

# The Principal's Leadership: To Create School Climate Disruption in Industrial Revolution Era 4.0

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**ABSTRACT--** 4.0 Industrial Era is era technology, had a negative impact on schooling, especially vocational schools if the school cannot be adapted to it. Schools should be able to create the atmosphere of the school, and at the same educational environment interaction patterns among teachers, students, staff and even the real outdoor environment (school climate) to maintain social humanistic accordance with their characteristics. But the technology is still evolving so as to adapt to the Industrial Revolution 4.0. This study aimed to determine the effect of school leadership on the climate of the school. The research was conducted in 30 vocational schools in the city of Sukabumi, while respondents who perceive about school leadership and school climate in this research were 243 teachers who have teaching experience in over 5 years. The results showed that the leadership of the principal positive effect on school climate. So if the school leadership, improved the school climate will also rise by an increase in the school leadership. Therefore, competence, motivation, and personality of principals that are characteristic of effective leadership must be constantly improved. This can be done by following education and training, Seminars, workshops, and other similar activities.

**Keywords**—Leadership Principal's, School Climate, Industrial Revolution Era 4.0.

## I INTRODUCTION

The development of science and technology today cannot be stopped. A man with a variety of needs and ambition seemed to be thirsty to continuously innovate in order to meet the needs and demands era disruption, The development of science and technology impact on the order of human life, such as the pattern of behaviour [1], interactions with each other even in the framework of his personality [2], [3], or in other words the people's living environment and atmosphere.

The era of the industrial revolution 4.0 becomes interesting assessed in the framework of schooling. The challenge of this era of concern for schools, but also an opportunity to develop the quality of education. There are 10 main qualifications (skills) of workers required employers in the era of industrial revolution 4.0, namely positive work habits, leadership, communication, technical, writing, English, problem solving, reading, computer, and teamwork [4]. This is the challenge of implementing school education. How does school create an education that is capable of producing 10 graduates' qualifications required them to be adaptable and competitive in the era of industrial revolution 4.0. The bottom view of the industrial revolution 4.0 has an impact unfavourably on the human

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role in life because everything seemed to be done by the technology with the automation system through the help of a robot.

The concern the industrial revolution 4.0 is the technology as if it would potentially degrade the human role. Yet human beings as social creatures who cannot live alone illustrate that human beings have a tendency in groups and interact with each other in a real-life environment. So that there is created an atmosphere that expresses the pattern of behaviour, mood, and milieu as well as forming a group. In a study of organizational behaviour is called organizational climate.

This is embryo will be the emergence of the concept of the era of society 5.0 developed by Japan, where society centered on the human (human-centered), is expected to create an artificial intelligence that can transform big data collected through the Internet in all areas of life becomes a wisdom that is new, with a view to improving the human ability to open up opportunities for humans. Especially for education who have responsible great in print quality human resources.

There was also the idea that man is a human quality that is not only intelligent in an intellectual as well as having good individual skills, but must also be sensitive to the social environment in which there redirect interaction and communication in the real world. Science and technology are only used as a tool only, so the concern on replacing the human role in life does not happen.

What a challenge for the school, where technology and science must continue to evolve, but must also be able to create the atmosphere of the school, and at the same educational environment interaction patterns Among teachers, students, educators even with environment significantly beyond. Not only through technology in cyberspace. This concept is referred to as the school climate.

School climate conceptually constitutes a set of attributes that gives colour or character, spirit, ethos, which describes the inner atmosphere of the school environment. According to Silver [4], the social climate of the school is formed by a reciprocal relationship between the behaviour of the principal and teacher behaviour as a group where the principal's behaviour can affect interpersonal interactions with teachers.

So in this case, the principal as a leader has a duty to be able to create a good school climate and in accordance with the times. Either in accordance with the industrial revolution 4.0 nor in order to meet society era 5.0, because that becomes interesting to study about influence school leadership to form a school climate that corresponds to the times today.

## **II METHODOLOGY**

The population in this study is SMK teachers who have teaching experience of more than 5 years, with samples were taken amounted to 243 people from 30 vocational schools in the city of Sukabumi. Data were collected by questionnaires randomly to the region's population, Data analysis techniques in this study using the Simple Linear Regression.

## **III RESULTS**

The results showed illustrates the effect of school leadership on the school climate as described as follows:

### ***1) Analysis of Correlation Coefficient***

The analysis of the correlation coefficient is calculated with SPSS 22.0 for Windows. Variable correlation value of the Climate Leadership School Principal views on the value of Pearson Product Moment Correlation. The results of the calculations are shown in Table 2 below.

**Table 1:** Correlation between Leadership Principal the School Climate  
**Correlations**

		Leadership Principal	School climate
Leadership Principal	Pearson Correlation	1	.477 **
	Sig. (2-tailed)		.000
	N	243	243
School climate	Pearson Correlation	.477 **	1
	Sig. (2-tailed)	.000	
	N	243	243

\*\* . Correlation is significant at the 0:01 level (2-tailed).

Based on the SPSS output in table 1 above, the correlation value is obtained from the principal of the Climate Leadership School, obtained the r - call amounted to 0.477, for  $\alpha = 0.01$  with df: 241 and test 2-tailed it is obtained critical mounting to 0.181. Because  $r\text{-cal} = 0.477 > 0.181$  means that there is a relationship (correlation) between the principal on the Climate Leadership School. Significance test obtained a significant value of 0.000 which is less than the probability of 0:01, which means there is a significant relationship. Then the conclusion that can be drawn is that there is a significant relationship between the principal of the Climate Leadership School.

The results of calculations using SPSS 22.0 for Windows coefficient of determination variables on the Climate Leadership School Principal can be seen in Table 2 below.

**Table 2:** Model summary

Model	Change Statistics				
	R Square Change	F Change	DF1	DF2	Sig. F Change
1	.228a	71.101	1	241	.000

a. Predictors: (Constant), Leadership Principal

b. Dependent Variable: School Climate

Based on Table 2 above, it can be seen the magnitude of  $r^2 = 0,228$  or 22.8% means that the variation in School Climate variables can be explained by variations in the Principal Leadership variables.

## 2) Regression Analysis

The variable regression equation between Leadership Principal with School Effectiveness is  $Y = a + BX_1$ . Calculation with SPSS 22.0 for Windows obtained the results as shown in Table 3 below:

**Table 3: Regression Equations**

**Coefficients**

Model	Coefficients unstandardized		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2,308	.220		10,487	.000
Leadership Principal	.467	.055	.477	8,432	.000

a. Dependent Variable: School Climate

Based on the above table 3. The regression equation of Y on X is  $Y = 2,308 + 0,467X$ , and since the coefficient of X in the equation is positive, namely 0.347 then Leadership Principal has a positive effect on school climate. The regression equation can be interpreted that if the Principal Leadership variable (X) with the School Climate (Y) is measured with an instrument developed in this study, so any changes the Principal Leadership score of 10 units can be estimated score School Effectiveness will rise by 4.67.

The testing criteria regression equation is acceptable if the probability is less than  $\alpha = 0.01$ . Based on the above table probability values as shown in the column sig. is 0.000 so much smaller probability value of 0.01. It can be concluded significant regression coefficient, or Leadership Principal (X) significantly influence the school climate.

#### IV DISCUSSION

School climate order, safety, and discipline, the relationship between the school community (principals, teachers, staff, students) and the behavior of people in schools especially in learning activities to be created as well. This enables the learning activities, the implementation of education programs in schools can work well too. Here the role of school leadership is necessary, based on research results indicate that school leadership can influence the creation of school climate. Good and poor school climate are formed depending on the effects of school leadership.

School leadership that will affect the school climate described by the environmental order, safety, and discipline, academic outcomes, social relationships, school facilities, and school connectedness [5], is not the leadership that stands on the basis of the formal power that only has authority. But the leadership that is run on the basis of its ability to cover personality, motivation, and competence [6], [7]. This is in line with the statement of John Gardner in 1986-1988 [8], argues that leadership is more than just occupy an authority, despite a formalized position of authority may strongly encourage the leadership process, but a position that does not make a person to be a leader.

Characteristics of good school leadership and effectively reflect the principal who has a confident personality, stress tolerance, emotional maturity, integrity, and extrovert, so dare to set high goals for himself and the followers, but it is also able to complete difficult tasks, persevering in the face of problems and fatigue. The school principal also remains calm and able to provide firm guidance despite being in a difficult situation. Emotional maturity allows him to know the strengths and weaknesses of her, but still trying to improve and maintain cooperative

relations with subordinates, peers, and supervisors. Personality is most important is the nature of honesty, ethical, responsible and trustworthy as well as being friendly, outgoing and comfortable in the group.

Characteristics of good school leadership and effectiveness also reflect the principal who has the competence, both conceptual and technical. Conceptual or cognitive competence includes the ability to analyze the situation, organize and solve problems that occur technical competence which includes budget management skills, supervision, coordination improvements in teaching and learning, including dominate and understands will technology [9].

So the principals of providing leadership to the accompaniment of capacity qualified which will be capable of creating a school environment well. Therefore, the principal as a leader in an educational institution that has a tough task in creating a better school climate, in the hope that it can affect the behavior of people in schools toward something good anyway.

School leadership is very important its role, especially in terms of creating a school environment that is conducive. 5.0 era challenges society is getting in front of the eye, where the technology increasingly uncontrollable provide can be positive, as well as the negative impact of education. Thus the principal had to control and to control climate change occurring in the schools in this disruption era.

The results of the research showed that the leadership of the principal influence on school climate, will not realize if the principal does not have the competency and personality as well as a good motivation. Therefore, the principal must be constantly trying to improve it. Especially in its efforts to create a school that is adaptive and competitive in the era disruption on current technology. Students, teachers, educational staff into the school community be of superior human resources, is not eroded by the growing technology on 4.0 Industrial Revolution era that seemed more valuable robot and smarter than robots. Efforts principals in improving competence, personality, and motivation to do with the leadership in training, seminars and even a workshop on leadership.

## V CONCLUSION

Based on the results showed that the leadership of the principal positive effect on school climate. It allows the creation of school climate-adaptive of the era disruption that can be controlled and well-controlled by the principal. However, principals need to improve their competence and personality in order to do that, especially in efforts to achieve such a good school climate. This is the reason why the principal must constantly learn and practice in carrying out its leadership, can through training, seminars or workshop leadership.

## REFERENCES

1. M. Nurtanto, H. Sofyan, M. Fawaid, and R. Rabiman, 'Problem-Based Learning (PBL) in Industry 4.0: Improving Learning Quality through Character-Based Literacy Learning and Life Career Skill (LL-LCS)', *Univers. J. Educ. Res.*, vol. 7, no. 11, pp. 2487–2494, Nov. 2019, doi: 10.13189/ujer.2019.071128.
2. M. Nurtanto, 'Development Model for Competency Improvement and National Vocational Qualification Support Frames In Automotive Technology', *Int. J. Eval. Res. Educ. IJERE*, vol. 9, no. 1, Mar. 2020, doi: 10.11591/ijere.v9i1.20447.

3. R. Rabiman, W. Widarto, N. Muhammad, and K. Nur, 'STEM education: Vocational teacher's perspective of 21st Century', 2020. <https://www.psychosocial.com/article/PR260985/21943/> (accessed May 10, 2020).
4. Suharsaputra, U. (2013). Administration Education, revised edition. Bandung:Refika Aditama.
5. Zullig, J., Koopman, TM, Patton, JM, & Ubbes, VA (2010). School Climate: Historical Review, Instrument Development, and School Assessment. *Journal of psychoeducational Assessment*, 139-152.
6. Hoy, WK, & Miskel, CG (2014). Educational Administration, Theory, Research and Practice (Ninth Edition). New York: Mcgraw-Hill.
7. Z. Arifin, M. Nurtanto, W. Warju, R. Rabiman, and N. Kholifah, 'The TAWOCK Conceptual Model for Content Knowledge for Professional Teaching in Vocational Education', *Int. J. Eval. Res. Educ. IJERE*, vol. 9, no. 3, Apr. 2020, doi: 10.11591/ijere.v9i3.20561.
8. Razik, TA, & Swanson, AD (1995). Fundamental Concept of Educational Leadership and Management. Columbus-Ohio: Prentice-Hall.
9. Suherman, I. (2018). Influence of Climate Leadership School Principals and School Effectiveness Against At SMK in Sukabumi. Repository UPI.