: <https://doi.org/10.1080/03098265.2020.1807478>.
- Chen, P. L., Mao-Shan, S., & Ya-Han, H. (2021). Psychological capital as a mediator: Effect of the teaching beliefs of classical reading program teachers on classroom management effectiveness. *Journal of Research in Education Sciences*, 66(2), 207–239.
- Cohen, L., Lawrence, M., & Keith, M. (2011). *Research methods in education*. London: Routledge.
- Costa, R. Z. F., Medina-Papst, J., Spinosa, R. M. d. O., Santo, D. L. d., & Marques, I. (2019). Content validity, reliability and construct validity of a checklist for dive roll evaluation. *Journal of Physical Education*, 30(1), 1–14. Available at: <https://doi.org/10.4025/jphiseduc.v30i1.3054>.
- Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects*, 49(1), 91–96.
- Delcker, J., & Ifenthaler, D. (2021). Teachers' perspective on school development at German vocational schools during the Covid-19 pandemic. *Technology, Pedagogy and Education*, 30(1), 125–139. Available at: <https://doi.org/10.1080/1475939x.2020.1857826>.
- Esfandagheh, F. B., Harris, R., & Oreyzi, H. R. (2012). The impact of extraversion and pre-training self-efficacy on levels of training outcomes. *Human Resource Development International*, 15(2), 175–191. Available at: <https://doi.org/10.1080/13678868.2011.647460>.
- Fawaid, M., Triyono, M. B., Sofyan, H., Mutohari, F., Jatmoko, D., Wachid, N., Majid, A., & Rabiman, R. (2022). Entrepreneurial Intentions of Vocational Education Students in Indonesia: PLS-SEM Approach. *Journal of Technical Education and Training*, 14(2), 91–105. <https://doi.org/https://doi.org/10.30880/jtet.2022.14.02.009>
- Ferradás, M. D. M., Freire, C., García-Bértoa, A., Núñez, J. C., & Rodríguez, S. (2019). Teacher profiles of psychological capital and their relationship with burnout. *Sustainability*, 11(18), 5096. Available at: <https://doi.org/10.3390/su11185096>.
- Freire, C., Ferradás, M. d. M., García-Bértoa, A., Núñez, J. C., Rodríguez, S., & Piñeiro, I. (2020). Psychological capital and burnout in teachers: The mediating role of flourishing. *International Journal of Environmental Research and Public Health*, 17(22), 1–14. Available at: <https://doi.org/10.3390/ijerph17228403>.
- Gao, Y., Gumah, B., Kulbo, N. B., Addo, P. C., Kulbo, D. B., & Aziabah, M. A. (2021). Predictors of teachers' self-efficacy in teaching EFL: An examination of "Nateness" and teachers' training. *Frontiers in Education*, 6(1), 1–10. Available at: <https://doi.org/10.3389/educ.2021.729271>.
- Graham, L. J., White, S. L., Cologon, K., & Pianta, R. C. (2020). Do teachers' years of experience make a difference in the quality of teaching? *Teaching and Teacher Education*, 96, 103190. Available at: <https://doi.org/10.1016/j.tate.2020.103190>.
- Guasch, T., Alvarez, I., & Espasa, A. (2010). University teacher competencies in a virtual teaching/learning environment: Analysis of a teacher training experience. *Teaching and Teacher Education*, 26(2), 199–206. Available at: <https://doi.org/10.1016/j.tate.2009.02.018>.
- Hamid, M. A., Aditama, D., Permata, E., Kholifah, N., Nurtanto, M., & Majid, N. W. A. (2022). Simulating the Covid-19 epidemic event and its prevention measures using python programming. *Indonesian Journal of Electrical Engineering and Computer Science*, 26(1), 278–288. Available at: <https://doi.org/10.11591/ijeecs.v26.i1.pp278-288>.
- Hanafi, Y., Taufiq, A., Saefi, M., Ikhsan, M. A., Diyana, T. N., Thoriquttyas, T., & Anam, F. K. (2021). The new identity of Indonesian Islamic boarding schools in the "new normal": The education leadership response to COVID-19. *Heliyon*, 7(3), e06549. Available at: <https://doi.org/10.1016/j.heliyon.2021.e06549>.
- Horspool, A., & Lange, C. (2012). Applying the scholarship of teaching and learning: Student perceptions, behaviours and success online and face-to-face. *Assessment & Evaluation in Higher Education*, 37(1), 73–88. Available at: <https://doi.org/10.1080/02602938.2010.496532>.
- Idrizi, E., Filiposka, S., & Trajkovijk, V. (2021). Analysis of success indicators in online learning. *International Review of Research in Open and Distributed Learning*, 22(2), 205–223. Available at: <https://doi.org/10.19173/irrodl.v22i2.5243>.
- Ismail, F., Pawero, A. M. D., & Umar, M. (2021). Education planning and its implications for education policy during the Covid-19 pandemic. *International Journal for Educational and Vocational Studies*, 3(2), 110–123.
- Iwaki, S., Sato, T., Tsuda, E., & Wyant, J. (2020). Japanese elementary classroom teachers' experiences of teaching gymnastics in physical education. *Physical Educator*, 77(2), 404–425. Available at: <https://doi.org/10.18666/tpe-2020-v77-i2-9915>.
- Johnson, R. A., & Wichern, D. W. (2007). *Applied multivariate statistical analysis* (6th ed.). Upper Saddle River: Pearson Education, Inc.
- Johnson, D., & Maclean, R. (2008). *Teaching: Professionalisation, development and leadership*. Dordrecht: Springer.
- Jöreskog, K. G., & Sörbom, D. (1982). Recent developments in structural equation modeling. *Journal of Marketing Research*, 19(4), 404–416. Available at: <https://doi.org/10.1177/002224378201900402>.
- Kennedy, Y., Flynn, N., O'Brien, E., & Greene, G. (2021). Exploring the impact of incredible years teacher classroom management training on teacher psychological outcomes. *Educational Psychology in Practice*, 37(2), 150–168. Available at: <https://doi.org/10.1080/02667363.2021.1882944>.
- Kholifah, N., Sofyan, H., Pardjono, P., Sudira, P., & Nurtanto, M. (2021). Explicating the experience of beginner vocational teachers. *TEM Journal*, 10(2), 719–723. Available at: <https://doi.org/10.18421/TEM102-28>.
- König, J., Jäger-Biela, D. J., & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: teacher education and teacher competence effects among early career teachers in Germany. *European Journal of Teacher Education*, 43(4), 608–622. Available at: <https://doi.org/10.1080/02619768.2020.1809650>.
- Lemay, D. J., Bazalais, P., & Doleck, T. (2021). Transition to online learning during the COVID-19 pandemic. *Computers in Human Behavior Reports*, 4(1), 100–130. Available at: <https://doi.org/10.1016/j.chbr.2021.100130>.
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *In Personnel Psychology*, 60(3), 541–572. Available at: <https://doi.org/10.1111/j.1744-6570.2007.00083.x>.
- Majid, N. W. A., Fuada, S., Fajri, M. K., Nurtanto, M., & Akbar, R. (2020). Progress Report of Cyber Society v1. 0 Development as A Learning Media for Indonesian Society to Support EFA. *International Journal of Engineering Pedagogy*, 10(4), 133–145. Available at: <https://doi.org/10.3991/ijep.v10i4.13085>.
- Maydeu-Olivares, A., Shi, D., & Rosseel, Y. (2018). Assessing fit in structural equation models: A Monte-Carlo evaluation of RMSEA Versus SRMR confidence intervals and tests of close Fit. *Structural Equation Modeling*, 25(3), 389–402. Available at: <https://doi.org/10.1080/10705511.2017.1389611>.
- Mcgrath, S., Mulder, M., Papier, J., & Suart, R. (2019). *Handbook of vocational education and training*. In *handbook of vocational education and training*. Nottingham: Springer.
- Miltiadous, A., Callahan, D. L., & Schultz, M. (2020). Exploring engagement as a predictor of success in the transition to online learning in first year chemistry. *Journal of Chemical Education*, 97(9), 2494–2501. Available at: <https://doi.org/10.1021/acs.jchemed.0c00794>.
- Misliya, M., Alim, A., Usuf, E., Tamsah, H., & Yusriadi, Y. (2021). The effect of training and education and teacher certification allowances on teachers. *Cypriot Journal of Educational Sciences*, 16(4), 1368–1383. Available at: <https://doi.org/10.18844/cjes.v16i4.5986>.
- Mithani, M. A. (2020). Adaptation in the face of the new normal. *Academy of Management Perspectives*, 34(4), 508–530. Available at: <https://doi.org/10.5465/AMP.2019.0054>.
- Mokoena, S. (2017). Student teachers' experiences of teaching practice at open and distance learning institution in South Africa. *Turkish Online Journal of Distance Education*, 18(2), 122–133.
- Moorhouse, B. L., & Wong, K. M. (2022). The COVID-19 pandemic as a catalyst for teacher pedagogical and technological innovation and development: Teachers' perspectives. *Asia Pacific Journal of Education*, 42(sup1), 105–120. Available at: <https://doi.org/10.1080/02188791.2021.1988511>.

- Mutohhari, F., Sutiman, S., Nurtanto, M., Kholifah, N., & Samsudin, A. (2021). Difficulties in implementing 21st century skills competence in vocational education learning. *International Journal of Evaluation and Research in Education (IJERE)*, 10(4), 1229-1236. Available at: <https://doi.org/10.11591/ijere.v10i4.22028>.
- Nurtanto, M., Kholifah, N., Masek, A., Sudira, P., & Samsudin, A. (2021). Crucial problems in arranged the lesson plan of vocational teacher. *International Journal of Evaluation and Research in Education*, 10(1), 345-354. Available at: <https://doi.org/10.11591/ijere.v10i1.20604>.
- Nurtanto, M., Sudira, P., Sofyan, H., Kholifah, N., & Triyanto, T. (2022). Professional Identity of Vocational Teachers in the 21 st Century in Indonesia. *Journal of Engineering Education Transformations*, 35(3), 30-36.
- Pacheco, J. A. (2021). The “new normal” in education. *Prospects*, 51(1), 3-14.
- Prasetyo, A., Abdillah, H., Wawan, W., Nurtanto, M., Kholifah, N., & Suyitno, S. (2021). *How to the need for personal protective equipment (PPE) during the current Covid 19 pandemic: Smart products solution*. Paper presented at the 3rd 2021 East Indonesia Conference on Computer and Information Technology, EIconCIT.
- Pressley, T., & Ha, C. (2021). Teaching during a pandemic: United States teachers' self-efficacy during COVID-19. *Teaching and Teacher Education*, 106(1), 103465. Available at: <https://doi.org/10.1016/j.tate.2021.103465>.
- Prieto, L. R., & Altmaier, E. M. (1994). The relationship of prior training and previous teaching experience to self-efficacy among graduate teaching assistants. *Research in Higher Education*, 35(4), 481-497. Available at: <https://doi.org/10.1007/bf02496384>.
- Reid, H. M. (2014). *Introduction to statistics: Fundamental concepts and procedures of data analysis*. USA: SAGE Publications, Inc.
- Rupp, D., & Becker, E. S. (2021). Situational fluctuations in student teachers' self-efficacy and its relation to perceived teaching experiences and cooperating teachers' discourse elements during the teaching practicum. *Teaching and Teacher Education*, 99, 103252. Available at: <https://doi.org/10.1016/j.tate.2020.103252>.
- Sánchez-Escobedo, P. A., Valdés-Cuervo, A. A., Contreras-Olivera, G. A., García-Vázquez, F. I., & Durón-Ramos, M. F. (2020). Mexican teachers' knowledge about gifted children: Relation to teacher teaching experience and training. *Sustainability*, 12(11), 4474. Available at: <https://doi.org/10.3390/su12114474>.
- Saripudin, S., Sumarto, S., Juanda, E. A., Abdullah, A. G., & Ana, A. (2020). Vocational school teachers' perceptions of e-learning during covid-19. *Journal of Engineering Education Transformations*, 34, 7-13. Available at: <https://doi.org/10.16920/JEET/2020/V34I0/157844>.
- Scherer, R., Howard, S. K., Tondeur, J., & Siddiq, F. (2021). Profiling teachers' readiness for online teaching and learning in higher education: Who's ready? *Computers in Human Behavior*, 118, 106675. Available at: <https://doi.org/10.1016/j.chb.2020.106675>.
- Suddeath, E., Baltrinic, E., & Dugger, S. (2020). The impact of teaching preparation practices on self-efficacy toward teaching. *Counselor Education and Supervision*, 59(1), 59-73. Available at: <https://doi.org/10.1002/ceas.12166>.
- Surahman, E., & Sujarwanto, E. (2021). Physics undergraduate students' perceptions of online learning during the transition period to the new normal era. *Journal of Physics: Conference Series*, 1869(1), 1-8. Available at: <https://doi.org/10.1088/1742-6596/1869/1/012159>.
- Sutiman, S., Sofyan, H., Soenarto, S., Mutohhari, F., & Nurtanto, M. (2022). Students' career decision-making during online learning: The mediating roles of self-efficacy in vocational education. *European Journal of Educational Research*, 11(3), 1669-1682.
- Thomsen, M., Karsten, S., & Oort, F. J. (2016). Distance in schools: The influence of psychological and structural distance from management on teachers' trust in management, organisational commitment, and organisational citizenship behaviour. *School Effectiveness and School Improvement*, 27(4), 594-612. Available at: <https://doi.org/10.1080/09243453.2016.1158193>.
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38(1), 1-10. Available at: <https://doi.org/10.1007/BF02291170>.
- Wilde, N., & Hsu, A. (2019). The influence of general self-efficacy on the interpretation of vicarious experience information within online learning. *International Journal of Educational Technology in Higher Education*, 16(1), 1-20.
- Wilson, C., Marks Woolfson, L., & Durkin, K. (2020). School environment and mastery experience as predictors of teachers' self-efficacy beliefs towards inclusive teaching. *International Journal of Inclusive Education*, 24(2), 218-234. Available at: <https://doi.org/10.1080/13603116.2018.1455901>.
- Wong, K. Y., Sulaiman, T., Ibrahim, A., Kunchi Mohd, A. G., Hassan, Hussin, O., & Wan Jaafar, W. M. (2021). Secondary school teachers psychological status and competencies in e-teaching during Covid-19. *Heliyon*, 7(11), 1-10. Available at: <https://doi.org/10.1016/j.heliyon.2021.e08238>.
- Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). New York: Harper and Row.
- Zapata-Cuervo, N., Montes-Guerra, M. I., Shin, H. H., Jeong, M., & Cho, M.-H. (2022). Students' psychological perceptions toward online learning engagement and outcomes during the COVID-19 pandemic: a comparative analysis of students in three different Countries. *Journal of Hospitality & Tourism Education*, 1-15. Available at: <https://doi.org/10.1080/10963758.2021.1907195>.