

## EFFECTIVE SCHOOL CLIMATE: THE PERCEPTION OF TEACHERS IN SECONDARY SCHOOLS IN KELANTAN, MALAYSIA

**JULIANA BAHARUDDIN, FARAH MOHAMAD ZAIN & SITI NOOR ISMAIL**

School of Education  
UUM College of Arts and Sciences  
Universiti Utara Malaysia

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### ABSTRACT

School climate plays a significant role in an educational institution which is explained by its dimensions. Collaboration, student relations, school resources, decision making, and instructional innovation are important elements that generate a positive school climate. The aim of this study was to identify the perception of teachers in secondary schools in the state of Kelantan regarding effective school climate. This study proposed a speedy action to be taken to improve the medium low level and medium high-level dimensions of the school climate in order to prevent further decrease in school performance.

**Keywords:** school climate, perception, school performance

### 1.0 INTRODUCTION

School is an institution built as a centre to educate children. An effective school will be able to deliver the education process producing well developed human capital as functional assets to the society. What constitutes an effective school? Texas Education Agency (2021) outlined strong school leadership planning, effective instruction, high-quality instructional materials and assessments, strategic staffing and positive school culture to be the pillars of effective schools framework. Rapti (2013) stresses on school climate as an integral element in school effectiveness while Koundyannan, Abdul Kadir, Basri and Mohd Ayub (2020) have identified the same elements namely school culture and climate to be the predictors of effective schools in primary schools in Malaysia. The education process should be delivered in a positive school climate so as to achieve students' excellent performance.

There have been a lot of definitions of school climate in studies found across the globe. Research by Ozgenel (2020) has defined school climate to be the circumstances or the aspects of the school learning environment. This includes the school cultures, values, educational practices and the type of relationships that exist among the people within the school. Aldridge and McLure (2024) give meaning to school climate as a measure of the level of school environment. This measurement is heavily influenced by several factors namely the beliefs, norms, attitudes and values which are spread throughout the school. Izaguirre, Fernandez-Zabala and Rodriguez-Fernandez (2022) have found a direct influence of school climate on academic performance because according to them, the essence of school life includes feelings of safety and belonging, interpersonal relationship between teachers and students as well as behavioural rules. Interestingly, Forsberg, Chiriac and Thornberg (2023) characterize the quality and character of school life as the school climate. They further explain that values,

attitudes and shared beliefs are moulding the interactions between administrators, teachers and students. In contrast, if a school is experiencing a negative school climate which is non-supportive and stimulating more disruptive behaviours among the students, their well-being will be disrupted which will result in the decline of performance.

Having said the importance of a strong positive school climate and its impact on school effectiveness, this study is undertaken with the purpose of identifying the perception of teachers on the school climate in secondary schools in the state of Kelantan, Malaysia. This perception is relevant to give an impact on the school performance.

## 2.0 MATERIALS AND METHODS

For this study, a descriptive research design is chosen, using a cross-sectional survey method in the process of collecting quantitative data. Questionnaires are answered by respondents because this method is most suitable for this study. The cross-sectional survey method will survey opinions across the board. According to Johnson and Christensen (2014), the most suitable approach to collect information for a descriptive study is to use a questionnaire. This is due to the fact that this study will involve a relatively large number of respondents. This survey method is easy to handle, cost-effective and can collect a lot of information at one time (Cohen, Manion and Morrison, 2011).

The population of this study involves teachers in secondary schools in the state of Kelantan. This study was carried out in several secondary schools in the state of Kelantan that were selected using a stratified random method. The schools involved in the study were not specifically named in order to comply with ethics in conducting research. This study involved a sample of 375 teachers. The number of samples involved in this study is based on Krejcie and Morgan (1970) taking into account the total population of teachers from 174 secondary schools in the state of Kelantan totaling 12,890 people. The Training and Services Unit of Kelantan State Education Department has been consulted to obtain the latest teacher population list for each district in the state of Kelantan. The population is broken down as follows; 3834 people in Kota Bharu district, 1670 people in Pasir Mas district, 1183 people in Tanah Merah district, 1116 people in Tumpat district, 828 people in Machang district, 1308 people in Bachok district, 1088 people in Pasir Puteh district, 363 people in the district Jeli, 925 people in the Kuala Krai district and 575 people in the Gua Musang district. The population percentage of each district and the number of samples for each district are shown in Table 1 below.

**Table 1: Population, Percentage of Population of Each District and Number of Study Samples**

District	Population	Percentage population of each District	Number of study samples
Kota Bharu	3834	29.7	111
Pasir Mas	1670	13.0	49
Tanah Merah	1183	9.2	34
Tumpat	1116	8.7	33
Machang	828	6.4	24
Bachok	1308	10.1	38

Pasir Puteh	1088	8.4	32
Jeli	363	2.8	10
Kuala Krai	925	7.2	27
Gua Musang	575	4.5	17
<b>Total</b>	<b>12,890</b>	<b>100%</b>	<b>375</b>

**Source:** Training and Services Unit, State Education Department, Kelantan (2017)

For the purpose of school selection, cluster random sampling technique is used. All secondary schools in the state of Kelantan are grouped according to the districts within the state. This technique is used to ensure that each district has a representative in this study. This technique is more effective in obtaining information from each group (Sekaran & Bougie, 2009). Clustered random sampling is suitable for non-uniform populations because this method can reduce sampling error, reduce variance and provide more accurate estimates (Gorard, 2001; Majid, 1998). All 10 districts in the state of Kelantan are labeled with Kota Bharu as number 01, Pasir Mas as number 02, Tanah Merah as number 03, Tumpat as number 04, Machang as number 05, Bachok as number 06, Pasir Puteh as number 07, Jeli as number 08, Kuala Krai as number 09 and Gua Musang as number 10.

Next, secondary schools are grouped according to their respective districts. A systematic random sampling technique was then used to select schools for each district. If the sample is large-scale and information about the sample can be obtained in a specific place, then the use of systematic sampling has advantages because it can simplify the sample selection process and can be carried out faster (Sekaran & Bougie, 2009). Then, the schools are listed based on the order of the school code according to the respective district and numbered according to the order within the district. The list of numbers in the Random Number Table is referred to to select 35 schools as a sample for this study, which is 20% of the population randomly (Noraini, 2010)

This systematic random sampling uses the interval method to obtain the required sample. Spacing is to reduce the size of such a large population. This is because a very large sample size will confuse a researcher to conduct a study (Sekaran and Bougie, 2009). When the size of the interval has been obtained, the researcher has randomly selected one of the numbers from that size. In this study, the population size of secondary schools in Kelantan is 174 and the required sample size is 35 schools. So,  $174/35$  is 5 interval sizes. So, the researcher has chosen a number between 1 to 5 which is number 5. This means the first element chosen is the 5th school. To get the next element is  $5+5= 10$ ,  $10+5= 15$ ,  $15+5= 20$  and so on. The interval size when added is constant which is 5. This proves that this sample is systematic. The samples to be taken are numbers 5,10,15,20 up to 174. Here it shows that the first number chosen is the 5th school and the last is the 170th school making the required school sample size which is 35 schools. The number of secondary schools in each district, the percentage of secondary schools in each district and the number of schools involved in the study are as shown in Table 2.

**Table 2: Number of Study Schools**

District	Number of Secondary Schools in Each District	Percentage of High Schools in Each District	Number of Study Schools
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Kota Bharu	48	27.6	10
Pasir Mas	25	14.4	5
Tanah Merah	16	9.2	3
Tumpat	13	7.5	3
Machang	10	5.7	2
Bachok	18	10.3	3
Pasir Puteh	16	9.2	3
Jeli	6	3.4	1
Kuala Krai	13	7.5	3
Gua Musang	9	5.2	2
Jumlah	174	100%	35

The study was conducted by choosing a standardized instrument using the domains and indicators of the School Level Environment Questionnaire (SLEQ). It is an integrated view of past and present perception of school climate which includes the shared expectations and norms of a school social system. Since the original instrument is in English, the translation needs to be done by an English language expert and a Malay language expert. The questionnaire consists of 21 items distributed into 5 scales namely Collaboration (6 items), Decision Making (3 items), Instructional Innovation (4 items) Student Relations (4 items) and School Resources (4 items). The items in the instrument use a Five-point Likert Scale, which is a score of 1 (strongly disagree) to a score of 5 (strongly agree).

Before this instrument is used in the actual study, a pilot study has been done to determine the validity and reliability of the instrument. Since the instrument's validity and reliability have been tested in western countries, this pilot test will determine the suitability of using the instrument in eastern countries in general and Malaysia in particular so that cross-cultural effects can be reduced. A pilot study involving a small number of respondents aims to test the appropriateness of the questions and the respondents' understanding of the questions (Sabitha, 2006). Sabitha (2006) thinks that this pilot study should be carried out to find out the reaction of the respondents, determine whether the respondents can understand the meaning of the question or vice versa. This study also helps to estimate the time required by respondents to answer the questionnaire. This pilot study involved 175 respondents selected from five schools in Bachok district, Kelantan. The number of respondents involved in this pilot study was relatively large to enable experimental factor analysis to be performed on the pilot study data.

In order to clean the data from outliers, a normality test needs to be conducted. The normality test is carried out to fulfill the assumption made where the data obtained is normally distributed (Zainuddin, 2012). Awang (2014) assumes that the data is normally distributed when the skewness value obtained is in the range between -1.5 and 1.5. Zainuddin (2012) also thinks that the general statistical measure of skewness is between the range - 3.0 and 3.0 while Ghasemi and Zahediasl (2012) also believe that, for a small number of samples which is less than 200, the value between the range of -1.96 and 1.96 is sufficient to obtain a normal data distribution. However, it should be taken into account that values approaching - 3.0 and 3.0 are considered to be very skewed to the right or very skewed to the left (Zainuddin, 2012). Table 3 below shows the measurement of the skewness of the collected data.

**Table 3: Skewness Measurement**

Item	Skewness
IS1	-0.54
IS2	-0.48
IS3	-0.66
IS4	-0.78
IS5	-0.25
IS6	-0.45
IS7	-0.64
IS8	-1.06
IS9	-1.06
IS10	-0.34
IS11	-0.35
IS12	-1.13
IS13	-0.99
IS14	-1.13
IS15	-0.58
IS16	-1.02
IS17	-0.44
IS18	-0.47
IS19	-0.97
IS20	-1.14
IS21	-0.36

Findings from the data collected from 112 respondents for this pilot test show that the value of the skewness is between the range of -1.16 and -0.05. For the purpose of this study, the accepted skewness measurement is in the range between -1.5 and 1.5. Therefore, the data collected from all 112 respondents is considered to be normally distributed.

Factor analysis is a procedure carried out with the aim of regrouping items in groups that have similar characteristics. The Kaiser-Meyer-Olkin (KMO) test and Bartlett's Sphericity Test were conducted first to measure the level of suitability of the data for factor analysis. Kaiser (1974) set a KMO value above 0.6 as the recommended value for factor analysis. In addition, the significant value for Bartlett's Sphericity Test is close to 0.00 indicating that the data is sufficient to proceed with factor analysis (Zainuddin Awang, 2012). Table 4 below shows KMO and Bartlett's Test for the School Climate construct.

**Table 4: KMO and Bartlett's Test for the School Climate Dimension**

Construct	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity
School Climate	0.89	0.00

The KMO value of 0.89 is meritorious and the significant value of Bartlett's test close to 0.0 indicates the data at hand was appropriate to proceed with the reduction process.

Costello and Osborne (2005) had termed the 'cleanest' factor structure would be items with factor loading above 3.0 and no dimension should be created with less than three items. This study selected the items with factor loading greater than 0.5 and dimensions with three and more items. Table 5 show the factor loading for items of School Climate under 5 dimensions. Items IS1, IS2, IS3, IS4, IS5 and IS6 are classified in dimension one. While items IS7, IS8 and IS9 and IS10 are classified in dimension two. Items IS11, IS12, IS13 and IS14 are classified in dimension three. While items IS15, IS16 and IS17 are classified in dimension four and finally items IS18, IS19, IS20 and IS21 are classified in dimension 5.

**Table 5: The Rotated Component Matrix for School Climate**

	Dimension				
	1	2	3	4	5
IS1	0.75				
IS2	0.80				
IS3	0.79				
IS4	0.78				
IS5	0.71				
IS6	0.71				
IS7		0.52			
IS8		0.63			
IS9		0.66			
IS10		0.61			
IS11			0.51		
IS12			0.67		
IS13			0.76		
IS14			0.56		
IS15				0.60	
IS16				0.68	
IS17				0.80	
IS18					0.85
IS19					0.84
IS20					0.78
IS21					0.82

The instrument is then tested for its reliability to ensure that it was valid and stable to be used in actual survey. For the purpose of this study, internal consistency was the type of reliability being considered and it was reflected by the Cronbach's Alpha (Salkin, 2003). Nunnally (1976) identified the cronbach alpha value of >0.6 to be having a high reliability value. Table 6 shows the value of reliability analysis for the School Climate variable.

**Table 6: Reliability Analysis of Instrument**

	Dimension	Number of Items	Cronbach Alpha
School Climate	Collaboration	6	0.93

Student Relations	4	0.73
School Resources	4	0.71
Decision Making	3	0.93
Instructional Innovation	4	0.79

Based on the validity and reliability tests performed, this instrument had been proven to have a high value of validity and reliability to be used in the real study.

### 3.0 RESULTS

Data collected for the real study was tested for its normal distribution so as to assure that the sample data had been drawn from a normally distributed population. The finding of this research showed the measure of skewness based on the data collected ranged from -0.492 to 0.955. This proved that the samples had been drawn from a normally distributed population of Secondary School teachers in the state of Kelantan.

The reliability of items used to measure the domains of school climate was analysed using the coefficient value of Cronbach Alpha based on the number of real samples (N=375). The finding from Table 7 revealed that all 21 items used to measure school climate had the value of Cronbach Alpha in between 0.604 to 0.869. This confirmed the reliability value of the instrument was high.

**Table 7: Reliability Analysis of Instrument**

Variable	Dimension	Bilangan Item	Cronbach Alpha
Iklim Sekolah	Collaboration	6	.604
	Student Relations	4	.869
	School Resources	4	.643
	Decision Making	3	.667
	Instructional Innovation	4	.845

Descriptive statistics aim to examine the descriptive findings of the study variable, school climate in secondary schools according to respondents' perceptions. The interpretation of the results is carried out through the use of the mean score and standard deviation of the group and according to the dimensions of the study variables. This study was carried out based on the assessment of the mean score by Nunnally & Bernstein (1994), by interpreting the mean in this study as shown in Table 8.

**Table 8: Table of Mean Score Interpretation**

Mean Scale	Level
4.01 - 5.00	High
3.01 - 4.00	Medium High
2.01 - 3.00	Medium Low
1.00 - 2.00	Low

**Source:** Nunnally, J.C. & Bernstein 1994

The descriptive findings for the level of school climate were shown in table 9 to 13 according to the dimensions of school climate variable.

**Table 9: Mean and Standard Deviation for Collaboration (School Climate)**

	N	Minimum	Maximum	Mean	Std. Deviation
CLIMATEA	375	1.50	3.67	2.6990	.40305
Valid N (listwise) 375					

**Table 10: Mean and Standard Deviation for Student Relations (School Climate)**

	N	Minimum	Maximum	Mean	Std. Deviation
CLIMATEB	375	1.50	5.00	3.7824	.59200
Valid N (listwise) 375					

**Table 11: Mean and Standard Deviation for School Resources (School Climate)**

	N	Minimum	Maximum	Mean	Std. Deviation
CLIMATEC	375	1.50	13.00	3.1529	.79273
Valid N (listwise) 375					

**Table 12: Mean and Standard Deviation for Decision Making (School Climate)**

	N	Minimum	Maximum	Mean	Std. Deviation
CLIMATED	375	1.00	4.67	2.8661	.63803
Valid N (listwise) 375					

**Table 13: Mean and Standard Deviation for Instructional Innovation (School Climate)**

	N	Minimum	Maximum	Mean	Std. Deviation
CLIMATEE	375	1.25	5.00	3.5765	.54919
Valid N (listwise) 375					

The overall mean score for school climate is 3.1828 as shown in Table 14, which according to the interpretation of Nunnally and Bernstein (1994) is said to be of medium high level. In this variable, the dimension of student relations had a mean score of 3.7824 which happened to be the highest mean score followed by the dimension of instructional innovation and school resources having mean scores of 3.5764 and 3.1529 respectively. These three dimensions are in medium high level while two other dimensions, namely decision making (mean score 2.8661) and collaboration (mean score 2.6990) are in medium low level. In conclusion, it could



be said that the perception of school climate in secondary schools throughout the state of Kelantan is at medium level.

**Table 14: Overall Mean Score for School Climate**

	N	Minimum	Maximum	Mean	Std. Deviation
CLIMATE	375	2.19	5.24	3.1828	.27069
Valid N (listwise) 375					

#### 4.0 DISCUSSION

This research would like to identify the perception of teachers in secondary schools in Kelantan on the effective school climate. Five Dimensions of the school climate are identified as being important elements that contribute to school effectiveness (Johnson, Stevens and Zvoch, 2007). From the results, collaborative dimension has the lowest mean score indicating that collaboration among the teachers in the school is happening at a medium low level. They may not perceive collaborating as a contributing factor to a positive school climate. This perception is in line with the finding of a research by Koundyannan et. al (2020) in terms of collaboration whereby teachers do not collaborate with each other as well as with students in enhancing the school performance. Pinchak (2024) termed this collaboration in schools as ‘school friendship network closure’ which should be of high level so that it will lead to positive school climate and in the end would boost the students’ performance.

Another dimension of school climate with a medium low level score is the decision making. The teachers perceived decision making is not a shared practice in the schools. Teachers are not empowered to make some relevant decisions in their teaching and learning processes. Kilag, Uy, Sasan, Calunsag, Pareja, Timtim and Pansacala (2024) in their research, came across the same finding where leaders in school did not promote collaborate decision-making processes within their schools. They concluded that this situation may contribute to a negative school climate characterized by low morale among teachers, mistrust and ineffective communication mediums.

Three other school climate dimensions, student relations, school resources and instructional innovations, are perceived as being in the medium high level. This is insufficient to promote better students and school performance. Student relations need to be enhanced due to the fact that teacher-pupil relationship and interaction patterns affect how pupils perceived their school climate. These patterns should be positive because they are associated with less disruptive behaviours among the students which in turn improved academic engagement as well as achievement (Forsberg, Chiriach and Thornberg, 2021). School resources should also be at the high level considering that it is an integral element of a positive school climate. Teachers still perceived school resources to be at a medium level when it should be at high level in order to reinforce the teaching and learning process. Lewno-Dumdie, Mason, Hajovsky and Villeneuve (2019) reported that school physical surroundings, resources and environment should be at optimum level to boost the learning process so as to improve the quality and character of school life.

## 5.0 CONCLUSION

The debate on school climate has been a longstanding yet it should be discussed further since there are still room for improvement. The school's performance in Kelantan in terms of the national examination (Sijil Peperiksaan Malaysia) has been a rollercoaster ride since 2019 until 2023. The Average School Grade (GPS) has been going up and down during those years performing from GPS of 4.72 to 5.10. This could be improved if the school climate, being one of the contributing factors to a school positive achievement, is developed and upgraded to a higher level. School administrators and teachers should make it an effort to embrace positive school climate for better school environment.

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