

Research Article

Training Management on Training Effectiveness and Teaching Creativity in the COVID-19 Pandemic

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Received 19 August 2022; Revised 3 October 2022; Accepted 11 November 2022; Published 9 January 2023

Academic Editor: Ehsan Rezvani

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The COVID-19 pandemic makes it difficult for the teaching and learning process to be conducted freely using all learning modes due to the limited interaction between teachers and students by distance. Therefore, teachers must creatively utilize various learning models to ensure students are properly taught during the pandemic. In this regard, this study aims to elaborate on the relationship between training management, effectiveness, and its impact on the teaching creativity of public teachers from kindergarten to upper secondary level. This is an online quantitative survey with a sample of state-funded teachers consisting of civil, honorary, and contract teachers. These three types of teachers were included in the category of teachers of the State Civil Apparatus. The accidental sampling technique was used to obtain data from 405 respondents through the questionnaire distribution for a month. This was greater than the initial target of 200 people as a condition for the eligibility of the number of respondents when using structural equation modeling (SEM)—AMOS analysis. A total of four hypotheses were proposed in this study, with three accepted and one rejected. The result showed that training management contributed significantly to training effectiveness but had a minimal contribution to increasing teachers teaching creativity during the pandemic. Furthermore, training effectiveness had a significant contribution to the invention of teaching teachers and was a full mediator. This study also found the lack of references about management training and the relationships built. Proper management is a key factor in encouraging the effectiveness of activity, but it is unable to improve the creativity of teaching teachers directly. The role of training effectiveness was significant because it increases the contribution of training management to teacher teaching creativity. This research also showed that the training carried out on ASN only be successful with good management. The effectiveness of teachers teaching creativity can only be increased through training, especially during a pandemic.

1. Introduction

The COVID-19 pandemic prevents the free use of various learning modes for teaching and learning because the interaction between teachers and students is limited by distance. Therefore, teacher creativity is needed to utilize multiple learning methods during the pandemic. Blended learning through online education is one of the strategies used to overcome the limitations of face-to-face learning methods [1–5].

Teaching creativity during the pandemic will increase student learning motivation and outcomes. Due to students'

different abilities, teachers must innovate ways to enhance the quality of the teaching process and learning outcomes [6–8]. The teaching philosophy is obtained through a long method, such as additional experience, skills, and knowledge. This is in addition to adequate education qualifications. According to preliminary studies, teachers teaching creativity is an essential part of the teaching process in schools [9–13].

This study explores the relationship between training management, effectiveness, and teaching creativity during the pandemic. Previous studies have been conducted on the relationship between training and teacher performance,

but references on training management and effectiveness still need to be provided. Therefore, this research, designed based on human capital, will contribute to filling these gaps. The human capital theory is based on the understanding that there are intangible assets within a person capable of being developed to produce performance, productivity, and service quality for human resources [14–19].

The human capital theory is explained based on empirical data by trying to develop an understanding beyond the relationship between human resource development and costs [20–23]. In the next stage, there is an attempt to synthesize the various propositions about human capital theory and its implications for HR management [24–26]. It expanded the implications for human resource management and its relationship to industrial development [27–30]. The subsequent development includes intellectual capital, and the addition of tangible capacity to human capital while creating an intangible value [31–33]. Nafukho et al. [34] explained the human achievement theory and its relationship to human resource development, while Gillies [35] analyzed its application in education.

The purpose of this study is to measure the effectiveness of training and professional development in teaching creativity during the pandemic. This study does focus on improving teachers' creativity or their ability to design creative and innovative learning activities. The training program is about teaching creativity, focusing on fostering teachers' ability to design, and implement classroom activities, techniques, and methods for students. In addition, the teaching practices of participating teachers, which can be classified as learning activities, are the dependent variable. However, this research did not measure the effectiveness of the training on students' creativity.

2. Literature Review

2.1. Theoretical Background and Hypothesis Development. Training is the most common way to improve skills, encouraging performance improvement [36–39]. It runs adequately when appropriately managed through accurate training methods [40–42]. This is in addition to the quality of training content [43, 44] and trainers [45–47]. Training management includes planning, organizing, implementing, and evaluating [48–50]. It comprises the accuracy of training methods, the quality of content, and trainers, thereby preventing dissatisfaction [51, 52] and failure. Training management systems can solve problems through planning, process, and evaluation [53–56].

Good training management encourages improved information about its content, methods, and quality of trainers. It also promotes the motivation of training participants, which results in training effectiveness [57–59]. Preparation before training, which is part of its management, can encourage the increased motivation of participants to create training effectiveness [60–62]. Well-managed training accompanied by knowledge management [63–65] strengthens the achievement of the output. According to preliminary studies, only practical training produces outcomes [66, 67]. These include

turnover intention, team performance, quality of work-life, and employee performance [64, 68, 69].

Sharma [70] stated that training management was initially associated with individual limitations such as training costs and perceptual anxieties of nontraining organizations. It was also oriented to improve individual skills [71] and contribute to human resource practice [72], such as teaching creativity [73–75]. Practical training is one of the interventions that can encourage improvements in teaching creativity [76] and thinking skills [77–80]. Good training management leads to practical training and encourages teachers' teaching creativity. This process conducts inquiry-based teaching with explicit strategies to promote cognitive flexibility [79, 81]. Training and utilization of all resources with interaction and collaboration can increase teacher-teaching creativity [82–84] and student learning absorption.

Research questions on variables, dimensions, and indicators are shown in Table 1. It also shows the primary references used as the basis for determining the indicators for each of these variables, which become the basis for making questionnaires.

- (H1) Training management has a significant positive effect on effectiveness
- (H2) Training management has a significant positive effect on teaching creativity
- (H3) Training effectiveness has a significant positive effect on teaching creativity
- (H4) Training management has a significant positive effect on teaching creativity through effectiveness

2.2. Conceptual Framework. The relationship between direct and indirect variables can be illustrated in the conceptual framework, as shown in Figure 1, with the hypothesis built in the literature review. Furthermore, the variables, along with their measurements and dimensions, are shown in Table 1 of the method subtheme.

3. Methods

3.1. Design of the Study. A quantitative design through a survey of teachers was used to measure the effectiveness of creativity training in influencing teacher teaching practices during the COVID-19 pandemic. This research used a questionnaire form filled out before the implementation of the teaching and after the conclusion to document practices related to teaching creativity. This is also multivariate research with the population comprising all public teachers at government schools in South Sulawesi and West Sulawesi provinces. Data sampling was determined by considering several factors of the Slovin formula, which ranged between 100 and 150 with a minimum sample size of 100 or 5–10 respondents for each parameter. The returned and processed questionnaires used to determine the incomplete and missing data were 405. This study was conducted using the proportionate stratified sampling technique with the accidental sampling process used to determine the elements.

TABLE 1: Research questions.

Variable	Indicator	Item
Accuracy of training methods (TM1)	Suitability of the method to the background	(i) The training I have attended is always in accordance with my educational background (ii) I always attend training according to the lessons I teach
	The compatibility of the method with the career path	(i) The training helped increase my rank (ii) I always attend high-value training
	Suitability of the method and training facilities	(i) The training I follow always uses a method that fits the existing circumstances (ii) I always attend training with complete facilities according to the method used
Quality of training content (TM2)	Completeness of the material	(i) The training that I attend always presents comprehensive material (ii) I always attend training with complete material according to the theme
	Material as needed	(i) The training materials that I follow are always as needed (ii) I only attend training with the appropriate materials needed
	New expertise	(i) The training that I attend always gets the latest information (ii) I always attend training where I acquire new skills
	Order in the arrangement of matter	(i) The training that I attended had a coherent material (ii) I always follow structured training in giving the material
Quality of trainer (TM3)	Trainer experience	(i) I always get instructors who are experienced in training (ii) I always look for training with experienced instructors
	The ability to transfer material	(i) I always get instructors with good knowledge of how to transfer skills (ii) I only attend training where the instructor can transfer knowledge adequately
	Trainer knowledge	(i) I always get training where the instructors have good knowledge (ii) I only attend training where the instructor is knowledgeable
Training effectiveness (TE)	Additional knowledge	(i) I have additional knowledge after attending training (ii) I acquire additional skills
	Ability to remember	(i) I can remember the material given during the training (ii) I can understand the material given during the training
	Ability to practice	(i) I can apply the training material on the job (ii) I can put into practice the experience gained from the training
Teaching creativity (TC)	Evaluating ability	(i) I can apply various ways of assessing learning outcomes properly, even in difficult times like the current pandemic (ii) I can use various learning outcomes assessment tools well
	Elaborating ability	(i) I can give correct answers when solving problems, even in difficult times (ii) I can give detailed answers to solving problems well

(continued)

TABLE 1: Continued.

Variable	Indicator	Item
	Rational thinking ability	(i) I can do things based on logical thoughts and considerations in the learning process (ii) I always use the ability to solve problems with a clear mindset
	Flexible thinking ability	(i) I can think of more than one idea to solve a problem in the learning process (ii) I always use flexible thinking skills in the learning process
	Fluent thinking ability	(i) I can generate many ideas for solving problems (ii) I can give many ways or suggestions to do various things (iii) I can work faster and conduct activities more than others, even in difficult times like the current pandemic

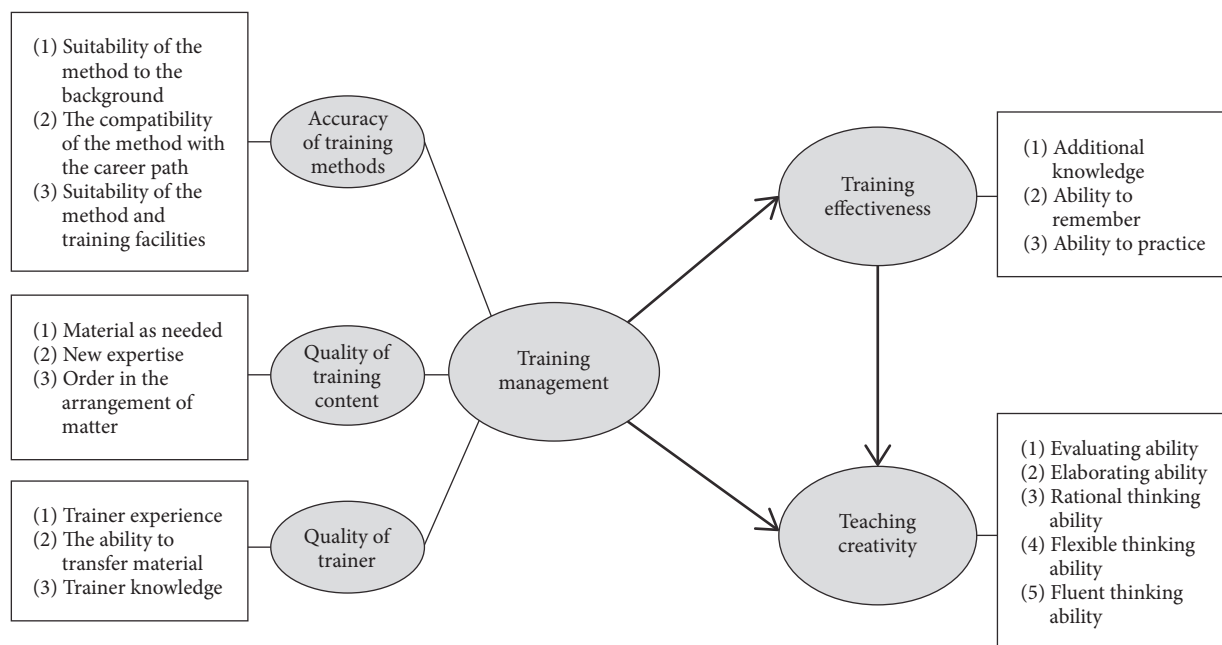


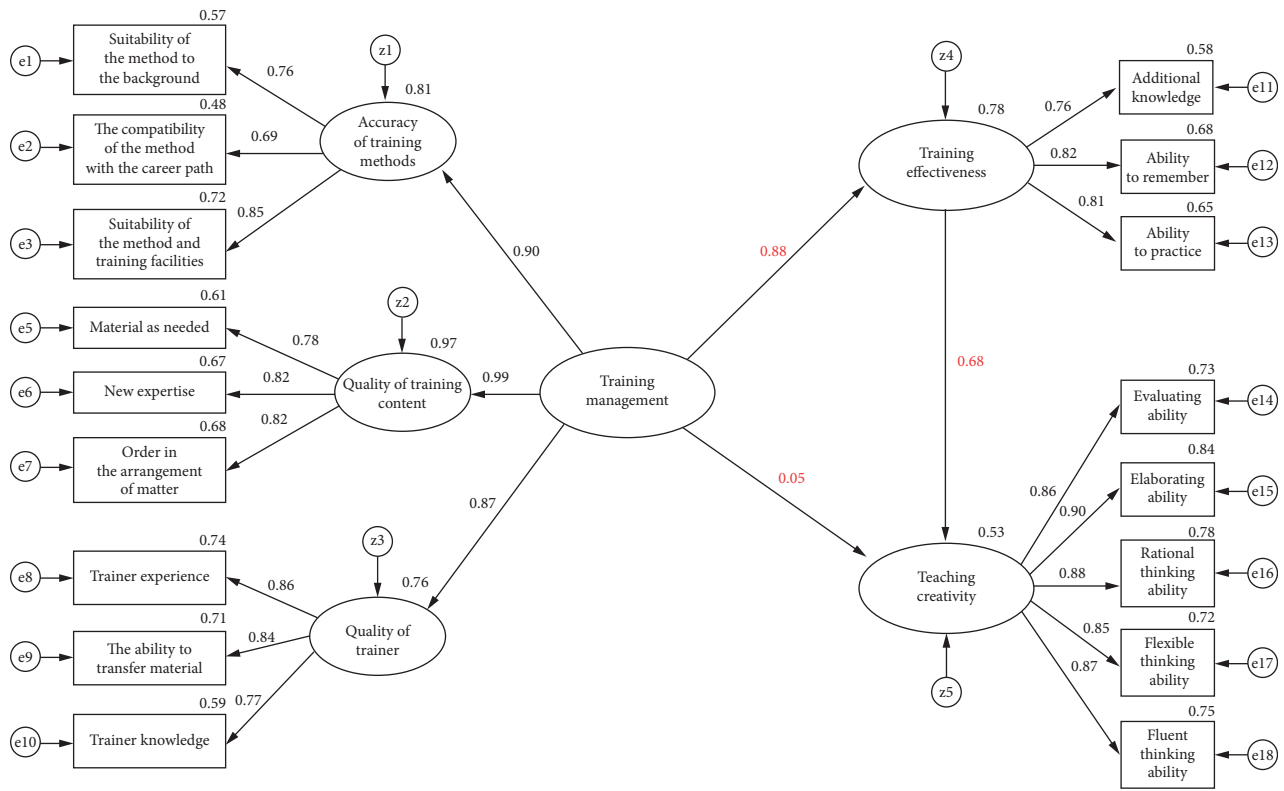
FIGURE 1: Conceptual framework.

3.2. *Participants.* Data were collected from a sample of 405 teachers of the State Civil Apparatus in South Sulawesi and West Sulawesi. The respondents comprised 312 (77.04%) and 93 (22.96%) bachelor’s and master’s degree holders. In terms of gender, there were 144 (35.56%) males and 261 (64.44%) females. Furthermore, 53 (13.09%), 305 (75.31%), and 47 (11.60%) of the respondents were between the age of 20–30, 31–40, and 41–50 years, respectively. Teachers teaching at the kindergarten/play group, elementary, middle, and high school were five (1.24%), 39 (9.63%), 301 people (74.32%), and 60 (14.81%) people.

3.3. *Measurement.* Management training is a form of planned effort used to improve the knowledge and skills of employees in specific fields to ensure they are competent and professional for the organization’s success in the future. Three dimensions are used to measure training management. The

first is the accuracy of training methods (TM1), with indicators of the method’s suitability to the background, career path, and training facilities [40, 42]. The second is the quality of training content (TM2), with indicators of completeness of the material, new expertise, and the order in the arrangement of matter and needed material [43, 44]. The third is the quality of the trainer (TM3), with indicators of trainer experience, knowledge, and the ability to transfer material [45]. Training effectiveness is measured by indicators of additional knowledge, ability to remember, and practice [85, 86] and investigated in public organizations [64, 87]. The variable of teaching creativity is measured by indicators evaluating ability, as well as analytical, flexible, and fluent thinking abilities [88–90].

3.4. *Data Analysis Methods.* The data analysis method was conducted using descriptive statistics and structural equation modeling–analysis moment of structural (SEM–AMOS) with



Goodness of fit:
 Chi-square = 309,417; significance = 0.000; DF = 113; CMIN = 2,738; GFI = 0.915; AGFI = 0.885; TLI = 0.954; CFI = 0.962; RMSEA = 0.066

FIGURE 2: Direct and indirect effect analysis.

23 versions. These tools were selected because they work efficiently with small sample sizes and complex models. According to Shamsudin and Hassim [91], it can also use to test the formative and reflective measurement models of data distribution assumption that is not normal without causing any identification problems [91]. According to Ghozali and Latan [92], there are five stages in using the SEM-AMOS model, namely, (1) model conceptualization, (2) determining the method of algorithm analysis, (3) determining the resampling methods, (4) drawing a path diagram, and (5) model evaluation by measuring the structural and inner models [93].

4. Result

Based on the model test carried out on each variable, all indicators built from the references used in this research produced a loading factor greater than 0.4, hence, the model is declared the goodness of fit [94]. These results indicate that all variables studied are markers and are feasible to proceed with the data analysis process. The initial model was the same as the final in this study, as shown in Figure 2.

The SEM-AMOS test results are carried out after ensuring that all indicators can be used for the process. The results showed that all direct relationships built in the model have positive and significant values >0.05. The value of the loading factor, CR, and significance is shown in Table 2.

The hypothesis in Table 3 shows that the variables tested generally have a positive and significant effect. The effect of training management on training effectiveness (H1), training effectiveness on teaching creativity (H3), and training management on teaching creativity through training effectiveness (H4) is significant at a significance level of 1% except for training management on teaching creativity (H2) which is insignificant. In conclusion, (H1), (H3), and (H4) are accepted, while (H2) is rejected, as shown in Figures 2 and 3. The complete study results of the coefficient of direct influence between variables are under the hypotheses (H1) to (H3), as shown in Figure 2. The indirect effect of the hypothesis (H4) is shown in Figure 3.

The fit testing model and goodness of fit result in good values of 0.738, 0.915, 0.957, 0.962, and 0.06 for CMIN/DF, GFI, TLI, CFI, and RMSEA, respectively. With these results, it can be concluded that the final model of the observation results has conformity with the predicted and conceived model.

Data analysis in this study used two stages of testing, namely, confirmatory factor analysis (CFA) and model fit testing. The training management (TM), is first analyzed using the CFA with a second-order technique used to measure the contribution of each dimension formed from its respective indicators.

Table 2 illustrates that each indicator has a valid value in measuring its dimensions with a loading factor >0.5, CR > 2, and p-value < 0.05. The indicators were used to measure the

TABLE 2: The goodness of fit model (training management).

Variables	Items/dimensions	Std. estimate	Estimate	SE	CR	p-value	Reliability test	
							Construct reliability (above 0.7)	Variance extracted (above 0.5)
Accuracy of training methods (TM1)	Suitability of the method to the background	0.757	0.960	0.058	16.664	***		
	The compatibility of the method with the career path	0.690	0.839	0.057	14.711	***		
	Suitability of the method and training facilities	0.849	1.000		Reference point		0.882	0.589
Quality of training content (TM2)	Material as needed	0.783	1.030	0.059	17.412	***		
	New expertise	0.816	1.000		Reference point		0.849	0.653
	Order in the arrangement of matter	0.825	1.063	0.055	19.211	***		
Quality of trainer (TM3)	Trainer experience	0.858	1.028	0.059	17.393	***		
	The ability to transfer material	0.841	1.072	0.060	17.765	***	0.862	0.677
	Trainer knowledge	0.768	1.000		Reference point			

*** Significant at level $p < 0.01$.

TABLE 3: The goodness of fit model.

Variable relationship	Estimate	CR	p	Remark
H1: Training management → training effectiveness	0.884	15.205	***	Supported
H2: Training management → teaching creativity	0.050	0.379	0.705	Not supported
H3: Training effectiveness → teaching creativity	0.682	4.895	***	Supported
H4: Training management → training effectiveness → teaching creativity	0.602	Sobel test: 3.940	***	Supported

***Significant at level $p < 0.01$.

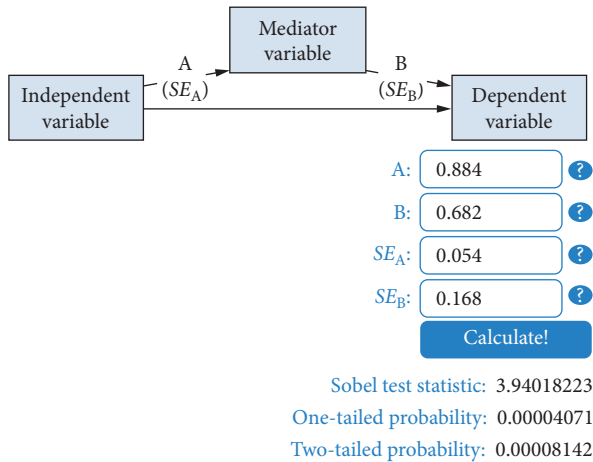


FIGURE 3: Sobel test result.

accuracy of training methods, their quality, and trainers' ability with loading factors of 0.649–0.849, 0.783–0.825, and 0.768–0.858. The reliability test results also show that each dimension has a good reliability value >0.7 and the variance extracted >0.5 .

The confirmatory factor analysis test for the full model is shown in Table 4 where each item also has a loading factor value >0.5 , critical ratio >2 , and p -value <0.05 . The dimensions of training management (TM) show a very good measurement with a standardized value of 0.899, 0.985, and 0.875 for accuracy and quality of training methods, as well as quality of trainers. Similarly, for training effectiveness (TE), the values of the loading factor of additional knowledge, ability to remember, and practice are 0.759, 0.824, and 0.809. Meanwhile, teaching creativity (TC) with five indicators also shows a very good loading factor with evaluating, elaborating, rational, flexible, and fluent thinking abilities of 0.857, 0.899, 0.884, 0.852, and 0.865.

The reliability test results indicated by construct reliability and variance extracted showed values that met the standards of each item ($CR > 0.7$; $VE > 0.5$). For example, training management has CR and VE values of 0.91 and 0.846, training effectiveness has CR and VE values of 0.839 and 0.636, and teaching creativity has CR and VE values of 0.94 and 0.759. For discriminant validity, each construct's value (AVE) is higher than the correlation between constructs, as shown in Table 5. This indicates that the data used can capture the phenomena measured in this study.

The measurement model results shown in the standardized estimate value indicate a direct and positive effect of training management on its effectiveness ($\gamma = 0.884$;

p -value = 0.001). This is in addition to the effect of training effectiveness on teaching creativity ($\beta = 0.682$; p -value = 0.001). However, different results are shown by the effect of training management on teaching creativity which is insignificant ($\gamma = 0.05$; p -value = 0.705).

Figure 3 shows that for the indirect relationship of training management to teaching creativity through training effectiveness, a standardized indirect effect coefficient value of 0.602 and the p -value of the Sobel test results = 0.001 is obtained. Hence, this relationship is positive and significant. The results of the Sobel test indicate that training effectiveness can mediate the effect of training management on teaching creativity. Furthermore, with a value of 3.94 (<1.645 at Sig. 0.05), training effectiveness fully mediates the relationship between training management and teaching creativity [95]. This result accepts (H1), (H3), and (H4), while (H2) is rejected.

5. Discussion

5.1. *ATM, QTC, and QOT as the Dimensions of Training Management.* The results in Table 2 indicate that all dimensions significantly contribute to training management as the primary variable. Accuracy of training methods (ATM) as measured by the suitability to the background ($\lambda = 0.757$), the compatibility of the method with the career path ($\lambda = 0.69$), and suitability of the method and training facilities ($\lambda = 0.849$), were able to explain training management with a standardized coefficient value of 0.899.

Martin et al. [96] stated how important the method used can affect the quality of training by conducting a comparative analysis of 13 types. These results show that the suitability of training methods and facilities is an important indicator that can measure ATM. They also indicate that with appropriate methods and facilities, training becomes more accurate and can explain the role of management training.

The second dimension is the quality of training content (QTC) comprising material needed ($\lambda = 0.783$), new expertise ($\lambda = 0.816$), order in the arrangement of matter ($\lambda = 0.825$), and ability to contribute to training management with a standardized coefficient of 0.985. With this result, QTC becomes the dimension with the most significant role in explaining training management. It also shows that the order in the arrangement of matter is the indicator with the most considerable measurement value. These are in accordance with preliminary studies, which stated that applying the correct sequences will improve the quality of training [97]. This is generally identified in the world of education, where the application of training results will continue to be sustainable from one educator to create subsequent ones [98, 99].

TABLE 4: The goodness of fit model (all variables).

Variables	Items	Standardized estimate	Estimate	SE	Critical ratio	p-value	Construct reliability	Reliability test Variance extracted		
Training management (TM)	Accuracy of training methods	0.899	1.000		Reference point					
	Quality of training content	0.985	0.991	0.060	16.534	***	0.910	0.846		
	Quality of trainer	0.873	0.917	0.065	14.100	***				
Training effectiveness (TE)	Additional knowledge	0.759	1.002	0.062	16.042	***				
	Ability to remember	0.824	1.000		Reference point		0.839	0.636		
	Ability to practice	0.809	0.994	0.053	18.694	***				
	Evaluating ability	0.857	1.029	0.041	25.025	***				
Teaching creativity (TC)	Elaborating ability	0.899	1.000		Reference point		0.940	0.759		
	Rational thinking ability	0.884	1.000	0.038	26.607	***				
	Flexible thinking ability	0.851	0.958	0.040	23.926	***				
	Fluent thinking ability	0.865	1.539	0.061	25.246	***				
Model fit testing										
Chi-square		Cut of value							Result	Remark
Significance		$df = 113, \chi^2 = 138.811$							309.417	Marginal
CMIN/DF		≥ 0.05							0.000	Marginal
GFI		≤ 3							2.738	Fit
AGFI		≥ 0.90							0.915	Fit
TLI		≥ 0.90							0.885	Marginal
CFI		≥ 0.90							0.957	Fit
RMSEA		0.03–0.08							0.962	Fit
									0.066	Fit

***Significant at level $p < 0.01$.

TABLE 5: Discriminant validity.

	TM	TE	TC
TM	0.92		
TE	0.884	0.797	
TC	0.05	0.682	0.871

Note: the number on the diagonal (bold) is the square root value of the variance extracted.

The third dimension comprises the quality of trainers (QOT) measured by trainer experience ($\lambda = 0.858$), the ability to transfer material ($\lambda = 0.841$), and trainer knowledge ($\lambda = 0.768$), with a measurement and standardized coefficient value of 0.873. Surprisingly, QOT is the dimension with the smallest coefficient in explaining training management. It is different from previous studies, which showed that the quality of trainers is the main factor in determining training outcomes [100–102]. The respondents in this study are teachers who are always required to be able to develop and expand their understanding of the training provided by the trainer. This is different from the previous studies where respondents are training participants required to apply the training results to avoid mistakes in the implementation practice, such as training health workers to ensure the quality of the trainer is the primary key in measuring its effectiveness.

From these results, training that aims to improve the teachers' ability can be more focused on the quality of the content. The better the content provided in training, the more the contribution to management training will increase.

5.2. Relationship between Training Management, Training Effectiveness, and Teaching Creativity. In line with previous studies [103–106], the test results of the present research also show that training management has a positive and significant effect on training effectiveness ($\gamma = 0.884$; p -value = 0.05). The relationship between these two variables has the most significant coefficient value in this study. The increasing role of the training management dimensions triggers the training effectiveness, which in this study is measured by additional knowledge ($\lambda = 0.759$), the abilities to remember ($\lambda = 0.824$), and to practice ($\lambda = 0.809$).

The results show that the ability to remember is the indicator with the most significant value in measuring training effectiveness. This indicates its practicability, assuming the teachers have an excellent memory after participating in the training sessions. Therefore, based on the proposed model, it can be interpreted that good quality training content boosts the role of the training management and its effectiveness. This is marked by an increase in the teachers' or participants' ability to remember the training session.

Several studies have obtained different results concerning the effect of training management on teaching creativity. The data collected show that it has an insignificant effect on teaching creativity ($\gamma = 0.05$; p -value = 0.705) [107]. This simply means that the enhanced training management was unable to significantly boost teaching creativity, measured by evaluating, elaborating, rational thinking, flexible thinking, and fluent thinking abilities of ($\lambda = 0.857$), ($\lambda = 0.899$),

($\lambda = 0.884$), ($\lambda = 0.852$), and ($\gamma = 0.865$), respectively. Incidentally, elaboration ability is the biggest indicator of measuring teaching creativity. Various studies also stated that the ability to decipher certain issues is one of the factors used to measure the level of teaching creativity [108]. This includes teaching mathematics [109], foreign languages [110], and even engineering [107, 111].

This study indicates that management training plays a significant role in teaching creativity realized through training effectiveness. This is proven by an indirect effect coefficient value and Sobel test result of 0.602 and 0.001, respectively. Therefore, to increase teaching creativity, even in difficult times like the current COVID-19 pandemic, the educational sector needs to ensure that teachers are subjected to practical training sessions. This aids them in gaining additional knowledge, thereby improving their ability to remember and discharge their tasks effectively, even in difficult situations like the current COVID-19 pandemic.

This is also in line with the research carried out by Simonton [112] that creativity is not only an intellectual subject but also an efficient phenomenon. Therefore, the quality of teachers, which in this case is one of the determinants of the next generations, needs to be continuously improved, especially in terms of creativity.

All participants were guided to boost their teaching creativity and provide socioemotional support. As earlier described, training management focuses on the teachers' understanding of creative challenges by shaping their thought and behavior through basic routine exercises. Extensive research based on an international context highlights their vital roles in actual innovative teaching and learning in the classroom [5, 113]. Some preliminary research on changes made in classroom implementation (prepandemic) suggests that this training approach is efficient [114, 115]. Based on the teachers' adaptations in the current study, it is essential to ensure all types of training, whether virtual or face-to-face and a mix of theoretical and experiential, offers adaptive beliefs and perspectives in addition to routines and exercises that can be immediately applied. Given the overarching role of environmental support for creativity, administrators need to participate in these training sessions to increase awareness, understanding, and encouragement.

In relation to training accuracy, absolute tolerance for quality helps to increase the effect of creativity. The results show that each unique contribution emerges when faced with undefined and unstructured challenges. These are conceptually related to how teachers handle students with learning disabilities. Creativity includes emotional arousal, intrusion into daily activities, and innovative behaviors [5, 113]. The ability to creatively handle certain challenges in times of uncertainty, such as during the pandemic, could generate adaptive responses relevant to managing intrusion and avoidance of teaching problems. For example, teachers who work with students dealing with networking problems can find creative ways to support them as well as create awareness concerning issues they can and cannot control. Preliminary studies stated that creative action can be considered both an agency and meta-cognitive activity [65, 96, 116]. Therefore, other creative

resources, such as associative and divergent thinking, beyond those included in this study, could facilitate the management of this kind of innovation. These results are only cross-sectional and correlational and require a more rigorous longitudinal analysis to understand the unique contribution of the following factors: stability with respect to time, intervention effects, and mechanisms of change.

6. Pedagogical Principles

The present research is based on the principle of maintaining creativity, which replicates learning outcomes. Therefore, it underscores the importance of training management in generating optimal creative results. This is in line with the research carried out by Yusriadi et al. [5] identified as a “balancing model” of creativity, characterized by the typical “consolidation of things” from a paradoxical view [115].

The following set of “dynamics” are explicitly considered valuable and extensible:

- (1) Connectivity with diversity—a state in which it is essential for teachers and students to “connect” and pay attention to the “environment” and the world at large with shared interests or passions—an enabling environment to pursue their desires, to contribute to a more efficient flow of information, move quickly
- (2) Codiscovery with separation—an environment in which the nature, purpose, and rules of self-management are understood and internalized. The learning product is the original synergy between training management and creativity
- (3) Leading and following—an environment where training management shares collective responsibility for effectively teaching creativity, analyzing the horizon for relevant information to share with others, and participating in “training activities” is central to today and the future
- (4) “Enhancing” constraints and removal of inhibitors—an environment that minimizes command and control, while providing scaffolded opportunities for members to conduct themselves in ways that optimize team
- (5) Explaining fewer and welcoming mistakes—a management training in which command and control instructions are used sparingly. It is anticipated that all members are bound to make mistakes—the goal is to learn from the instructive complications of errors rather than avoid or try to disguise them

7. Limitations

In the present study, the informants were aged between 31 and 40 years. However, there is no evidence that the efficacy of teaching creativity training depends on gender or age, and the results obtained may not be generalizable to other populations. The extent of dissimilarity in increased creativity and risk-taking scores after the training sessions was attributed to

the mean regression for creative thinking efficacy. When the mean regression was calculated, it was discovered that the participants with relatively low scores on the pretest tended to earn higher scores on the posttest, even without training. To explain the effect of the mean regression and distinguish the absolute impact of training on teaching creativity, a control group is needed when using repeated measures to evaluate training efficacy. The real effect of training on creativity is equivalent to the changes in the experimental group (training effect + regression effect on the mean) minus that in the control group (regression effect on the mean). This method distinguishes between the real effect of training on creativity vs. regression and the average impact due to repetitive actions. Future studies need to examine other reasons, aside from the mean regression, to explain the decline in creativity and risk-taking attitudes after the training sessions. Among the possible reasons to consider are (1) the participants’ efforts in completing the survey and training activities and (2) the extent of stress experienced when completing this activity. For example, some participants may put less effort into completing an assessment in the posttest than they did in the pretest, which tends to affect their creativity score. Informants tend to be extremely tired and stressed during the pandemic due to innumerable deadlines. This significantly affects the overall attitude towards survey completion when participants have to generate enormous original ideas within a limited time frame. The present research shows that training improves the participants’ self-reported creativity and attitudes toward risk-taking. No research has examined how the ability to generate original ideas relates to real-life achievement, and this needs to be considered. In addition, none has investigated whether the effects of training and creativity are long-lasting. There is a need to carry out a longitudinal study to determine the effectiveness of creativity training. Future research involves the use of a larger and more diverse sample.

8. Future Directions

The reviewed results describe the theoretical training management model and its effectiveness. In addition, teacher creativity needs to be further studied. For example, previous research has proven that buoyancy with respect to a typical student’s setback mediates the role of predictive factors, such as self-efficacy and resilience, in dealing with more chronic forms of adversity [64]. In the current study, training management positively correlates with teacher creativity. The incorporation of these results into previous research led to the formulation of a model in which creative self-efficacy supports teachers’ teaching power. This reduces the adverse effects of the COVID-19 pandemic and increases creativity, especially during this period. Moreover, longitudinal research is needed to test this model empirically.

Although correlational, the results suggest that better creative training helps teachers to overcome the negative emotional experiences encountered during the pandemic. The recent research on creativity training [115] suggests that it may be a more prominent domain for teachers. To

date, no interventions have been defined to address these barriers, and helping teachers gain control over them could positively affect how they manage the other complex-scale crises experienced. Therefore, it is essential to analyze how training and interventions for teachers can effectively reduce this form of inhibition when they presume that the school values and prioritizes their creative development. In that case, they also seem to exhibit more creativity in teachings and other positive influences, such as interest, enthusiasm, pride, inspiration, and determination. In addition, the school climate that encourages teachers' creative thinking is also associated with fewer negative influences, such as feelings of stress, anger, guilt, nervousness, and shame. The perceived support from the external environment played a more substantial role than that of the internal creative self-efficacy. The research on organizational learning, which focuses on creativity [64, 68, 69], goes a step further to understand why these perceptions are closely related to that of the teachers'.

9. Conclusion

This study proposes four hypotheses, and only three are accepted, while the other one is rejected. The results showed that training management significantly contributed to its effectiveness rather than teaching creativity, especially during the pandemic. Furthermore, training effectiveness significantly contributes to the teachers' teaching creativity. It is also a full mediator between training management and teaching creativity. This study also covers the lack of references for management training and the relationships developed in this research.

Training management is crucial, especially the quality of its content in terms of encouraging training effectiveness. However, it does not directly improve the teachers' teaching creativity. Practical training plays a significant role in remembering and elaborating abilities, which are the key to improving teachers' teaching creativity even in difficult times like the current COVID-19 pandemic. The role of training effectiveness is supported by the ability to remember, which is extremely important in this study. This is because it contributes to training management and the teachers' teaching creativity. This study also proved that the training carried out on ASN will only be successful with good management. The effectiveness of teachers teaching creativity can only be increased through training, especially during a pandemic like the current one. Therefore, training management must pay attention to the quality of its content.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Acknowledgments

The authors are grateful to the Sekolah Tinggi Ilmu Ekonomi, AMKOP, Makassar Postgraduate Program for the permission and financial assistance given in carrying out this research. The authors are also grateful to all the respondents willing to fill out the questionnaire, especially during this pandemic.

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