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Collective Creative Efficacy as A Mediation of The Influence of Creative Self Efficacy on Students' Creativity

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ABSTRACT

The purpose of this study was to investigate the mediating role of creative collective efficacy on the effect of creative self-efficacy on the creativity of a class X student team at SMAN 12 Tangerang Banten. The number of subjects who became the research sample was 122 people. The research method used is a quantitative method. The data analysis technique used by researchers is multiple analysis techniques and indirect effect analysis. The results of the study show that creative self-efficacy influences team creativity. Creative collective efficacy also influences team creativity. The results of the indirect effect analysis show that creative collective efficacy mediates the effect of creative self-efficacy on team creativity in class X students of SMAN 12 Tangerang Banten with a significance value of 0.00000124 <0.005.

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1. INTRODUCTION

The goal of Merdeka Belajar (Freedom to Learn) is to create a broad space for innovation among all education stakeholders in Indonesia to realize the recovery and improvement of education quality comprehensively. In the Merdeka Curriculum, the learning model applied is Project-Based Learning, which emphasizes the learning process and uses project creation as the core activity in implementing the learning process (Farhin, Setiawan, & Waluyo, 2023; Kusadi, Sriartha, & Kertih, 2020).

One of the schools implementing Project-Based Learning is Grade X students of SMAN 12, Tangerang City, Banten. The project-based learning activities are related to history and economics subjects, where students are required to create a project in groups of 8 to 10 students. The project involves developing a culinary business featuring traditional Indonesian cuisine. Each group must plan and execute a project agreed upon by its members. Through this activity, students are expected to develop collaboration skills and creativity, enabling them to create innovative and creative business projects (Indriajati & Ngazizah, 2018). The creativity of individual students significantly influences the creativity of the group or team. However, in practice, not all groups are able to demonstrate good creativity. Therefore, research is needed to examine team creativity among students of SMAN 12 Tangerang City, especially Grade X students participating in Project-Based Learning.

Based on the above description, the research problem addressed in this study is how to enhance team creativity among students, particularly those in SMAN 12 Tangerang City involved in Project-Based Learning. Thus, it is necessary to conduct a scientific study to identify the factors influencing team creativity to contribute to efforts aimed at improving team creativity and developing theories about team creativity (Hu et al., 2018).

To address this research problem, the study adopts the Investment Theory of Creativity proposed by Sternberg and Lubart (1992). This theory suggests several elements contributing to creativity, such as

intelligence, knowledge, thinking styles, personality/attitudinal attributes, motivation, environment, and the interaction between these elements.

Additionally, to resolve the research problem, the study employs Social Cognitive Theory (Bandura, 1997), which states that personal agency and social structures operate interdependently to influence human activity (Kassymova et al., 2019). This theory posits that cognitive, affective, and other personal factors, along with environmental factors, function as determinants of human behavioral interactions. Based on this theory, studying team member variables and contextual factors is crucial to understanding team creativity (Puccio et al., 2020).

One variable within the framework of Social Cognitive Theory is Creative Self-Efficacy, derived from Self-Efficacy in Social Cognitive Theory (Bandura, 1997). Creative Self-Efficacy refers to the belief that one has the capacity to effectively perform creative tasks (Tierney & Farmer, 2002). Creative Self-Efficacy has been shown to predict creative performance (Tierney & Farmer, 2002). Hence, the researcher argues that one key to addressing this issue is to develop Creative Self-Efficacy. Accordingly, based on Social Cognitive Theory, the researcher poses the question: Does Creative Self-Efficacy affect team creativity among students?

Previous research has explored the relationship between creative performance and Creative Self-Efficacy, with most studies finding a positive relationship between the two. Some researchers identified a strong correlation between Creative Self-Efficacy and creative performance, reaching 0.85 (Chuang, Shiu, & Cheng, 2010). A study by Xia et al. (2021) revealed a strong link between Creative Self-Efficacy and team creativity performance. However, other studies have shown varying results regarding the strength of this relationship. Some reported no or only weak correlations between Creative Self-Efficacy and creative performance (Graham, 2011, r = –.04; Karwowski, 2011, r = .15; Richter et al., 2012, r = .09; Simmons et al., 2014, r = .06).

The inconsistencies in research findings highlight a research gap regarding the influence of Creative Self-Efficacy on team creativity (Huda & Munastiwi, 2020). To address this complex relationship, further research is needed to fill this gap by incorporating intervening variables in the influence of Creative Self-Efficacy on team creativity (Amrullah et al., 2018; Runco, Acar, & Cayirdag, 2017).

Therefore, the objective of this research is to explore the process of managing Creative Self-Efficacy to enhance students' team creativity. This process will lead to the development of a conceptual model for managing Creative Self-Efficacy to improve team creativity. This study contributes to existing research on students' team creativity by investigating the role of intervening variables in mediating the effect of Creative Self-Efficacy on team creativity.

To achieve this, the researcher proposes Collective Creative Efficacy as an intervening variable to provide a logical explanation of how Creative Self-Efficacy influences students' team creativity.

2. METHOD

The variables in this study are Creative Self-Efficacy, Collective Creative Efficacy, and Team Creativity. This study employs a quantitative method with mediator analysis techniques using SPSS 21.0. The total number of respondents is 122 students from all Grade X students at SMAN 12 Tangerang City, Banten. The sampling technique used is simple random sampling. Data collection was conducted using a questionnaire distributed via Google Forms. Data analysis was assisted using SPSS 21.0 software (Creswell & Creswell, 2018). The researcher utilized three measurement tools in the form of scales: the Creative Self-Efficacy Scale, the Collective Creative Efficacy Scale, and the Team Creativity Scale.

3. RESULTS AND DISCUSSION

3.1. Result

This study aims to examine the mediating role of Collective Creative Efficacy (CCE) on the influence of Creative Self-Efficacy (CSE) on Team Creativity (TC). The subjects of this study are Grade X students of SMAN 12 Tangerang City, Banten. Based on the distribution of the questionnaire, the total number of respondents who completed the questionnaire was 122. The analysis used in this study is Simple Mediation Analysis, employing SPSS software to test the hypotheses.

The results of the mediator analysis of the research instrument data using SPSS 21.0 are as follows:

Table 1. Dependent Variable: CSE

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	14,037	1,490	,533	9,423	,000
TC	,535	,078		6,899	,000

a. Dependent Variable: CSE

Based on the analysis, it is evident that the total effect of Creative Self-Efficacy (CSE) on Team Creativity (TC) is significant (p = 0.000). The next step is to examine the direct effect of Creative Self-Efficacy (CSE) on Collective Creative Efficacy (CCE) using simple linear regression. The results are as follows:

Table 2. Dependent Variable: CSE

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	13,110	1,643	,527	7,977	,000
CCE	,317	,047		6,791	,000

a. Dependent Variable: CSE

The analysis shows that the total effect of Creative Self-Efficacy (CSE) on Collective Creative Efficacy (CCE) is significant (p = 0.000).

The subsequent step is to examine the direct effects of Creative Self-Efficacy (CSE) on Team Creativity (TC) and Collective Creative Efficacy (CCE) on Team Creativity (TC) using multiple linear regression. The results are as follows:

Table 3. Dependent Variable: TC

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-,290	1,289		-,225	,823
CSE	,128	,058	,128		,029

CCE	,461	,035	,768	13,215	,000

a. Dependent Variable: TC

The regression coefficients are as follows:
- Path A = 0.317 (0.047)
- Path B = 0.461 (0.035)
- Path C = 0.128 (0.058)

The next step is to test whether the indirect effect of Creative Self-Efficacy (CSE) Collective Creative Efficacy (CCE) Team Creativity (TC) is statistically significant using the Sobel Test (Sobel, 1992). The results are as follows:
- Test statistic = 6.00336552
- Standard error = 0.02434251
- p-value = 0.00000124

The most critical parameter here is the p-value, which is less than 0.05. Thus, it can be concluded that the indirect effect of Creative Self-Efficacy on Team Creativity through Collective Creative Efficacy is statistically significant (p-value ≤ 0.05).

3.2. Discussion

Based on the results of a simple linear regression analysis, it was found that creative self-efficacy has a significant influence on the team creativity of 10th-grade students at SMAN 12 Tangerang, Banten. This indicates that high creative self-efficacy positively contributes to enhancing team creativity, consistent with the initial hypothesis. In other words, if students' creative self-efficacy is high, their team creativity will also be high, and conversely, if their creative self-efficacy is low, their team creativity will also be low (Clara, Entang & Wulandari, 2024). These findings align with previous studies that suggest creative self-efficacy affects individual creative performance in various contexts (Khayati & Sarjana, 2015; Chuang, Shiu, & Cheng, 2010; Xia et al., 2021; Mukherjee, 2021).

Furthermore, the simple linear regression analysis also revealed that collective creative efficacy significantly influences team creativity. Collective creative efficacy, which encompasses a group's belief in their ability to collaboratively complete creative tasks, has been shown to play a crucial role in enhancing team creativity. This suggests that not only does an individual's belief in their creative abilities matter, but the group's shared confidence in their collective capacity also impacts the creative outcomes achieved by the team (Soh, 2017; Rubenstein et al., 2018; Muqodas, 2015).

Moreover, the analysis of the indirect effect between creative self-efficacy and team creativity through collective creative efficacy yielded statistically significant results, with a p-value of 0.00000124, which is smaller than 0.005. This demonstrates that high creative self-efficacy can enhance collective creative efficacy, which in turn contributes to improving team creativity. These findings align with Bandura's (1996) social cognitive theory, which emphasizes the importance of both individual and social factors in shaping collective creativity (Pavlović & Maksić, 2019).

Thus, effective management of creative self-efficacy can facilitate better team creativity. These findings provide significant insights into the factors influencing students' team creativity. For educators, this research highlights the importance of fostering creative self-efficacy and collective creative efficacy within the context of project-based learning. By addressing both factors, educators can design more effective interventions to enhance team creativity in schools (Masril et al., 2020; Rajagukguk, 2023). Therefore, it is crucial to create a supportive environment both at the individual and group levels to bolster students' creative confidence when collaborating in teams. Although this study offers deeper understanding, future research should expand the sample to include various educational levels and cultural contexts to provide a more comprehensive picture of the factors influencing team creativity across diverse settings.

4. CONCLUSION

Based on the results of data analysis using multiple regression and indirect effect techniques, it can be concluded that collective creative efficacy mediates the influence of creative self-efficacy on team creativity among 10th-grade students at SMAN 12 Tangerang, Banten, with a significance value of 0.00000124 < 0.005.

5. RECOMMENDATION

In light of the findings and the limitations of this study, future research is encouraged to explore other factors that support team creativity, such as personality, learning motivation, and religiosity. Researchers who wish to develop or continue this study should consider using different samples. Students at SMAN 12 Tangerang, Banten, are encouraged to continuously develop their creative self-efficacy and collective creative efficacy when working collaboratively on group tasks. Enhancing team creativity can be achieved by improving creative self-efficacy. Teachers and parents should provide support to students, helping them find learning methods that suit their preferences to foster team creativity. Teachers are also expected to assist students in enhancing creativity and reducing unnecessary obstacles.

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