

The Leadership of School Principals in Egalitarian Matrilineal Society of Minangkabau

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Abstract- The purpose of this research was to examine the influence of egalitarian cultural factors and a more dominant leadership style in principal leadership practices. The research sample was determined based on urban and inner-city zones with a total of 134 samples consisting of 8 school principals, 32 deputy principals, and 94 teachers. Stratified random utilized a survey design with quantitative methods, in which data were collected using a questionnaire as an instrument. Data were analyzed by utilizing SPSS 2.0 to calculate mean, percentage, standard deviation, Pearson correlation, and Stepwise multiple regression analysis. The results showed that learning leadership was more dominant and had the highest influence compared to the other two leadership styles. Four dimensions of transformational leadership influence simultaneously, the dominant influence is given by the Idealized Influence dimension. Two dimensions of learning leadership affect effective learning. The greatest influence is provided by the dimension of learning supervision. Four of the five indicators of Minangkabau cultural values have a significant effect on the leadership of the principals.

Keywords: Culture, effective learning, leadership, matrilineal society

Introduction

As emphasized in the fourth paragraph of the preamble to the 1945 Constitution; one of the goals of the formation of the Republic of Indonesia is to educate the Indonesian people. To realize this conceptual goal, the government must build a good education system so that schools at all levels of education, from elementary school to university level, have good quality. A high quality school is determined by many factors, e.g., resources and culture in each region. Many researchers in the country agree that the effective learning process is the main indicator of a high quality school. Meanwhile, the effective learning process can be addressed by effective and successful principal leadership [1]-[2]-[3]-[4]-[5]. There was a direct relationship between school culture and principal leadership and teacher performance in effective learning[6]. This opinion is supported by Leithwood, K. A., & Reihl stating that there may be some schools with a culture and school environment that are not conducive here and there which are led by a good and effective principal but there has never been any research result that says the realization of an effective school is the result of a person with bad, ineffective leadership [7].

The study of principal leadership is no longer limited to the influence of principal leadership on effective schools but has specifically evolved into which leadership style is the most effective. Classically, the study of principal leadership, which was initially in the form of a democratic leadership style and delegation leadership style as one of the dimensions of situational leadership by Moradi Korejan & Shahbazi [8], has developed into a transformational leadership style initiated by Armugam et al. [9]-[10] and learning leadership styles by Franco & Almeida [11]; Hughes & Zachariah [12]. Various research results show that the overall leadership style has a significant influence on the effective learning process in the classroom [13]-[14]-[15].

The application of the principal's leadership style must be adapted to the conditions of the community. Different leadership styles can be applied to societies with different cultures. In schools with a democratic leadership style, the principal always tries to prioritize cooperation and teamwork in an effort to achieve goals. The principal can also receive suggestions, opinions and even criticism from his subordinates. Subordinates must be actively involved in the decision-making process[16]. This style has been shown to have a significant effect on effective schooling [17]. Likewise, theoretically, participatory leadership belongs to Blanchard Situational Style dimension with high support and low direction to the subordinates. The characteristic of participatory leadership is that the leader performs low-directed task behavior and high support. At this stage the leader listens more, provides support and acts as an easy way to make decisions.

In transformational leadership, in contrast, the principal acts as: a leader who creates a motivational atmosphere based on commitment and emotional identity to their vision, philosophy, and style in their subordinates; a leader who is passionate about communicating the future of an idealistic organization to foster team spirit, not just individual passion; a leader who is able to shape employees to solve old problems with their innovations; and a leader always pays attention to, treats, trains and advises his employees individually [18]-[19]-[20].

Recently, there have been many researches on leadership that focus more on the implementation of effective learning rather than leadership managerial [21]. The study is no longer focused on the managerial abilities of school principals but is more focused on the actions taken to create a productive and satisfying work environment for students which can ultimately lead to effective learning [22]. Research conducted by Eyal & Roth on effective principal leadership explains that there has been a shift in the principal's function from being managerial to learning leadership [23]. This means that effective schools can only be realized by principals who can understand the role played in the learning program in their schools. In addition to understanding, school principals must also be able to implicate their responsibilities towards the overall academic achievement of their students.

Lunenburg said that in many studies on principal leadership related to learning in various countries [24], principals who are skilled in leading learning can motivate teachers and students in implementing the learning process. According to Ross & Gray [25]; Linton [26]; Valentine & Prater [21], Witziers et al. [21], principal learning leadership is the most effective leadership model for improving student achievement. The effect size of learning leadership is three times greater than that of transformational leadership. This view is reinforced by Hallinger & Heck [27] which states that a review of 40 research results on the influence of principal leadership shows that there is a significant influence between the leadership of a principal and student achievement through the formation of teacher attitudes and behavior in achieving student academic achievement. More explicitly, the results of this review also state that efforts to improve student achievement are carried out indirectly through improving teacher performance.

The Ministry of National Education with nine National Education Standards specifically on Management Standards also provides direction for school principals to implement learning leadership in schools. Through the education and training of school principals, the ministry's policy of education as outlined in the "School Management and Leadership" published by the Education Personnel Development Center, Ministry of Education and Culture emphasizes that effective learning leadership is applied to create a school climate that is able to encourage quality improvement. Internal management of the school so as to enable the implementation of a learning process that will stimulate students to achieve good learning achievement. Ahumada et al also states that learning leadership is seen to be effectively involved in curricular and learning problems which as a whole affect student achievement [28].

However, in the last five years, educational autonomy has authorized regional heads to appoint and dismiss school principals subjectively. This brings new problems such as the existence of effective school principals who do not succeed in bringing their schools to become effective schools because of differences in backgrounds with the culture in today's schools which they do not understand well. The facts show that Indonesia as a multicultural country has a variety of different cultures for each ethnicity. This condition affects the leadership practice of school principals in realizing effective schools. In Indonesia, the practice of principal leadership which is emphasized in management standards leads to learning leadership as a model for professional school principal leadership because this model provides a greater effect size in creating effective schools compared to other school principal leadership styles. However, school and community culture are social systems that are interrelated with each other, each of which influences each other. Parsons states that within the framework of an open social system, school organization is structurally a component of a larger social system [29]. Based on this theory, the values of local wisdom that belong to each ethnicity are a factor that influences the leadership practice of school principals.

In addition, the management and leadership practices of school principals in West Sumatra, especially in Padang, from the social system theory review, are always related to the cultural values of the Minangkabau people. According to Tono et al., [30], Minangkabau culture as an integral part of Indonesia is known for its unique culture, adhering to a matrilineal system with a lineage based on a maternal line that is different from many cultures in Indonesia that adhere to the patrilineal system. The Minangkabau people uphold customs based on the view of life "*alam takambang jadi guru* - Learning from nature"[31], *adat basandi syarak, syarak basandi Kitabullah*, and natural philosophy [32]. The combination of customary values based on natural philosophy with Islamic values makes the Minangkabau people tend to be egalitarian in everyday life. The formation of an egalitarian character for Minangkabau men starts from the pattern of life in the surau, where Minangkabau

children and adolescents learn the Koran [33]. This kind of pattern makes Minangkabau youth have an attitude and are free to express their opinions [34]. For the Minangkabau people, a leader takes only one step and is exalted simultaneously. This is what makes the Minangkabau people respond differently to education compared to most other feudal societies in Indonesia.

Although the Indonesianization of West Sumatra which is identical to Minangkabau has been in progress since West Sumatra became part of the Republic of Indonesia, the matrilineal system and egalitarian cultural values are constant cultural values in Minangkabau which are thought to have influenced the implementation of various leadership styles in various sectors both in government and in the sector education. Minangkabau matrilineal society with a nagari government system, a kind of small republic during the Greek era, upholds values [35]. The highest decisions for the Minangkabau people are those made through deliberation and consensus through the density of adat nagari. As the customary proverb of "*rajo alim rajo disambah, rajo lalim rajo di sanggah* - Follow the good king and criticize the bad one." For the Minangkabau, decisions are tiered through: *kemenakan ber-Raja kemamak, mamak ber-Raja ke penghulu, penghulu ber-Raja ke mufakat, mufakat ber-Raja kepada kebenaran, benar menurut alur dan patut* (nephews follow their mamak, mamaks follow the leader, leaders follow the consensus, and consensus follows rules and truth) [36]. In Minangkabau, a good decision is a decision that is agreed upon through a process of deliberation and consensus, as the customary saying goes, "*ka hilia sarangkuah dayuang, ka mudiak sarentak galah* - going downstream in a row of paddles, going upstream in a row of stick." This means that someone will be responsible for implementing a decision if they are involved in the decision-making process. This study examines egalitarian cultural factors as factors that influence the leadership style of school principals, and also examines which leadership style is more dominant in principal leadership practices. As a society that has inherited an egalitarian culture, of course the basic assumption that supports it is that leadership with a democratic and participatory style is a leadership style that is in accordance with the culture of the Minangkabau community. However, a management approach with binding national regulations will certainly influence local cultural interventions in the leadership practice of school principals. As there is no specific research on the leadership based on local culture, the current study investigates the dominant cultural factors and principal leadership practices in the Minangkabau matrilineal society that uphold egalitarian values. To achieve the aims and objectives of this study to describe the implementation stage of each principal leadership practice, the practice of the dominant leadership style of the principal, and leadership style is suitable for schools in an egalitarian society.

Methods

This study applies a quantitative approach to measuring cultural factors and leadership practices of school principals in Padang. The study population area is SMA Negeri in Padang with the majority of the Minangkabau ethnicity who are matrilineal and egalitarian. In Padang there are 16 State Senior High Schools (SMA Negeri). Then the research sample was determined based on the city zone and the suburban zone with details of four schools representing the city and four schools representing the suburbs with the characteristics of the Minangkabau ethnic community. The research data were collected using a questionnaire as an instrument, and analyzed using SPSS ver. 20. To calculate the minimum score, standard deviation, correlation and regression analysis, the Stepwise method was applied.

This conceptual framework explains the relationship and influence of five indicators of egalitarian cultural values that characterize Minangkabau society on the three leadership styles of school principals (transformational style, instructional style, and democratic style). Next, it also explains which leadership style is more dominant in the daily practice of principal leadership in realizing an effective learning process. Conceptually, schools that are in the Minangkabau cultural environment are certainly more dominant in using democratic leadership styles compared to other leadership styles. Minangkabau society with a matrilineal system adheres to the notion of freedom of thought and the decision process is made through deliberation and consensus not through decrees of the king's decree in most other communities in Indonesia. Therefore, this conceptual framework is a guide to see to what extent these egalitarian cultural values influence the leadership of school principals who are oriented towards the concept of professional leadership and modern management based on the rules and regulations established by the government on the basis of the nation-state.

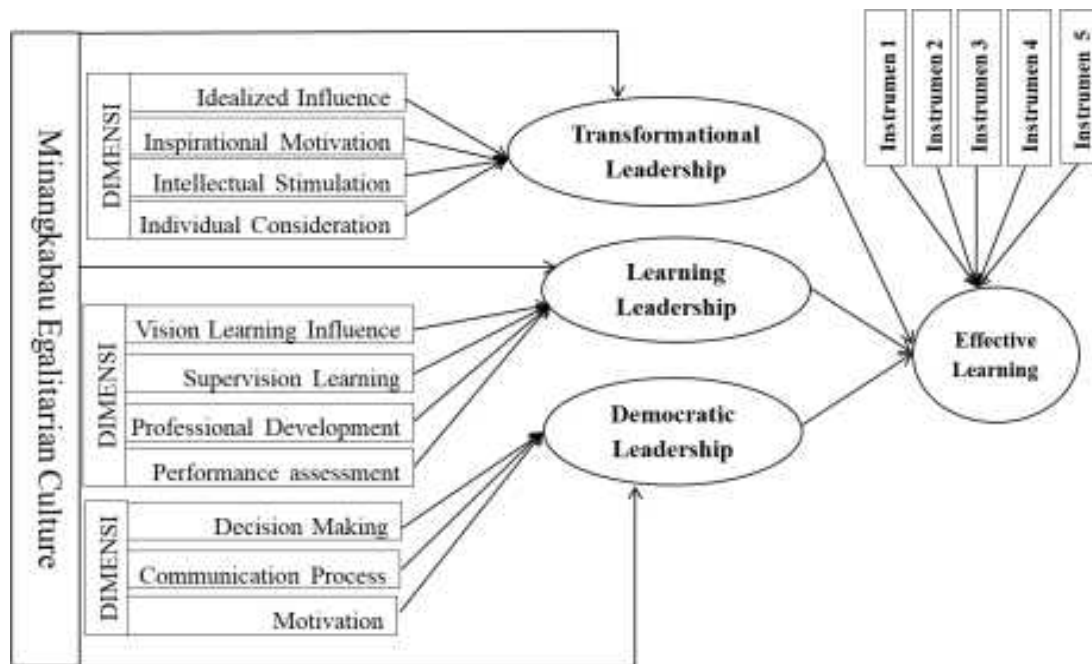


Figure 1. Conceptual Framework

Results

1. Validity and Reliability Test

The results of the overall instrument item analysis test from each construct using Cronbach Alpha obtained results with the item correlation value with a total score (r) of > 0.30 , meaning that the estimated value of all instruments is valid or has high validity and the Alpha coefficient value > 0.70 indicates These instrument items are reliable or have reliability in measuring the same thing (Mohamad et al., 2015; Creswell, 2003). In more detail, it can be seen that the estimation of the reliability and validity of the instruments of each construct is as follows: First, the results of the analysis of the transformational leadership construct of the principal with 17 instrument items obtained a range of item correlation values with a total score (r) > 0.30 , namely between 0.258 - 0.689 with The Cronbach Alpha coefficient is .897. Second, the results of the analysis for the construct of the principal's learning leadership with 20 instrument items, 2 items for the Learning Vision dimension, obtained a range of item correlation values with a total score (r) > 0.30 , namely between 0.265-0.637 with a Cronbach Alpha coefficient of 0.881; Third, the results of the analysis for the construct of the principal's democratic leadership of 15 instrument items obtained a range of item correlation values with a total score (r) > 0.30 , namely between 0.291-0.676 with a Cronbach Alpha coefficient of 0.881. Fourth, the results of the analysis for the cultural values of the Minangkabau people were 8 items with 2 items and 2 items were obtained from the correlation value range of items with a total score (r) > 0.30 , namely between 0.479 - 0.798 with a Cronbach Alpha coefficient of 0.799. Fifth, the results of the analysis for effective learning were 10 instruments, 2 items failed, and the item correlation value range was obtained with a total score (r) > 0.30 , namely between 0.271 - 0.494 with a Cronbach Alpha coefficient of 0.721.

2. Factor Analysis Confirmation Test

Then the results of the validity and reliability tests with Cronbach Alpha were analyzed again by Confirmatory Factor Analysis (CFA). The results of the CFA test have dropped 1 item for the dimension of Teacher Professional Development from learning leadership, 2 items for the dimension of the Decision Making Process of democratic leadership, 1 item for the Minangkabau Culture construct, and 3 items for the Effective Learning construct. Analysis with Confirmatory Factor Analysis (CFA) aims to measure the extent to which indicators can explain the constructs of transformational leadership, learning leadership, and democratic/participatory leadership as well as Minangkabau egalitarian cultural constructs and effective learning constructs. The analysis results obtained KMO value 0.05 and Anti Image Correlation value for each instrument item of each construct with a loading factor of > 0.05 . In detail, the results of the analysis can be seen in Table 1 below

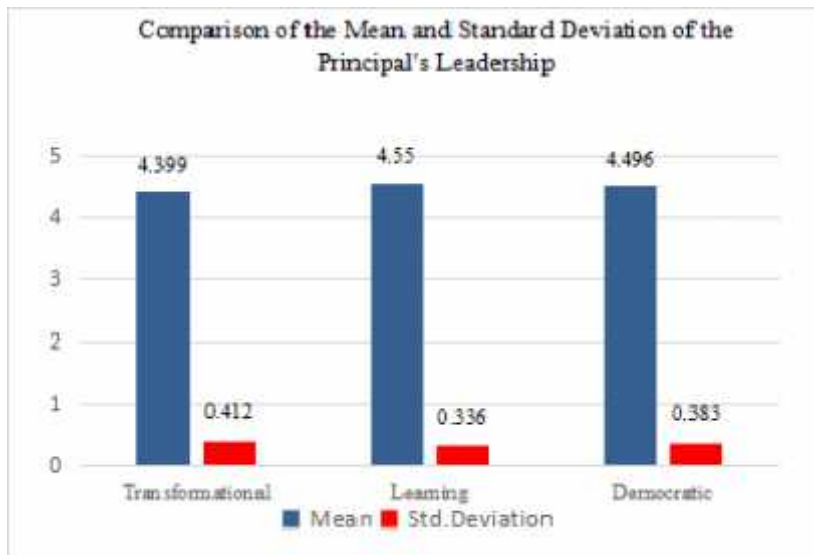
Table 1: Results of the Confirmatory Factor Analysis (CFA) analysis

Construct	Number of indicators	Loading Factor ➢ 0.50	Compulsive %
Transformational leadership			
1. Idealized Influence	4	0.759-0.832	60.948 %
2. Inspirational Motivation	5	0.667-0.814	55.203%
3. Intellectual Stimulation	4	0.674-0.799	53.626%
4. Individual Consideration	4	0.565-0.822	49.898%
Learning leadership			
1. Vision Learning	4	0.490-0.851	52.814%
2. Supervision Learning	4	0.675-0.786	54.384%
3. Professional development	4	0.678-0.795	56.641%
4. Performance assessment	5	0.589-0.889	60.906%
Democratic leadership			
1. Decision making	5	0.694-0.792	54.730%
2. Communication process	4	0.717-0.790	56.879%
3. Motivation	4	0.625-0.849	53.965%
Minangkabau egalitarian culture	5	0.708-0.894	59.532%
Effective Learning	5	0.619-0.788	49.620%

The results of the Confirmatory Factor Analysis (CFA) analysis such as table 1 above can be explained that the Compulsive % value from indicator to dimension and from indicator to construct being above 50% is good enough to measure the construct, meaning that the indicators conceptualized are unidimensional valid as an indicator measuring construct. For example, indicators from the Idealized Influence dimension are valid for measuring constructs of 60,948%, while the remaining 39.052% are determined by other indicators, and so on.

3.Principal Leadership Implementation Stage

Table 2 shows the acquisition of the mean score of the three principal leadership practices at a very high stage. However, from the three leadership practices, the mean score of learning leadership (mean= 4.550) is in the highest position exceeding (0.151) compared to transformational leadership and exceeding (0.054) compared to democratic leadership. The results of this analysis illustrate that learning leadership is the dominant leadership practice carried out by the principal of SMA Negeri Kota Padang, as shown in Graphic 1 below.



4. Significant predictors of the principal's leadership style on effective learning

H₀₁ : There is no positive and significant effect of each principal's leadership style (transformational, learning, and democratic) on effective learning.

The results of multiple linear regression analysis using the Stepwise method show that the principal's leadership style simultaneously has a positive and significant impact on the effective learning process in SMA Negeri in Padang with the results as shown in tables 2 and 3 below:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.157	1	14.157	238.836	0.000 ^b
	Residual	7.824	132	0.059		
	Total	21.981	133			
2	Regression	16.057	2	8.029	177.556	0.000 ^c
	Residual	5.924	131	0.045		
	Total	21.981	133			
3	Regression	16.673	3	5.558	136.118	0.000 ^d
	Residual	5.308	130	0.041		
	Total	21.981	133			

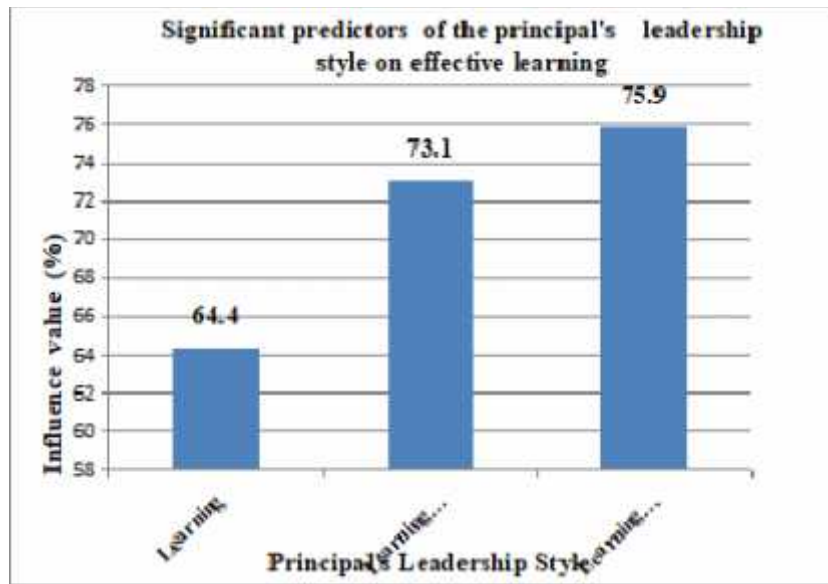
a. Dependent Variable: Effective Learning

Table 3: Multiple regression (Stepwise) for the dependent variable principal leadership (Transformational, Learning, and Democratic) on effective learning

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.037	0.287		-0.128	0.899
	Learning	0.998	0.065	0.803	15.454	0.000
2	(Constant)	-0.690	0.270		-2.552	0.012
	Learning	0.599	0.083	0.482	7.179	0.000
	Transformational	0.542	0.084	0.435	6.483	0.000
3	(Constant)	-0.905	0.263		-3.446	0.001
	Learning	0.498	0.083	0.400	5.965	0.000
	Transformational	0.427	0.085	0.342	5.027	0.000
	Democratic	0.265	0.068	0.233	3.883	0.000

a. Dependent Variable: Effective Learning

From table 2 above, it is obtained that the value of $F_{\text{count}} (238,836) > F_{\text{table}} (3.91)$, with a significant value smaller than the probability value of 0.05 or the value of $\text{sig} = 0.000 < 0.05$, meaning that there is an effect of learning leadership on effective learning. The value of F_{count} for the combination of learning leadership and transformation leadership is $F_{\text{count}} (177.556) > F_{\text{table}} (3.06)$ and the value of sig. smaller than the probability value 0.05 or $\text{sig} = 0.000 < 0.05$, it means that there is a positive and significant influence simultaneously learning leadership and transformational leadership on effective learning. The value of F_{count} for the combination of learning leadership, transformational leadership, and democratic leadership is $F_{\text{count}} (136,118) > F_{\text{table}} (2.67)$ and $\text{sig} = 0.000 < 0.05$, meaning that there is a positive and significant influence simultaneously learning leadership, transformational leadership, and democratic leadership on effective learning. The results of this analysis can be concluded that the H_0 hypothesis is rejected. The effect value given by the three independent variables either partially or simultaneously is shown in Graphic 2 below.



3. **Significant predictors of the dimensions principal's leadership style (transformational, learning, and democracy) on effective learning**

The influence of the dimensions of transformational leadership, learning leadership, democratic leadership on effective learning is expressed in the form of a hypothesis:

H₀₂ : There is no positive and significant influence of the dimensions of transformational leadership of principals on effective learning.

H₀₃ : There is no contribution of learning leadership dimensions of school principals to effective learning in SMA Negeri in Padang.

H₀₄ : There is no contribution of the democratic leadership dimensions of school principals to effective learning in SMA Negeri in Padang.

The significant influence of the dimensions of transformational leadership on effective learning at SMA Negeri Padang is shown in tables 4 and 5 below:

Table 4: ANOVA Variant independent variable on dependent variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.476	1	10.476	120.193	0.000 ^b
	Residual	11.505	132	0.087		
	Total	21.981	133			
2	Regression	13.502	2	6.751	104.312	0.000 ^c
	Residual	8.478	131	0.065		
	Total	21.981	133			
3	Regression	13.977	3	4.659	75.673	0.000 ^d
	Residual	8.004	130	0.062		
	Total	21.981	133			

a. Dependent Variable: Effective Learning

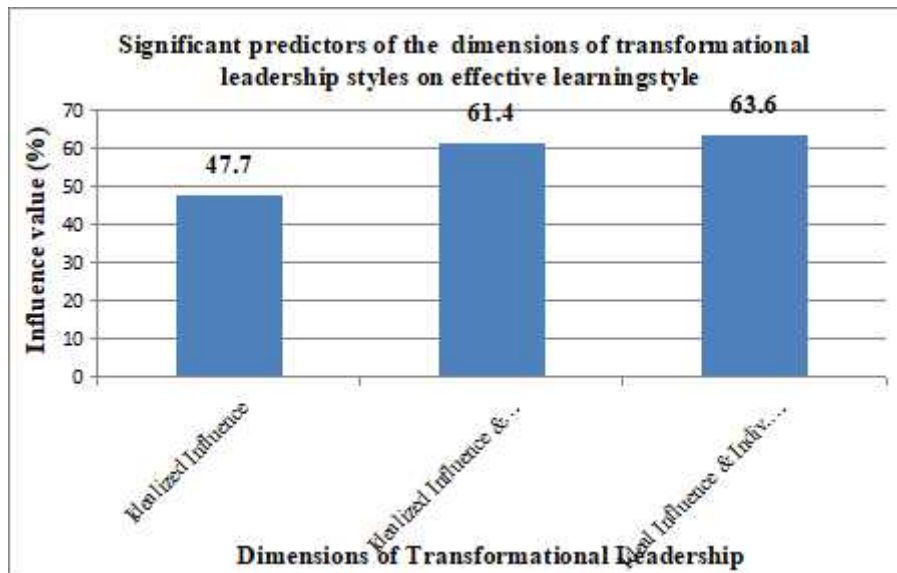
Table 5 Multiple regression (Stepwise) for the independent variable dimensions of transformational leadership on effective learning

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	1.419	0.272		5.219	0.000
	<i>Idealized Influence</i>	0.674	0.061	0.690	10.963	0.000
2	(Constant)	0.409	0.27		1.475	0.143
	<i>Idealized Influence</i>	0.494	0.059	0.506	8.352	0.000
	<i>Individual Consideration</i>	0.405	0.059	0.414	6.838	0.000

3	(Constant)	0.128	0.289		0.444	0.658
	<i>Idealized Influence</i>	0.369	0.073	0.378	5.050	0.000
	<i>Individual Consideration</i>	0.351	0.061	0.359	5.753	0.000
	<i>Inspirational Motivation</i>	0.235	0.085	0.217	2.777	0.006

a. Dependent Variable : Effective Learning

The results of the study in table 4, the analysis of variance shows that the value of F_{count} for the Idealized Influence dimension is $F_{count} (120.193) > F_{table} (3.91)$, and $sig = 0.000 < 0.05$ and $R^2 = 0.477$, meaning that the Idealized Influence dimension affects effective learning. The value of F_{count} for the dimensions of Idealized Influence and Individual Consideration is $F_{count} (104.312) > F_{table} (3.056)$, and $sig = 0.000 < 0.05$ and $R^2 = 0.614$, meaning that the dimensions of Idealized Influence and Individual Consideration simultaneously affect effective learning. The value of F_{count} for the dimensions of Idealized Influence, Individual Consideration and Inspirational Motivation is $F_{count} (75.673) > F_{table} (2.67)$ and $sig = 0.000 < 0.05$ and $R^2 = 0.636$, meaning that simultaneously the dimensions of Idealized Influence, Individual Consideration and Inspirational Motivation have an effect on effective learning. These findings indicate that the dimensions of Idealized Influence affect the effective learning variable by 47.7%, the combination of Idealized Influence and Individual Consideration dimensions has an effect on effective learning by 61.4%, meaning that the Individual Consideration dimension of transformational leadership has an effect of 13.8%, while the combination of Idealized Influence dimensions, Individual Consideration and Inspirational Motivation have an effect on effective learning as much as 63.6%, meaning that the Inspirational Motivation dimension of transformational leadership accounts for 2.2%. Meanwhile, the Intellectual Stimulation dimension has absolutely no effect on the realization of effective learning in SMA Negeri in Padang. The overall effect value can be seen in Graphic 3 below.



Graphic 3 above explains that the idealized influence dimension of transformational leadership has the greatest influence as much as 47.7% compared to the other three dimensions. The indicators of the Idealized Influence dimension that have a lot of influence on effective learning are 1) the principal is my role model (role model) in carrying out learning tasks; 2) The principal instructed me in preparing effective learning planning and strategies; 3) The principal instilled my pride in joining him; 4) Principals get respect from teachers and school employees. This finding is consistent with Bass's research that transformational leadership is considered effective in any situation or culture [18].

The results of multiple analyses using the stepwise method to see the significant influence of the dimensions of learning leadership on effective learning in SMA Negeri in Padang are as shown in Table 6 and 7 below:

Table 6: ANOVA Variant variable independent to variable dependent

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.746	1	18.746	764.942	0.000 ^b
	Residual	3.235	132	0.025		
	Total	21.981	133			
2	Regression	19.052	2	9.526	426.043	0.000 ^c
	Residual	2.929	131	0.022		

Total	21.981	133		
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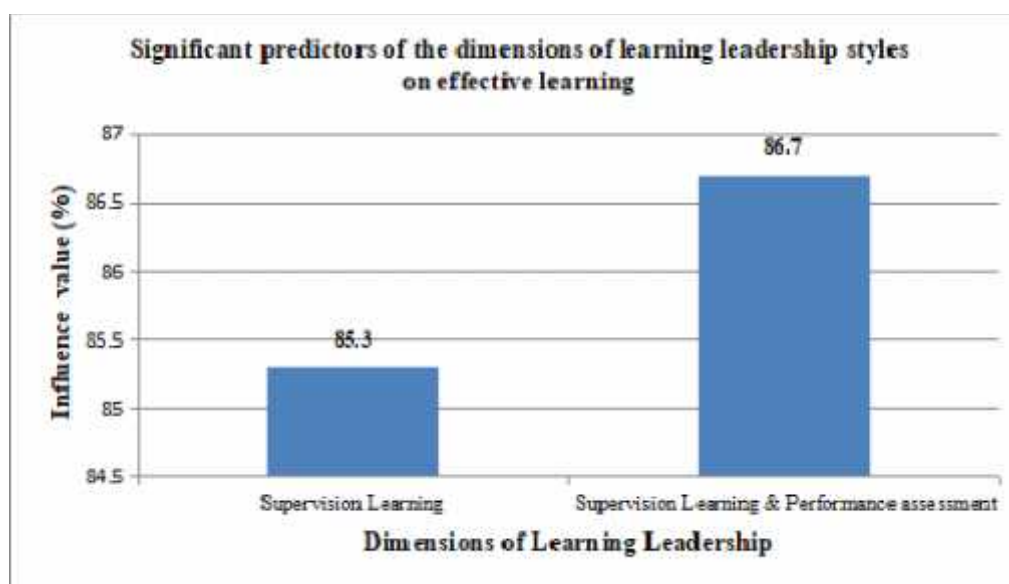
a. Dependent Variable : Effective Learning

Table 7: Multiple regression (Stepwise) for the independent variable dimensions of learning leadership on effective learning

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.577	0.138		4.164	0.000
	Supervision Learning	0.878	0.032	0.923	27.658	0.000
2	(Constant)	0.392	0.141		2.769	0.000
	Supervision Learning	0.799	0.037	0.841	21.564	0.000
	Performance assessment	0.121	0.033	0.144	3.698	0.000

a. Dependent Variable : Effective Learning

The results of the study in tables 6 and 7, the analysis of variance shows that for the dimension of supervision, the value of $F_{count} (764,942) > F_{table} (3.91)$ and $sig = 0.000 < 0.05$ and $R^2 = .0853$ is obtained and the F_{count} value for the combination of the dimensions of learning supervision and performance appraisal is obtained by the $F_{count} (426.043) > F_{table} (3.06)$, and $sig = 0.000 < 0.05$ and $R^2 = 0.867$. These findings indicate that the dimensions of learning supervision have an effect on the effective learning variable by 85.3%, the combination of the dimensions of learning supervision and teacher performance appraisal has an effect on effective learning by 86.7%, meaning that the dimensions of teacher performance appraisal of learning leadership affect 1.4%. The value of the influence of the learning leadership dimension is shown in Graphic 4 below.



From these findings it can be explained that from the four dimensions of learning leadership, it turns out that the dimensions of learning supervision of learning leadership have the greatest influence by 65.3%, the highest compared to the other three dimensions. The indicators of the dimension of learning supervision that have a lot of influence on effective learning are 1) the principal performs supervision on a scheduled basis; 2) The principal exercises strict control of the learning process in the classroom; 3) The principal is knowledgeable about learning and learning theory; 4) Knowledgeable principals distinguish between appropriate teacher learning and learning that is not in accordance with student learning outcomes to be achieved.

The significant influence of the dimensions of democratic leadership on effective learning in SMA Negeri Padang is shown in table 8 and 9 below:

Table 8: ANOVA Variant variable independent on variable dependent

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.437	1	11.437	143.193	0.000 ^b
	Residual	10.543	132	0.080		
	Total	21.981	133			
2	Regression	12.072	2	6.036	79.803	0.000 ^c
	Residual	9.909	131	0.076		

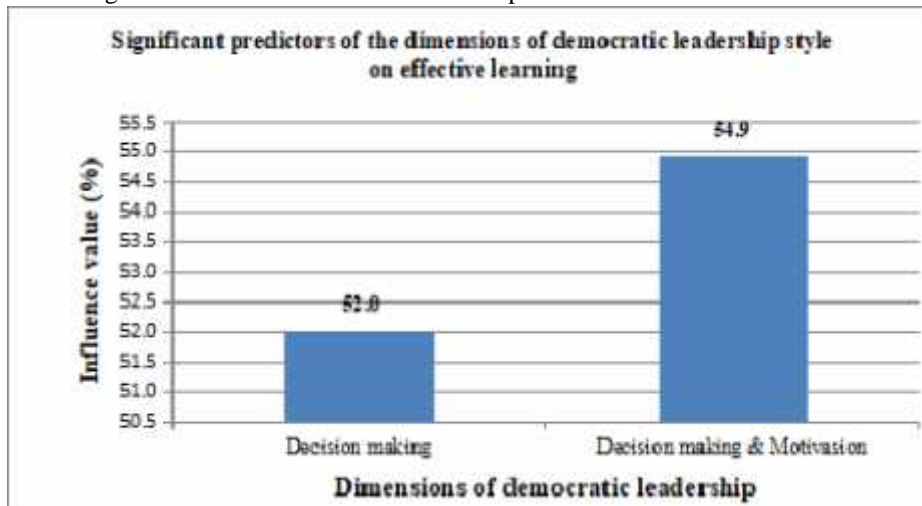
	Total	21.981	133			
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Table 9: Multiple regression (Stepwise) for the independent variable, the dimensions of democratic leadership on effective learning

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.400	0.251		5.578	0.000
	Decision making	0.676	0.057	0.721	11.966	0.000
2	(Constant)	0.930	0.293		3.175	0.000
	Decision making	0.526	0.076	0.561	6.957	0.000
	Motivation	0.250	0.086	0.234	2.897	0.004

a. Dependent Variable: Effective learning

The results of the study in tables 8 and 9, analysis of variance shows that the value of F_{count} for the dimensions of the decision-making process is $F_{count} (143,193) > F_{table} (3,91)$ and $sig = 0.000 < 0.05$ and $R^2 = 0.520$ and the value of F_{count} for the combination of dimensions to make decisions, motivation is $F_{count} (79,803) > F_{table} (3,06)$ and $sig = 0.000 < 0.05$ and $R^2 = 0.549$. These findings indicate that the dimensions of making decisions affect the effective learning variable by 52.0%, the combination of the dimensions of making decisions, motivation influences effective learning by 54.9%, meaning that the motivation dimension of leadership has an effect of 2.9%, while the communication dimension has absolutely no effect on its realization of effective learning in SMA Negeri in Padang. The effect value can be seen in Graphic 5 below.



From these findings, it can be explained that from the three dimensions of leadership, it turns out that the dimension of the decision-making process has the greatest influence as much as 52.0% compared to the other three dimensions. The indicators from the dimensions of the decision-making process that have a lot of influence on effective learning are: 1) The principal is willing to exchange opinions with school members in formulating important decisions regarding the vision and mission of the school; 2) The principal is someone who is willing to hear criticism, suggestions/opinions before decisions are made; 3) The principal appears as a way of facilitating the decision-making process; 4) The principal asked for many alternatives to the decision to be taken; 5) The principal is a persuader and a good listener, confident in solving various problems related to assignments.

4. Significant predictor indicators of Minangkabau egalitarian culture with leadership style

There are five indicators of cultural values which are a reflection of the egalitarian cultural values of the Minangkabau people inherited from generation to generation through the process of internalizing values so that they become cultural characteristics that distinguish Minangkabau people from other feudal societies. To see to what extent each indicator of these egalitarian cultural values affects the leadership practice of the principal of SMA Negeri in Padang, the following hypothesis is put forward:

H_05 : There is no positive and significant influence of the egalitarian culture of the Minangkabau community on transformational leadership, learning leadership, and democratic leadership of school principals.

The results of the analysis using the Stepwise method of multiple regression show that there are several indicators of the Minangkabau egalitarian culture that influence the principal's transformational leadership practice, is shown in tables 10 below:

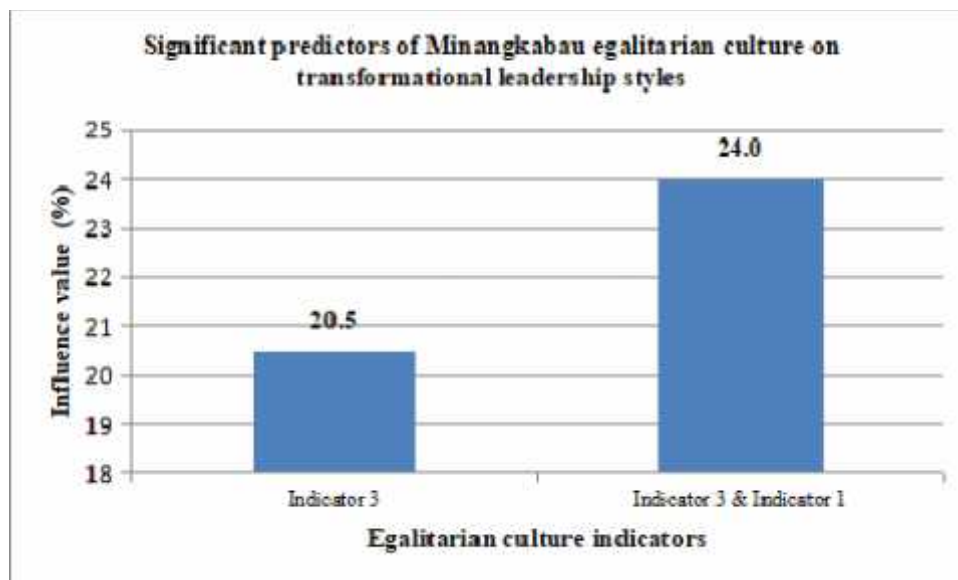
Table 10: Multiple regressions (Stepwise) for indicators of Minangkabau egalitarian culture that affect the transformational leadership practice of school principals

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.415	0.182		18.811	0.000
	Indicator3	0.246	0.042	0.453	5.838	0.000
2	(Constant)	3.026	0.239		12.677	0.000
	Indicator3	0.190	0.047	0.349	4.003	0.000
	Indicator1	0.139	0.057	0.214	2.449	0.016

a. Dependent Variable: Transformational leadership

The CFA test results show that there are five valid and reliable indicators of Minangkabau culture, namely indicators 1) I participate in supporting school policies and programs if they are established through a deliberation process involving school members; indicator 3) I will remain critical of school principals who are not democratic; indicator 5) I am only loyal to the principal who has an opinion and principle in enforcing school rules; 6) I support school principals who enforce the truth in accordance with school regulations; 7) I value principals who are close to subordinates, treating everyone equally.

After the multiple regression analysis of the Stepwise method was carried out, there were two indicators that had an effect on the transformational leadership of the principal: indicator 3) with a value of Beta contribution (0.453), $t_{count} (5.838) > t_{table} (1.654)$, $sig. 000 < 0.05$ and $R^2 (0.205)$. These findings indicate that the critical attitude of school members towards school principals who act not democratically has an influence on the transformational leadership of the principal by 20.5%. The effect value given by the combination of indicator 3) and indicator 1) is Beta (0.214), $t_{count} (2.449) > t_{table} (1.654)$, $sig. 016 < 0.05$ and $R^2 (0.240)$. These findings indicate that the value of the contribution given simultaneously by indicator 3 and indicator 1) is $R^2 (0.240)$ or 24%, while the remaining 76% is determined by other indicators. The influence value is shown in Graphic 6 below.



The indicators of the egalitarian Minangkabau cultural values that affect the learning leadership practice of principals in public high schools in Padang are shown in table 11 below:

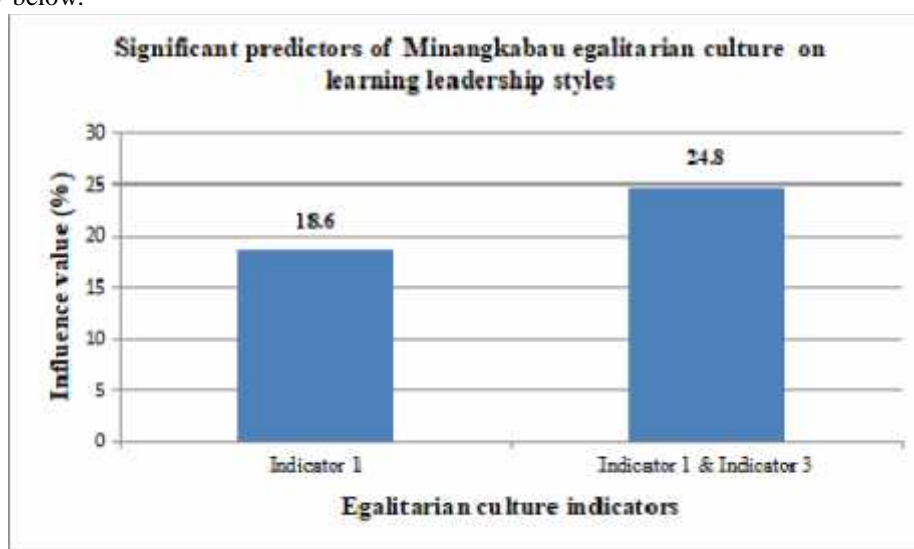
Table 11: Multiple regressions (Stepwise) for indicators of egalitarian culture of the Minangkabau community that affect the learning leadership practice of principals

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	3.161	0.234		13.529	0.000
	Indicator 1	0.281	0.051	0.431	5.484	0.000
2	(Constant)	2.907	0.238		12.218	0.000
	Indicator 1	0.190	0.057	0.291	3.357	0.001
	Indicator 3	0.156	0.047	0.287	3.308	0.001

a. Dependent Variable: Learning leadership

Table 11 above shows that the Minangkabau cultural value that affects the principal's learning leadership is an indicator 1) I participate in supporting school policies and programs if they are laid out through a deliberation process involving school members with Beta values (0.431), $t_{count} (5.484) > t_{table} (1.654)$, $sig. 0.000 < 0.05$ and $R^2 (0.186)$. These findings indicate the value of the effect given is 18.6%. The effect value given by a combination of indicator 1) with indicator 3) I will remain critical of the principal who does not act is Beta (0.287), $t_{count} (3.308) > t_{table} (1.654)$, $sig. 0.000 < 0.05$ and $R^2 (.248)$ or the value of influence is 6.3%. The effect value is shown in Graphic 7 below.



The influence of the Minangkabau egalitarian cultural indicators on the practice of democratic leadership of school principals in SMA Negeri in Padang is shown in table 12 below:

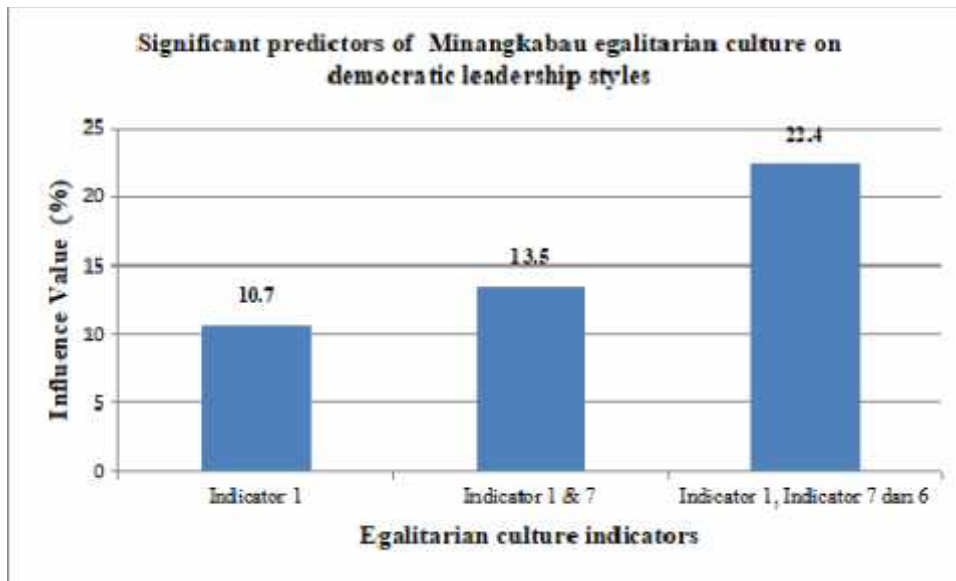
Table 12: Multiple regressions (Stepwise) for indicators of egalitarian culture of the Minangkabau community which influence the practice of principal democratic leadership

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.398	0.268		12.688	0.000
	Indicator 1	0.234	0.059	0.328	3.984	0.000
2	(Constant)	3.185	0.284		11.202	0.000
	Indicator 1	0.189	0.062	0.264	3.040	0.003
	Indicator 7	0.092	0.045	0.178	2.043	0.043
3	(Constant)	3.263	0.271		12.036	0.000
	Indicator 1	0.271	0.063	0.379	4.316	0.000
	Indicator 7	0.276	0.064	0.533	4.309	0.000
	Indicator 6	-0.279	0.072	-0.507	-3.862	0.000

a. Dependent Variable: Democratic leadership

Table 12 above shows that the indicators of the egalitarian Minangkabau culture that have an impact on the democratic leadership of the school principal are indicators 1) Even though I have different opinions, I still participate in supporting school policies and programs if they are determined through a deliberation process involving school members; indicator 7) I value the principal who is close to subordinates, treating everyone equally; indicator 6) I support the principal who upholds the truth in accordance with school regulations. The value of the influence given by indicator 1) is Beta (0.328), $t_{count} (3.984) > t_{table} (1.654)$, $sig. 0.00 < 0.05$ and $R^2 (0.107)$. These findings indicate that indicator 1) has an influence on the democratic leadership of school principals by 10.7%. The combination of indicator 1) and indicator 7) affects the democratic leadership of

principals with Beta values (0.178), t_{count} (2.043) > t_{table} (1.654), sig. 043 < 0.05 and R2 (0.135). The value of the influence given by indicator 7) is 2.8%. The combination of indicator 1), indicator 7), and indicator 6) has an influence on the democratic leadership of principals with Beta values (-0.507), t_{count} (-3.862) > t_{table} (1.654), sig. 000 < 0.05 and R2 (0.224). The effect value given by indicator 6) is 8.9%. The effect value can be seen in Graphic 8 below.



Discussion

From the findings above, it can be argued that even though SMA Negeri in Padang are in an egalitarian climate and culture of the Minangkabau people, it turns out that the democratic leadership style is not the main and dominant leadership practice in schools. The principal is more dominant in practicing the learning leadership style with a minimum score of 4,550 which is at a very high and highest stage among other leadership styles. This finding is not in accordance with the social systems theory by Hoppey and Mcleskey[37], and the views of Minangkabau Navis cultural observers [38] and research by Armiati et al[39]; Stark [36] that the school is a social unit with the culture of the community around the school that interacts and influences each other. However, the results of this study indicate that the stage of learning leadership is more dominant, this illustrates that the principal and teachers in SMA Negeri prefer learning leadership as professional leadership with a modern scientific management approach in realizing an effective learning process. This finding is also in accordance with the management standards of the Ministry of Education and Culture, which direct schools to implement learning leadership.

Of the three principal leadership styles (Transformational Leadership, Learning Leadership, and Democratic Leadership), the research findings showed that learning leadership styles had the highest influence by 64.4% compared to the other two leadership styles. This finding is in line with the results of research by Azwar et al. [35], principal learning leadership is the most effective leadership model to improve student achievement, the effect size of learning leadership is three times greater than transformational leadership. This view is also reinforced by Hallinger & Heck [27], that the results of a review of 40 research results on the influence of principal leadership show that there is a significant influence between the leadership of a principal and student achievement through the formation of teacher attitudes and behavior to achieve student academic achievement. More firmly, the results of this review state that efforts to improve student achievement are carried out indirectly through improving teacher performance by the principal with a learning leadership style.

Three of the four dimensions of transformational leadership are simultaneously influential. The dimensions of Idealized Influence, Individual Consideration, and Inspirational Motivation have an effect of 63.4%. The dominant influence is given by the Idealized Influence dimension of 47.7%. While the Intellectual Stimulation dimension has no effect at all, this illustrates that the principal has not maximally encouraged teachers to be more creative, innovative in using various teaching strategies, and is less enthusiastic about listening to ideas / ideas from teachers regarding efforts to improve student achievement, and has not maximally pushed teachers in solving student problems related to learning. These findings are generally in accordance with the theory of transformational leadership by Bass & Riggio [18]. Transformational leadership is a leadership style that

engages followers. However, related to the dimensions of intellectual stimulation, the results are not in line with the views of Bass & Riggio [18].

Next, with regard to the four dimensions of learning leadership, these findings show that the combination of the dimensions of learning supervision and the dimensions of teacher performance appraisal has an effect on effective learning by 86.7%. The biggest influence is given by the learning supervision dimension of 85.3%, while the other two dimensions, namely the learning vision dimension and the continuous professional development dimension, have no effect at all. This illustrates the principal's leadership in the aspect of the learning vision and the efforts made for sustainable professional development have not been maximally carried out. These two dimensions do not show a significant effect on teacher performance in an effective learning process. This finding is not in line with the results of the research of Hallinger & Murphy [40], two dimensions do not have a significant effect, meaning that learning leadership in concept and theory is better understood as a leadership style that leads to the creation of a school climate that is able to encourage optimal learning processes that have not been maximally implemented in SMA Negeri in Padang.

The dimensions of making decisions from the democratic leadership style affect the effective learning variable by 52.0%, the combination of dimensions of making decisions, motivation influences effective learning by 54.9%, meaning that the motivation dimension of the influential leadership style is 2.9%. These findings indicate, for egalitarian societies, the process of making decisions by involving many school members is a dimension of democratic leadership that must be the main consideration for school principals in formulating various school programs in order to get strong support by school members.

From the findings above, it can be argued that there are four of the five indicators of Minangkabau cultural values that have a significant effect on the leadership of school principals, namely indicator 1) Even though I have different opinions, I still participate in supporting school policies and programs if they are determined through a deliberation process involving school members; Indicator 3) I remain critical of school principals who do not; indicator 6) I support the principal who enforces the truth in accordance with school regulations; indicator 7) I appreciate the principal who is close to subordinates, treating everyone equally. Meanwhile, indicator 5) I am only loyal to the principal who has an opinion and principle in upholding school rules, it does not have a significant and significant effect.

Two indicators have a simultaneous effect on transformational leadership and learning leadership, namely teacher responses shown by teachers' critical attitudes towards school principals who do not and only participate in supporting school policies and programs if determined through a deliberation process involving school members. Meanwhile, the indicators shown by the teacher's response that have a simultaneous effect on democratic leadership are still participating in supporting school policies and programs if they are determined through a deliberation process involving school members; respect the principal who is close to subordinates, treats everyone equally; and support school principals who enforce the truth in accordance with school regulations. This finding is in accordance with the viewpoint of Navis, a veteran of the Minangkabau culture who explains that the highest decision for the Minangkabau community is a decision made through deliberation and consensus through the density of Nagari customs. As the customary saying "*rajo alim rajo disambah, rajo lalim rajo disanggah,*" for the Minangkabau, the decisions are tiered *kemenakan ber-Raja kemamak, mamak ber-Raja ke penghulu, penghulu ber-Raja ke mufakat, mufakat ber-Raja kepada kebenaran, benar menurut alur dan patut*. For Minangkabau community, a good decision is a decision that is agreed upon through a process of deliberation and consensus, as the customary proverb says, *ka hilia saranguah dayuang, ka mudiak sarentak galah*. It means that someone will be responsible for implementing a decision if they are involved in the decision-making process. Also in accordance with the research results of Stark [36], Fatimah [31], that the combination of customary values based on natural philosophy with Islamic values makes the Minangkabau people tend to be egalitarian in their daily life.

Conclusions

The findings of this study can be concluded that the egalitarian and democratic culture that has become a tradition in the leadership of the Nagari government in Minangkabau does not necessarily make democratic leadership style the dominant leadership practice in schools. Although SMA Negeri in Padang are in an egalitarian environment of the Minangkabau matrilineal society, it turns out that the leadership practice of the principal is not in harmony with the culture of the community. The principal is more dominant in practicing the learning leadership style as professional leadership with a modern management approach in realizing an effective learning process. This finding is also in accordance with the management standards of the Ministry of Education and Culture, which direct schools to implement learning leadership. The implementation stage of this leadership practice is also evidenced by the significant and significant influence value provided by learning

leadership of 64.4% compared to transformational leadership styles and democratic leadership styles. In addition, the Intellectual Stimulation dimension of transformational leadership has no effect at all, this illustrates that the principal has not maximally encouraged teachers to be more creative, innovative in using various teaching strategies, and is less enthusiastic about listening to teachers' ideas regarding efforts to improve student achievement, and also not maximally encouraging teachers to solve student problems related to learning. While the dimensions of learning supervision and the dimensions of teacher performance appraisal of learning leadership simultaneously affect effective learning, the other two dimensions have no effect. With regard to the democratic leadership style, the process of making decisions by involving school members is a major dimension that has a meaningful and significant influence on effective learning.

Data (and Software) Availability

This study is a collaborative study of 3 lecturers from 3 different universities, therefore the research team stores data well to be used or accessed by everyone concerned.

The research data storage entitled: "The Leadership of School Principals in Egalitarian Matrilineal Society of Minangkabau" the link
<https://figshare.com/s/8a8e0bea499147f10e97>

This project contains the following basic data:

Data file 1. (Research data on aspects of transformational leadership, learning leadership and leadership democracy)

DOI: 10.6084/m9.figshare.16811314

Author contributions

The first author has more contributions in completing this research, he has proven the results of work ranging from data collection, data analysis to even data verification.

The second author, contributes in establishing the methods to be used, analyzing the data as well as conclusions.

The third author's contribution was to translate and improve the grammar of the language.

Competing interests

Research and publication of articles is conducted for the dissemination of science-related information based on scientific studies. Therefore, the research team has no conflict of interest in completing this project.

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The Leadership of School Principals in Egalitarian Matrilineal Society of Minangkabau

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Abstract- The purpose of this research was to examine the influence of egalitarian cultural factors and a more dominant leadership style in principal leadership practices. The research sample was determined based on urban and inner-city zones with a total of 134 samples consisting of 8 school principals, 32 deputy principals, and 94 teachers. Stratified random utilized a survey design with quantitative methods, in which data were collected using a questionnaire as an instrument. Data were analyzed by utilizing SPSS 2.0 to calculate mean, percentage, standard deviation, Pearson correlation, and Stepwise multiple regression analysis. The results showed that learning leadership was more dominant and had the highest influence compared to the other two leadership styles. Four dimensions of transformational leadership influence simultaneously, the dominant influence is given by the Idealized Influence dimension. Two dimensions of learning leadership affect effective learning. The greatest influence is provided by the dimension of learning supervision. Four of the five indicators of Minangkabau cultural values have a significant effect on the leadership of the principals.

Keywords: Culture, effective learning, leadership, matrilineal society

Introduction

As emphasized in the fourth paragraph of the preamble to the 1945 Constitution; one of the goals of the formation of the Republic of Indonesia is to educate the Indonesian people. To realize this conceptual goal, the government must build a good education system so that schools at all levels of education, from elementary school to university level, have good quality. A high quality school is determined by many factors, e.g., resources and culture in each region. Many researchers in the country agree that the effective learning process is the main indicator of a high quality school. Meanwhile, the effective learning process can be addressed by effective and successful principal leadership [1]-[2]-[3]-[4]-[5]. There was a direct relationship between school culture and principal leadership and teacher performance in effective learning[6]. This opinion is supported by Leithwood, K. A., & Reihl stating that there may be some schools with a culture and school environment that are not conducive here and there which are led by a good and effective principal but there has never been any research result that says the realization of an effective school is the result of a person with bad, ineffective leadership [7].

The study of principal leadership is no longer limited to the influence of principal leadership on effective schools but has specifically evolved into which leadership style is the most effective. Classically, the study of principal leadership, which was initially in the form of a democratic leadership style and delegation leadership style as one of the dimensions of situational leadership by Moradi Korejan & Shahbazi [8], has developed into a transformational leadership style initiated by Armugam et al. [9]-[10] and learning leadership styles by Franco & Almeida [11]; Hughes & Zachariah [12]. Various research results show that the overall leadership style has a significant influence on the effective learning process in the classroom [13]-[14]-[15].

The application of the principal's leadership style must be adapted to the conditions of the community. Different leadership styles can be applied to societies with different cultures. In schools with a democratic leadership style, the principal always tries to prioritize cooperation and teamwork in an effort to achieve goals. The principal can also receive suggestions, opinions and even criticism from his subordinates. Subordinates must be actively involved in the decision-making process[16]. This style has been shown to have a significant effect on effective schooling [17]. Likewise, theoretically, participatory leadership belongs to Blanchard Situational Style dimension with high support and low direction to the subordinates. The characteristic of participatory leadership is that the leader performs low-directed task behavior and high support. At this stage the leader listens more, provides support and acts as an easy way to make decisions.

In transformational leadership, in contrast, the principal acts as: a leader who creates a motivational atmosphere based on commitment and emotional identity to their vision, philosophy, and style in their subordinates; a leader who is passionate about communicating the future of an idealistic organization to foster team spirit, not just individual passion; a leader who is able to shape employees to solve old problems with their innovations; and a leader always pays attention to, treats, trains and advises his employees individually [18]-[19]-[20].

Recently, there have been many researches on leadership that focus more on the implementation of effective learning rather than leadership managerial [21]. The study is no longer focused on the managerial abilities of school principals but is more focused on the actions taken to create a productive and satisfying work environment for students which can ultimately lead to effective learning [22]. Research conducted by Eyal & Roth on effective principal leadership explains that there has been a shift in the principal's function from being managerial to learning leadership [23]. This means that effective schools can only be realized by principals who can understand the role played in the learning program in their schools. In addition to understanding, school principals must also be able to implicate their responsibilities towards the overall academic achievement of their students.

Lunenburg said that in many studies on principal leadership related to learning in various countries [24], principals who are skilled in leading learning can motivate teachers and students in implementing the learning process. According to Ross & Gray [25]; Linton [26]; Valentine & Prater [21], Witziers et al. [21], principal learning leadership is the most effective leadership model for improving student achievement. The effect size of learning leadership is three times greater than that of transformational leadership. This view is reinforced by Hallinger & Heck [27] which states that a review of 40 research results on the influence of principal leadership shows that there is a significant influence between the leadership of a principal and student achievement through the formation of teacher attitudes and behavior in achieving student academic achievement. More explicitly, the results of this review also state that efforts to improve student achievement are carried out indirectly through improving teacher performance.

The Ministry of National Education with nine National Education Standards specifically on Management Standards also provides direction for school principals to implement learning leadership in schools. Through the education and training of school principals, the ministry's policy of education as outlined in the "School Management and Leadership" published by the Education Personnel Development Center, Ministry of Education and Culture emphasizes that effective learning leadership is applied to create a school climate that is able to encourage quality improvement. Internal management of the school so as to enable the implementation of a learning process that will stimulate students to achieve good learning achievement. Ahumada et al also states that learning leadership is seen to be effectively involved in curricular and learning problems which as a whole affect student achievement [28].

However, in the last five years, educational autonomy has authorized regional heads to appoint and dismiss school principals subjectively. This brings new problems such as the existence of effective school principals who do not succeed in bringing their schools to become effective schools because of differences in backgrounds with the culture in today's schools which they do not understand well. The facts show that Indonesia as a multicultural country has a variety of different cultures for each ethnicity. This condition affects the leadership practice of school principals in realizing effective schools. In Indonesia, the practice of principal leadership which is emphasized in management standards leads to learning leadership as a model for professional school principal leadership because this model provides a greater effect size in creating effective schools compared to other school principal leadership styles. However, school and community culture are social systems that are interrelated with each other, each of which influences each other. Parsons states that within the framework of an open social system, school organization is structurally a component of a larger social system [29]. Based on this theory, the values of local wisdom that belong to each ethnicity are a factor that influences the leadership practice of school principals.

In addition, the management and leadership practices of school principals in West Sumatra, especially in Padang, from the social system theory review, are always related to the cultural values of the Mainangkabau people. According to Tono et al., [30], Minangkabau culture as an integral part of Indonesia is known for its unique culture, adhering to a matrilineal system with a lineage based on a maternal line that is different from many cultures in Indonesia that adhere to the patrilineal system. The Minangkabau people uphold customs based on the view of life "*alam takambang jadi guru* - Learning from nature"[31], *adat basandi syarak, syarak basandi Kitabullah*, and natural philosophy [32]. The combination of customary values based on natural philosophy with Islamic values makes the Minangkabau people tend to be egalitarian in everyday life. The formation of an egalitarian character for Minangkabau men starts from the pattern of life in the surau, where Minangkabau

children and adolescents learn the Koran [33]. This kind of pattern makes Minangkabau youth have an attitude and are free to express their opinions [34]. For the Minangkabau people, a leader takes only one step and is exalted simultaneously. This is what makes the Minangkabau people respond differently to education compared to most other feudal societies in Indonesia.

Although the Indonesianization of West Sumatra which is identical to Minangkabau has been in progress since West Sumatra became part of the Republic of Indonesia, the matrilineal system and egalitarian cultural values are constant cultural values in Minangkabau which are thought to have influenced the implementation of various leadership styles in various sectors both in government and in the sector education. Minangkabau matrilineal society with a nagari government system, a kind of small republic during the Greek era, upholds values [35]. The highest decisions for the Minangkabau people are those made through deliberation and consensus through the density of adat nagari. As the customary proverb of "*rajo alim rajo disambah, rajo lalim rajo di sanggah* - Follow the good king and criticize the bad one." For the Minangkabau, decisions are tiered through: *kemenakan ber-Raja kemamak, mamak ber-Raja ke penghulu, penghulu ber-Raja ke mufakat, mufakat ber-Raja kepada kebenaran, benar menurut alur dan patut* (nephews follow their mamak, mamaks follow the leader, leaders follow the consensus, and consensus follows rules and truth) [36]. In Minangkabau, a good decision is a decision that is agreed upon through a process of deliberation and consensus, as the customary saying goes, "*ka hilia saranguah dayuang, ka mudiak sarentak galah* - going downstream in a row of paddles, going upstream in a row of stick." This means that someone will be responsible for implementing a decision if they are involved in the decision-making process. This study examines egalitarian cultural factors as factors that influence the leadership style of school principals, and also examines which leadership style is more dominant in principal leadership practices. As a society that has inherited an egalitarian culture, of course the basic assumption that supports it is that leadership with a democratic and participatory style is a leadership style that is in accordance with the culture of the Minangkabau community. However, a management approach with binding national regulations will certainly influence local cultural interventions in the leadership practice of school principals. As there is no specific research on the leadership based on local culture, the current study investigates the dominant cultural factors and principal leadership practices in the Minangkabau matrilineal society that uphold egalitarian values. To achieve the aims and objectives of this study to describe the implementation stage of each principal leadership practice, the practice of the dominant leadership style of the principal, and leadership style is suitable for schools in an egalitarian society.

Methods

This study applies a quantitative approach to measuring cultural factors and leadership practices of school principals in Padang. The study population area is SMA Negeri in Padang with the majority of the Minangkabau ethnicity who are matrilineal and egalitarian. In Padang there are 16 State Senior High Schools (SMA Negeri). Then the research sample was determined based on the city zone and the suburban zone with details of four schools representing the city and four schools representing the suburbs with the characteristics of the Minangkabau ethnic community. The research data were collected using a questionnaire as an instrument, and analyzed using SPSS ver. 20. To calculate the minimum score, standard deviation, correlation and regression analysis, the Stepwise method was applied.

This conceptual framework explains the relationship and influence of five indicators of egalitarian cultural values that characterize Minangkabau society on the three leadership styles of school principals (transformational style, instructional style, and democratic style). Next, it also explains which leadership style is more dominant in the daily practice of principal leadership in realizing an effective learning process. Conceptually, schools that are in the Minangkabau cultural environment are certainly more dominant in using democratic leadership styles compared to other leadership styles. Minangkabau society with a matrilineal system adheres to the notion of freedom of thought and the decision process is made through deliberation and consensus not through decrees of the king's decree in most other communities in Indonesia. Therefore, this conceptual framework is a guide to see to what extent these egalitarian cultural values influence the leadership of school principals who are oriented towards the concept of professional leadership and modern management based on the rules and regulations established by the government on the basis of the nation-state.

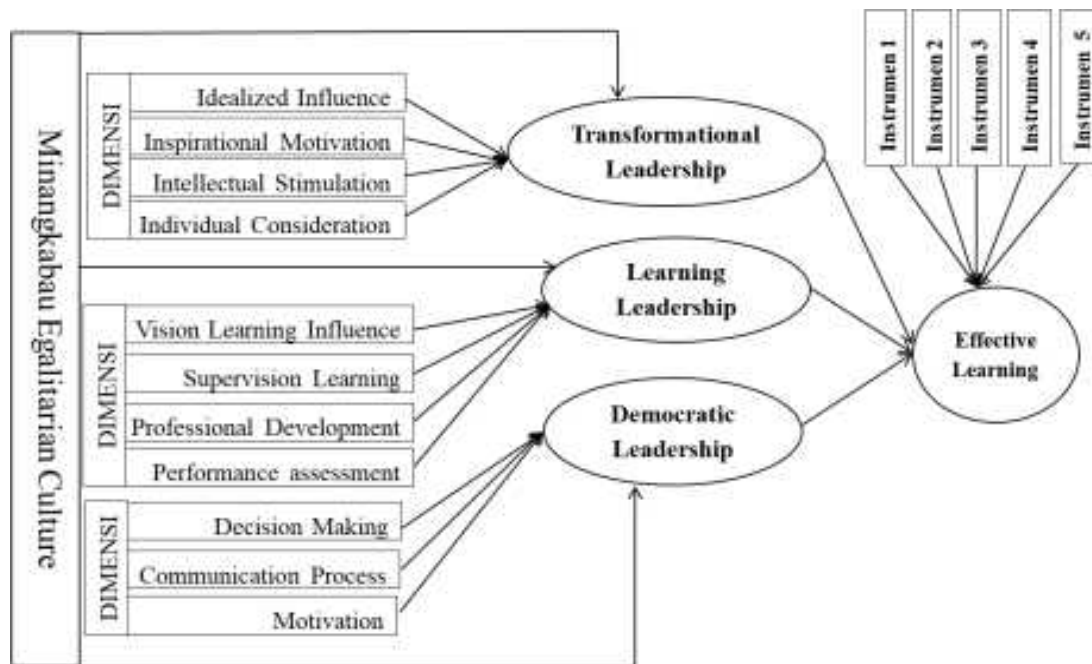


Figure 1. Conceptual Framework

Results

1. Validity and Reliability Test

The results of the overall instrument item analysis test from each construct using Cronbach Alpha obtained results with the item correlation value with a total score (r) of > 0.30 , meaning that the estimated value of all instruments is valid or has high validity and the Alpha coefficient value > 0.70 indicates These instrument items are reliable or have reliability in measuring the same thing (Mohamad et al., 2015; Creswell, 2003). In more detail, it can be seen that the estimation of the reliability and validity of the instruments of each construct is as follows: First, the results of the analysis of the transformational leadership construct of the principal with 17 instrument items obtained a range of item correlation values with a total score (r) > 0.30 , namely between 0.258 - 0.689 with The Cronbach Alpha coefficient is .897. Second, the results of the analysis for the construct of the principal's learning leadership with 20 instrument items, 2 items for the Learning Vision dimension, obtained a range of item correlation values with a total score (r) > 0.30 , namely between 0.265-0.637 with a Cronbach Alpha coefficient of 0.881; Third, the results of the analysis for the construct of the principal's democratic leadership of 15 instrument items obtained a range of item correlation values with a total score (r) > 0.30 , namely between 0.291-0.676 with a Cronbach Alpha coefficient of 0.881. Fourth, the results of the analysis for the cultural values of the Minangkabau people were 8 items with 2 items and 2 items were obtained from the correlation value range of items with a total score (r) > 0.30 , namely between 0.479 - 0.798 with a Cronbach Alpha coefficient of 0.799. Fifth, the results of the analysis for effective learning were 10 instruments, 2 items failed, and the item correlation value range was obtained with a total score (r) > 0.30 , namely between 0.271 - 0.494 with a Cronbach Alpha coefficient of 0.721.

2. Factor Analysis Confirmation Test

Then the results of the validity and reliability tests with Cronbach Alpha were analyzed again by Confirmatory Factor Analysis (CFA). The results of the CFA test have dropped 1 item for the dimension of Teacher Professional Development from learning leadership, 2 items for the dimension of the Decision Making Process of democratic leadership, 1 item for the Minangkabau Culture construct, and 3 items for the Effective Learning construct. Analysis with Confirmatory Factor Analysis (CFA) aims to measure the extent to which indicators can explain the constructs of transformational leadership, learning leadership, and democratic/participatory leadership as well as Minangkabau egalitarian cultural constructs and effective learning constructs. The analysis results obtained KMO value 0.05 and Anti Image Correlation value for each instrument item of each construct with a loading factor of > 0.05 . In detail, the results of the analysis can be seen in Table 1 below

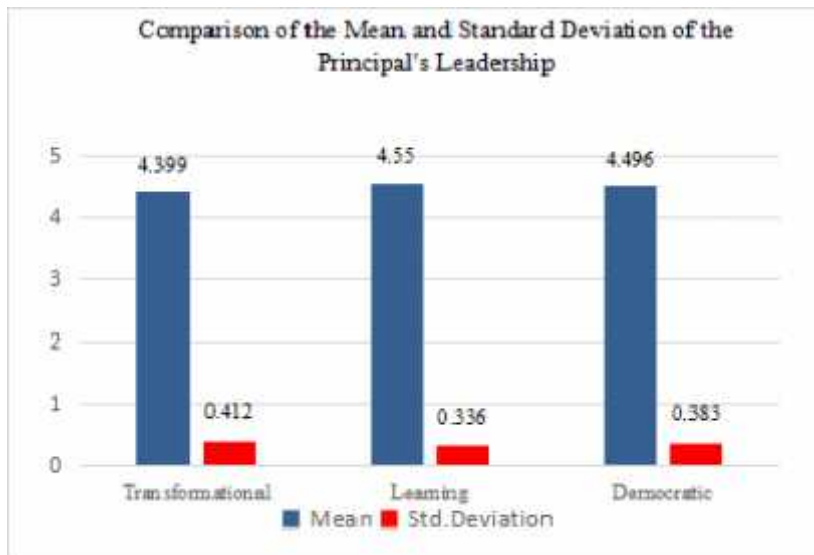
Table 1: Results of the Confirmatory Factor Analysis (CFA) analysis

Construct	Number of indicators	Loading Factor ➤ 0.50	Compulsive %
Transformational leadership			
1. Idealized Influence	4	0.759-0.832	60.948 %
2. Inspirational Motivation	5	0.667-0.814	55.203%
3. Intellectual Stimulation	4	0.674-0.799	53.626%
4. Individual Consideration	4	0.565-0.822	49.898%
Learning leadership			
1. Vision Learning	4	0.490-0.851	52.814%
2. Supervision Learning	4	0.675-0.786	54.384%
3. Professional development	4	0.678-0.795	56.641%
4. Performance assessment	5	0.589-0.889	60.906%
Democratic leadership			
1. Decision making	5	0.694-0.792	54.730%
2. Communication process	4	0.717-0.790	56.879%
3. Motivation	4	0.625-0.849	53.965%
Minangkabau egalitarian culture	5	0.708-0.894	59.532%
Effective Learning	5	0.619-0.788	49.620%

The results of the Confirmatory Factor Analysis (CFA) analysis such as table 1 above can be explained that the Compulsive % value from indicator to dimension and from indicator to construct being above 50% is good enough to measure the construct, meaning that the indicators conceptualized are unidimensional valid as an indicator measuring construct. For example, indicators from the Idealized Influence dimension are valid for measuring constructs of 60,948%, while the remaining 39.052% are determined by other indicators, and so on.

3.Principal Leadership Implementation Stage

Table 2 shows the acquisition of the mean score of the three principal leadership practices at a very high stage. However, from the three leadership practices, the mean score of learning leadership (mean= 4.550) is in the highest position exceeding (0.151) compared to transformational leadership and exceeding (0.054) compared to democratic leadership. The results of this analysis illustrate that learning leadership is the dominant leadership practice carried out by the principal of SMA Negeri Kota Padang, as shown in Graphic 1 below.



4. Significant predictors of the principal's leadership style on effective learning

H₀₁ : There is no positive and significant effect of each principal's leadership style (transformational, learning, and democratic) on effective learning.

The results of multiple linear regression analysis using the Stepwise method show that the principal's leadership style simultaneously has a positive and significant impact on the effective learning process in SMA Negeri in Padang with the results as shown in tables 2 and 3 below:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.157	1	14.157	238.836	0.000 ^b
	Residual	7.824	132	0.059		
	Total	21.981	133			
2	Regression	16.057	2	8.029	177.556	0.000 ^c
	Residual	5.924	131	0.045		
	Total	21.981	133			
3	Regression	16.673	3	5.558	136.118	0.000 ^d
	Residual	5.308	130	0.041		
	Total	21.981	133			

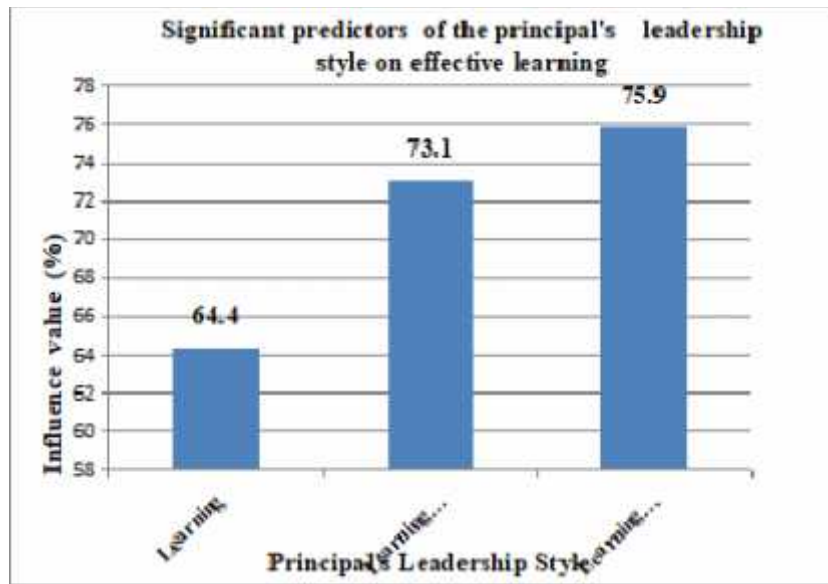
a. Dependent Variable: Effective Learning

Table 3: Multiple regression (Stepwise) for the dependent variable principal leadership (Transformational, Learning, and Democratic) on effective learning

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.037	0.287		-0.128	0.899
	Learning	0.998	0.065	0.803	15.454	0.000
2	(Constant)	-0.690	0.270		-2.552	0.012
	Learning	0.599	0.083	0.482	7.179	0.000
	Transformational	0.542	0.084	0.435	6.483	0.000
3	(Constant)	-0.905	0.263		-3.446	0.001
	Learning	0.498	0.083	0.400	5.965	0.000
	Transformational	0.427	0.085	0.342	5.027	0.000
	Democratic	0.265	0.068	0.233	3.883	0.000

a. Dependent Variable: Effective Learning

From table 2 above, it is obtained that the value of $F_{\text{count}} (238,836) > F_{\text{table}} (3.91)$, with a significant value smaller than the probability value of 0.05 or the value of $\text{sig} = 0.000 < 0.05$, meaning that there is an effect of learning leadership on effective learning. The value of F_{count} for the combination of learning leadership and transformation leadership is $F_{\text{count}} (177.556) > F_{\text{table}} (3.06)$ and the value of sig. smaller than the probability value 0.05 or $\text{sig} = 0.000 < 0.05$, it means that there is a positive and significant influence simultaneously learning leadership and transformational leadership on effective learning. The value of F_{count} for the combination of learning leadership, transformational leadership, and democratic leadership is $F_{\text{count}} (136,118) > F_{\text{table}} (2.67)$ and $\text{sig} = 0.000 < 0.05$, meaning that there is a positive and significant influence simultaneously learning leadership, transformational leadership, and democratic leadership on effective learning. The results of this analysis can be concluded that the H_0 hypothesis is rejected. The effect value given by the three independent variables either partially or simultaneously is shown in Graphic 2 below.



3. **Significant predictors of the dimensions principal's leadership style (transformational, learning, and democracy) on effective learning**

The influence of the dimensions of transformational leadership, learning leadership, democratic leadership on effective learning is expressed in the form of a hypothesis:

H₀₂ : There is no positive and significant influence of the dimensions of transformational leadership of principals on effective learning.

H₀₃ : There is no contribution of learning leadership dimensions of school principals to effective learning in SMA Negeri in Padang.

H₀₄ : There is no contribution of the democratic leadership dimensions of school principals to effective learning in SMA Negeri in Padang.

The significant influence of the dimensions of transformational leadership on effective learning at SMA Negeri Padang is shown in tables 4 and 5 below:

Table 4: ANOVA Variant independent variable on dependent variable

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.476	1	10.476	120.193	0.000 ^b
	Residual	11.505	132	0.087		
	Total	21.981	133			
2	Regression	13.502	2	6.751	104.312	0.000 ^c
	Residual	8.478	131	0.065		
	Total	21.981	133			
3	Regression	13.977	3	4.659	75.673	0.000 ^d
	Residual	8.004	130	0.062		
	Total	21.981	133			

a. Dependent Variable: Effective Learning

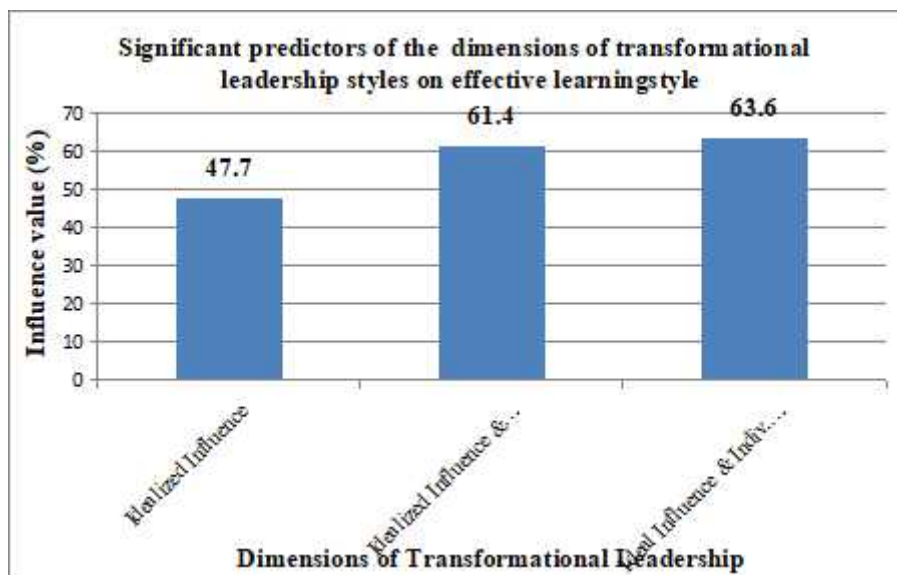
Table 5 Multiple regression (Stepwise) for the independent variable dimensions of transformational leadership on effective learning

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.419	0.272		5.219	0.000
	<i>Idealized Influence</i>	0.674	0.061	0.690	10.963	0.000
2	(Constant)	0.409	0.277		1.475	0.143
	<i>Idealized Influence</i>	0.494	0.059	0.506	8.352	0.000
	<i>Individual Consideration</i>	0.405	0.059	0.414	6.838	0.000
3	(Constant)	0.128	0.289		0.444	0.658
	<i>Idealized Influence</i>	0.369	0.073	0.378	5.050	0.000

<i>Individual Consideration</i>	0.351	0.061	0.359	5.753	0.000
<i>Inspirational Motivation</i>	0.235	0.085	0.217	2.777	0.006

a. Dependent Variable : Effective Learning

The results of the study in table 4, the analysis of variance shows that the value of F_{count} for the Idealized Influence dimension is $F_{count} (120.193) > F_{table} (3.91)$, and $sig = 0.000 < 0.05$ and $R^2 = 0.477$, meaning that the Idealized Influence dimension affects effective learning. The value of F_{count} for the dimensions of Idealized Influence and Individual Consideration is $F_{count} (104.312) > F_{table} (3.056)$, and $sig = 0.000 < 0.05$ and $R^2 = 0.614$, meaning that the dimensions of Idealized Influence and Individual Consideration simultaneously affect effective learning. The value of F_{count} for the dimensions of Idealized Influence, Individual Consideration and Inspirational Motivation is $F_{count} (75.673) > F_{table} (2.67)$ and $sig = 0.000 < 0.05$ and $R^2 = 0.636$, meaning that simultaneously the dimensions of Idealized Influence, Individual Consideration and Inspirational Motivation have an effect on effective learning. These findings indicate that the dimensions of Idealized Influence affect the effective learning variable by 47.7%, the combination of Idealized Influence and Individual Consideration dimensions has an effect on effective learning by 61.4%, meaning that the Individual Consideration dimension of transformational leadership has an effect of 13.8%, while the combination of Idealized Influence dimensions, Individual Consideration and Inspirational Motivation have an effect on effective learning as much as 63.6%, meaning that the Inspirational Motivation dimension of transformational leadership accounts for 2.2%. Meanwhile, the Intellectual Stimulation dimension has absolutely no effect on the realization of effective learning in SMA Negeri in Padang. The overall effect value can be seen in Graphic 3 below.



Graphic 3 above explains that the idealized influence dimension of transformational leadership has the greatest influence as much as 47.7% compared to the other three dimensions. The indicators of the Idealized Influence dimension that have a lot of influence on effective learning are 1) the principal is my role model (role model) in carrying out learning tasks; 2) The principal instructed me in preparing effective learning planning and strategies; 3) The principal instilled my pride in joining him; 4) Principals get respect from teachers and school employees. This finding is consistent with Bass's research that transformational leadership is considered effective in any situation or culture [18].

The results of multiple analyses using the stepwise method to see the significant influence of the dimensions of learning leadership on effective learning in SMA Negeri in Padang are as shown in Table 6 and 7 below:

Table 6: ANOVA Variant variable independent to variable dependent

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.746	1	18.746	764.942	0.000 ^b
	Residual	3.235	132	0.025		
	Total	21.981	133			
2	Regression	19.052	2	9.526	426.043	0.000 ^c
	Residual	2.929	131	0.022		
	Total	21.981	133			

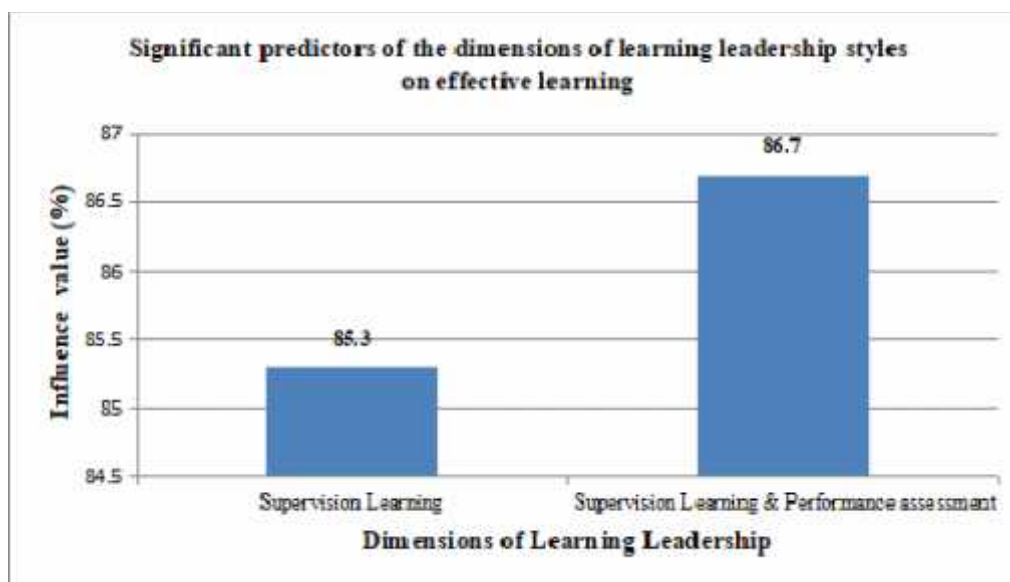
a. Dependent Variable : Effective Learning

Table 7: Multiple regression (Stepwise) for the independent variable dimensions of learning leadership on effective learning

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.577	0.138		4.164	0.000
	Supervision Learning	0.878	0.032	0.923	27.658	0.000
2	(Constant)	0.392	0.141		2.769	0.000
	Supervision Learning	0.799	0.037	0.841	21.564	0.000
	Performance assessment	0.121	0.033	0.144	3.698	0.000

a. Dependent Variable : Effective Learning

The results of the study in tables 6 and 7, the analysis of variance shows that for the dimension of supervision, the value of $F_{count} (764,942) > F_{table} (3.91)$ and $sig = 0.000 < 0.05$ and $R^2 = .0853$ is obtained and the F_{count} value for the combination of the dimensions of learning supervision and performance appraisal is obtained by the $F_{count} (426.043) > F_{table} (3.06)$, and $sig = 0.000 < 0.05$ and $R^2 = 0.867$. These findings indicate that the dimensions of learning supervision have an effect on the effective learning variable by 85.3%, the combination of the dimensions of learning supervision and teacher performance appraisal has an effect on effective learning by 86.7%, meaning that the dimensions of teacher performance appraisal of learning leadership affect 1.4%. The value of the influence of the learning leadership dimension is shown in Graphic 4 below.



From these findings it can be explained that from the four dimensions of learning leadership, it turns out that the dimensions of learning supervision of learning leadership have the greatest influence by 65.3%, the highest compared to the other three dimensions. The indicators of the dimension of learning supervision that have a lot of influence on effective learning are 1) the principal performs supervision on a scheduled basis; 2) The principal exercises strict control of the learning process in the classroom; 3) The principal is knowledgeable about learning and learning theory; 4) Knowledgeable principals distinguish between appropriate teacher learning and learning that is not in accordance with student learning outcomes to be achieved.

The significant influence of the dimensions of democratic leadership on effective learning in SMA Negeri Padang is shown in table 8 and 9 below:

Table 8: ANOVA Variant variable independent on variable dependent

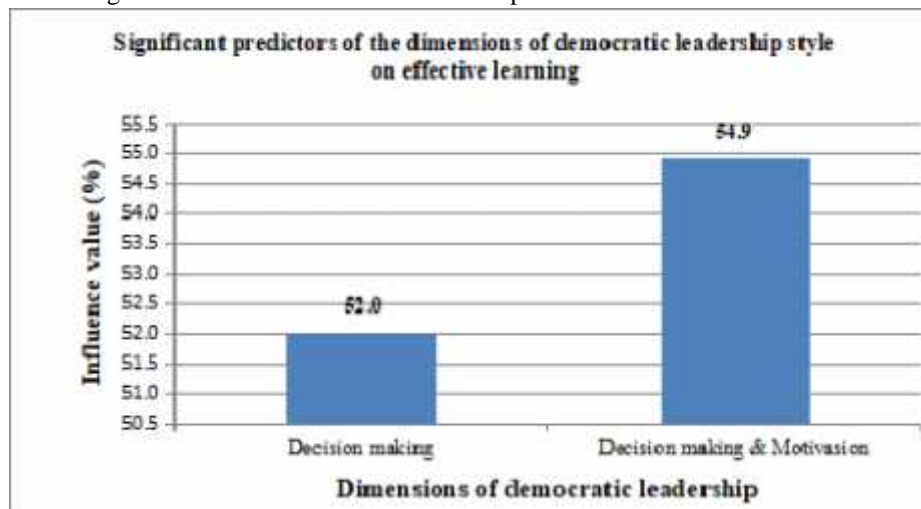
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.437	1	11.437	143.193	0.000 ^b
	Residual	10.543	132	0.080		
	Total	21.981	133			
2	Regression	12.072	2	6.036	79.803	0.000 ^c
	Residual	9.909	131	0.076		
	Total	21.981	133			

Table 9: Multiple regression (Stepwise) for the independent variable, the dimensions of democratic leadership on effective learning

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.400	0.251		5.578	0.000
	Decision making	0.676	0.057	0.721	11.966	0.000
2	(Constant)	0.930	0.293		3.175	0.000
	Decision making	0.526	0.076	0.561	6.957	0.000
	Motivation	0.250	0.086	0.234	2.897	0.004

a. Dependent Variable: Effective learning

The results of the study in tables 8 and 9, analysis of variance shows that the value of F_{count} for the dimensions of the decision-making process is $F_{count} (143,193) > F_{table} (3,91)$ and $sig = 0.000 < 0.05$ and $R^2 = 0.520$ and the value of F_{count} for the combination of dimensions to make decisions, motivation is $F_{count} (79,803) > F_{table} (3,06)$ and $sig = 0.000 < 0.05$ and $R^2 = 0.549$. These findings indicate that the dimensions of making decisions affect the effective learning variable by 52.0%, the combination of the dimensions of making decisions, motivation influences effective learning by 54.9%, meaning that the motivation dimension of leadership has an effect of 2.9%, while the communication dimension has absolutely no effect on its realization of effective learning in SMA Negeri in Padang. The effect value can be seen in Graphic 5 below.



From these findings, it can be explained that from the three dimensions of leadership, it turns out that the dimension of the decision-making process has the greatest influence as much as 52.0% compared to the other three dimensions. The indicators from the dimensions of the decision-making process that have a lot of influence on effective learning are: 1) The principal is willing to exchange opinions with school members in formulating important decisions regarding the vision and mission of the school; 2) The principal is someone who is willing to hear criticism, suggestions/opinions before decisions are made; 3) The principal appears as a way of facilitating the decision-making process; 4) The principal asked for many alternatives to the decision to be taken; 5) The principal is a persuader and a good listener, confident in solving various problems related to assignments.

4. Significant predictor indicators of Minangkabau egalitarian culture with leadership style

There are five indicators of cultural values which are a reflection of the egalitarian cultural values of the Minangkabau people inherited from generation to generation through the process of internalizing values so that they become cultural characteristics that distinguish Minangkabau people from other feudal societies. To see to what extent each indicator of these egalitarian cultural values affects the leadership practice of the principal of SMA Negeri in Padang, the following hypothesis is put forward:

H_05 : There is no positive and significant influence of the egalitarian culture of the Minangkabau community on transformational leadership, learning leadership, and democratic leadership of school principals.

The results of the analysis using the Stepwise method of multiple regression show that there are several indicators of the Minangkabau egalitarian culture that influence the principal's transformational leadership practice, is shown in tables 10 below:

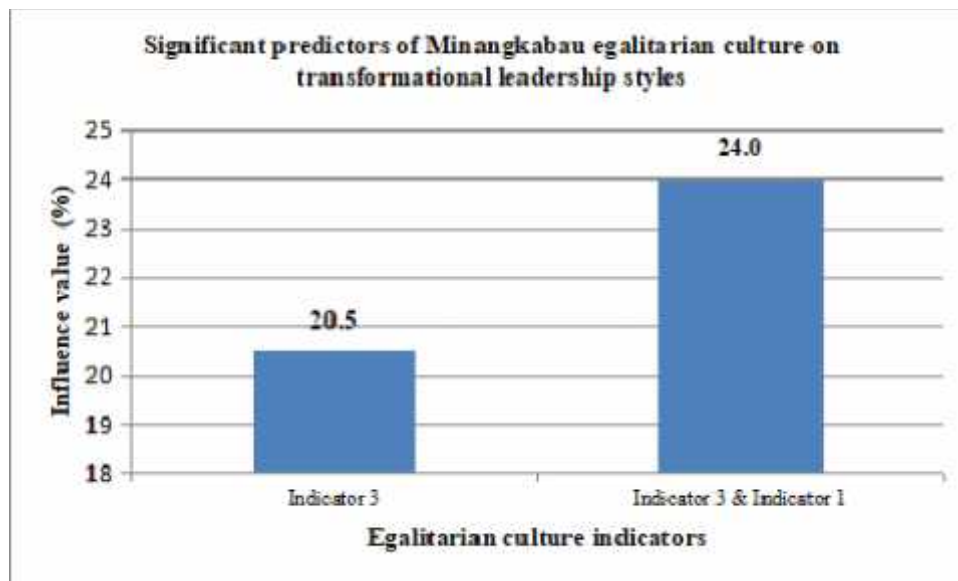
Table 10: Multiple regressions (Stepwise) for indicators of Minangkabau egalitarian culture that affect the transformational leadership practice of school principals

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.415	0.182		18.811	0.000
	Indicator3	0.246	0.042	0.453	5.838	0.000
2	(Constant)	3.026	0.239		12.677	0.000
	Indicator3	0.190	0.047	0.349	4.003	0.000
	Indicator1	0.139	0.057	0.214	2.449	0.016

a. Dependent Variable: Transformational leadership

The CFA test results show that there are five valid and reliable indicators of Minangkabau culture, namely indicators 1) I participate in supporting school policies and programs if they are established through a deliberation process involving school members; indicator 3) I will remain critical of school principals who are not democratic; indicator 5) I am only loyal to the principal who has an opinion and principle in enforcing school rules; 6) I support school principals who enforce the truth in accordance with school regulations; 7) I value principals who are close to subordinates, treating everyone equally.

After the multiple regression analysis of the Stepwise method was carried out, there were two indicators that had an effect on the transformational leadership of the principal: indicator 3) with a value of Beta contribution (0.453), $t_{count} (5.838) > t_{table} (1.654)$, sig. $000 < 0.05$ and $R^2 (0.205)$. These findings indicate that the critical attitude of school members towards school principals who act not democratically has an influence on the transformational leadership of the principal by 20.5%. The effect value given by the combination of indicator 3) and indicator 1) is Beta (0.214), $t_{count} (2.449) > t_{table} (1.654)$, sig. $016 < 0.05$ and $R^2 (0.240)$. These findings indicate that the value of the contribution given simultaneously by indicator 3 and indicator 1) is $R^2 (0.240)$ or 24%, while the remaining 76% is determined by other indicators. The influence value is shown in Graphic 6 below.



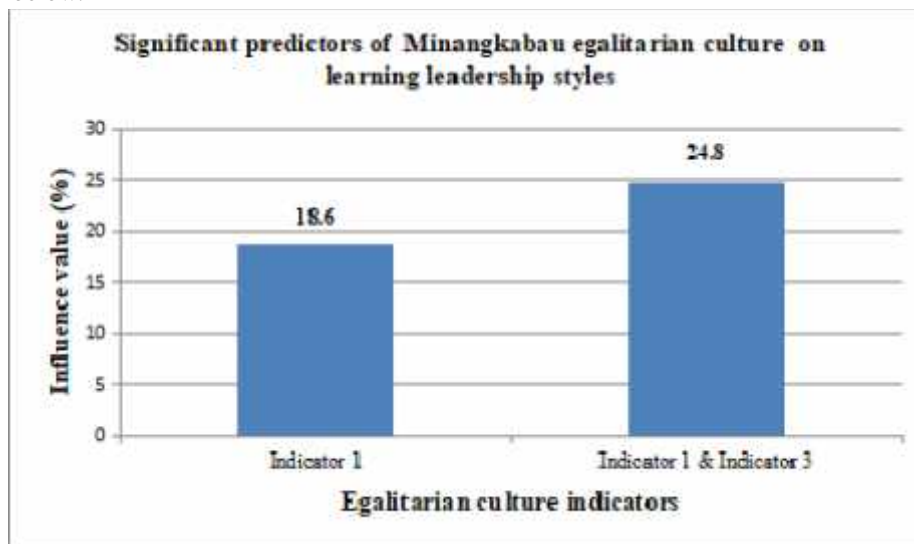
The indicators of the egalitarian Minangkabau cultural values that affect the learning leadership practice of principals in public high schools in Padang are shown in table 11 below:

Table 11: Multiple regressions (Stepwise) for indicators of egalitarian culture of the Minangkabau community that affect the learning leadership practice of principals

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.161	0.234		13.529	0.000
	Indicator 1	0.281	0.051	0.431	5.484	0.000
2	(Constant)	2.907	0.238		12.218	0.000
	Indicator 1	0.190	0.057	0.291	3.357	0.001

Indicator 3	0.156	0.047	0.287	3.308	0.001
a. Dependent Variable: Learning leadership					

Table 11 above shows that the Minangkabau cultural value that affects the principal's learning leadership is an indicator 1) I participate in supporting school policies and programs if they are laid out through a deliberation process involving school members with Beta values (0.431), $t_{count} (5.484) > t_{table} (1.654)$, $sig. 0.000 < 0.05$ and $R^2 (0.186)$. These findings indicate the value of the effect given is 18.6%. The effect value given by a combination of indicator 1) with indicator 3) I will remain critical of the principal who does not act is Beta (0.287), $t_{count} (3.308) > t_{table} (1.654)$, $sig. 0.000 < 0.05$ and $R^2 (.248)$ or the value of influence is 6.3%. The effect value is shown in Graphic 7 below.



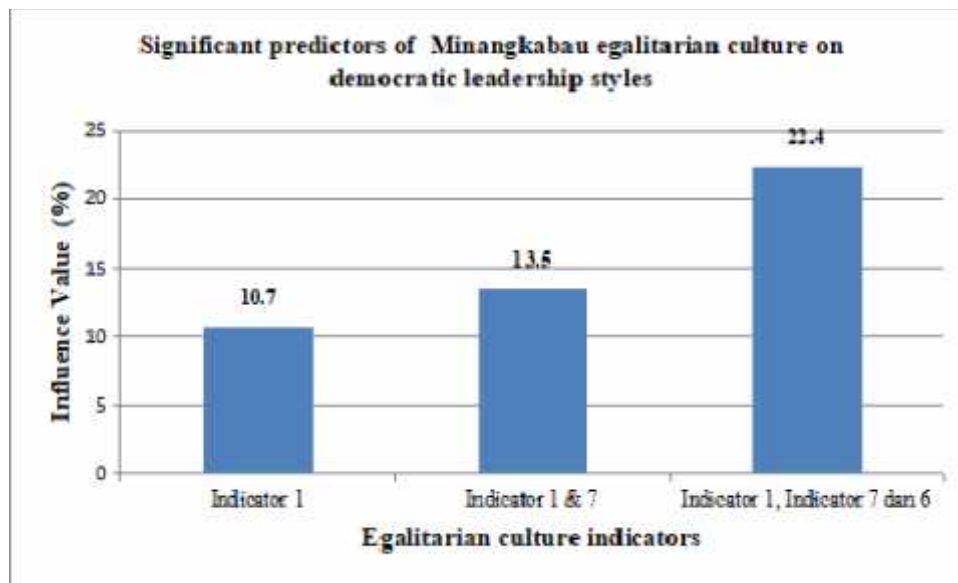
The influence of the Minangkabau egalitarian cultural indicators on the practice of democratic leadership of school principals in SMA Negeri in Padang is shown in table 12 below:

Table 12: Multiple regressions (Stepwise) for indicators of egalitarian culture of the Minangkabau community which influence the practice of principal democratic leadership

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.398	0.268		12.688	0.000
	Indicator 1	0.234	0.059	0.328	3.984	0.000
2	(Constant)	3.185	0.284		11.202	0.000
	Indicator 1	0.189	0.062	0.264	3.040	0.003
	Indicator 7	0.092	0.045	0.178	2.043	0.043
3	(Constant)	3.263	0.271		12.036	0.000
	Indicator 1	0.271	0.063	0.379	4.316	0.000
	Indicator 7	0.276	0.064	0.533	4.309	0.000
	Indicator 6	-0.279	0.072	-0.507	-3.862	0.000
a. Dependent Variable: Democratic leadership						

Table 12 above shows that the indicators of the egalitarian Minangkabau culture that have an impact on the democratic leadership of the school principal are indicators 1) Even though I have different opinions, I still participate in supporting school policies and programs if they are determined through a deliberation process involving school members; indicator 7) I value the principal who is close to subordinates, treating everyone equally; indicator 6) I support the principal who upholds the truth in accordance with school regulations. The value of the influence given by indicator 1) is Beta (0.328), $t_{count} (3.984) > t_{table} (1.654)$, $sig. 0.00 < 0.05$ and $R^2 (0.107)$. These findings indicate that indicator 1) has an influence on the democratic leadership of school principals by 10.7%. The combination of indicator 1) and indicator 7) affects the democratic leadership of principals with Beta values (0.178), $t_{count} (2.043) > t_{table} (1.654)$, $sig. 0.043 < 0.05$ and $R^2 (0.135)$. The value of the influence given by indicator 7) is 2.8%. The combination of indicator 1), indicator 7), and indicator 6) has an influence on the democratic leadership of principals with Beta values (-0.507), $t_{count} (-3.862) > t_{table} (1.654)$, $sig.$

000 < 0.05 and R2 (0.224). The effect value given by indicator 6) is 8.9%. The effect value can be seen in Graphic 8 below.



Discussion

From the findings above, it can be argued that even though SMA Negeri in Padang are in an egalitarian climate and culture of the Minangkabau people, it turns out that the democratic leadership style is not the main and dominant leadership practice in schools. The principal is more dominant in practicing the learning leadership style with a minimum score of 4,550 which is at a very high and highest stage among other leadership styles. This finding is not in accordance with the social systems theory by Hoppey and Mcleskey[37], and the views of Minangkabau Navis cultural observers [38] and research by Armiami et al[39]; Stark [36] that the school is a social unit with the culture of the community around the school that interacts and influences each other. However, the results of this study indicate that the stage of learning leadership is more dominant, this illustrates that the principal and teachers in SMA Negeri prefer learning leadership as professional leadership with a modern scientific management approach in realizing an effective learning process. This finding is also in accordance with the management standards of the Ministry of Education and Culture, which direct schools to implement learning leadership.

Of the three principal leadership styles (Transformational Leadership, Learning Leadership, and Democratic Leadership), the research findings showed that learning leadership styles had the highest influence by 64.4% compared to the other two leadership styles. This finding is in line with the results of research by Azwar et al. [35], principal learning leadership is the most effective leadership model to improve student achievement, the effect size of learning leadership is three times greater than transformational leadership. This view is also reinforced by Hallinger & Heck [27], that the results of a review of 40 research results on the influence of principal leadership show that there is a significant influence between the leadership of a principal and student achievement through the formation of teacher attitudes and behavior to achieve student academic achievement. More firmly, the results of this review state that efforts to improve student achievement are carried out indirectly through improving teacher performance by the principal with a learning leadership style.

Three of the four dimensions of transformational leadership are simultaneously influential. The dimensions of Idealized Influence, Individual Consideration, and Inspirational Motivation have an effect of 63.4%. The dominant influence is given by the Idealized Influence dimension of 47.7%. While the Intellectual Stimulation dimension has no effect at all, this illustrates that the principal has not maximally encouraged teachers to be more creative, innovative in using various teaching strategies, and is less enthusiastic about listening to ideas / ideas from teachers regarding efforts to improve student achievement, and has not maximally pushed teachers in solving student problems related to learning. These findings are generally in accordance with the theory of transformational leadership by Bass & Riggio [18]. Transformational leadership is a leadership style that engages followers. However, related to the dimensions of intellectual stimulation, the results are not in line with the views of Bass & Riggio [18].

Next, with regard to the four dimensions of learning leadership, these findings show that the combination of the dimensions of learning supervision and the dimensions of teacher performance appraisal has an effect on effective learning by 86.7%. The biggest influence is given by the learning supervision dimension of 85.3%, while the other two dimensions, namely the learning vision dimension and the continuous professional development dimension, have no effect at all. This illustrates the principal's leadership in the aspect of the learning vision and the efforts made for sustainable professional development have not been maximally carried out. These two dimensions do not show a significant effect on teacher performance in an effective learning process. This finding is not in line with the results of the research of Hallinger & Murphy [40], two dimensions do not have a significant effect, meaning that learning leadership in concept and theory is better understood as a leadership style that leads to the creation of a school climate that is able to encourage optimal learning processes that have not been maximally implemented in SMA Negeri in Padang.

The dimensions of making decisions from the democratic leadership style affect the effective learning variable by 52.0%, the combination of dimensions of making decisions, motivation influences effective learning by 54.9%, meaning that the motivation dimension of the influential leadership style is 2.9%. These findings indicate, for egalitarian societies, the process of making decisions by involving many school members is a dimension of democratic leadership that must be the main consideration for school principals in formulating various school programs in order to get strong support by school members.

From the findings above, it can be argued that there are four of the five indicators of Minangkabau cultural values that have a significant effect on the leadership of school principals, namely indicator 1) Even though I have different opinions, I still participate in supporting school policies and programs if they are determined through a deliberation process involving school members; Indicator 3) I remain critical of school principals who do not; indicator 6) I support the principal who enforces the truth in accordance with school regulations; indicator 7) I appreciate the principal who is close to subordinates, treating everyone equally. Meanwhile, indicator 5) I am only loyal to the principal who has an opinion and principle in upholding school rules, it does not have a significant and significant effect.

Two indicators have a simultaneous effect on transformational leadership and learning leadership, namely teacher responses shown by teachers' critical attitudes towards school principals who do not and only participate in supporting school policies and programs if determined through a deliberation process involving school members. Meanwhile, the indicators shown by the teacher's response that have a simultaneous effect on democratic leadership are still participating in supporting school policies and programs if they are determined through a deliberation process involving school members; respect the principal who is close to subordinates, treats everyone equally; and support school principals who enforce the truth in accordance with school regulations. This finding is in accordance with the viewpoint of Navis, a veteran of the Minangkabau culture who explains that the highest decision for the Minangkabau community is a decision made through deliberation and consensus through the density of Nagari customs. As the customary saying "*rajo alim rajo disambah, rajo lalim rajo disanggah*," for the Minangkabau, the decisions are tiered *kemenakan ber-Raja kemamak, mamak ber-Raja ke penghulu, penghulu ber-Raja ke mufakat, mufakat ber-Raja kepada kebenaran, benar menurut alur dan patut*. For Minangkabau community, a good decision is a decision that is agreed upon through a process of deliberation and consensus, as the customary proverb says, *ka hilia saranguah dayuang, ka mudiak sarentak galah*. It means that someone will be responsible for implementing a decision if they are involved in the decision-making process. Also in accordance with the research results of Stark [36], Fatimah [31], that the combination of customary values based on natural philosophy with Islamic values makes the Minangkabau people tend to be egalitarian in their daily life.

Conclusions

The findings of this study can be concluded that the egalitarian and democratic culture that has become a tradition in the leadership of the Nagari government in Minangkabau does not necessarily make democratic leadership style the dominant leadership practice in schools. Although SMA Negeri in Padang are in an egalitarian environment of the Minangkabau matrilineal society, it turns out that the leadership practice of the principal is not in harmony with the culture of the community. The principal is more dominant in practicing the learning leadership style as professional leadership with a modern management approach in realizing an effective learning process. This finding is also in accordance with the management standards of the Ministry of Education and Culture, which direct schools to implement learning leadership. The implementation stage of this leadership practice is also evidenced by the significant and significant influence value provided by learning leadership of 64.4% compared to transformational leadership styles and democratic leadership styles. In addition, the Intellectual Stimulation dimension of transformational leadership has no effect at all, this illustrates that the principal has not maximally encouraged teachers to be more creative, innovative in using various teaching

strategies, and is less enthusiastic about listening to teachers' ideas regarding efforts to improve student achievement, and also not maximally encouraging teachers to solve student problems related to learning. While the dimensions of learning supervision and the dimensions of teacher performance appraisal of learning leadership simultaneously affect effective learning, the other two dimensions have no effect. With regard to the democratic leadership style, the process of making decisions by involving school members is a major dimension that has a meaningful and significant influence on effective learning.

Data (and Software) Availability

This study is a collaborative study of 3 lecturers from 3 different universities, therefore the research team stores data well to be used or accessed by everyone concerned.

The research data storage entitled: "The Leadership of School Principals in Egalitarian Matrilineal Society of Minangkabau" the link

<https://figshare.com/s/8a8e0bea499147f10e97>

This project contains the following basic data:

Data file 1. (Research data on aspects of transformational leadership, learning leadership and leadership democracy)

DOI: 10.6084/m9.figshare.16811314

Author contributions

The first author has more contributions in completing this research, he has proven the results of work ranging from data collection, data analysis to even data verification.

The second author, contributes in establishing the methods to be used, analyzing the data as well as conclusions.

The third author's contribution was to translate and improve the grammar of the language.

Competing interests

Research and publication of articles is conducted for the dissemination of science-related information based on scientific studies. Therefore, the research team has no conflict of interest in completing this project.

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The Leadership of School Principals in Egalitarian Matrilineal Society of Minangkabau

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Abstract

The purpose of this research was to examine the influence of egalitarian cultural factors and a more dominant leadership style in principal leadership practices. The research sample was determined based on urban and inner-city zones with a total of 134 samples consisting of 8 school principals, 32 deputy principals, and 94 teachers. Stratified random utilized a survey design with quantitative methods, in which data were collected using a questionnaire as an instrument. Data were analyzed by utilizing SPSS 2.0 to calculate mean, percentage, standard deviation, Pearson correlation, and Stepwise multiple regression analysis. The results showed that learning leadership was more dominant and had the highest influence compared to the other two leadership styles. Four dimensions of transformational leadership influence simultaneously, the dominant influence is given by the Idealized Influence dimension. Two dimensions of learning leadership affect effective learning. The greatest influence is provided by the dimension of learning supervision. Four of the five indicators of Minangkabau cultural values have a significant effect on the leadership of the principals.

Keywords: Culture, effective learning, leadership, matrilineal society

Introduction

As emphasized in the fourth paragraph of the preamble to the 1945 Constitution; one of the goals of the formation of the Republic of Indonesia is to educate the Indonesian people. To realize this conceptual goal, the government must build a good education system so that schools at all levels of education, from elementary school to university level, have good quality. A high quality school is determined by many factors, e.g., resources and culture in each region. Many researchers in the country agree that the effective learning process is the main indicator of a high quality school. Meanwhile, the effective learning process can be addressed by effective and successful principal leadership [1]-[2]-[3]-[4]-[5]. There was a direct relationship between school culture and principal leadership and teacher performance in effective learning[6]. This opinion is supported by Leithwood, K. A., & Reihl stating that there may be some schools with a culture and school environment that are not conducive here and there which are led by a good and effective principal but there has never been any research result that says the realization of an effective school is the result of a person with bad, ineffective leadership [7].

The study of principal leadership is no longer limited to the influence of principal leadership on effective schools but has specifically evolved into which leadership style is the most effective. Classically, the study of principal leadership, which was initially in the form of a democratic leadership style and delegation leadership style as one of the dimensions of situational leadership by Moradi Korejan & Shahbazi [8], has developed into a transformational leadership style initiated by

Armugam et al. [9]-[10] and learning leadership styles by Franco & Almeida [11]; Hughes & Zachariah [12]. Various research results show that the overall leadership style has a significant influence on the effective learning process in the classroom [13]-[14]-[15].

The application of the principal's leadership style must be adapted to the conditions of the community. Different leadership styles can be applied to societies with different cultures. In schools with a democratic leadership style, the principal always tries to prioritize cooperation and teamwork in an effort to achieve goals. The principal can also receive suggestions, opinions and even criticism from his subordinates. Subordinates must be actively involved in the decision-making process[16]. This style has been shown to have a significant effect on effective schooling [17]. Likewise, theoretically, participatory leadership belongs to Blanchard Situational Style dimension with high support and low direction to the subordinates. The characteristic of participatory leadership is that the leader performs low-directed task behavior and high support. At this stage the leader listens more, provides support and acts as an easy way to make decisions.

In transformational leadership, in contrast, the principal acts as: a leader who creates a motivational atmosphere based on commitment and emotional identity to their vision, philosophy, and style in their subordinates; a leader who is passionate about communicating the future of an idealistic organization to foster team spirit, not just individual passion; a leader who is able to shape employees to solve old problems with their innovations; and a leader always pays attention to, treats, trains and advises his employees individually [18]-[19]-[20].

Recently, there have been many researches on leadership that focus more on the implementation of effective learning rather than leadership managerial [21]. The study is no longer focused on the managerial abilities of school principals but is more focused on the actions taken to create a productive and satisfying work environment for students which can ultimately lead to effective learning [22]. Research conducted by Eyal & Roth on effective principal leadership explains that there has been a shift in the principal's function from being managerial to learning leadership [23]. This means that effective schools can only be realized by principals who can understand the role played in the learning program in their schools. In addition to understanding, school principals must also be able to implicate their responsibilities towards the overall academic achievement of their students.

Lunenburg said that in many studies on principal leadership related to learning in various countries [24], principals who are skilled in leading learning can motivate teachers and students in implementing the learning process. According to Ross & Gray [25]; Linton [26]; Valentine & Prater [21], Witziers et al. [21], principal learning leadership is the most effective leadership model for improving student achievement. The effect size of learning leadership is three times greater than that of transformational leadership. This view is reinforced by Hallinger & Heck [27] which states that a review of 40 research results on the influence of principal leadership shows that there is a significant influence between the leadership of a principal and student achievement through the formation of teacher attitudes and behavior in achieving student academic achievement. More explicitly, the results of this review also state that efforts to improve student achievement are carried out indirectly through improving teacher performance.

The Ministry of National Education with nine National Education Standards specifically on Management Standards also provides direction for school principals to implement learning leadership in schools. Through the education and training of school principals, the ministry's policy of education as outlined in the "School Management and Leadership" published by the Education Personnel Development Center, Ministry of Education and Culture emphasizes that effective learning leadership is applied to create a school climate that is able to encourage quality improvement. Internal management of the school so as to enable the implementation of a learning process that will stimulate students to achieve good learning achievement. Ahumada et al also states that learning leadership is seen to be effectively involved in curricular and learning problems which as a whole affect student achievement [28].

However, in the last five years, educational autonomy has authorized regional heads to appoint and dismiss school principals subjectively. This brings new problems such as the existence of effective school principals who do not succeed in bringing their schools to become effective schools because of differences in backgrounds with the culture in today's schools which they do not understand well. The facts show that Indonesia as a multicultural country has a variety of different cultures for each ethnicity. This condition affects the leadership practice of school principals in realizing effective schools. In Indonesia, the practice of principal leadership which is emphasized in management standards leads to learning leadership as a model for professional school principal leadership because this model provides a greater effect size in creating effective schools compared to other school principal leadership styles. However, school and community culture are social systems that are interrelated with each other, each of which influences each other. Parsons states that within the framework of an open social system,

school organization is structurally a component of a larger social system [29]. Based on this theory, the values of local wisdom that belong to each ethnicity are a factor that influences the leadership practice of school principals.

In addition, the management and leadership practices of school principals in West Sumatra, especially in Padang, from the social system theory review, are always related to the cultural values of the Mainangkabau people. According to Tono et al., [30], Minangkabau culture as an integral part of Indonesia is known for its unique culture, adhering to a matrilineal system with a lineage based on a maternal line that is different from many cultures in Indonesia that adhere to the patrilineal system. The Minangkabau people uphold customs based on the view of life "alam takambang jadi guru - Learning from nature"[31], adat basandi syarak, syarak basandi Kitabullah, and natural philosophy [32]. The combination of customary values based on natural philosophy with Islamic values makes the Minangkabau people tend to be egalitarian in everyday life. The formation of an egalitarian character for Minangkabau men starts from the pattern of life in the surau, where Minangkabau children and adolescents learn the Koran [33]. This kind of pattern makes Minangkabau youth have an attitude and are free to express their opinions [34]. For the Minangkabau people, a leader takes only one step and is exalted simultaneously. This is what makes the Minangkabau people respond differently to education compared to most other feudal societies in Indonesia.

Although the Indonesianization of West Sumatra which is identical to Minangkabau has been in progress since West Sumatra became part of the Republic of Indonesia, the matrilineal system and egalitarian cultural values are constant cultural values in Minangkabau which are thought to have influenced the implementation of various leadership styles in various sectors both in government and in the sector education. Minangkabau matrilineal society with a nagari government system, a kind of small republic during the Greek era, upholds values [35]. The highest decisions for the Minangkabau people are those made through deliberation and consensus through the density of adat nagari. As the customary proverb of "rajo alim rajo disambah, rajo lalim rajo di sanggah-Follow the good king and criticize the bad one." For the Minangkabau, decisions are tiered through: kemenakan ber-Raja kemamak, mamak ber-Raja ke penghulu, penghulu ber-Raja ke mufakat, mufakat ber-Raja kepada kebenaran, benar menurut alur dan patut (nephews follow their mamak, mamaks follow the leader, leaders follow the consensus, and consensus follows rules and truth) [36]. In Minangkabau, a good decision is a decision that is agreed upon through a process of deliberation and consensus, as the customary saying goes, "ka hilia sarangukuah dayuang, ka mudiak sarentak galah - going downstream in a row of paddles, going upstream in a row of stick." This means that someone will be responsible for implementing a decision if they are involved in the decision-making process. This study examines egalitarian cultural factors as factors that influence the leadership style of school principals, and also examines which leadership style is more dominant in principal leadership practices. As a society that has inherited an egalitarian culture, of course the basic assumption that supports it is that leadership with a democratic and participatory style is a leadership style that is in accordance with the culture of the Minangkabau community. However, a management approach with binding national regulations will certainly influence local cultural interventions in the leadership practice of school principals.

As there is no specific research on the leadership based on local culture, the current study investigates the dominant cultural factors and principal leadership practices in the

Minangkabau matrilineal society that uphold egalitarian values. To achieve the aims and objectives of this study to describe the implementation stage of each principal leadership practice, the practice of the dominant leadership style of the principal, and leadership style is suitable for schools in an egalitarian society.

Methods

This study applies a quantitative approach to measuring cultural factors and leadership practices of school principals in Padang. The study population area is SMA Negeri in Padang with the majority of the Minangkabau ethnicity who are matrilineal and egalitarian. In Padang there are 16 State Senior High Schools (SMA Negeri). Then the research sample was determined based on the city zone and the suburban zone with details of four schools representing the city and four schools representing the suburbs with the characteristics of the Minangkabau ethnic community. The research data were collected using a questionnaire as an instrument, and analyzed using SPSS ver. 20. To calculate the minimum score, standard deviation, correlation and regression analysis,

the Stepwise method was applied.

This conceptual framework explains the relationship and influence of five indicators of egalitarian cultural values that characterize Minangkabau society on the three leadership styles of school principals (transformational style, instructional style, and democratic style). Next, it also explains which leadership style is more dominant in the daily practice of principal leadership in realizing an effective learning process. Conceptually, schools that are in the Minangkabau cultural environment are certainly more dominant in using democratic leadership styles compared to other leadership styles. Minangkabau society with a matrilineal system adheres to the notion of freedom of thought and the decision process is made through deliberation and consensus not through decrees of the king's decree in most other communities in Indonesia. Therefore, this conceptual framework is a guide to see to what extent these egalitarian cultural values influence the leadership of school principals who are oriented towards the concept of professional leadership and modern management based on the rules and regulations established by the government on the basis of the nation-state.

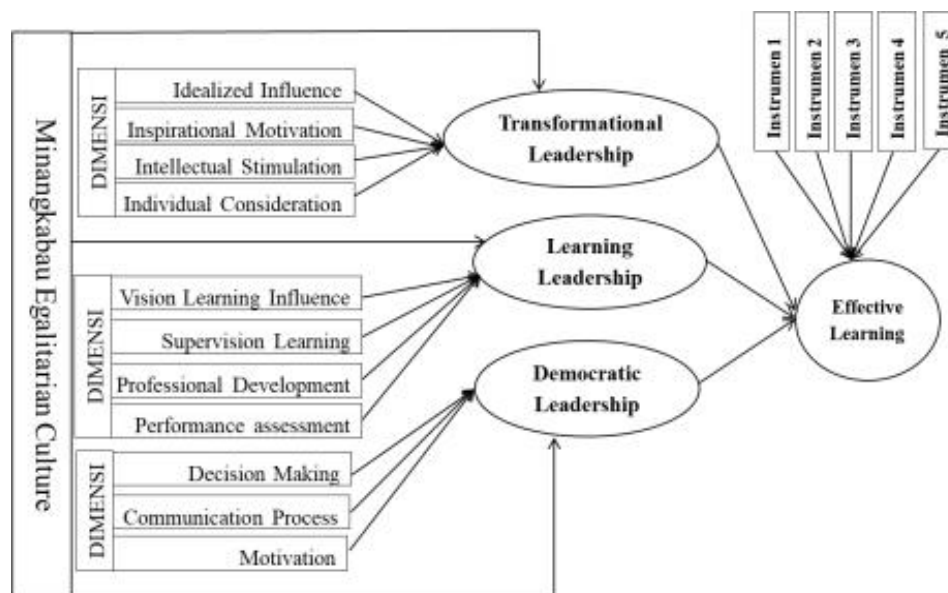


Figure 1: Conceptual Framework

Results

1. Validity and Reliability Test

The results of the overall instrument item analysis test from each construct using Cronbach Alpha obtained results with the item correlation value with a total score (r) of > 0.30 , meaning that the estimated value of all instruments is valid or has high validity and the Alpha coefficient value > 0.70 indicates These instrument items are reliable or have reliability in measuring the same thing (Mohamad et al., 2015; Creswell, 2003). In more detail, it can be seen that the estimation of the reliability and validity of the instruments of each construct is as follows: First, the results of the analysis of the transformational leadership construct of the principal with 17 instrument items obtained a range of item correlation values with a total score (r) > 0.30 , namely between 0.258 - 0.689 with The Cronbach Alpha coefficient is .897. Second, the results of the analysis for the construct of the principal's learning leadership with 20

instrument items, 2 items for the Learning Vision dimension, obtained a range of item correlation values with a total score (r) > 0.30 , namely between 0.265-0.637 with a Cronbach Alpha coefficient of 0.881; Third, the results of the analysis for the construct of the principal's democratic leadership of 15 instrument items obtained a range of item correlation values with a total score (r) > 0.30 , namely between 0.291-0.676 with a Cronbach Alpha coefficient of 0.881. Fourth, the results of the analysis for the cultural values of the Minangkabau people were 8 items with 2 items and 2 items were obtained from the correlation value range of items with a total score (r) > 0.30 , namely between 0.479 - 0.798 with a Cronbach Alpha coefficient of 0.799. Fifth, the results of the analysis for effective learning were 10 instruments, 2 items failed, and the item correlation value range was obtained with a total score (r) > 0.30 , namely between 0.271 - 0.494 with a Cronbach Alpha coefficient of 0.721.

2. Factor Analysis Confirmation Test

Then the results of the validity and reliability tests with Cronbach Alpha were analyzed again by Confirmatory Factor Analysis (CFA). The results of the CFA test have dropped 1 item for the dimension of Teacher Professional Development from learning leadership, 2 items for the dimension of the Decision Making Process of democratic leadership, 1 item for the Minangkabau Culture construct, and 3 items for the Effective Learning construct. Analysis with Confirmatory

Factor Analysis (CFA) aims to measure the extent to which indicators can explain the constructs of transformational leadership, learning leadership, and democratic/participatory leadership as well as Minangkabau egalitarian cultural constructs and effective learning constructs. The analysis results obtained KMO value ≥ 0.05 and Anti Image Correlation value for each instrument item of each construct with a loading factor of > 0.05 . In detail, the results of the analysis can be seen in Table 1 below

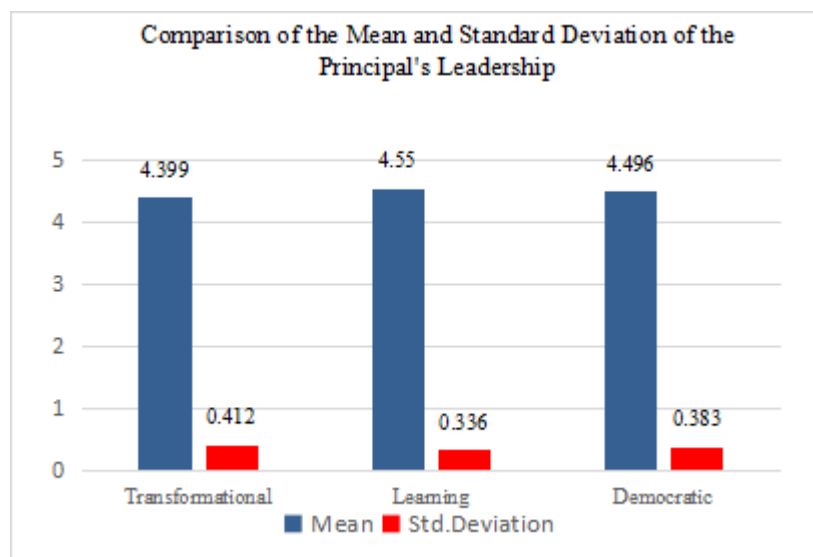
Construct	Number of indicators	Loading Factor > 0.50	Compulsive %
Transformational leadership			
1. Idealized Influence	4	0.759-0.832	60.948 %
2. Inspirational Motivation	5	0.667-0.814	55.203%
3. Intellectual Stimulation	4	0.674-0.799	53.626%
4. Individual Consideration	4	0.565-0.822	49.898%
Learning leadership			
1. Vision Learning	4	0.490-0.851	52.814%
2. Supervision Learning	4	0.675-0.786	54.384%
3. Professional development	4	0.678-0.795	56.641%
4. Performance assessment	5	0.589-0.889	60.906%
Democratic leadership			
1. Decision making	5	0.694-0.792	54.730%
2. Communication process	4	0.717-0.790	56.879%
3. Motivation	4	0.625-0.849	53.965%
Minangkabau egalitarian culture	5	0.708-0.894	59.532%
Effective Learning	5	0.619-0.788	49.620%

Table 1: Results of the Confirmatory Factor Analysis (CFA) analysis

The results of the Confirmatory Factor Analysis (CFA) analysis such as table 1 above can be explained that the Compulsive % value from indicator to dimension and from indicator to construct being above 50% is good enough to measure the construct, meaning that the indicators conceptualized are unidimensional valid as an indicator measuring construct. For example, indicators from the Idealized Influence dimension are valid for measuring constructs of 60,948%, while the remaining 39.052% are determined by other indicators, and so on.

3. Principal Leadership Implementation Stage

Table 2 shows the acquisition of the mean score of the three principal leadership practices at a very high stage. However, from the three leadership practices, the mean score of learning leadership (mean= 4.550) is in the highest position exceeding (0.151) compared to transformational leadership and exceeding (0.054) compared to democratic leadership. The results of this analysis illustrate that learning leadership is the dominant leadership practice carried out by the principal of SMA Negeri Kota Padang, as shown in Graphic 1 below.



4. Significant predictors of the principal's leadership style on effective learning

Ho1: There is no positive and significant effect of each principal's leadership style (transformational, learning, and democratic) on effective learning.

The results of multiple linear regression analysis using the Stepwise method show that the principal's leadership style simultaneously has a positive and significant impact on the effective learning process in SMA Negeri in Padang with the results as shown in tables 2 and 3 below:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.157	1	14.157	238.836	0.000b
	Residual	7.824	132	0.059		
	Total	21.981	133			
2	Regression	16.057	2	8.029	177.556	0.000c
	Residual	5.924	131	0.045		
	Total	21.981	133			
3	Regression	16.673	3	5.558	136.118	0.000d
	Residual	5.308	130	0.041		
	Total	21.981	133			

a. Dependent Variable: Effective Learning

Table 2: ANOVA^a Variant independent variable on dependent variable

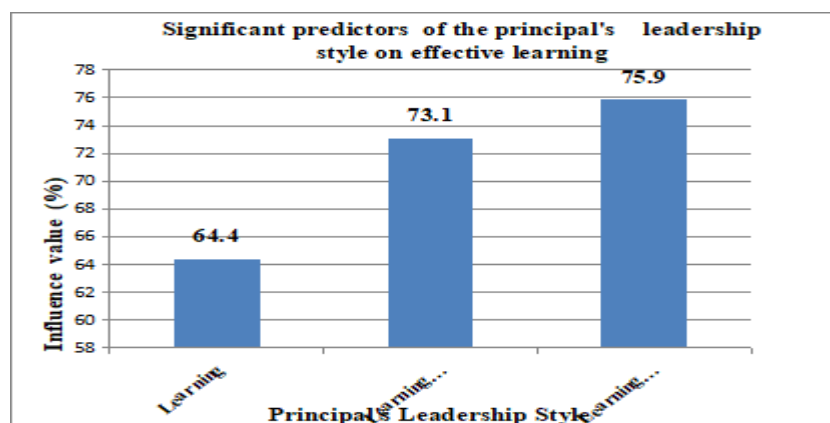
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.037	0.287		-0.128	0.899
	Learning	0.998	0.065	0.803	15.454	0.000
2	(Constant)	-0.690	0.270		-2.552	0.012
	Learning	0.599	0.083	0.482	7.179	0.000
	Transformational	0.542	0.084	0.435	6.483	0.000
3	(Constant)	-0.905	0.263		-3.446	0.001
	Learning	0.498	0.083	0.400	5.965	0.000
	Transformational	0.427	0.085	0.342	5.027	0.000
	Democratic	0.265	0.068	0.233	3.883	0.000

a. Dependent Variable: Effective Learning

Table 3: Multiple regression (Stepwise) for the dependent variable principal leadership (Transformational, Learning, and Democratic) on effective learning

From table 2 above, it is obtained that the value of Fcount (238,836) > Ftable (3.91), with a significant value smaller than the probability value of 0.05 or the value of sig = 0.000 < 0.05, meaning that there is an effect of learning leadership on effective learning. The value of Fcount for the combination of learning leadership and transformation leadership is Fcount (177.556) > Ftable (3.06) and the value of sig. smaller than the probability value 0.05 or sig = 0.000 < 0.05, it means that there is a positive and significant influence simultaneously learning leadership and transformational leadership on effective

learning. The value of Fcount for the combination of learning leadership, transformational leadership, and democratic leadership is Fcount (136,118) > Ftable (2.67) and sig = 0.000 < 0.05, meaning that there is a positive and significant influence simultaneously learning leadership, transformational leadership, and democratic leadership on effective learning. The results of this analysis can be concluded that the Ho1 hypothesis is rejected. The effect value given by the three independent variables either partially or simultaneously is shown in Graphic 2 below.



5. Significant predictors of the dimensions principal's leadership style (transformational, learning, and democracy) on effective learning

The influence of the dimensions of transformational leadership, learning leadership, democratic leadership on effective learning is expressed in the form of a hypothesis:

Ho2: There is no positive and significant influence of the dimensions of transformational leadership of principals on

effective learning.

Ho3: There is no contribution of learning leadership dimensions of school principals to effective learning in SMA Negeri in Padang.

Ho4: There is no contribution of the democratic leadership dimensions of school principals to effective learning in SMA Negeri in Padang.

The significant influence of the dimensions of transformational leadership on effective learning at SMA Negeri Padang is shown in tables 4 and 5 below:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.476	1	10.476	120.193	0.000 ^b
	Residual	11.505	132	0.087		
	Total	21.981	133			
2	Regression	13.502	2	6.751	104.312	0.000 ^c
	Residual	8.478	131	0.065		
	Total	21.981	133			
3	Regression	13.977	3	4.659	75.673	0.000 ^d
	Residual	8.004	130	0.062		
	Total	21.981	133			

Table 4: ANOVA Variant independent variable on dependent variable
a. Dependent Variable: Effective Learning

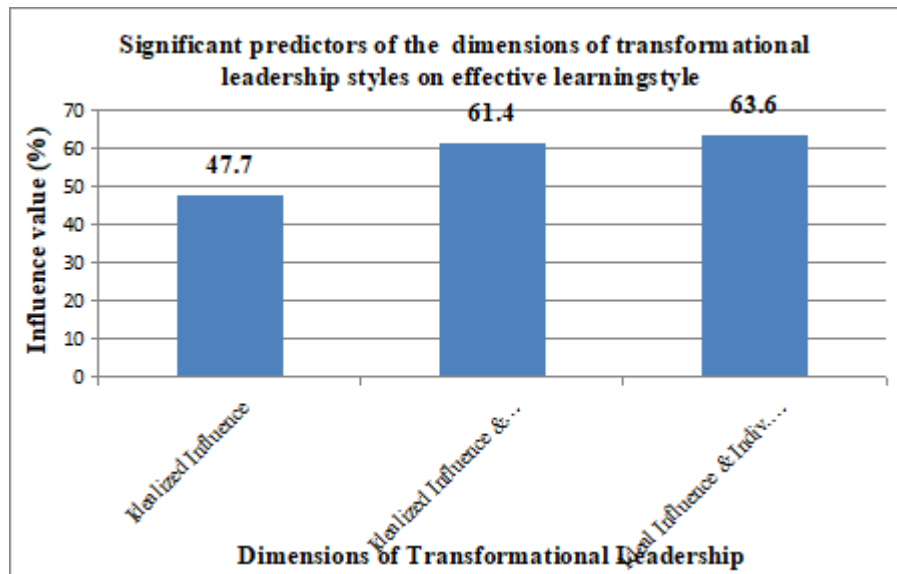
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.419	0.272		5.219	0.000
	Idealized Influence	0.674	0.061	0.690	10.963	0.000
2	(Constant)	0.409	0.277		1.475	0.143
	Idealized Influence	0.494	0.059	0.506	8.352	0.000
	Individual Consideration	0.405	0.059	0.414	6.838	0.000
3	(Constant)	0.128	0.289		0.444	0.658
	Idealized Influence	0.369	0.073	0.378	5.050	0.000
	Individual Consideration	0.351	0.061	0.359	5.753	0.000
	Inspirational Motivation	0.235	0.085	0.217	2.777	0.006

Table 5: Multiple regression (Stepwise) for the independent variable dimensions of transformational leadership on effective learning
a. Dependent Variable : Effective Learning

The results of the study in table 4, the analysis of variance shows that the value of Fcount for the Idealized Influence dimension is Fcount (120.193) > Ftable (3.91), and sig = 0.000 < 0.05 and R2 = 0.477, meaning that the Idealized Influence dimension affects effective learning. The value of Fcount for the dimensions of Idealized Influence and Individual Consideration is Fcount (104.312104.312) > Ftable (3.056), and sig = 0.000 < 0.05 and R2 = 0.614, meaning that the dimensions of Idealized Influence and Individual Consideration simultaneously affect effective learning. The value of Fcount for the dimensions of Idealized Influence, Individual Consideration and Inspirational Motivation is Fcount (75.673) > Ftable (2.67) and sig = 0.000 < 0.05 and R2 = 0.636, meaning that simultaneously the dimensions of Idealized Influence, Individual Consideration and Inspirational Motivation

have an effect on effective learning. These findings indicate that the dimensions of Idealized Influence affect the effective learning variable by 47.7%, the combination of Idealized Influence and Individual Consideration dimensions has an effect on effective learning by 61.4%, meaning that the Individual Consideration dimension of transformational leadership has an effect of 13.8%, while the combination of Idealized Influence dimensions, Individual Consideration and Inspirational Motivation have an effect on effective learning as much as 63.6%, meaning that the Inspirational Motivation dimension of transformational leadership accounts for 2.2%. Meanwhile, the Intellectual Stimulation dimension has absolutely no effect on the realization of effective learning in SMA Negeri in Padang. The overall effect value can be seen in Graphic 3 below.

GENERAL MANAGEMENT



Graphic 3 above explains that the idealized influence dimension of transformational leadership has the greatest influence as much as 47.7% compared to the other three dimensions. The indicators of the Idealized Influence dimension that have a lot of influence on effective learning are 1) the principal is my role model (role model) in carrying out learning tasks; 2) The principal instructed me in preparing effective learning planning and strategies; 3) The principal

instilled my pride in joining him; 4) Principals get respect from teachers and school employees. This finding is consistent with Bass's research that transformational leadership is considered effective in any situation or culture [18].

The results of multiple analyses using the stepwise method to see the significant influence of the dimensions of learning leadership on effective learning in SMA Negeri in Padang are as shown in Table 6 and 7 below:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.746	1	18.746	764.942	0.000 ^b
	Residual	3.235	132	0.025		
	Total	21.981	133			
2	Regression	19.052	2	9.526	426.043	0.000 ^c
	Residual	2.929	131	0.022		
	Total	21.981	133			

Table 6: ANOVA Variant variable independent to variable dependent

a. Dependent Variable : Effective Learning

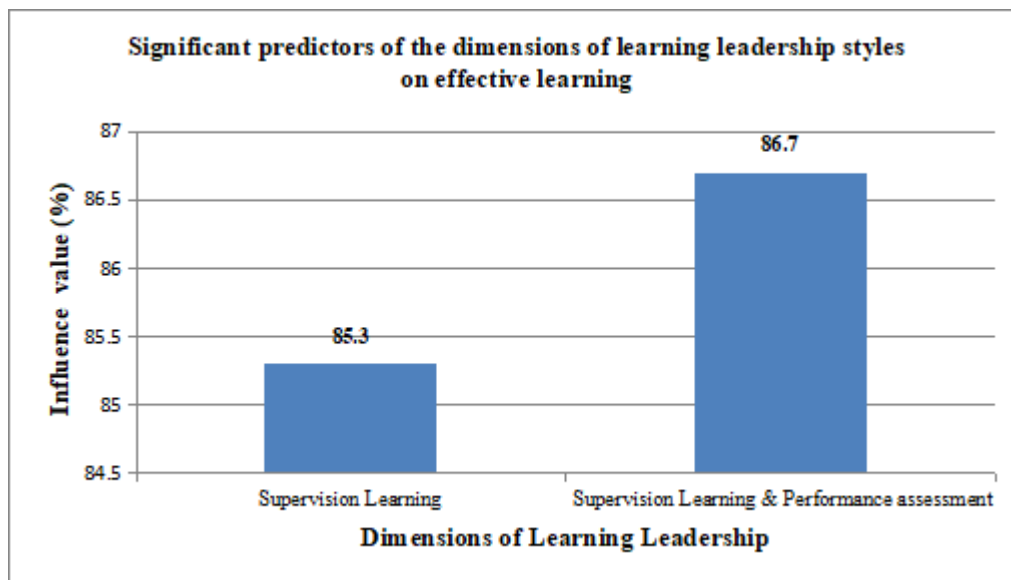
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.577	0.138		4.164	0.000
	Supervision Learning	0.878	0.032	0.923	27.658	0.000
2	(Constant)	0.392	0.141		2.769	0.000
	Supervision Learning	0.799	0.037	0.841	21.564	0.000
	Performance assessment	0.121	0.033	0.144	3.698	0.000

Table 7: Multiple regression (Stepwise) for the independent variable dimensions of learning leadership on effective learning

a. Dependent Variable : Effective Learning

The results of the study in tables 6 and 7, the analysis of variance shows that for the dimension of supervision, the value of Fcount (764,942) > Ftable (3.91) and sig = 0.000 < 0.05 and R2 = .0853 is obtained and the Fcount value for the combination of the dimensions of learning supervision and performance appraisal is obtained by the Fcount (426.043) > Ftable (3.06), and sig = 0.000 < 0.05 and R2 = 0.867. These findings indicate that the dimensions of learning supervision

have an effect on the effective learning variable by 85.3%, the combination of the dimensions of learning supervision and teacher performance appraisal has an effect on effective learning by 86.7%, meaning that the dimensions of teacher performance appraisal of learning leadership affect 1.4%. The value of the influence of the learning leadership dimension is shown in Graphic 4 below.



From these findings it can be explained that from the four dimensions of learning leadership, it turns out that the dimensions of learning supervision of learning leadership have the greatest influence by 65.3%, the highest compared to the other three dimensions. The indicators of the dimension of learning supervision that have a lot of influence on effective learning are 1) the principal performs supervision on a scheduled basis; 2) The principal exercises strict control of the

learning process in the classroom; 3) The principal is knowledgeable about learning and learning theory; 4) Knowledgeable principals distinguish between appropriate teacher learning and learning that is not in accordance with student learning outcomes to be achieved.

The significant influence of the dimensions of democratic leadership on effective learning in SMA Negeri Padang is shown in table 8 and 9 below:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.437	1	11.437	143.193	0.000 ^b
	Residual	10.543	132	0.080		
	Total	21.981	133			
2	Regression	12.072	2	6.036	79.803	0.000 ^c
	Residual	9.909	131	0.076		
	Total	21.981	133			

Table 8: ANOVA Variant variable independent on variable dependent

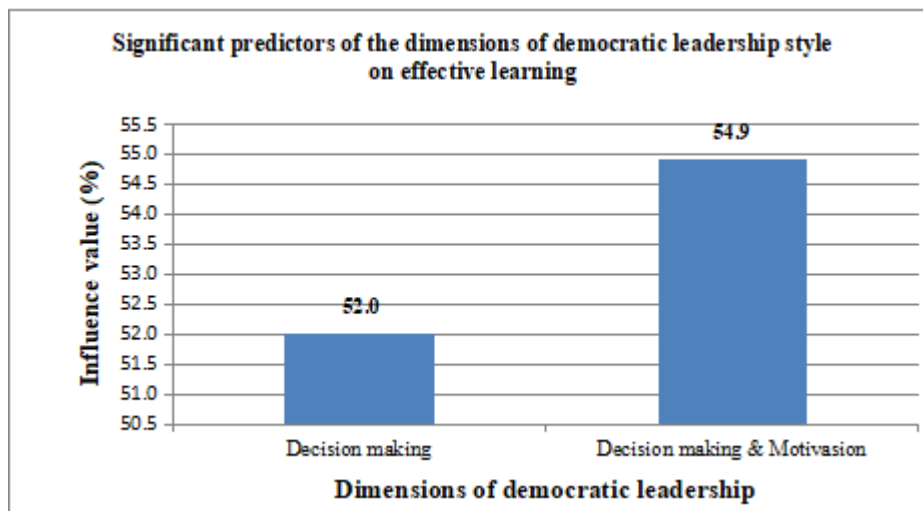
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.400	0.251		5.578	0.000
	Decision making	0.676	0.057	0.721	11.966	0.000
2	(Constant)	0.930	0.293		3.175	0.000
	Decision making	0.526	0.076	0.561	6.957	0.000
	Motivation	0.250	0.086	0.234	2.897	0.004

a. Dependent Variable: Effective learning

Table 9: Multiple regression (Stepwise) for the independent variable, the dimensions of democratic leadership on effective learning

The results of the study in tables 8 and 9, analysis of variance shows that the value of Fcount for the dimensions of the decision-making process is Fcount (143,193) > Ftable (3.91) and sig = 0.000 < 0.05 and R² = 0.520 and the value of Fcount for the combination of dimensions to make decisions, motivation is Fcount (79,803) > Ftable (3.06) and sig = 0.000 < 0.05 and R² = 0.549. These findings indicate that the dimensions of making decisions affect the effective learning

variable by 52.0%, the combination of the dimensions of making decisions, motivation influences effective learning by 54.9%, meaning that the motivation dimension of leadership has an effect of 2.9%, while the communication dimension has absolutely no effect on its realization of effective learning in SMA Negeri in Padang. The effect value can be seen in Graphic 5 below.



From these findings, it can be explained that from the three dimensions of leadership, it turns out that the dimension of the decision-making process has the greatest influence as much as 52.0% compared to the other three dimensions. The indicators from the dimensions of the decision-making process that have a lot of influence on effective learning are: 1) The principal is willing to exchange opinions with school members in formulating important decisions regarding the vision and mission of the school; 2) The principal is someone who is willing to hear criticism, suggestions/opinions before decisions are made; 3) The principal appears as a way of facilitating the decision-making process; 4) The principal asked for many alternatives to the decision to be taken; 5) The principal is a persuader and a good listener, confident in solving various problems related to assignments.

4. Significant predictor indicators of Minangkabau egalitarian culture with leadership style

There are five indicators of cultural values which are a reflection of the egalitarian cultural values of the Minangkabau people inherited from generation to generation through the process of internalizing values so that they become cultural characteristics that distinguish Minangkabau people from other feudal societies. To see to what extent each indicator of these egalitarian cultural values affects the leadership practice of the principal of SMA Negeri in Padang, the following hypothesis is put forward:

Ho5: There is no positive and significant influence of the egalitarian culture of the Minangkabau community on transformational leadership, learning leadership, and democratic leadership of school principals.

The results of the analysis using the Stepwise method of multiple regression show that there are several indicators of the Minangkabau egalitarian culture that influence the principal's transformational leadership practice, is shown in tables 10 below:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.415	0.182		18.811	0.000
	Indicator3	0.246	0.042	0.453	5.838	0.000
2	(Constant)	3.026	0.239		12.677	0.000
	Indicator3	0.190	0.047	0.349	4.003	0.000
	Indicator1	0.139	0.057	0.214	2.449	0.016

a. Dependent Variable: Transformational leadership

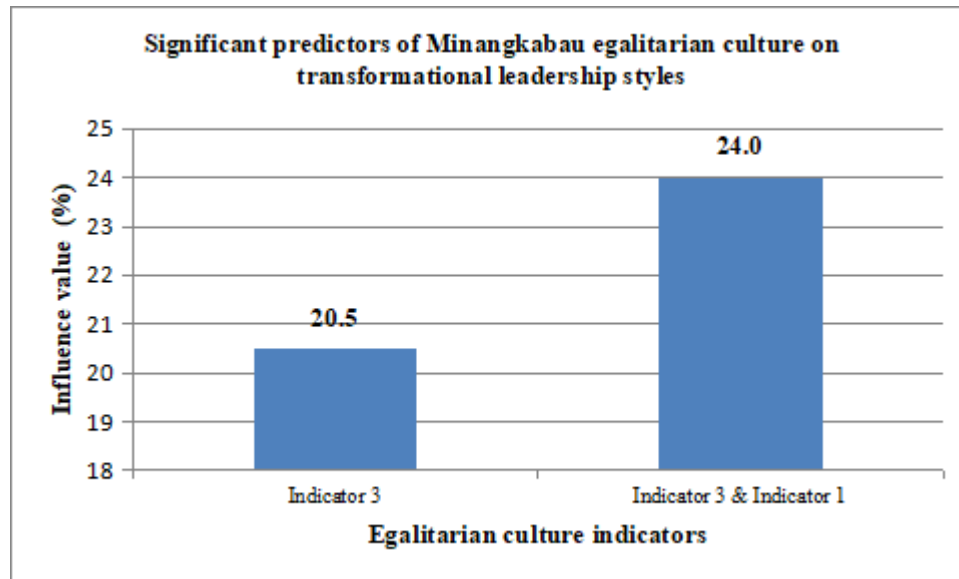
Table 10: Multiple regressions (Stepwise) for indicators of Minangkabau egalitarian culture that affect the transformational leadership practice of school principals

The CFA test results show that there are five valid and reliable indicators of Minangkabau culture, namely indicators 1) I participate in supporting school policies and programs if they are established through a deliberation process involving school members; indicator 3) I will remain critical of school principals who are not democratic; indicator 5) I am only loyal to the principal who has an opinion and principle in enforcing school rules; 6) I support school principals who enforce the truth in accordance with school regulations; 7) I value principals who are close to subordinates, treating everyone equally.

After the multiple regression analysis of the Stepwise method was carried out, there were two indicators that had an

effect on the transformational leadership of the principal: indicator 3) with a value of Beta contribution (0.453), tcount (5.838) > ttable (1.654), sig. 000 < 0.05 and R2 (0.205). These findings indicate that the critical attitude of school members towards school principals who act not democratically has an influence on the transformational leadership of the principal by 20.5%. The effect value given by the combination of indicator 3) and indicator 1) is Beta (0.214), tcount (2.449) > ttable (1.654), sig. 016 < 0.05 and R2 (0.240). These findings indicate that the value of the contribution given simultaneously by indicator 3) and indicator 1) is R2 (0.240) or 24%, while the remaining 76% is determined by other indicators. The influence value is shown in Graphic 6 below.

GENERAL MANAGEMENT



The indicators of the egalitarian Minangkabau cultural values that affect the learning leadership practice of principals in public high schools in Padang are shown in table 11 below:

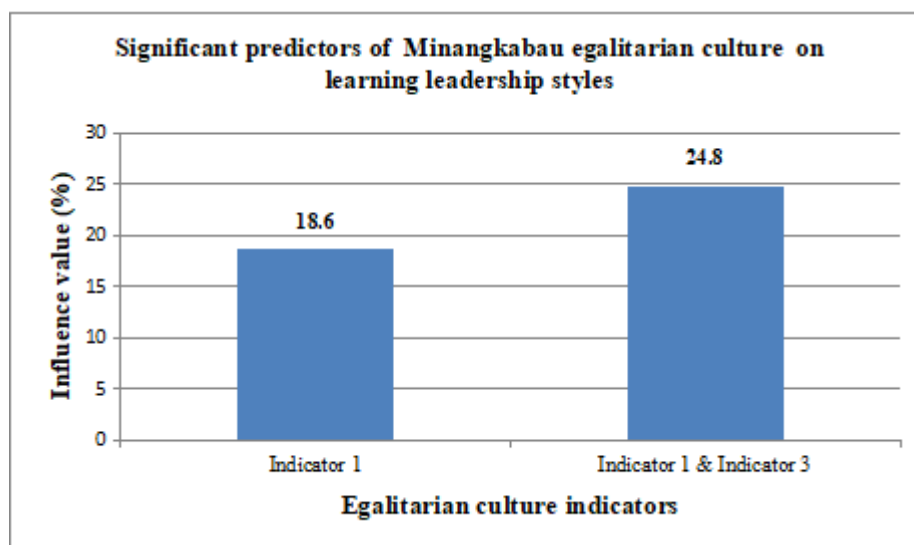
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.161	0.234		13.529	0.000
	Indicator 1	0.281	0.051	0.431	5.484	0.000
2	(Constant)	2.907	0.238		12.218	0.000
	Indicator 1	0.190	0.057	0.291	3.357	0.001
	Indicator 3	0.156	0.047	0.287	3.308	0.001

a. Dependent Variable: Learning leadership

Table 11: Multiple regressions (Stepwise) for indicators of egalitarian culture of the Minangkabau community that affect the learning leadership practice of principals

Table 11 above shows that the Minangkabau cultural value that affects the principal's learning leadership is an indicator 1) I participate in supporting school policies and programs if they are laid out through a deliberation process involving school members with Beta values (0.431), tcount (5.484) > ttable (1.654), sig. 000 < 0.05 and R2 (0.186). These findings

indicate the value of the effect given is 18.6%. The effect value given by a combination of indicator 1) with indicator 3) I will remain critical of the principal who does not act is Beta (0.287), tcount (3.308 > ttable (1.654), sig. 000 < 0.05 and R2 (.248) or the value of influence is 6.3%. The effect value is shown in Graphic 7 below.



GENERAL MANAGEMENT

The influence of the Minangkabau egalitarian cultural indicators on the practice of democratic leadership of school principals in SMA Negeri in Padang is shown in table 12 below:

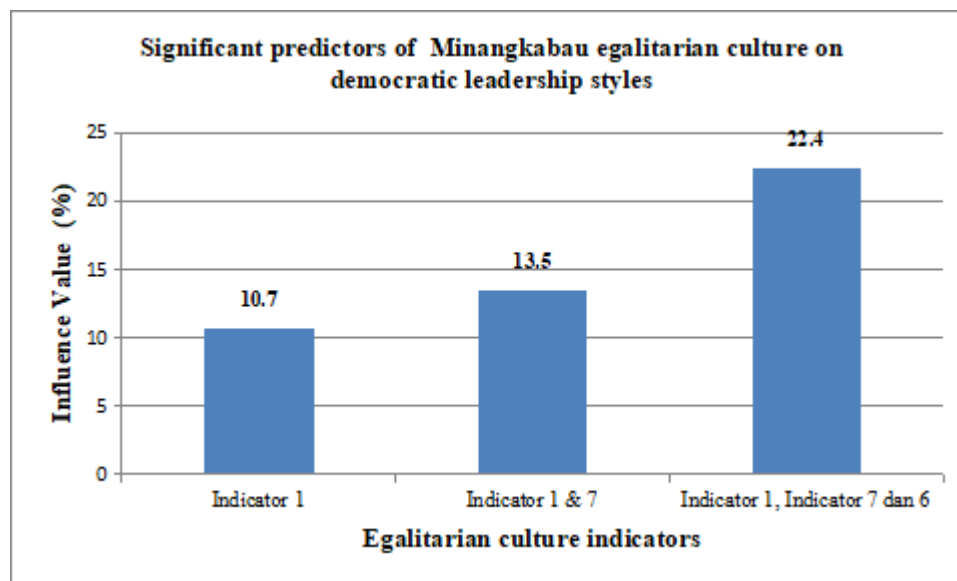
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.398	0.268		12.688	0.000
	Indicator 1	0.234	0.059	0.328	3.984	0.000
2	(Constant)	3.185	0.284		11.202	0.000
	Indicator 1	0.189	0.062	0.264	3.040	0.003
	Indicator 7	0.092	0.045	0.178	2.043	0.043
3	(Constant)	3.263	0.271		12.036	0.000
	Indicator 1	0.271	0.063	0.379	4.316	0.000
	Indicator 7	0.276	0.064	0.533	4.309	0.000
	Indicator 6	-0.279	0.072	-0.507	-3.862	0.000

a. Dependent Variable: Democratic leadership

Table 12: Multiple regressions (Stepwise) for indicators of egalitarian culture of the Minangkabau community which influence the practice of principal democratic leadership

Table 12 above shows that the indicators of the egalitarian Minangkabau culture that have an impact on the democratic leadership of the school principal are indicators 1) Even though I have different opinions, I still participate in supporting school policies and programs if they are determined through a deliberation process involving school members; indicator 7) I value the principal who is close to subordinates, treating everyone equally; indicator 6) I support the principal who upholds the truth in accordance with school regulations. The value of the influence given by indicator 1) is Beta (0.328), tcount (3.984) > ttable (1.654), sig. 0.00 < 0.05 and R2 (0.107).

These findings indicate that indicator 1) has an influence on the democratic leadership of school principals by 10.7%. The combination of indicator 1) and indicator 7) affects the democratic leadership of principals with Beta values (0.178), tcount (2.043) > ttable (1.654), sig. 0.043 < 0.05 and R2 (0.135). The value of the influence given by indicator 7) is 2.8%. The combination of indicator 1), indicator 7), and indicator 6) has an influence on the democratic leadership of principals with Beta values (-0.507), tcount (-3.862) > ttable (1.654), sig. 0.000 < 0.05 and R2 (0.224). The effect value given by indicator 6) is 8.9%. The effect value can be seen in Graphic 8 below.



Discussion

From the findings above, it can be argued that even though SMA Negeri in Padang are in an egalitarian climate and culture of the Minangkabau people, it turns out that the democratic leadership style is not the main and dominant leadership practice in schools. The principal is more dominant in practicing the learning leadership style with a minimum score of 4,550 which is at a very high and highest stage among other leadership styles. This finding is not in accordance with the social systems theory by Hoppey and Mcleskey[37], and the views of Minangkabau Navis cultural

observers [38] and research by Armiami et al[39]; Stark [36] that the school is a social unit with the culture of the community around the school that interacts and influences each other. However, the results of this study indicate that the stage of learning leadership is more dominant, this illustrates that the principal and teachers in SMA Negeri prefer learning leadership as professional leadership with a modern scientific management approach in realizing an effective learning process. This finding is also in accordance with the management standards of the Ministry of Education and Culture, which direct schools to implement learning leadership.

Of the three principal leadership styles (Transformational

Leadership, Learning Leadership, and Democratic Leadership), the research findings showed that learning leadership styles had the highest influence by 64.4% compared to the other two leadership styles. This finding is in line with the results of research by Azwar et al. [35], principal learning leadership is the most effective leadership model to improve student achievement, the effect size of learning leadership is three times greater than transformational leadership. This view is also reinforced by Hallinger & Heck [27], that the results of a review of 40 research results on the influence of principal leadership show that there is a significant influence between the leadership of a principal and student achievement through the formation of teacher attitudes and behavior to achieve student academic achievement. More firmly, the results of this review state that efforts to improve student achievement are carried out indirectly through improving teacher performance by the principal with a learning leadership style.

Three of the four dimensions of transformational leadership are simultaneously influential. The dimensions of Idealized Influence, Individual Consideration, and Inspirational Motivation have an effect of 63.4%. The dominant influence is given by the Idealized Influence dimension of 47.7%. While the Intellectual Stimulation dimension has no effect at all, this illustrates that the principal has not maximally encouraged teachers to be more creative, innovative in using various teaching strategies, and is less enthusiastic about listening to ideas / ideas from teachers regarding efforts to improve student achievement, and has not maximally pushed teachers in solving student problems related to learning. These findings are generally in accordance with the theory of transformational leadership by Bass & Riggio [18]. Transformational leadership is a leadership style that engages followers. However, related to the dimensions of intellectual stimulation, the results are not in line with the views of Bass & Riggio [18].

Next, with regard to the four dimensions of learning leadership, these findings show that the combination of the dimensions of learning supervision and the dimensions of teacher performance appraisal has an effect on effective learning by 86.7%. The biggest influence is given by the learning supervision dimension of 85.3%, while the other two dimensions, namely the learning vision dimension and the continuous professional development dimension, have no effect at all. This illustrates the principal's leadership in the aspect of the learning vision and the efforts made for sustainable professional development have not been maximally carried out. These two dimensions do not show a significant effect on teacher performance in an effective learning process. This finding is not in line with the results of the research of Hallinger & Murphy [40], two dimensions do not have a significant effect, meaning that learning leadership in concept and theory is better understood as a leadership style that leads to the creation of a school climate that is able to encourage optimal learning processes that have not been maximally implemented in SMA Negeri in Padang.

The dimensions of making decisions from the democratic leadership style affect the effective learning variable by 52.0%, the combination of dimensions of making decisions, motivation influences effective learning by 54.9%, meaning that the motivation dimension of the influential leadership style is 2.9%. These findings indicate, for egalitarian societies, the process of making decisions by involving many school members is a dimension of democratic leadership that must be the main consideration for school principals in formulating various school programs in order to get strong support by school members.

From the findings above, it can be argued that there are four of the five indicators of Minangkabau cultural values that

have a significant effect on the leadership of school principals, namely indicator 1) Even though I have different opinions, I still participate in supporting school policies and programs if they are determined through a deliberation process involving school members; Indicator 3) I remain critical of school principals who do not; indicator 6) I support the principal who enforces the truth in accordance with school regulations; indicator 7) I appreciate the principal who is close to subordinates, treating everyone equally. Meanwhile, indicator 5) I am only loyal to the principal who has an opinion and principle in upholding school rules, it does not have a significant and significant effect.

Two indicators have a simultaneous effect on transformational leadership and learning leadership, namely teacher responses shown by teachers' critical attitudes towards school principals who do not and only participate in supporting school policies and programs if determined through a deliberation process involving school members. Meanwhile, the indicators shown by the teacher's response that have a simultaneous effect on democratic leadership are still participating in supporting school policies and programs if they are determined through a deliberation process involving school members; respect the principal who is close to subordinates, treats everyone equally; and support school principals who enforce the truth in accordance with school regulations. This finding is in accordance with the viewpoint of Navis, a veteran of the Minangkabau culture who explains that the highest decision for the Minangkabau community is a decision made through deliberation and consensus through the density of Nagari customs. As the customary saying "rajo alim rajo disambah, rajo lalim rajo disanggah," for the Minangkabau, the decisions are tiered kemenangan ber-Raja kemamak, mamak ber-Raja ke penghulu, penghulu ber-Raja ke mufakat, mufakat ber-Raja kepada kebenaran, benar menurut alur dan patut. For Minangkabau community, a good decision is a decision that is agreed upon through a process of deliberation and consensus, as the customary proverb says, ka hilia saranguah dayuang, ka mudiak sarentak galah. It means that someone will be responsible for implementing a decision if they are involved in the decision-making process. Also in accordance with the research results of Stark [36], Fatimah [31], that the combination of customary values based on natural philosophy with Islamic values makes the Minangkabau people tend to be egalitarian in their daily life.

Conclusions

The findings of this study can be concluded that the egalitarian and democratic culture that has become a tradition in the leadership of the Nagari government in Minangkabau does not necessarily make democratic leadership style the dominant leadership practice in schools. Although SMA Negeri in Padang are in an egalitarian environment of the Minangkabau matrilineal society, it turns out that the leadership practice of the principal is not in harmony with the culture of the community. The principal is more dominant in practicing the learning leadership style as professional leadership with a modern management approach in realizing an effective learning process. This finding is also in accordance with the management standards of the Ministry of Education and Culture, which direct schools to implement learning leadership. The implementation stage of this leadership practice is also evidenced by the significant and significant influence value provided by learning leadership of 64.4% compared to transformational leadership styles and democratic leadership styles. In addition, the Intellectual Stimulation dimension of transformational leadership has no

effect at all, this illustrates that the principal has not maximally encouraged teachers to be more creative, innovative in using various teaching strategies, and is less enthusiastic about listening to teachers' ideas regarding efforts to improve student achievement, and also not maximally encouraging teachers to solve student problems related to learning. While the dimensions of learning supervision and the dimensions of teacher performance appraisal of learning leadership simultaneously affect effective learning, the other two dimensions have no effect. With regard to the democratic leadership style, the process of making decisions by involving school members is a major dimension that has a meaningful and significant influence on effective learning.

Data (and Software) Availability

This study is a collaborative study of 3 lecturers from 3 different universities, therefore the research team stores data well to be used or accessed by everyone concerned.

The research data storage entitled: "The Leadership of School Principals in Egalitarian Matrilineal Society of Minangkabau" the link

<https://figshare.com/s/8a8e0bea499147f10e97>

This project contains the following basic data:

Data file 1. (Research data on aspects of transformational leadership, learning leadership and leadership democracy)

DOI: 10.6084/m9.figshare.16811314

Author contributions

The first author has more contributions in completing this research, he has proven the results of work ranging from data collection, data analysis to even data verification.

The second author, contributes in establishing the methods to be used, analyzing the data as well as conclusions.

The third author's contribution was to translate and improve the grammar of the language.

Competing interests

Research and publication of articles is conducted for the dissemination of science-related information based on scientific studies. Therefore, the research team has no conflict of interest in completing this project.

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