The Effect of Instructional Leadership and Creative Teaching

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The Effect of Instructional Leadership and Creative Teaching on Student Actualization: Student Satisfaction as a Mediator Variable

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This research examines the effect of principal instructional leadership and teaching creativity on self-actualization and its impact on student satisfaction. Across sectional study was used to determine the relationship between exogenous and endogenous variables. Respondents were 307 students on Madrasah Aliyah and Al-Kamal Kebumen Islamic Vocational High Schools, Indonesia. Data was collected using a questionnaire consisting of 4 indicators representing each variable. The questionnaire was made using Likert scale from a score of 1 to 4, with the data collected in intervals. The research data was analyzed using structural equation modeling (SEM) with the AMOS application. Out of 5 proposed hypotheses, 1 was rejected because of not fulfilling the Critical Ratio (CR) value > 1.96 and the p-value <0.05 criteria. The results showed that this model fulfilled the Goodness of Fit requirements in SEM analysis. It was evident that principal instructional leadership and creative teaching affects student learning satisfaction. The results also showed that the principal's instructional leadership affects student self-actualization, while creative teaching has no direct effect unless it is mediated by learning satisfaction.

Keywords: Instructional leadership, creative teaching, student learning satisfaction, student self-actualization

INTRODUCTION

Education is a planned effort to create a meaningful climate and learning process for students to develop self-potential, knowledge, attitudes, and skills. According to Maslow (1971), self-actualization is the highest level of human development where one's full potential is realized. Education is one of the best ways of achieving self-

actualization. Students with self-actualization optimize their abilities to work beyond expectations (Akcay & Akyol, 2012; Farimani & Shahri, 2020; Neto, 2015). Therefore, self-actualization is an achievement towards students' understanding of their full potential and this stage is only achievable when schools maintain quality education. The main factor in realizing student self-actualization success is to maximize existing inputs by providing optimal services to create quality outcomes. This also improves student satisfaction, which is an indicator of the educational institution's quality and potential development. Several research results showed that student satisfaction is an effective method of monitoring the quality of education and academic development (Razinkina et al., 2018; Kammur, 2017). Letcher & Neves (2010) stated that student satisfaction affects one's self-confidence to develop skills, gain knowledge and achievement, and build pleasant relationships with friends and teachers.

Individuals satisfied with the surrounding environment develops self-actualization abilities (Arslan, 2017). Self-satisfaction created by fulfilling four basic needs, including physiological, security, love, and appreciation, triggers self-actualization (Maslow, 1971). According to Jena and Dorji (2016), job satisfaction also contributes to self-actualization. Efforts to fulfill self-satisfaction mean striving to realize self-actualization. Therefore, when students are satisfied with the learning process, they grow their ability to self-actualize. Achieving student satisfaction and self-actualization requires external motivation and support from parents, school principals, teachers, and peers. Jena and Dorji (2016) stated that teaching wholeheartedly helps students achieve self-actualization through creative and meaningful learning. Furthermore, the principal facilitate quality learning processes for student satisfaction and self-actualization. Tuan (2012) stated that optimal service from school principals impacted student learning satisfaction extensively. Instructional leadership is an intermediary factor in school management that impacts student learning satisfaction (Arif et al., 2013; Kammur, 2017). Moreover, this form of leadership contributes to teacher professionalism and student achievement (Liu & Hallinger, 2018; Heaven & Bourne, 2016; Hallinger, 2010).

This research examined the effects of principal instructional leadership and creative teaching towards student self-actualization mediated by learning satisfaction. Existing research analyzed the relationship between the learning process and students' self-actualization (Farimani & Shahri 2020; Aljaser, 2019; Velieva et al. 2018; Dmitrienko et al. 2017; Neto 2015; Wadaani 2015; Akcay & Akyol, 2012). However, realizing students' self-actualization is also the principal's responsibility as the school leader and manager. Therefore, these results can be a reference for principals, teachers, practitioners, and educational officers in developing self-actualization in students.

LITERATURE REVIEW

Instructional Leadership

Instructional leadership refers to the principal's ability to manage the curriculum and learning to ensure effectiveness and success of the overall educational process.The focus is on involving teachers in curriculum preparation, strategies, and assessment processes to improve the learning quality (Horng & Loeb, 2010; Lunenbrug, 2010; Marks & Printy, 2003). Instructional leadership has three aspects, including mission communication, which ensures teachers and staff work based on the school's objective. Furthermore, instructional program management, which includes evaluation, curriculum coordination, and monitoring student progress. The last aspect of instruction leadership is cultivating a positive school climate through teachers' professional development, incentive provision and motivation (Hallinger, 2003; Hallinger, 2010). Blase and Blase (2000) stated that effective instructional leadership has two factors, including communicating with teachers to deepen learning reflection and facilitating professional development. These factors improve teacher performance and professionalism inside and outside the classroom.

The principal's instructional leadership contributes to competence quality and teacher performance because of good planning and learning management. This leadership also affects teacher professionalism and job satisfaction, influencing the student's effectiveness and achievements (Liu & Hallinger, 2018; Boyce & Bowers, 2017; Liu et al., 2020). Additionally, instructional leadership influences various students' aspects, including the effective learning environment, cooperation, communication and discipline (Clifford et al., 2012; Sahney, 2016; Park, 2012; Halverson et al., 2007; Gulcan, 2001). Therefore, the principal's instructional leadership is closely related to student achievements and learning satisfaction. This is in line with the research (Heaven & Bourne, 2016; Sahney, 2016; Mitchell & Tschannen-moran, 2015; Shatzer, 2009; Bartlett, 2008; Moffitt, 2007) which stated that instructional leadership contributes to learning performance and student achievement.

Creative Teaching

Creative teaching help students learn new material and practically apply it to life situations. Mayer (1989) stated that learning material provides meaning, heterogeneous abilities, learning methods that stimulate student's creativity, and appropriate learning evaluations to measure student creativity. Horng et al. (2005) reported that learning creativity is influenced by teacher personality, family support, educational experience, belief, hard work, motivation, and school management conditions. Creative teaching is highly influenced by the leadership and management characteristics of school principals. Schools' leadership strategy affects teachers' creativity performance and

commitment. Furthermore, the principal's leadership determines school infrastructure development and a work climate that supports teacher creativity (Cachia et al., 2010; Selkrig & Keamy, 2017).

Creative teaching refers to the strategy to foster inventive, effective, and interesting learning, increase students' courage and critical thinking (Corner, 2012; Wood & Ashfield, 2008; Gibson, 2010). This shows that creative teaching closely relates to learning that develops students' potential. Teachers have the skills to plan, manage, and evaluate appropriate learning to develop student potential in creativity and critical thinking. Habits that can be implemented to foster creative teaching include openness to student thinking, building confidence and safety, stimulating critical thinking, tolerating errors, promoting collaborations, and giving students opportunities to build concepts and solve problems and think across disciplines (Sawyer, 2015). Many studies have concluded that creative teaching affects aspects such as performance, motivation and creativity, cognitive development, experience and learning satisfaction (Schacter et al., 2006; Jankowska & Atlay, 200; Freund & Holling, 2008; Strean, 2011; Rivero, 2002).

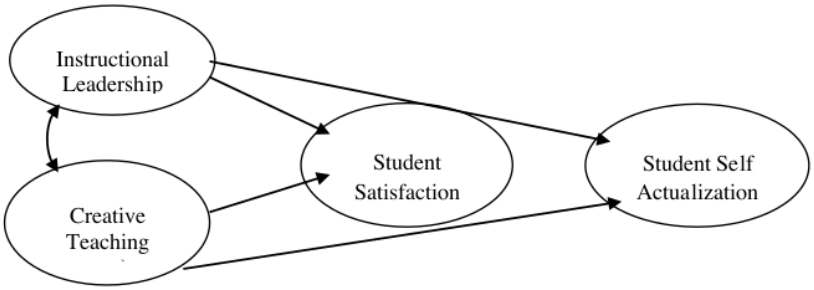
Student Satisfaction and Self Actualization

Learning satisfaction is a measure of services, facilities, and environment, in schools characterized by increased student trust and cooperation (Kammur, 2017; Razinkina et al., 2018). Razinkina et al. (2018) stated that student satisfaction measures academic development, service levels, and education quality in schools. It also shows the quality of the cooperative relationship between schools and parents, which influences student's learning satisfaction (Schertzer & Schertzer, 2004). Several factors affect student learning satisfaction, including innovation, school service quality and principal's instructional leadership (Arif et al., 2013; Elliot & Healiy, 2001; Kangas et al., 2017; Hemsley-Brown et al., 2010; Teeroovengadum et al., 2019; Tuan, 2012). Furthermore, Bolliger and Martindale (2004) stated that student satisfaction is influenced by factors such as teacher quality, communication with school members, availability of learning technology, and collaboration. Comparably, student satisfaction influences motivation and learning performance, confidence, skill development and self-potential (Letcher & Neves, 2010; Mihanović et al., 2016).

Self-potential development influenced by student satisfaction is closely related to self-actualization. Maslow (1971) stated that self-actualization is triggered by self-satisfaction obtained from fulfilling four basic needs, including physiological, security, love, and appreciation. Generally, self-actualization is a prime need in the basic human hierarchy and causes intrinsic motivation to increase self-competence to the highest level. Through education, actualization can be achieved by students gaining learning satisfaction and understanding life goals (Farimani & Shahri, 2020). Therefore,

principals and teachers need skills and proficiency for students to gain learning satisfaction and understanding of their life's purpose. Schools that conduct learning programs to meet student satisfaction, positively influences self-actualization (Akcay & Akyol, 2012). This is in line with Arslan (2017) and Jena and Dorji (2016), which concluded that students who are satisfied with learning experience increased self-confidence to develop their potential through self-actualization. Well-being and enthusiasm from self-confidence positively influence self-actualization (Ordun & Akün, 2017). Figure 1 shows the research hypothesis developed based on these descriptions.

Figure 1. Research hypothesis model scheme



Research Hypothesis

This study has five hypotheses, namely:

H1.1: Principal instructional leadership affects student learning satisfaction

H1.2: Creative teaching affects student learning satisfaction

H1.3: Principal instructional leadership affects student self-actualization

H1.4: Creative teaching affects student self-actualization

H1.5: Principal instructional leadership and creative teaching affect student self-actualization mediated by student learning satisfaction

METHODS

Research design and data collection

This cross-sectional study aimed to determine the direct or indirect relationship between exogenous and endogenous variables using the SEM, specifically the AMOS analysis model. Respondents were 307 students of Madrasah Aliyah and Al-Kamal Kebumen Islamic vocational high schools, as shown in table 1.

Table 1
Demographics of study respondents

Profile	Description	Number of Respondents	Percentage
Gender	Male	152	49%
	Female	155	51%
Type of School	Madrasah Aliyah	147	48%
	Vocational High School	160	52%
Age	14-16 years	130	40%
	17-19 years	177	60%

Data was collected using 4 types of questionnaires representing each variable, including principal instructional leadership, teacher creativity, learning satisfaction and self-actualization. The questionnaire was made using a Likert scale from a score of 1 to 4, representing strongly disagree, disagree, agree and strongly agree with data collected in intervals. The score is different for negative statements, with 4 for "strongly disagree," 3 for "disagree," 2 for "agree," and 1 for "strongly agree."

Research Instruments

The study used 2 exogenous variables, including principal instructional leadership and teacher creative learning. Also, there was 1 mediating and endogenous variable represented by student learning satisfaction, and student learning actualization, respectively. The four variables were developed based on the theory described in the previous section. The instrument draft was guided by experts with relevant scientific fields, revised and empirically tested. Study results showed that the instruments had fulfilled the validity and reliability standards. Variables achievements were measured using a questionnaire, where each was categorized in several indicators, as shown in table 2.

Table 2

Variable Indicator Description

Variable	Indicator	Code
Instructional leadership	1. Instructional leadership and management programs, including: • Design and socialization of school vision, mission, goals, and curriculum • Management of student activities • Supervision and evaluation of learning • Monitoring of student development	IL 1
	2. School climate management that supports learning • Management of a school culture that promotes student development • Training programs that improve the competence of teachers and students	IL 2

	• Appreciation for teacher and student performance • Social relations with teachers, students, and parents of students	
Creative Teaching	1. Creativity in learning design 2. Creativity in learning method determination 3. Creativity in learning media selection 4. Creativity in material presentation 5. Creativity in learning assessment types and tools	CT1 CT2 CT3 CT4 CT5
Student Learning Satisfaction	1. Student satisfaction in learning 2. Student satisfaction with school programs 3. Student satisfaction with school infrastructure 4. Student satisfaction with school climate and culture	SS1 SS2 SS3 SS4
Student Self-Actualization	1. Self-potential development 2. Problem-solving skills 3. Student creativity 4. Confidence	SA1 SA2 SA3 SA4

Data Analysis

Data was analyzed using Structural Equation Modeling (SEM) with AMOS applications. SEM was used to determine the relationship between instructional leadership, creative learning as exogenous variables with student learning satisfaction as an intervening variable and student self-actualization as an endogenous variable. The advantages of using AMOS and SEM software were image tools, accuracy, speed, and ease of the path analysis (Byrne, 2001). SEM analysis was divided into two categories, including the measurement model, which explains the relationship between variables and their indicators. The second category or the structural model, measures the relationship between different variables (Gerbing & Anderson, 1988). Also, regression weight output was obtained to determine the acceptable level of the proposed hypothesis.

FINDINGS

The data analysis results were divided into three categories, including measurement and structural models, and hypothesis testing.

Measurement Model

The measurement model provided the relationship between instrument values (observed indicator variables) and designed constructs (unobservable latent variables). Furthermore, the model was analyzed using Confirmatory Factor Analysis (CFA) to assess variable indicator validity. Indicators were determined from CFA test results

with the provisions that the value of CR (critical ration) > 1.96 and probability or p < 0.05. All the variables shown in Table 3 fulfilled the validity test requirements.

Table 3

CR and probability values in the CFA test

			Estimate	S.E.	C.R.	P	Label
SS	<---	IL	,055	,015	3,616	***	par_13
SS	<---	CT	,364	,032	11,271	***	par_14
SSA	<---	IL	,073	,034	2,125	,034	par_10
SSA	<---	CT	-,088	,149	-,586	,558	par_11
SSA	<---	SS	,799	,395	2,024	,043	par_12
IL2	<---	IL	1,000				
IL1	<---	IL	,450	,043	10,430	***	par_1
CT5	<---	CT	1,000				
CT4	<---	CT	,502	,025	19,974	***	par_2
CT3	<---	CT	1,219	,058	20,973	***	par_3
CT2	<---	CT	,773	,034	22,943	***	par_4
CT1	<---	CT	1,511	,059	25,683	***	par_5
SSA1	<---	SSA	1,000				
SSA2	<---	SSA	2,012	,146	13,784	***	par_6
SSA3	<---	SSA	1,521	,114	13,367	***	par_7
SSA4	<---	SSA	1,575	,128	12,317	***	par_8
SS4	<---	SS	1,000				
SS3	<---	SS	1,806	,169	10,674	***	par_15
SS2	<---	SS	2,310	,182	12,720	***	par_16
SS1	<---	SS	3,457	,261	13,245	***	par_17

Note: *** = p-value < 0,001

CR > 1.96 and probability < 0.05 from Table 3 show that each indicator fulfilled the validity requirements to represent a variables. Furthermore, the validity test was also conducted to determine the value of standardized loading estimate or loading factor > 0.05, as shown in table 4. The results showed that each variable has exceeded the required loading factor value.

Table 4

Standardized loading estimate value

			Estimate
SS	<---	IL	,203
SS	<---	CT	,778
SSA	<---	IL	,280
SSA	<---	CT	,099
SSA	<---	SS	,346
IL2	<---	IL	,926
IL1	<---	IL	,670
CT5	<---	CT	,907
CT4	<---	CT	,816
CT3	<---	CT	,857
CT2	<---	CT	,873
CT1	<---	CT	,914
SSA1	<---	SSA	,709
SSA2	<---	SSA	,865
SSA3	<---	SSA	,831
SSA4	<---	SSA	,756
SS4	<---	SS	,684
SS3	<---	SS	,724
SS2	<---	SS	,791
SS1	<---	SS	,885

Structural Model

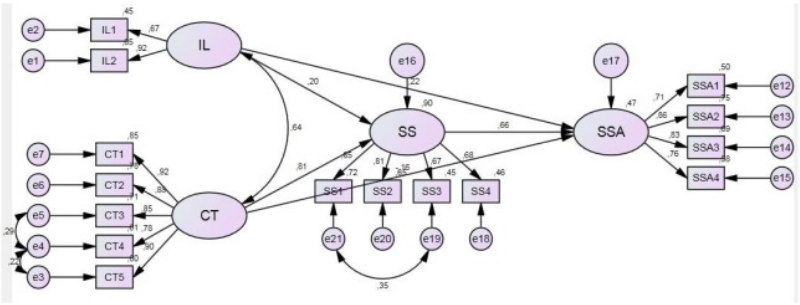
The structural model described the relationship between all latent variables, including exogenous, intervening, or endogenous. Its validity was measured using the GOF (Goodness of Fit) value or the model's feasibility test, by determining the index suitability criteria achievement and the cut off value. The indices were GFI, AGFI, CMIN/DF, TLI, CFI, and RMSEA. GFI and AGFI described the model suitability level with a value ranging from 0 (poor fit) to 1.0 (perfect fit). According to Arbuckle (2014), GFI > 0.90 and AGFI > 0.90 values indicated that the tested model had a good fit. The study obtained a GFI of 0.934 and AGFI of 0.903, proving that the model was a good fit. Furthermore, CMIN/DF and TLI indicators measured the fit level of the research model with the criteria of CMIN/DF ≤ 2.0 and TLI ≥ 0.95 (Byrne et al., 1989). This study's results indicated that the CMIN/DF value was 2.056 and TLI was 0.968, which shows the model fulfilled the acceptable requirements. Other measurement criteria included CFI, whereby a value closer to 1 provided higher acceptance chances for the model, and RMSEA ≤ 0.08 (Arbuckle, 2014; Cudeck & Browne, 1983). These results showed a CFI of 0, 975 and RMSEA of 0.059 which proved a high acceptance level.

Table 5

Goodness of Fit Indices

Goodness of Fit Indices	Cut – Off Value	Result Analysis	Model Evaluation
CMIN/DF	≤ 2,00	2,056	Fit
RMSEA	≤ 0,08	0,059	Fit
GFI	≥ 0,90	0,934	Fit
AGFI	≥ 0,90	0,903	Fit
TLI	≥ 0,95	0,968	Fit
CFI	≥ 0,95	0,975	Fit

Figure 2. Research model schemes



Hypothesis test

Hypothesis testing in SEM AMOS was determined by Critical Ration (CR) and p-value in the regression weights output. CR > 1.96 and p <0.05 values proved that this research's hypothesis was acceptable, as shown in Table 6. The magnitude effect strength between the variables was determined from an existing estimate value.

Table 6

Regression Weight Output

			Estimate	S.E.	C.R.	P	Label
SS	<---	IL	,055	,015	3,616	***	par_13
SS	<---	CT	,364	,032	11,271	***	par_14
SSA	<---	IL	,073	,034	2,125	,034	par_10
SSA	<---	CT	-,088	,149	-,586	,558	par_11
SSA	<---	SS	,799	,395	2,024	,043	par_12

Description: *** = p-value < 0,001

Based on the hypothesis testing, the following evidences were obtained.

1. H1.1: Principal instructional leadership (IL) affects student learning satisfaction (SS). The hypothesis had a CR value of 3,616 and p 0,000 which means the CR value> 1.96 and p <0.05 criteria was met.
2. H1.2: Creative teaching (CT) affects student learning satisfaction (SS). The hypothesis had a CR value of 11.271 and p 0.000 which is acceptable based on CR value> 1.96 and p <0.05 criteria.
3. H1.3: Principal instructional leadership (IL) affects student self-actualization (SSA). The hypothesis had a CR value of 2.125 and p 0.034 and was accepted based on CR value> 1.96 and p <0.05 criteria.
4. H1.4: Creative teaching (CT) affects student self-actualization (SSA). The hypothesis had a CR value of -5.58 and p 0.558, and was rejected because it did not meet the CR value> 1.96 and p <0.05 criteria.
5. H1.5: Principal instructional leadership (IL) and creative teaching (CT) affect student self-actualization (SSA) mediated by student learning satisfaction (SS). The hypothesis had a CR value of 2.024 and p 0.043 which was accepted based on CR value> 1.96 and p <0.05 criteria.

DISCUSSION

This research model met the criteria for a good fit model to determine the effects between variables. Table 6 shows that out of the 5 proposed hypotheses, only 1 was rejected. The description of the hypothesis test can be described as follows:

Principal instructional leadership (IL) has a significant direct effect on student learning satisfaction (SS) and student self-actualization (SSA)

The hypothesis of the IL effect on SS was accepted because it met the CR value> 1.96 and p <0.05 criteria. Instructional leadership manages education quality by involving teachers in curriculum preparation, learning strategies and assessments (Horng & Loeb, 2010; Lunenbrug, 2010; Marks & Printy, 2003). Therefore, a principal leads to quality learning by providing optimal services to develop student talents and full potential. Optimal service to students affects student learning satisfaction. Teeroovengadum et al. (2019), Kammur (2016) and Tuan (2012) concluded that student satisfaction and commitment depend on the quality of educational services provided by schools in facilitating their potential and talents. Furthermore, the principal leadership in learning management improves student performance that leads to satisfaction. This is in line with previous research results (Bartlett, 2008; Heaven & Bourne, 2016; Mitchell & Tschannen-moran, 2015; Moffitt, 2007; Sahney, 2016; Shatzer, 2009). Students appreciate and enjoy good performance and achievement which improves their satisfaction levels. Moreover, instructional leadership influences various aspects related to students, including the formation of a pleasant learning environment, improved

communication and student discipline (Clifford et al., 2012; Sahney, 2016); Halverson et al., 2007; Park, 2012; Gulcan, 2001). This aspect shows that IL is closely related to the supporting factors of student learning satisfaction. Quality collaboration and school communication with students correlates with their learning satisfaction (Arif et al., 2013; Bangert 2005; Elliot & Healiy, 2001). Involving students in various work programs and school activities creates a sense of pride and satisfaction because they feel appreciated and important.

Instructional leadership influenced students' self-actualization because its effect on SSA was acceptable and met CR value> 1.96 and p <0.05 criteria. IL is the key to success in managing the learning process because it provides excellent service for students' potential development. Several student potentials are affected by IL, including creativity, innovation and entrepreneurial spirit making them highly competitive. The development of students' self-potential through instructional leadership is an effective step to self-actualization (Sharma, 2012; Yavgildina et al. 2019). Through IL, schools can develop modern and innovative strategies, services, and learning environments to keep up with students' needs. Leadership and educational services that adjust to the times, school programs and students' needs positively affect self-actualization (Akcay & Akyol, 2012; Dmitrienko et al., 2017).

Creative teaching (CT) has a direct effect on student learning satisfaction (SS) but has no direct effect on student self-actualization (SSA)

The hypothesis of the CT effect on SS was accepted because it met the CR value> 1.96 and p <0.05 criteria. Therefore, creative teaching directly affects student learning satisfaction. Creative teaching refers to a teaching strategy to foster inventive, effective, and interesting learning as well as increasing students' courage and critical thinking skills (Corner, 2012; Gibson, 2010; Wood & Ashfield, 2008). It gives students the freedom to explore and build a meaningful learning process. Therefore, students easily achieve their goals, which influence learning satisfaction. The achievement of learning objectives is also supported by a fun and dynamic climate in creative teaching. Bangert (2005) stated that creative teaching provides climate and student learning flexibility, which impacts satisfaction. Several studies conclude that creative teaching affects learning satisfaction by improving student achievement, motivation and creativity, cognitive development and experiences (Freund & Holling, 2008; Jankowska & Atlay, 2008; Schacter et al., 2006; Trean, 2011). Creative teaching helps students realize their potential to solve learning and life problems independently. Students' self-potential and independence are the successes of creative teaching and learning satisfaction. Lee (2011) stated that creative and innovative teaching significantly affects student learning satisfaction. Moreover, it affects the school environment and makes learning enjoyable.

Kangas et al. (2017) stated that a fun learning process determines the level of learning satisfaction.

This study proved that creative teaching does not directly affect students' self-actualization based on the hypothesis test of the CT effect on SSA which was rejected. However, creative teaching affected students' self-actualization when mediated by learning satisfaction. Student self-actualization was determined by learning satisfaction influenced by the creative teaching and principal instructional leadership. According to Rivero (2002), creative teaching affects student learning satisfaction. Bolliger and Martindale (2004) stated that the teaching quality and creative use of technology correlates to student learning satisfaction. Therefore, creative teaching influencing students 'self-actualization when inventive potential is well developed. This is in line with Velieva et al. (2018), which stated that students' self-actualization is realized when learning needs are successfully understood and developed. Learning needs awareness motivates students to develop their potential, increase creativity, and independence to self-actualize (Neto, 2015). The teaching process is the only supporting factor for the formation of this awareness.

Instructional leadership (IL) and creative teaching (CT) influence student self-actualization (SSA) mediated by student learning satisfaction (SS)

Instructional leadership and creative teaching affect self-actualization mediated by student satisfaction. This hypothesis had a CR value of 2.024 and p 0.043, which acceptable based on CR value> 1.96 and p <0.05 requirements. Instructional leadership and creative teaching provide opportunities for students to develop their knowledge, skills, and potential. The two factors also make the learning process enjoyable by involving students in designing optimal educational services. Therefore, instructional leadership and creative teaching develop students' skills and potential, making them happy which grows their learning satisfaction. Maslow (1971) stated that self-satisfaction obtained from fulfilling four basic needs, including physiological, security, love, and appreciation, triggers self-actualization growth. Because learning satisfaction is a basic psychological need, achievements help students self-actualize. Akcay and Akyol's research (2012) proved that schools that implement learning programs to meet student satisfaction help them fulfill self-actualization needs. Arslan (2017) and Jena and Dorji (2016) concluded that students satisfied with the learning experience increased self-confidence to develop their potential through self-actualization. Moreover, through self-confidence, students grow enthusiasm for self-actualization (Ordun & Akün, 2017).

Generally, principal's leadership oriented towards quality learning and teacher creativity influences student satisfaction. Because self-actualization is a prime goal in the learning

process, principals need to focus on instructional leadership and improving teacher creativity.

CONCLUSION

This research achieved suitability and conformity demands because the model met the good fit test requirements. The study results proved a relationship between exogenous, intervening, and endogenous, such that the principal's instructional leadership and creative teaching affect student learning satisfaction. Furthermore, the principal's instructional leadership influences students' self-actualization, while creative teaching has no direct effect. The principal instructional leadership and creative teaching influence self-actualization mediated by student learning satisfaction. Therefore, educational policymakers and curriculum designers need quality learning-oriented leadership for students' satisfaction and potential actualization.

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REFERENCES

Akcay, C., & Akyol, B. (2012). Self actualization needs and education of participants in lifelong education centers. *Procedia - Social and Behavioral Sciences*, *46*(2011), 3456–3459. https://doi.org/10.1016/j.sbspro.2012.06.084

Aljaser, A. (2019). Examining the implications of differentiated instruction for high school students' self-actualization. *International Journal of Education and Practice*, *7*(3), 184–199. https://doi.org/10.18488/journal.61.2019.73.184.199

Arbuckle, J. L. (2014). *IBM SPSS Amos 23.0 user's guide*. AMOS Development Corporation.

Arif, S., Ilyas, M., & Hameed, A. (2013). Student satisfaction and impact of leadership in private universities. *TQM Journal*, *25*(4), 399–416. https://doi.org/10.1108/17542731311314881

Arslan, A. (2017). Basic needs as a predictors of prospective teachers' self-actualization. *Universal Journal of Educational Research*, *5*(6), 1045–1050. https://doi.org/10.13189/ujer.2017.050618

Bangert, A. W. (2005). Identifying factors underlying the quality of online teaching effectiveness : An exploratory study. *Journal of Computing In Higher Education*, *17*(2), 79–99. https://www.researchgate.net

Bartlett, J. C. (2008). *Principal leadership practices: A correlation study of spesific instructional leadership practice and student achievement on the tennessee gateway tests* (Issue May). Liberty University.

Blase, J., & Blase, J. (2000). Effective instructional leadership. *Journal of Educational Administration*, *38*(2), 130–141. https://doi.org/10.1108/09578230010320082

Bolliger, D. U., & Martindale, T. (2004). Key factors for determining student satisfaction in online courses. *International Journal on E-Learning*, 61–67. https://doi.org/10.5771/9783845279893-1090-1

Boyce, J., & Bowers, A. J. (2017). Toward an evolving conceptualization of instructional leadership as leadership for learning. *Journal of Educational Administration*. https://doi.org/10.1108/JEA-06-2016-0064

Byrne, B. M. (2001). Structural equation modeling With AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring instrument. *International Journal of Testing*, *1*(1), 55–86. https://doi.org/10.1207/s15327574ijt0101_4

Byrne, B. M., Shavelson, R. J., & Muthén, B. (1989). Testing for the Equivalence of Factor Covariance and Mean Structures: The Issue of Partial Measurement Invariance. *Psychological Bulletin*, *105*(3), 456–466. https://doi.org/10.1037/0033-2909.105.3.456

Cachia, R., Ferrari, A., Ala-Mutka, K., & Punie, Y. (2010). Creative Learning and Innovative Teaching. In *JRC Scientific and Thechnical Reports*. https://doi.org/10.2791/52913

Clifford, M., Behrstock-Sherratt, E., & Fetters, J. (2012). A Synthesis of Research on Principal Influence to Inform Performance Evaluation Design. *A Qualiy School Leadership*, *3*(Brief).

Corner, C. (2012). Into another world: From creativity to creative learning. *Improving Schools*, *15*(2), 116–129. https://doi.org/10.1177/1365480212450237

Cudeck, R., & Browne, M. W. (1983). Cross-validation of covariance structures. *Multivariate Behavioral Research*, *18*(2), 147–167. https://doi.org/10.1207/s15327906mbr1802_2

Dmitrienko, N. A., Gorbina, M. A., Porozhnyak, N. F., Trusova, T. V., & Konovalenko, T. G. (2017). Formation of students' professional self-actualization in modern educational environment. *Journal of Social Studies Education Research*, *8*(2), 161–177. https://doi.org/10.17499/jsser.360871

Elliot, K. M., & Healiy, M. A. (2001). Key factors influencing student satisfaction related to recruitment and retention. *Journal of Marketing for Higher Education*, *10*(4), 1–11. https://doi.org/10.1300/J050v10n04

Farimani, Z. B., & Shahri, N. N. (2020). Reaching Self-actualization in Education: Construction and Validation of a Hierarchical Scale. *Journal of Language Teaching and Research*, *11*(4), 623. https://doi.org/10.17507/jltr.1104.14

Freund, P. A., & Holling, H. (2008). Creativity in the classroom: A multilevel analysis investigating the impact of creativity and reasoning ability on GPA. *Creativity Research Journal*, *20*(3), 309–318. https://doi.org/10.1080/10400410802278776

Gerbing, D. W., & Anderson, J. C. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411–423. http://psycnet.apa.org/psycinfo/1989-14190-001

Gibson, R. (2010). Points of departure: The "art" of creative teaching: Implications for higher education. *Teaching in Higher Education*, *15*(5), 607–613. https://doi.org/10.1080/13562517.2010.493349

Gulcan, M. G. (2001). Research On Instructional Leadership Competencies of School Principals. *Education*, *132*(3), 625–636.

Hallinger, P. (2003). Leading educational change: Reflections on the practice of instructional and transformational leadership. *Cambridge Journal of Education*, *33*(3), 329–351. https://doi.org/10.1080/0305764032000122005

Hallinger, P. (2010). Developing Instructioal Leadership. In *Developing Successful Leadership* (pp. 61–76). https://doi.org/10.1007/978-90-481-9106-2

Halverson, R., Grigg, J., Prichett, R., & Thomas, C. (2007). The new instructional leadership : Creating data-driven instructional systems in school. *Journal of School Leadership*, *17*(3), 159–194.

Heaven, G., & Bourne, P. A. (2016). Instructional leadership and its effect on students' academic performance. *Review of Public Administration and Management*, *04*(03). https://doi.org/10.4172/2315-7844.1000197

Hemsley-Brown, J., Lowrie, A., Gruber, T., Fuß, S., Voss, R., & Gläser-Zikuda, M. (2010). Examining student satisfaction with higher education services: Using a new measurement tool. *International Journal of Public Sector Management*, *23*(2), 105–123. https://doi.org/10.1108/09513551011022474

Horng, B. Y. E., & Loeb, S. (2010). New thinking about instructional. *Kappan*, *92*(3), 66–70.

Horng, J. S., Hong, J. C., Chanlin, L. J., Chang, S. H., & Chu, H. C. (2005). Creative teachers and creative teaching strategies. *International Journal of Consumer Studies*, *29*(4), 352–358.

Jankowska, M., & Atlay, M. (2008). Use of creative space in enhancing students' engagement. *Innovations in Education and Teaching International*, *45*(3), 271–279. https://doi.org/10.1080/14703290802176162

Jena, P. C., & Dorji, R. (2016). Self-actualization and value orientation among primary school teachers in Bhutan. *World Scientific News*, *54*, 217–239.

Kammur, A. A. (2017). The quality of educational services and its effect on students satisfaction an empirical study on students of alrifaq private university in Libya. *Global Journal of Commerce & Management Perspective*, *6*(1), 1–10. https://doi.org/10.24105/gjcmp.6.1.1701

Kangas, M., Siklander, P., Randolph, J., & Ruokamo, H. (2017). Teachers' engagement and students' satisfaction with a playful learning environment. *Teaching and Teacher Education*, *63*, 274–284. https://doi.org/10.1016/j.tate.2016.12.018

Lee, Y. J. (2011). A study on the effect of teaching innovation on learning effectiveness with learning satisfaction as a mediator. *World Transactions on Engineering and Technology Education*, *9*(2), 92–101.

Letcher, D., & Neves, J. (2010). Determinants of undergraduate business student satisfaction. *Research in Higher Education Journal*, 1–26. http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Determinants+of+undergraduate+business+student+satisfaction#0

Liu, S., & Hallinger, P. (2018). Principal instructional leadership, teacher self-efficacy, and teacher professional learning in China: Testing a mediated-effects model. *Educational Administration Quarterly*, *54*(4), 501–528. https://doi.org/10.1177/0013161X18769048

Liu, Y., Bellibaş, M. Ş., & Gümüş, S. (2020). The effect of instructional leadership and distributed leadership on teacher self-efficacy and job satisfaction: Mediating roles of supportive school culture and teacher collaboration. *Educational Management Administration and Leadership*, *XX*(X), 1–24. https://doi.org/10.1177/1741143220910438

Lunenbrug, F. C. (2010). The principal as instructional leader: An evolving role. *National Forum Of Education And Supervision Journal*, *27*(4). https://doi.org/10.1177/019263658506948107

Marks, H. M., & Printy, S. M. (2003). Principal leadership and school performance: An Integration of Transformational and Instructional Leadership. *Educational Administration Quarterly*, *39*(3), 370–397. https://doi.org/10.1177/0013161X03253412

Maslow, A. (1971). *Self Actualizing*. Big Sur Recordings.

Mayer, R. E. (1989). Cognitive views of creativity : Creative teaching for creative learning. *Contemporary Educational Psychology*, *14*, 203–211.

Mihanović, Z., Batinić, A. B., & Pavičić, J. (2016). The link between students' satisfaction with faculty, overall students' satisfaction with student life and student performances. *Review of Innovation and Competitiveness*, *2*(1), 37–60. https://doi.org/10.32728/ric.2016.21/3

Moffitt, J. R. (2007). *What Works : Principal Leadership Behaviors that Positively Impact Student Achievement in Elementary Schools*. Electronic Theses and Dissertations. https://digitalcommons.georgiasouthern.edu/etd/264

Neto, M. (2015). Educational motivation meets Maslow: Self- actualisation as contextual driver. *Journal of Student Engagement: Education Matters*, *5*(1), 18–27. http://ro.uow.edu.au/jseemhttp://ro.uow.edu.au/jseem/vol5/iss1/4

Ordun, G., & Akün, F. A. (2017). Self actualization, self efficacy and emotional intelligence of undergraduate students. *Journal of Advanced Management Science*, *5*(3), 170–175. https://doi.org/10.18178/joams.5.3.170-175

Park, J. H. (2012). The effects of principal's leadership style on support for innovation: Evidence from Korean vocational high school change. *Asia Pacific Education Review*, *13*(1), 89–102. https://doi.org/10.1007/s12564-011-9182-9

Razinkina, E., Pankova, L., Trostinskaya, I., & Pozdeeva, E. (2018). Student satisfaction as an element of education quality monitoring in innovative higher education institution. *In E3S Web of Conferences*, *33*(03043).

Rivero, L. (2002). Progressive digressions: Home schooling for self-actualization. *Roeper Review*, *24*(4), 197–202. https://doi.org/10.1080/02783190209554180

Sahney, V. D. S. (2016). School leadership and its impact on student achievement: The mediating role of school climate and teacher job satisfaction. *International Journal of Educational Management*, *30*(6). https://doi.org/http://dx.doi.org/10.1108/IJEM-12-2014-0170

Sawyer, K. (2015). A call to action: The challenges of creative teaching and learning. *Teachers College Record*, *117*(10), 1–34.

Schacter, J., Thum, Y. M., & Zifkin, D. (2006). How much does creative teaching enhance elementary school students' achievement? *Journal of Creative Behavior*, *40*(1), 47–72. https://doi.org/10.1002/j.2162-6057.2006.tb01266.x

Schertzer, C. B., & Schertzer, S. M. . (2004). Student satisfaction and retention: A conceptual model. *Studies in Higher Education*, *7*(1), 37–41. https://doi.org/10.1300/J050v14n01

Selkrig, M., & Keamy, R. (2017). Creative pedagogy: a case for teachers' creative learning being at the centre. *Teaching Education*, *28*(3), 317–332. https://doi.org/10.1080/10476210.2017.1296829

Sharma, S. (2012). Instructional leadership model through Asian principals' perspectives. *2012 International Conference on Education and Management Innovation*, *30*, 17–21.

Shatzer, R. H. (2009). A comparison study between instructional and transformational leadership theories : Effects on student achievement and teacher job satisfaction

[Brigham Young University December]. In *All Theses and Dissertations*. https://scholarsarchive.byu.edu/etd/2432 This

Strean, W. B. (2011). Creating student engagement? HMM: Teaching and learning with humor, music, and movement. *Creative Education*, *02*(03), 189–192. https://doi.org/10.4236/ce.2011.23026

Teeroovengadum, V., Nunkoo, R., Gronroos, C., Kamalanabhan, T. J., & Seebaluck, A. K. (2019). Higher education service quality, student satisfaction and loyalty: Validating the HESQUAL scale and testing an improved structural model. *Quality Assurance in Education*, *27*(4), 427–445. https://doi.org/10.1108/QAE-01-2019-0003

Tuan, N. M. (2012). Effects of service quality and price fairness on student satisfaction. *International Journal of Business and Social Science*, *3*(19 October), 132–151. https://www.academia.edu/9764615/Effects_of_Service_Quality_and_Price_Fairness_on_Student_Satisfaction

Velieva, S. V., Mashkin, N. A., Khairullina, E. R., Semenova, T. N., Varlamova, M. E., Guseva, T. S., & Dolgasheva, M. V. (2018). University student professional selfactualization: Context of personality subjectivity. *Espacios*, *39*(20).

Wadaani, M. R. (2015). Teaching for creativity as human development toward self-actualization: The essence of authentic learning and optimal growth for all students. *Creative Education*, *06*(07), 669–679. https://doi.org/10.4236/ce.2015.67067

Wood, R., & Ashfield, J. (2008). The use of the interactive whiteboard for creative teaching and learning in literacy and mathematics: A case study. *British Journal of Educational Technology*, *39*(1), 84–96. https://doi.org/10.1111/j.1467-8535.2007.00703.x

Yavgildina, Z. M., Batyrshina, G. I., Kamalova, I. F., Salakhova, R. I., & Salakhov, R. F. (2019). Pedagogical conditions for the creative self-actualization of future art teachers. *International Journal of Civil Engineering and Technology*, *10*(2), 1677–1685.

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