Journal of Positive School Psychology http://journalppw.com
2022, Vol. 6, No. 9, 1320-1344

Examining The Implication Of Teachers' Resilience Factors On Teaching Effectiveness During Covid-19 Pandemic

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ABSTRACT

The paper fills in the research gap on the study of teachers' resilience factors that influence their teaching effectiveness in a hybrid learning setting during the COVID-19 pandemic in Indonesia. During the pandemic, many Indonesian students experienced a lack of class interaction, leading to decreased learning outcomes –an issue called learning loss. It impacts Indonesia's competitiveness in education globally and a decreased GDP value. To answer the learning loss issue, the study analyses the three-dimensional framework for resilience with a moderating effect of computer self-efficacy on teachers in Jakarta, Bogor, and Tangerang city of Indonesia. The results indicate that the most influential aspects of teachers' resilience are their emotional and social competence. The results also reveal other factors contributing to teaching success, such as supporting infrastructure, human resource management, shared values, communication flow, as well as parents and students support. The data uphold the ongoing issue that highlights the need for teachers and students interaction, as the moderating effect of computer self-efficacy encourages more face-to-face interaction and minimizes the reliance on technology to substitute the teacher's role. From a managerial perspective, this study emphasizes the need to facilitate teacher's personal development by considering the impact and awareness of building resiliency.

Keywords: Teaching Effectiveness, Teachers' Resilience, Hybrid Learning, COVID-19 Pandemic.

1. INTRODUCTION

The teaching and learning process during the COVID-19 pandemic in Indonesia was found ineffective. The Indonesian Child Protection Commission (KPAI) survey in 2021 showed that 79.9% of 1700 students did not interact with their teachers in class. Furthermore, 81.8% of them perceived that their teachers emphasized giving assignments on a tight deadline rather than teaching in class discussions (KPAI 2021). Additionally, both UNICEF and World Health Organization warned that the long-term consequences would affect students' health and wellbeing (UNICEF 2021b). As a result, students have been showing low learning achievements. The World Bank calculated that Indonesian students' learning outcomes decreased from around 0.9 to 1.2 years of study compared to before the COVID-19 pandemic, where the average of 12.4 years of study was equivalent to 7.8 years of learning outcomes (Yarrow, Masood, and Afkar 2020).

Consequently, the decreased student learning outcomes affect Indonesia's competitiveness in education globally. The

Organization for Economic Co-operation and Development mentioned that the government has been too focused on business closures and unemployment issues that hardly see the longer-term consequences in education. Thus, the impact of less than 1/3 years of learning outcome today, resulted in a decreased GDP present value of approximately 2.2 billion USD in the next 80 years caused by labor forces who were in Grade 1-12 by 2020 (Hanushek and Woessmann 2020). This issue is called learning loss, described as a decreased learning ability caused by a loaded curriculum, tedious learning process, limited facilities and infrastructure, incompetent and unprofessional teachers, inadequate supporting resources, and ineffective education assessment (Chen et al. 2021). Thus, the learning loss issue is not because of how long the school closure is; rather, the teaching and learning process indicates its ineffectiveness (Yarrow et al. 2020). Therefore, it is important to identify additional support to restore learning and promote effective teaching. One of them is through the development of teachers' resilience.

There are more resilience studies found in childhood than in teachers. First introduced as a concept under the disciplines of psychiatry and developmental psychology, a study in resilience found that two-thirds of children who grow through negative life experiences (such as poverty, abuse, neglection, and poor parenting) develop a thriving behavior and positive reaction (Eldridge 2013). But teachers need to build resilience too. As teachers encounter stress daily, they need to develop their resilience from time to time (Schussler et al. 2018). In the theoretical frameworks, resilience is defined as an iterative process in using one's personal capability and resources in any given setting; and their relationship with the system around them (Eldridge 2013). It promotes human coping and protective factors, self-improvement rooted in pressure, understanding of positive and negative outcomes (often overlooked in sociocultural), and a manifestation of human behavior and wellbeing (Johnson et al. 2014). Hence, understanding teachers' perspectives on their resiliency will help understand the impact on their teaching practice. Furthermore, teachers' emotional understanding reflects on their students' attitudes to demanding uncertainties. As a result, resilient teachers will raise resilient students. Because of that, exploring how teachers respond and overcome demanding uncertainties is worth studying for (Eldridge 2013).

This study analyzes teachers' resilience in a new context of hybrid-learning during the COVID-19 pandemic. The COVID-19 pandemic signals the urgency to accelerate the process of adaptive learning through ICT integration (UNICEF 2021a). In fact, the Indonesian education ministry plans to integrate science and technology resources within the education framework towards 2030 (Kementrian Perencanaan Pembangunan Nasional / Badan Perencanaan Pembangunan Nasional 2017). Understanding how the applied teaching method can maximize current and upcoming curriculum management is essential (Anwar 2018). In this case, the hybrid learning implementation that emerged since the rising number of Massive Open Online Course is suitable with Indonesia's learning culture and education system (Kurniasari, Jusuf, and Gunardi 2018). Many used hybrid learning, blended learning, and flipped classroom terms interchangeably, but there are differences between the proportion of face-to-face and online interaction. Hybrid learning is more balanced with online-onsite interaction and is considered more engaging. The benefits and opportunities offered are the learning flexibility, independent exploration (College of DuPage 2015); organizational benefits to attract more students abroad to study remotely, and pedagogical benefits to invite guests online and have students be socially active in a diverse setting (Raes et al. 2020).

Indeed, measuring students' learning outcomes is an ongoing study. Studies have previously integrated other frameworks: VITAE "Variations in Teachers' Work, Lives and Effectiveness" to analyze the roles of resilience (Gu and Day 2007); 5 Major Themes of problems in early-career teaching (Johnson et al. 2014); and a mindfulness program called CARE with acceptance indicators in mindfulness and self-efficacy (Schussler et al. 2018). Previously, effective lessons are measured based on the students' assessments, which solemnly focused on their self-report abilities, while others used pre-test and post-test designs. The research standard measurement on student's GPA was rejected as it did not reflect on the amount of learning given in class, only the score of one group. Continuing, an established measurement of cognitive learning named learning loss was also rejected as it was unreliable to measure student's performance by recalling their knowledge memory. Also, there were research gaps in the validity of the factor analysis and biased student evaluations of teachers who graded them with higher scores (Hooker and Denker 2014). Because of that, this study will focus more on the teacher's personal development that will reflect on their teaching method.

To answer this, the study analyses the three-dimensional framework for resilience with a moderating effect of computer self-efficacy. The three-dimensional framework answers resilience formed through three states:

(1) Emotional Competence. Qualities of a positive self-concept, an internal locus of control, an autonomous or well-developed sense of identity, and a sense of humor. To illustrate, successful adults were once children with more internal and external capabilities and resources. They are better problem solvers with higher self-esteem, developed through various situations. They are more emotionally competent and would likely bounce back in a situation that did not go as planned (Knight 2007).

(2) Social Competence. Resilient children grow in a supportive environment with supportive adults, developing a protective factor throughout their growth. Resilience prevents abuse, violence, and suicide issues. The development of resilience at a young age has a longer-term occupational and life success (Knight 2007).

(3) Future-Oriented. Qualities of having a clear sense of purpose, belief that life has meaning, a sense of optimism, the ability to solve problems and be reflective, and the ability to be flexible and adaptive in new situations. Similarly, there is a relationship between optimism and adjustment in negative life settings. People with problem-solving skills can see things beyond their current situation. They are more flexible with changes. Also, the sense of flexibility is associated with a positive belief in their self-efficacy (Knight 2007). Increased self-efficacy triggers confidence, positive adaptation on professional development, persistence when things are not going as expected (Gu and Day 2007), acceptance to changes, as well as a characteristic of mindfulness and acting with full awareness (Schussler et al. 2018).

Often teacher's educational programs highlights the need to develop self-efficacy in teaching (in instruction, student engagement, and classroom management) but lack focus on the efficacy of overcoming social-emotional challenges during professional experiences (Mansfield 2020). In this context, self-efficacy revolves around using technology in education. Previously, a study found that the low level of someone's computer self-efficacy triggered frustrations when facing challenges in using the computer. The frustrations lowered their belief in their capability. Conversely, those with higher Computer Self-Efficacy would not easily give up when encountering problems. They would be more persistent in overcoming obstacles (Punnoose 2012).

To sum up, it is important to study teachers' resilience factors as an additional response recovery to promote effectiveness amidst the learning loss issue during the COVID-19 pandemic. Therefore, this study aims to fill the research gap in teacher resilience to teaching effectiveness in hybrid learning during the COVID-19 pandemic in Indonesia.

2. METHOD

This study identifies and evaluates the factors influencing teachers' resilience to teaching effectiveness. The research used both quantitative and qualitative research in collecting the data. The literature review focuses on resilience, teaching, and hybrid learning. A questionnaire was distributed to teachers (N=161) who participated in a hybrid learning setting during the COVID-19 pandemic in Indonesia. The distribution phases are divided into two phases which are the pre-test and main test. A confirmatory interview (N=6) was conducted afterward. The respondents were mostly Indonesian female millennials around 28 to 33 years old with bachelor's degrees living in Jakarta. They are mostly full-time teachers responsible for teaching 6 to 10 elementary classes weekly and have experienced the hybrid learning setting since July 2021.

3. RESULT

The result indicated that all variables and indicators are valid, according to the measurement of factor loading (greater than 0.60) the value of Average Variance Extracted (greater than 0.50) as seen on Table 1. The result of the cross-loadings also showed the correlation between the same indicator has the highest number among other cross-loadings, as seen on Table 2.

Table 1 Convergent Validity Measurement

Variable	Indicators	Factor Loading Value	AVE Value
		> 0.60	> 0.50
Emotional Competence	EC2	0.799	0.530
	EC3	0.707	
	EC4	0.672	
Social Competence	SC1	0.765	0.662
	SC2	0.838	
	SC3	0.872	
	SC4	0.774	
Future-Oriented	FO1	0.836	0.732
	FO3	0.808	
	FO4	0.862	

	FO5	0.913	
Teachers' Resilience	TR1	0.878	0.628
	TR3	0.568	
	TR4	0.889	
Teaching Effectiveness	TE1	0.745	0.636
	TE2	0.812	
	TE3	0.820	
	TE4	0.838	
	TE5	0.769	
Computer Self-Efficacy	CS1	0.780	0.657
	CS2	0.803	
	CS3	0.804	
	CS4	0.854	
Perceived Learning Loss	PL1	0.852	0.777
	PL2	0.921	
	PL3	0.911	
	PL4	0.839	

(Source: Author, 2022)

Table 2 Cross Loading Discriminant Analysis

Indicator	EC	SC	FO	TR	TE	CS	PL
EC2	0.799	0.415	0.481	0.409	0.473	0.317	-0.022
EC3	0.707	0.512	0.542	0.273	0.354	0.318	-0.059
EC4	0.672	0.496	0.330	0.330	0.390	0.364	-0.152
SC1	0.582	0.768	0.462	0.420	0.482	0.322	-0.197
SC2	0.485	0.841	0.480	0.378	0.439	0.345	-0.039
SC3	0.532	0.872	0.505	0.522	0.486	0.340	-0.021
SC4	0.477	0.769	0.513	0.355	0.407	0.380	-0.007

FO1	0.447	0.518	0.836	0.351	0.460	0.377	0.041
FO3	0.566	0.472	0.808	0.312	0.367	0.416	0.038
FO4	0.543	0.531	0.862	0.382	0.566	0.421	-0.030
FO5	0.553	0.531	0.913	0.408	0.553	0.535	-0.009
TR1	0.377	0.491	0.386	0.878	0.624	0.475	-0.264
TR3	0.215	0.123	0.132	0.568	0.321	0.283	-0.133
TR4	0.475	0.505	0.418	0.889	0.668	0.452	-0.253
TE1	0.410	0.407	0.384	0.558	0.746	0.403	-0.282
TE2	0.400	0.370	0.376	0.567	0.809	0.404	-0.209
TE3	0.400	0.403	0.395	0.614	0.820	0.453	-0.373
TE4	0.538	0.536	0.524	0.515	0.838	0.432	-0.196
TE5	0.496	0.510	0.618	0.576	0.769	0.484	-0.124
CS1	0.356	0.253	0.381	0.406	0.450	0.780	-0.099
CS2	0.306	0.211	0.394	0.285	0.392	0.803	-0.163
CS3	0.417	0.449	0.452	0.502	0.493	0.804	0.256
CS4	0.369	0.366	0.415	0.447	0.429	0.854	-0.201
PL1	-0.182	-0.156	-0.079	-0.271	-0.330	-0.277	0.876
PL2	-0.079	-0.094	-0.002	-0.294	-0.282	-0.214	0.919
PL3	-0.038	-0.019	0.028	-0.219	-0.237	-0.237	0.906
PL4	-0.047	-0.010	0.096	-0.215	-0.192	-0.114	0.812

(Source: Author, 2022)

The result of the Fornell-Larcker analysis showed that each latent variable has the highest correlation on its own latent variable. The highest correlation value is from Perceived Learning Loss with the number 0.879 and the lowest correlation value is from Emotional Competence with the number 0.728. The result also emphasized that every variable in the model has discriminant validity. The details are shown in Table 3.

Table 3 Fornell-Larcker Discriminant Analysis

Variable	EC	SC	FO	TR	TE	CS	PL
EC	0.728						

SC	0.640	0.814					
FO	0.614	0.600	0.856				
TR	0.472	0.522	0.428	0.793			
TE	0.564	0.560	0.579	0.712	0.797		
CS	0.454	0.423	0.514	0.521	0.548	0.810	
PL	-0.101	-0.038	-0.142	-0.257	-0.222	0.239	0.879

(Source: Author, 2022)

The result also showed that all variables are reliable based on the measurement of Cronbach's Alpha (more than 0.60) and composite reliability (more than 0.70), except for variable Emotional Competence. However, due to the limitation of Cronbach's Alpha, Emotional Competence with composite reliability greater than 0.70 is considered reliable (Hair et al. 2017). The details are shown in Table 4.

Table 4 Cronbach's Alpha and Composite Reliability Analysis

Variable	Indicator	Composite Reliability (>0.7)	Cronbach's Alpha (>0.6)	Model Evaluation
Emotional Competence (EC)	EC2	0.771	0.558	Reliable
	EC3			
	EC4			
Social Competence (SC)	SC1	0.887	0.829	Reliable
	SC2			
	SC3			
	SC4			
Future-Oriented (FO)	FO1	0.916	0.878	Reliable

	FO3			
	FO4			
	FO5			
Teachers' Resilience (TR)	TR1	0.830	0.707	Reliable
	TR3			
	TR4			
Teaching Effectiveness (TE)	TE1	0.897	0.856	Reliable
	TE2			
	TE3			
	TE4			
	TE5			
Computer Self-Efficacy (CS)	CS1	0.884	0.836	Reliable
	CS2			
	CS3			
	CS4			
Perceived Learning Loss (PL)	PL1	0.931	0.904	Reliable
	PL2			
	PL3			
	PL4			

(Source: Author, 2022)

With seven variables and a total of twenty-three indicators, the result of the Common Method Bias showed the value variance gathered by a single factor is 35.082%, which passes the rule below 50%. Because of that, the result can be carried out with minimum possible errors in the testing (Aguirre-Urreta and Hu 2019).

In assessing R^2, there are three levels of R^2: 0.75 (for substantial value), 0.50 (for moderate value), and 0.25 (for weak value) (Hair et al. 2017). Among all the R^2 values, the highest effect is from Teachers' Resilience towards Teaching Effectiveness (TE), with an R^2 value equal to 0.614. Conversely, the lowest effect is from Teaching Effectiveness (TE) towards Perceived Learning Loss (PL), with an R^2 value equal to 0.131. These details are shown in Table 5.

Table 5 R Square Analysis

Variable	R Square (R^2)

Teachers' Resilience (TR)	0.311
Teaching Effectiveness (TE)	0.614
Perceived Learning Loss (PL)	0.131

(Source: Author, 2022)

In assessing f^2, there are three levels of f^2 effect: 0.02 (for small effect), 0.15 (for medium effect), and 0.35 (for large effect) (Hair et al. 2017). Among all the f^2 values, the highest effect is from Teachers' Resilience (TR) towards Teaching Effectiveness (TE), with a f^2 value equal to 0.470, considered as a large effect. On the other hand, the lowest effect is from Social Competence (SC) towards Teaching Effectiveness (TE), with a f^2 value equal to 0.005, considered as a small effect. These details are shown in Table 6.

Table 6 f Square Analysis

Variable	Teachers' Resilience (TR)	Teaching Effectiveness (TE)	Perceived Learning Loss (PL)
Emotional Competence (EC)	0.027	0.023	
Social Competence (SC)	0.084	0.005	
Future-Oriented (FO)	0.010	0.080	
Teacher's Resilience (TR)		0.470	
Teaching Effectiveness (TE)			0.040

(Source: Author, 2022)

The result also indicated that the variable Computer Self-Efficacy has a role in moderating the relationship between Teaching Effectiveness and Perceived Learning Loss. Based on the graph in Figure 1, the blue line (when the variable Computer Self-Efficacy is at the mean state) has a downwards slope, meaning Teaching Effectiveness negatively affects Perceived Learning Loss. In other words, the higher the Teaching Effectiveness, the lower the Perceived Learning Loss. However, the red line (when the variable Computer Self-Efficacy is one standard

deviation below the mean) has a steeper downwards slope, which concluded that when the level of Computer Self-Efficacy is low, the moderating effect of Teaching Effectiveness on Perceived Learning Loss is more substantial.

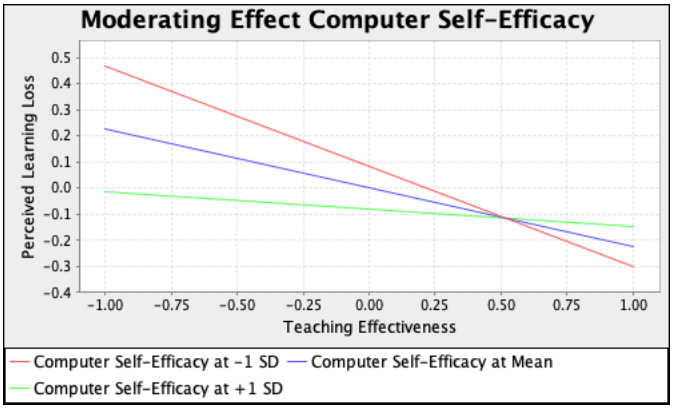

Figure 1 Slope Analysis on Moderating Effect of Computer Self-Effect on Teaching Effectiveness towards Perceived Learning Loss
(Source: Author, 2022)

To consider a hypothesis is acceptable, one should have t-value more than 1.96 for significance level of 5% and p-value less than 0.05. Based on the structural model analysis as seen on Figure 2 and Table 7, it can be concluded that not all hypotheses proposed can be accepted. H1, H3, H6, H7, H8, and H9 were accepted while H2, H4, and H5 were rejected.

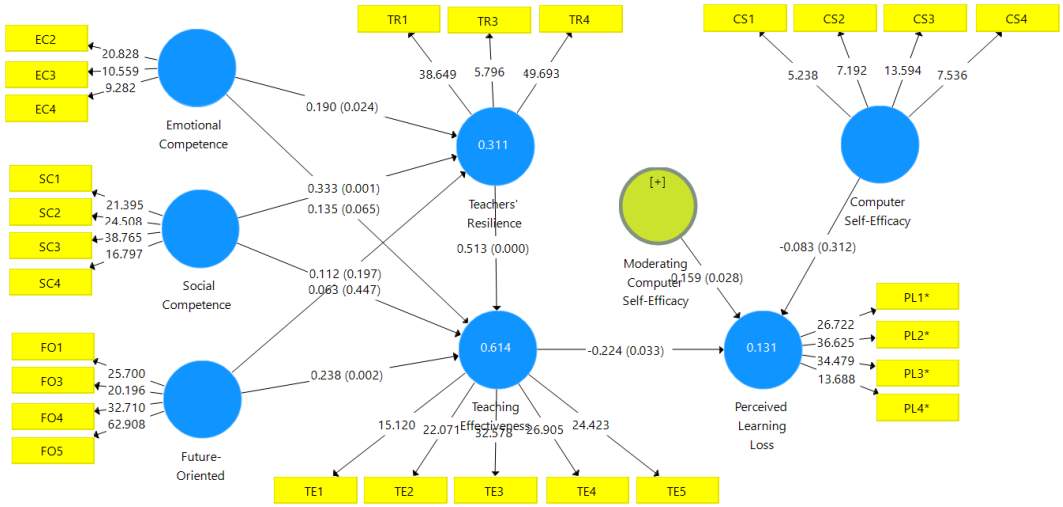

Figure 2 Structural Model Analysis by SMART-PLS version 3 program
(Source: Author, 2022)

Table 7 Significancy – Hypothesis Test

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Value	P-Values
EC -> TR	0.190	0.190	0.084	2.258	0.024
EC -> TE	0.135	0.144	0.073	1.851	0.065
SC -> TR	0.333	0.335	0.101	3.285	0.001

SC -> TE	0.063	0.062	0.083	0.761	0.447
FO -> TR	0.112	0.114	0.087	1.293	0.197
FO -> TE	0.238	0.237	0.075	3.183	0.002
TR -> TE	0.513	0.509	0.052	9.782	0.000
TE -> PL	-0.224	-0.225	0.105	2.141	0.033
TE -> CS -> PL	0.159	0.152	0.072	2.202	0.028

(Source: Author, 2022)

4. DISCUSSION

This study aims to fill in the limitation of research on the study of teacher effectiveness to teaching effectiveness in the context of a hybrid learning setting during the COVID-19 pandemic in Indonesia by exploring the factors influencing Teachers' Resilience to Teaching Effectiveness. Although several hypotheses were found acceptable, some were rejected, such as H2 - the effect of Emotional Competence towards Teaching Effectiveness, H4 - the effect of Social Competence towards Teaching Effectiveness, and H5 - the effect of Future-Oriented towards Teachers' Resilience. The details are shown in Table 8.

Table 8 Hypothesis Analysis Results

Variable	Hypothesis	Results
H1	The Emotional Competence has a positive effect on Teachers' Resilience	Accepted
H2	The Emotional Competence has a positive effect on Teaching Effectiveness.	Rejected
H3	The Social Competence has a positive effect on Teachers' Resilience.	Accepted
H4	The Social Competence has a positive effect on Teaching Effectiveness.	Rejected

H5	The Future-Oriented has a positive effect on Teachers' Resilience.	Rejected
H6	The Future-Oriented has a positive effect on Teaching Effectiveness.	Accepted
H7	The Teachers' Resilience has a positive effect on Teaching Effectiveness.	Accepted
H8	The Teaching Effectiveness has a negative effect on Perceived Learning Loss.	Accepted
H9	The Computer Self-Efficacy has a moderating effect in the relationship between Teaching Effectiveness to Perceived Learning Loss.	Accepted

(Source: Author, 2022)

To begin with, there were differences in the variables and research methodology taken compared to the resilience framework referred to. Knight (2007) used a literature review on resilience education by analyzing the educators' situations in Australia in 2007. When the study was conducted in 2007, Australia was under several political changes and natural disasters (Morrissey and Reser 2007). There was also a highly pathogenic avian influenza virus or H5N1 virus spread by multiple bird species (Australian National Audit Office 2007) and H3N8 or equine influenza, where a strict quarantine followed the virus outbreak (Singh et al. 2018). Despite all the life events classified as uncertainties and challenging situations, Australia did not implement the hybrid learning program nor had school closures there (Cheeseman and Torr 2009). By contrast, this study analyzed the questionnaire distributed to teachers in Indonesia in 2021-2022 during the COVID-19 pandemic in Indonesia. The questionnaire respondents in this study had a different background setting from the ones in Australia. At the same time, it should be considered if the respondents have the same understanding in answering the statements as there were differences in the statements used.

There were also uniqueness and traits unmentioned through the questionnaire data analysis but were found through more profound interviews with the respondents. Thus, the study also conducted confirmatory interviews to clarify the findings from the questionnaire, focusing on understanding the impact of Computer Self-Efficacy, their teaching method, and traits related to resilience.

1. Emotional Competence has a positive effect on Teachers' Resilience.

The data in this study supported the hypothesis that mentioned Emotional Competence positively affects Teachers' Resilience. The data was aligned with the previous studies from Knight (2007), where emotional competence helped people bounce back from situations that did not go well, indicating the significance of Emotional Competence's influence on building resilience for teachers. As previously mentioned, Teachers' Resilience was influenced in a weak value by three exogenous variables, including Emotional Competence. The path coefficient data analysis showed that Emotional Competence has a small effect on Teachers' Resilience, with emotional regulation as the most influential aspect of Teachers' Resilience -followed by being

autonomous and having a sense of humor. Teachers are expected to be adaptive in teaching amid changing curriculums under the influence of political socioeconomic situations. Knight (2007) mentioned that emotional competence was developed through various upbringing situations that shaped them to be emotionally competent to bounce back from situations that did not go well. The respondents agreed that building resilience starts from building enough internal capabilities, with one of them confirming that teachers are expected to have good emotional regulation in front of their students. It is relevant to talk about emotional competence in this study's scope of research, especially when hybrid learning is a recovery response. In this challenging situation, teachers admitted to needing continuous adjustments. Although the situation answers issues of hybrid learning during the COVID-19 pandemic, the situation itself is not something that everyone is familiar with beforehand. Thus, emotional competence is needed to build resilience. The more emotionally competent someone is, the easier it is for them to build resilience.

2. Emotional Competence has a positive effect on Teaching Effectiveness.

The data in this study did not support the hypothesis that Emotional Competence positively affects Teaching Effectiveness. Previous studies mentioned that teachers with good emotional competence would have better teaching abilities. An interesting view was found in the analysis of indicator EC4 or sense of humor. Knight (2007) included a sense of humor in shaping emotional competence. The indicator EC4 explained the teacher's focus on regulating their sense of humor to build their resilience, especially when conducting hybrid learning during the pandemic. Its influence was affected by how the teachers perceived the school management and local government's decisions on conducting hybrid learning and finding its positive side. Thus, as the sense of humor is found to be the least influential aspect, the result indicated the level of humor and the positive side that the respondents perceived from the hybrid learning implementation decision.

Additionally, the interview unfolded two factors unmentioned in the questionnaire. First, the leadership team and the teachers mentioned that building emotional ability should include having self-belief and self-acceptance, especially in facing their challenges in teaching during hybrid learning. To illustrate, when teachers encounter a problem, they would not blame themselves for their limitations. They also mentioned social skills that were applicable in teachings, such as having the ability to encourage students to feel confident and comfortable, the ability to motivate students, and the ability to promote students' interest in learning.

When talking about being emotionally competent during the hybrid-learning, it is worth noting that people are more exposed to negative news during those times. The news was filled

with reports of the number of cases or sub-variances that emerged. The long, draining news of the pandemic overshadowed other news highlighting optimistic hopes that things would get better. Because of that, it is understandable if the data indicated how the respondents found difficulty in fostering a positive self-concept and sense of humor. That said, the positive self-concept and sense of humor reflected the respondent's overall teaching within a certain level of emotional competence under the COVID-19 pandemic.

3. Social Competence has a positive effect on Teachers' Resilience.

The data in this study supported the hypothesis that Social Competence positively affects Teachers' Resilience. Previous literature has mentioned how vital Social Competence is in building children's resilience. Children who grow up surrounded by supportive adults would develop enough protective factors to face different situations in the future. Knight (2007) mentioned that social competency has a longer-term effect on someone's life, especially preventing abuse, violence, and suicide. Because of that, social competence is necessary to be encouraged since early childhood to raise tougher adults. There was a correlation between the literature and the data found. Based on the data result, the indicator empathy has the highest factor loading value, followed by stable relationships, kindness, and good communication. The interview results also confirmed that empathy is the most crucial aspect of Social Competence.

The indicator empathy is an interesting finding, especially in hybrid learning. As previously mentioned, the respondents were exposed to more uncertain news during the COVID-19 pandemic. During those times, people were living day by day with worries. People are worried about many possibilities: the possibility of getting COVID-19, the possibility that they could make other people get COVID-19, and if their closest relatives and friends get COVID-19. In addition, as people were under social-distancing policies, they could not show their usual way of showing kindness. However, amid the uncertainties, people began to understand each other's feelings and conditions more as they faced the same worries -they learned to empathize with others. With that being said, building and showing empathy during the COVID-19 pandemic is the most critical aspect of building social competence.

4. Social Competence has a positive effect on Teaching Effectiveness.

The data in this study did not support the hypothesis that Social Competence has a positive effect on Teaching Effectiveness. When analysing the path coefficient data result, Teaching Effectiveness was influenced in a moderate value (R^2 value equals 0.614) by four exogenous variables, one of them was Social Competence. Yet, the variable Social effectiveness the least effect on Teaching Effectiveness (f^2 value equals 0.005) compared with the other three exogenous variables (Emotional Competence, Future-Oriented, and Teachers' Resilience). The variable Social Competence has the lowest contribution effect and indicates the respondents' least significant variable in influencing Teaching Effectiveness. The reason behind Social Competence's low influence on Teaching Effectiveness can be seen in the COVID-19 pandemic situation itself. During the COVID-19 pandemic, people stayed home and did daily work from home. Therefore, teachers who were used to going to work and meeting teachers and students in person would find it challenging when adjusting themselves to socialize online. In this study, the majority were teachers who had been experiencing hybrid learning since the early academic year of 2021 and a year of online learning since March 2020. Hence, it is understandable that teachers may

show low indications of social competence influence towards effectiveness in teaching as they have not been in an in-person relationship long enough.

The interviews also revealed the reason behind Social Competence impact as the least essential variable in teaching effectiveness. The respondents mentioned that Social Competence should be examined from two sides -internal relationships or having relationships with themselves (self-understanding and having a character) and external relationships with others (collaboration and social awareness). To illustrate, participating in community services and developing abilities to encourage students' enthusiasm, were mentioned as building an external relationship. However, the implementation of participating in community service and handling class enthusiasm was far from expected during the COVID-19 pandemic. Building social competence through volunteering online did not give the same impact as volunteering in person. The challenges of social distancing and the risk of the COVID-19 spread hinder the chances for someone to build social competence through volunteering. Furthermore, encouraging students' enthusiasm and cooperation online differs from doing it in person. When the teacher encourages students in person, both could show facial expressions and gestures, projecting their empathy and irreplaceable social traits through online presence. Hence, respondents found challenges in building social competence during the COVID-19 pandemic, as in their point of view, building social competence is through volunteering and class engagement.

The factors of Social Competence found through the interviews elevated the previously mentioned indicators on the questionnaires. In comparison, the indicators stated on the questionnaire were perceived to be more general than the factors mentioned in the interviews were more practical. Because of that, the respondents could not fully express their understanding of Emotional Competence and Social Competence. In short, the data gathered was not aligned with the previous literature due to the differences in the research methods and target respondents' settings. The factors mentioned in the interview answered the rest of the 39% effect on Teachers' Resilience that was not mentioned earlier. The data also concluded that the impact of Social Competence on Teaching Effectiveness must be through building Teachers' Resilience.

5. Future-Oriented has a positive effect on Teachers' Resilience.

The data in this study did not support the hypothesis that being Future-Oriented positively affected Teachers' Resilience. Previously, there were seven indicators of being Future-Oriented influences Teachers' Resilience: sense of purpose, spiritual, optimism, flexible and adaptive, proactive, problem solving, and critical thinking (Knight 2007). However, based on the pre-test validation, the indicator FO6 or problem-solving was found invalid and was dropped due

to its Pearson Correlation 0.266 (lower than 0.5) and Sig. value 0.097 (more than 0.05). Then, based on the convergent validity of the main test, indicator FO2 or spiritual and FO7 or critical thinking were found invalid and were dropped because of their AVE value. Therefore, pursuing the study with four indicators left out of seven from the proposed theory affected the amount of influence of Future-Oriented towards Teachers' Resilience, which became an indication that the hypothesis was rejected. Continuing, among all the f^2 values on the path coefficient data analysis, Future-Oriented (FO) has the most negligible effect on Teachers' Resilience (TR), but the indicator proactive has the highest factor loading value. Thus, proactiveness is the most influential aspect of being future-oriented, followed by flexibility, adaptive, sense of purpose, and optimism. The interview also agreed that teachers were expected to be flexible in approaching changing situations. To illustrate, the government delegated each region to decide on reopening schools when they find the situation is safe enough. The school stakeholders need to be prepared for any decision regarding school reopening. School leadership teams and teachers need to be fast in understanding the situation, especially in what is needed for the upcoming school setting. Proactiveness is necessary for teachers because they cannot entirely rely on the leadership teams. Teachers should be prepared themselves, by being knowledgeable and adaptive to situations. They are expected to go to great lengths to prepare themselves.

In the implementation, the respondents admitted to needing adjustments at the beginning with continuous flexibility and clear communication flow from time to time. Other factors in future-oriented mentioned in the interviews were integrity, growth mindset, nobility, innovation, striving for excellence, time management, discipline, and respect. The traits mentioned in the interview showed a broader scope of understanding in being future-oriented based on first-hand experiences, unmentioned in the previous literature on respondents' condition. It is worth remembering that previous literature did not implement a hybrid learning situation. Continuing, the interview unraveled a finding where some teachers were not sure about the learning loss phenomenon. From their point of view, high-performing students still perform better learning outcomes during hybrid learning; thus, they perceived learning loss did not happen. At the same time, some teachers admitted having no knowledge about other schools' conditions and have difficulty describing what differentiates their teaching method from other schools. When asked to explain further, the teachers answered that digital literacy has no impact on learning loss phenomenon or their teaching. Their answers were on contrary to their previous answers on their experience in tackling problems with the help of technology, such as by using multiple platforms to cater to differentiated learning -a teaching approach that adjusted the lesson plan to cater to each student's learning needs with different starting points.

The difference between their answers in viewing learning loss and their teaching experience shown indication of limited scope of knowledge about what's currently happening in education development. In this study, the indication of limited awareness of education development updates can be considered an interesting finding. By admitting little to no awareness of other schools' conditions, some teachers indirectly answered that they did not have any object to compare. Thus, they could not answer their uniqueness or admit that learning loss happens. This is aligned with the Social Comparison Theory that mentioned people's opinion is formed based on comparing the information they receive about other people's condition (what others can do and cannot do) with their conditions (Crusius, Corcoran, and Mussweiler 2022). If the teachers did not have any information about other school's conditions,

it is plausible to understand they did not know about the learning loss phenomenon. On the other hand, teachers with enough networking and knowledge about other schools' conditions showed pride as they successfully surpassed other schools' conditions in handling learning loss issues. This leads to a sense of confidence in answering their teaching method uniqueness and believing that learning loss happened as they saw other schools' challenges (Crusius et al. 2022). The indication of Social Comparison Bias explained why proactiveness is viewed as the most important aspect of being future-oriented. Proactiveness is needed to help teachers become more aware of education updates. The interview results also answered that because there is a lack of proactiveness, being future-oriented has no significant influence on building teachers' resilience in this context.

Another point of view is found to help understand the teacher's perspective in viewing what's currently happening in education development. The interviews confirmed several uniqueness in the teaching method that the respondents experienced first-hand, which was unmentioned in the previous literature. The leadership team mentioned specific schools' values (integrity, growth mindset, nobility, innovation, teamwork, and excellence) along with five competencies (collaboration, creativity, critical thinking, communication, and character) that contributed to shaping the hybrid learning method at their school. This statement is aligned with the previous literature that mentioned how the company's culture shaped the company's competitiveness and performance (Utomo and Budiastuti 2019). The respondents also described that having active-learner students with enough support from home as well as a team of creative and understanding teachers helped the running success. With that being said, the uniqueness of the respondent's background in this study contributed to a new perspective on the hybrid learning process -the influence of the school's values and collaborative stakeholders. The factors mentioned through the interview were the rest of 69% effect on Teaching Effectiveness unmentioned in the questionnaire.

6. Future-Oriented has a positive effect on Teaching Effectiveness.

The data in this study supported the hypothesis that Future-Oriented positively affects Teaching Effectiveness. As previously mentioned, being proactive is the most influential aspect of Future-Oriented. In this context, proactiveness contributed to the positive influence in creating a practical class. Another exciting finding found that being optimistic is the least influential aspect in Future-Oriented. Being optimistic is closely related to emotional competence, as previously explained. It is worth remembering that respondents' emotional states were significantly affected by the situation surrounding them, including news about the COVID-19 pandemic. Although this study did not consider mental health and stress levels as individual variables,

the interview showed indications of teachers needing continuous adjustments. There were times when it was challenging for them to work; because of that, being optimistic may be difficult to stimulate when the respondent is continuously exposed to negative news.

7. Teachers' Resilience has a positive effect on Teaching Effectiveness.

The data in this study supported the hypothesis that mentioned Teachers' Resilience has a positive effect on Teaching Effectiveness. Therefore, the hypothesis that teachers' resilience characteristics affect their daily teaching was acceptable. Based on the data result, the relationship between personal capability and resources has the highest factor loading value, which means it is the most influential aspect—followed by emotional understanding and dealing with stress in daily life. The data also concluded that Teachers' Resilience has the most significant impact on Teaching Effectiveness.

8. Teaching Effectiveness has a negative effect on Perceived Learning Loss.

The data in this study supported the hypothesis that mentioned Teaching Effectiveness has a negative effect on Perceived Learning Loss. Based on the result, communication skills have the highest factor loading value, followed by social awareness and situational management, self-awareness and self-management, relational skills, and perceived better student learning outcomes. In other words, communication skills are the essential aspect of Teaching Effectiveness in affecting Perceived Learning Loss. The interview also confirmed that being communicative and having a clear communication flow support implementing hybrid learning. The respondents mentioned that parents' and students' support resulted from the clear communication flow that the school established since the early COVID-19 pandemic.

Based on the analysis, Perceived Learning Loss (PL) is influenced by a weak value with only 13% effect by only one exogenous variable, Teaching Effectiveness. The interviewees answered the other factors contributing to the 87% effect towards lowering Perceived Learning Loss. Several factors that contributed to the successful implementation were mentioned as (1) Infrastructure that supported the hybrid learning (working station, classroom, teaching tools, health support, IT support system), (2) Human resource management (leadership, training, class management, daily briefing and evaluation, backup plan/timetable, and admin support), (3) Sharing values (community of learners, willingness, adaptability), (4) Communication flow internal and external, and (5) Parents and students support. Digital literacy also ensured faster integration of the lesson plan and technology needed for effective teaching, which was aligned with the previous literature that mentioned company's should prepare their employee to adjust with the latest technology (Arifin, Utomo, and Kembaren 2021). The factors that were mentioned were more detailed on a practical side in comparison to the indicators that were mentioned in the questionnaire statements. In the hybrid-learning context, communication skills are needed when people interact online. An online interaction could not deliver the proper intonation and facial expression, similar to in-person interaction. Teachers need communication skills to deliver learning material and to keep the class engaging. An engaging class is needed to ensure that students are motivated and participate in class. Thus, class participation supports the effectiveness of teaching. That being said, having good communication skills specified the person's ability to show communicative traits amidst the hybrid-learning challenging situation.

9. Computer Self-Efficacy has a moderating effect on Teaching Effectiveness to Perceived Learning Loss.

The ninth hypothesis that mentioned a moderating effect of Computer Self-Efficacy on the relationship of Teaching Effectiveness to Perceived Learning Loss was exploratory research that was found significantly valid. The data was found significant based on its T-value greater than 1.96 and P-value smaller than 0.05, the slope analysis shown the lower the value of Computer Self-Efficacy, the greater the relationship of Teaching Effectiveness towards Perceived Learning Loss. By contrast, the survey result was not aligned with the previous studies on self-efficacy. One stated that the lower the level of someone's computer self-efficacy would trigger frustrations when facing obstacles to using a computer. The frustrations will lower their perceptions of their capability to use them. However, those with higher Computer Self-Efficacy would not easily give up when encountering problems. They would also be more persistent in overcoming obstacles (Punnoose, 2012). Based on the theory, the data analysis was not aligned because if the teacher has a low level of Computer Self-Efficacy, then the Teaching Effectiveness should not run better.

In the implementation, the leadership team and the teachers mentioned a brief technology integration in classroom and hands-on activities prior to the pandemic setting. However, then, they rely more on technology during hybrid learning. In facing the pandemic and school closures, teachers were given specific training to support their hybrid learning. To name a few, teachers were given professional development programs, curriculum trainings, as well as to be Google Educator Certified. The professional development programs were packed with sharing sessions on new resources and platforms, as well as a refreshment program at the beginning of the academic year. At the same time, there were training for students and parents to understand the technology used in the classroom and communication flow. The training supported the teachers in understanding the technology integration to manage class, provide differentiated learning, keep the class interactive, and ensure class attendance. The Google Educator Certification training made the teachers to be more credible, confident (due to familiarity), and competence, which were shown through their quick understanding on the technology. Teachers have enough understanding of how to operate the technology faster. Digital literacy ensures teaching effectiveness through easier collaboration, easier class supervision with live assignments, easier to overview students' progress, and enhanced creativity in teaching. The interview result was aligned with the resilience framework mentioned by Eldridge (2013), where resilience was described as using personal capability and resources and having a relationship with the system around them. The theory is aligned because the interview results

mentioned how technology became a resource and a system that teachers adapt. Yet, the explanations also indicated a considerable reliance on technology in teaching.

There were several other reasons further explaining the moderating effect. Previous literature has already informed the issues of hybrid learning. The challenges include having a real-time in-person engagement compared to a face-to-face class. In other words, students at home will not get the same level of class engagement with their friends in school. Class engagement includes discussion, group work, and presentations that contribute to a meaningful learning experience (College of DuPage 2015). The issues were found relevant to the respondent's situation. The interviews mentioned the challenges that the teacher faced, classified as (1) External factors (Internet connection) and (2) Internal factors (difficulty in delivering learning outcomes) and followed by specific challenges based on different teaching levels. Primary students at home have a low attention span, and those at school have a low understanding of health protocol. While for secondary students, the challenges were low online classroom engagement and students motivation. When asked for further explanation, the low attention span and low classroom engagement were only found in students at home. The low classroom engagement situation does not align with the previous literature that mentioned the pedagogical benefits of hybrid learning. The previous study mentioned that hybrid learning encourages students to be more active in a diverse setting, give the student's opportunity to manage their own time, and thus reduces the phenomenon of absenteeism and tiredness to attend class (Raes et al. 2020). The difference in data analysis means that the pedagogical benefits did not apply to the respondents' situation in this study, which became a new perspective and finding.

The challenges faced by the students at home can be answered through several theories. First the absence of Collaborative Learning. Collaborative learning is described as a learning philosophy that facilitates the active participation of students to succeed together (Rahdiyanta and Hargiyarto 2017). Stanford University has also mentioned the impact of peer learning pedagogy as an open communication environment to enhance deep learning by expanding students' knowledge through others' perspectives (Kulkarni 2015). In collaborative learning, active participation between the students minimizes their differences. The approach showed that building awareness of social interaction is essential (Rahdiyanta and Hargiyarto 2017). Although the teachers mentioned several tools that promote class discussion, there were different treatments between students at school and home. To illustrate, the interviews mentioned how students at school demonstrate science experiments in the lab with their friends, while those at home demonstrate it through an online lab simulation with little to no discussion. Because of the different teaching methods, students at home could not fully engage with their teammates and thus lower their motivation and engagement in class -unlike students at school who were able to follow the class with better class engagement.

Second, the presence of Zoom Fatigue. In addition to low engagement in an online class, there is a phenomenon of Zoom Fatigue. The issue emerged during the COVID-19 pandemic as there was a risen amount of Zoom platform usage for online video conferencing in daily activities, including online classes. Students abroad have already complained of tired eyes, concentration difficulty, weariness, to lack of rest (Kaur et al. 2022). In this topic, students experiencing hybrid learning at home have a higher chance of Zoom Fatigue, which results in physical and mental exhaustion, than their friends who come to school. Other literature has mentioned that Zoom Fatigue is associated with the duration of online video conferencing itself. The longer the duration

of students in front of the online video conference platform, the higher the chances the students experience four aspects (mirroring, physiologic trap, hyper-gaze, and nonverbal intention) that cause mirror anxiety and visual distortions. With limited physical interaction, the isolation and feeling alone would increase fatigue, or worse, depression (Salim et al. 2022). The theory about Zoom Fatigue further explained the reason behind low motivation and class engagement found in students at home.

Third, theories have mentioned how technology cannot replace teachers' roles in the classroom. Based on the interviews, the teachers admitted having total reliance on technology in their teaching process. However, the previous theory mentioned why teachers should not rely on technology as it could not replace their role in class. Technology integration cannot solve the most severe problems in school as students still need their teachers to guide and evaluate the information given. This is aligned with previous studies that mentioned the importance of supportive adults around children. Teachers with resilience shape their students' resilience with overall good health physically and mentally (Eldridge 2013). Children with supporting adults will develop protective factors where they will be successful in facing different situations later in life (Knight 2007). Thus, there are several points why technology cannot replace teachers. Technology cannot provide the same teachers' role in building social and emotional aspects, for example, the ability to motivate their students. Teachers must be the ones who address the students' problems in school (self-discipline, responsibility, and learning to be respectful) by demonstrating and becoming role models themselves (Collinson 2001), not through technology.

Fourth, the difference in teachers' understanding level of the current condition. There was also an interesting finding in the teachers' knowledge about other schools' conditions, which affected their understanding of the hybrid learning situation. The leadership teams and a few teachers showed awareness of the differences outside by confidently describing the phenomenon where students at home only receive an assignment and do not attend the classroom online. They mentioned exchanging knowledge and broadening their mind on ICT integration in class. Several points that set their hybrid learning method apart include using live assignments with multiple platforms (integrated with Google Suite) and hands-on activity at school with online simulation at home. Other factors that support their teaching effectiveness are creative teaching methods with technology, direct supervision, interaction, communication flow, and having the same understanding of the hybrid learning situation to cooperate better. The leadership team saw that having digital literacy shaped their teachers to be agile in a surprising situation. Indirectly, the teachers showed a sense of creativity in connecting their teaching knowledge with a challenging situations and what technology could solve them. The interview

results are aligned with the previous literature that mentions the pedagogical benefits of hybrid learning, where users' digital literacy and active technology integration affect one another (Raes et al. 2020). Unfortunately, there were also some teachers with limited awareness and showed indications of different levels of understanding on the learning loss phenomenon.

The data analysis and interviews indicated a significant reliance on technology, especially in their computer self-efficacy to run the hybrid learning. When Computer Self-Efficacy is at a low level, there is a low level of technology usage, showing a low level of technology reliance class. So the moderating effect indirectly promotes a higher chance of having a face-to-face experience rather than having hybrid learning with some students at home.

In conclusion, the moderating effect of Computer Self-Efficacy in the relationship between Teaching Effectiveness and Perceived Learning Loss showed the importance of having real face-to-face engagement between teacher and students. There is a connection between the phenomenon mentioned earlier, where most Indonesian students have little interaction with their teachers (KPAI 2021), and the warnings about students' health and wellbeing consequences (UNICEF 2021b) during their online learning. Both led to learning loss, as the interviews confirmed that students at home have lower motivation and participation in class. Thus, the low level of Computer Self-Efficacy showed lower usage and reliance on technology. The way to achieve learning recovery is to not heavily rely on technology and expect it to replace the teacher's role, but technology should support teachers' role in a face-to-face class.

5. CONCLUSION

The study fulfills the research purpose of identifying and evaluating the factors influencing teachers' resilience to teaching effectiveness. The factors that significantly found influenced teachers' resilience were emotional competence and social competence. At the same time, being future-oriented also influences teaching effectiveness. Thus, teaching effectiveness lowers the perceived learning loss. In the implementation, having computer self-efficacy was beneficial as it eased the technology integration in hybrid learning. However, technology should not replace the teachers' role; rather, it should be at a low level so that there is a low amount of technology running the class, promoting a more face-to-face experience. The result of the study showed alignment with the learning loss phenomenon that highlights the need for teacher and student interaction. The moderating effect also showed that other additional factors influence teaching effectiveness. Additional factors that influenced teaching effectiveness and contributed to the success of the hybrid learning implementation were supporting infrastructure, human resource management, shared values, communication flows, and parents' and students' support. Hence, school management can focus on the implication of factors previously stated as additional supports for effective teaching, and acceleration of learning recovery.

6. FUTURE RESEARCH AND LIMITATIONS

Although the study showed acceptable findings with a positive impact, several things can be explored further. To begin with, the questionnaire statements were written from a theoretical perspective. Thus, to promote relevance and minimize confusion, the statements should include professional practice that will be more relevant to the respondents. Conversely, future research should also include statements about teachers' profiles and cultural backgrounds, as well as teachers' stress levels under changing situations. In addition, there are opportunities to explore factors mentioned in the interviews:

internal aspects (self-belief, self-acceptance, internal social skills) and external aspects (external social skills, schools' values and competencies, infrastructure, human resource management, sharing values, communication flow, parents and students support).

7. DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

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