

Article

# The Effects of School Climate on Sixth Form Teachers' Self-Efficacy in Malaysia

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**Abstract:** In Malaysia, sixth form is a post-secondary education that is comparable to pre-university programs such as A-level and Foundation qualifications. Enrolment in sixth forms has dwindled over the past ten years due to assumptions that the curriculum is difficult and because it is offered in regular secondary schools. Thus, the sixth form transformation program was introduced in 2015 with the purpose to rebrand sixth form education to a new setting comparable to other pre-university education, with a focus on improving the school climate and increasing teacher self-efficacy. Therefore, this study was conducted to identify the level and relationship of the school climate on teacher self-efficacy. This survey was carried out using a questionnaire instrument, involving 695 sixth form teachers currently in Selangor. The findings showed that the level of school climate and teacher self-efficacy in all sixth form centers were at a high level. There was also a strong positive relationship between the school climate and sixth form teachers' self-efficacy. Social and academic dimensions contributed significantly to the teacher self-efficacy of 38%. Hence, further studies looking at aspects that suggestively contribute to the school climate should be given due attention to ensure that transformation planning can be implemented as intended.

**Keywords:** transformation; post-secondary; school climate; teacher efficiency; sixth form



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## 1. Introduction

Educational transformation is a necessity in order to make changes in an education system to improve the quality and competitiveness of education at the international level. This is because education is one of the most important activities of any country [1]. In ensuring the success of educational transformation, all important aspects of educational development planning should be looked at, especially in strengthening the physical, academic, and social aspects of a school.

The Malaysian Education Blueprint (MEB) 2013–2025 announced a sixth form transformation to rebrand post-secondary education as a new environment comparable to pre-university education. The four main focus areas are administration, teaching and learning modes, curriculum, and infra- and infostructure [2]. These four focus areas are comprehensive and are an important aspect of supporting a conducive learning environment. Therefore, the effective implementation of every aspect involved should be emphasized to ensure a positive school climate.

One of the sixth form centers' efforts is to focus on infra- and infostructure to create a conducive pre-university learning environment [2]. This effort is important not only for providing a quality learning environment for sixth form students but also for providing a good work environment for teachers. This is because every person in the school, including teachers, is always influenced by and exposed to the school environment. According to Bronfenbrenner's ecological systems theory [3], the context of an individual environment is multifaceted, with all facets interacting with one other in shaping an individual's development. According to Yegoh [4], the aspects of the work environment that shape the

characteristics of a school create the feeling and attitude of the school climate. As such, aspects of the school climate are seen as important malleable elements in influencing and impacting the development of teachers in schools in carrying out challenging daily tasks in today's era of educational transformation [5,6].

### *Background*

A school climate is defined as a pattern of shared perceptions of the characteristics and atmosphere, including its norms, values, and expectations of an organization with its members [7–11]. In addition, a school climate is also defined as the quality and character of school life [12]. Thus, each school has its own characteristics that shape its climate. This is because schools have differences in terms of taste, atmosphere or ideology, student behavior, and academic performance, as well as other aspects. Therefore, the school climate is very important for giving teachers a perception of all aspects related to the work environment of an organization in the school context.

The work environment is commonly understood as being physical features, i.e., school facilities, nearby communities, and infrastructure buildings. However, according to the Regulations and Planning Guidelines for Building Planning by the Economic Planning Unit [13], there are no explicit specifications for infra- and infostructures for post-secondary classes or sixth form centers [13], as all sixth form classes and buildings in Malaysia do not meet the requirements of the post-secondary curriculum or the university level. In addition, the provision of adequate facilities is also one of the issues faced by sixth form education, particularly for the sixth form center modes two and three, which share some of their physical facilities and equipment with mainstream secondary education [14].

On the academic side, the changes brought about by the rebranding of sixth forms have also increased the workload of teachers by failing to provide detailed guidelines, research-based learning, and colloquiums [14]. This is due to factors such as the syllabus, lack of courses, and training and time constraints. This can have an impact on the learning environment of sixth forms. In terms of social relationships, there is dissatisfaction among sixth form teachers regarding the implementation of teaching and training tasks [14]. This can influence the school's social climate, which is an important part of the learning environment [15].

This was supported by Bryk and Schneider [16], who showed that a complex network of social relationships in schools is a critical factor in the school environment. The issues and problems facing sixth form teachers can further influence students' academic achievements. This can be seen in spite of the increase in the national cumulative grade point average (CGPA) for Higher School Certificate achievement in 2017; however, the percentage of GPA 4.00 decreased slightly to 485 candidates (1.13%) compared to 565 candidates (1.31%) in 2016 [17].

Efficacy has been associated with optimistic self-confidence in competencies or opportunities to successfully perform tasks and provide good results [18,19]. Teacher efficacy can be linked to beliefs that influence teacher behavior in performing instructional activities in the classroom [20–23]. Teachers who know that they have the ability to bring positive progress in the development and learning of their students have high self-efficacy [24,25]. Teachers as individuals who are directly involved in activities related to teaching and learning always receive feedback on the effectiveness of various individuals such as students, colleagues, parents, and administrators [26,27]. Effective feedback is also received from the teacher's environment. This feedback can form self-efficacy based on past experiences, observations and direct experiences, and social influences, as well as physiological and emotional conditions [18]. The interpretation made by teachers on this effectiveness information helps them determine their level of self-efficacy. In general, consistent success in teaching activities increases self-efficacy, and failure, in turn, reduces self-efficacy [19].

High teacher efficacy is associated with positive perceptions of school climate-related factors [28]. Studies have shown that teachers' satisfaction with their school climate is a major contributor to their decisions to stay in the profession based on the variables of

self-efficacy, work conditions, and job satisfaction [29]. In this regard, sixth form teachers need to have high self-efficacy to adapt to the increasingly complex educational situation in schools. High self-efficacy practices foster teachers' confidence in teaching students to meet high standards, and they tend to exhibit teaching behavior that supports this goal [20].

In addition, studies on school climate and its relationship with self-efficacy are still lacking in Malaysia, especially in sixth form centers. Therefore, the school climate in sixth form centers needs to be studied based on the perceptions of teachers to make sixth form transformation possible. By assessing the school climate, school leaders obtain information on every aspect of the school that requires improvement [30]. Accordingly, the purpose of this study was to study the physical, academic, and social dimensions of the school climate in sixth form centers in Selangor to evaluate the effectiveness of the rebranding efforts of the center. The key research questions which guided this study were:

- a. What is the level of school climate in the sixth form centers in Selangor according to the physical, social, and academic dimensions with regard to the mode?
- b. What is the sixth form teacher efficacy level in Selangor according to the dimensions of student involvement, teaching and learning strategies, and classroom management with regard to the mode?
- c. Is there a relationship between the school climate and sixth form teacher efficacy in Selangor?
- d. What are the school climate dimensions that most contribute to sixth form teacher efficacy in Selangor?

## 2. Materials and Methods

### 2.1. Research Design and Sampling Approach

This study employed a survey method. The study population consisted of sixth form teachers currently serving at sixth form centers in Selangor. The State of Selangor was selected because it has all three modes of sixth form. Respondents were selected using random stratified sampling methods, as this type of technique is best used when the population exhibits unbalanced characteristics of a sample, such that the number of samples varies by category [31]. All 36 sixth form centers in Selangor were selected as the study population, involving 1103 teachers as survey respondents. The questionnaires were distributed to the selected respondents using two methods, paper-based and Google forms.

### 2.2. Instruments

This survey was carried out using a questionnaire instrument. The research school climate questionnaire consisted of five sections: Part A: Teacher demographics; Part B: Physical dimensions of the school climate; Part C: Academic dimensions of the school climate; Part D: Social dimensions of the school climate; Part D: Teacher self-efficacy—adapted from a questionnaire developed by [4,12,21,32–35]. The process of adapting the instrument involved steps such as selection of items from the original instrument and customization of the items by dimensions through a literature review. The questionnaire was validated by three experts and was pilot tested for reliability following the guidelines of Creswell [36].

### 2.3. Data Analysis

Descriptive and inference data analysis methods were performed. Descriptive analysis was used to analyze the demographic data obtained and to answer the research questions using frequency, percentage, mean, and standard deviation. The interpretation of the mean scores used to determine the school climate levels was based on the Educational Planning and Research Division [37], as shown in Table 1.

**Table 1.** Mean score interpretation.

Mean Score	Mean Score Interpretation
1.00 to 1.80	Extremely low
1.81 to 2.60	Low
2.61 to 3.40	Moderate
3.41 to 4.20	High
4.21 to 5.00	Extremely high

One-way ANOVA tests, correlations, and regressions were the inference analyses conducted in this study. For interpretation of the strength of the relationships of the variables, interpretations were made based on Cohen's [38] and Pallant's [39] works, as shown in Table 2.

**Table 2.** Correlation coefficient interpretation.

Correlation Ratio	Strength of Relationship
$\pm 0.00$ to $0.29$	Weak
$\pm 0.30$ to $0.49$	Moderate
$\pm 0.50$ to $1.00$	Strong

#### 2.4. Research Conceptual Framework

The conceptual framework of this study was constructed based on Bronfenbrenner's theory of ecological systems [40] and Bandura's [18] social cognitive theory. Both of these theories are important in providing the relationship between the school climate, the constructs involved, and the dependent variable studied, i.e., teacher efficacy.

Bronfenbrenner's [40] theory of ecological systems explains that human development occurs through the complex and reciprocal interactions of an individual with other individuals and their environment. This environment is interactive for an individual and consists of five systems, namely microsystems, mesosystems, nanosystems, ecosystems, and chronosystems. The relationship of school climate to Bronfenbrenner's [40] theory of ecological systems can be seen by schools as a microsystem of individuals in the school and every interaction that occurs affects the school environment.

The social cognitive theory [18] refers to the reciprocal interaction of behavior, individuals, and the environments in which learning takes place in a social environment [41]. There is an influence between these three factors in influencing individual behavior. In the context of school climate, environmental factors can influence individual behavior, namely teacher self-efficacy, and at the same time, individual behavior also determines the environment [40].

Sixth form transformations require teachers to adapt to school climate changes so that they can improve their self-efficacy to ensure that effective instructional practices are implemented.

#### 2.5. School Climate

School climate has various interpretations and definitions. This is due to the complex and multidimensional school climate construct [42]. To this day, the definitions of and parameters for measuring school climate are still not agreed upon because school climate is often used to cover many aspects of the school environment [12,34,43,44]. Wang and Degol [35] explained that differences exist in defining school climate because there is no universal concrete and appropriate definition, and there are also more abstract and theoretical definitions.

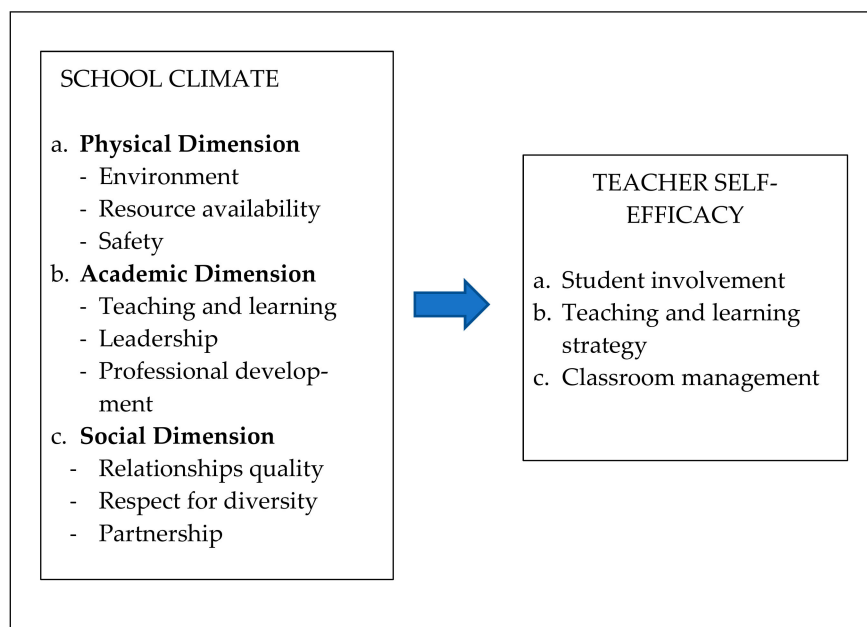
School climate, based on Wang and Degol's definition [35], is categorized into four domains, namely safety, community, academia, and the institutional environment. The domain of security is divided into three dimensions, namely the physical and emotional as well as instruction and discipline. The community domains are defined through the

three dimensions of the quality of interpersonal relationships, respect for diversity, and community sharing. The academic domain is defined using three dimensions, namely leadership, teaching and learning, and professional development. Finally, the domain of the institutional environment refers to the environment, the organizational structure, and the availability of resources.

By looking at and comparing all of the dimensions of the school climate from previous studies, the differences that can be noticed are in the categories and the naming of the dimensions and they are about important aspects and indicators of school climate. In the context of national education, School Toolkit, known as Sarana Sekolah, also emphasizes the school climate's physical, emotional, academic, and social aspects as the important elements in supporting learning [45].

Therefore the definition of school climate used for this study states that school climate consists of three dimensions, namely physical, social, and academic, as posited by [33,46]. The physical, social, and academic dimensions defined by Loukas [33] were also used by Yegoh [4] in his study to measure the effectiveness of Kenya's public secondary schools that can create a positive school climate and high academic achievement.

This model is supported by [4] Bronfenbrenner's theory of ecological systems [40], which is one of the theories used to explain school climate and can be used to explain the influence of school climate on the cognitive, social, and physical conditions of individuals, which, in this study, refer to teachers' self-efficacy. Based on this theory, definition, and model, the conceptual framework of this study (Figure 1), built with independent variables, was a three-dimensional school climate (physical, social, and academic dimensions), while the dependent variable was teacher self-efficacy (student involvement, teaching and learning, and classroom management).



**Figure 1.** Research conceptual framework showing the variables of school climate and teacher self-efficacy.

#### a. Physical Dimension

The physical dimension includes the environmental, resource availability, and security constructs. These constructs refer to the physical factors of the building, facilities, and resources available at sixth form centers. The institutional environment looks at the hygiene, infrastructure, maintenance, and esthetic qualities [12,35]. Resource availability refers to the facilities and equipment provided for the operation of the school in general and for teaching and learning in particular. Safety refers to the school's readiness for emergency prevention

by focusing on fire extinguishers, emergency directions, fire hydrants, emergency bells, and gathering places.

#### b. Academic Dimension

The academic dimension refers to the constructs of teaching and learning, leadership, and professional development [33,35]. Tableman [47] stated that the academic environment is important for promoting learning and self-achievement. Teaching and learning can be carried out effectively through the commitment of teachers who have high expectations as well as provide the encouragement and assistance needed by students. Leadership is defined as the art or process of influencing human activities related to their duties so that they are willing to engage and strive toward effectiveness and the achievement of organizational goals [48]. School leaders must play a role in the implementation of the school curriculum involving teaching and learning and must always be sensitive and concerned about matters related to academia in schools. Teachers' professional development refers to an activity and process designed to develop the skills, professional knowledge, and attitudes of teachers so that they are able to improve student learning [49].

#### c. Social Dimension

The social dimension involves relationship quality, respect for diversity, and partnership [35]. The quality of interpersonal relationships refers to the consistency, frequency, and nature of relationships that occur in the school, i.e., student–teacher relationships, student relationships, and staff relationships [50–52]. Respect for diversity refers to positive relationships among the administrators, teachers, staff, and students. These relationships occur regardless of background, such as religion, culture, or race, as well as the level of relationships between teachers or between teachers and students. Partnership refers to the relationship between the school and the community, involving the external environment of the school. Sharing shows the extent to which schools can foster constructive relationships with the local community [53].

### 2.6. Self-Efficacy

Bandura [54] defined self-efficacy as a belief in one's ability to take the actions necessary to succeed in certain situations by providing the foundation for motivation and personal accomplishment. It is basically an individual's belief in the power that he or she has to produce a desired effect [22,55–58]. Hence, teacher self-efficacy is the belief and skill of educators in their ability to achieve their goals, which is an important characteristic of teachers and is associated with success in teaching [19,21]. The model of teacher self-efficacy in this study was used by [21] and consists of three dimensions, namely student involvement, teaching and learning strategies, and classroom management.

#### a. Student Involvement

Student involvement is an educator's ability to encourage students' value learning and to motivate learning [21]. In addition, Fredricks [59] explained as the involvement of educators in teaching students about the importance of working together to achieve teaching goals. Factors that define student engagement include the behavioral, emotional or psychological, and cognitive aspects developed by teachers [60]. Therefore, teachers play a very important role in student engagement. This is because the actions and behavior of teachers in the classroom influence student engagement.

#### b. Teaching and Learning Strategies

The daily duties of teachers are closely related to their responsibilities in the classroom, and this requires planning of teaching and learning strategies [61]. Tschannen-Moran and Hoy [21] stated that teaching and learning strategies are teachers' techniques that support independent thinking, creativity in teaching, or strategic methods for assessment. Teacher effectiveness, referring to teaching strategies, is related to teachers' beliefs about their ability to use a variety of teaching strategies effectively [62]. With this, teachers are



able to perform teaching tasks effectively, despite facing certain constraints in performing said tasks.

### c. Classroom Management

Classroom management refers to creating a safe and stimulating learning environment [63]. Emmer and Hickman [64] related classroom management to strategies developed to emphasize encouragement for appropriate behavior among students through positive reinforcement, inspiration, and commitment, despite disruptive behavior. Therefore, classroom management requires teachers to use a variety of strategies to control behavior and to create and maintain an environment in the classroom that provides opportunities for students to learn [21].

## 3. Results

This study involved 695 sixth form teachers, including 175 teachers (25.2%) in sixth form center mode 1, 139 teachers (20.0%) in sixth form center mode 2, and 381 teachers (54.8%) in sixth form center mode 3. The majority of the respondents were female teachers (85.5%), while 14.5% of the respondents were male teachers. The breakdown of the academic qualifications of the respondents saw that two had a diploma qualification (0.3%), 536 had a bachelor's degree (77.1%), 154 teachers had a master's degree (22.2%), and three teachers had a doctoral degree (0.4%). The respondents were profiled based on their teaching subjects, where 132 teachers (19%) taught in the science stream and 563 teachers (81%) taught in the social science stream. The majority of the respondents (42.4%) had more than 15 years of teaching experience, 186 teachers (26.8%) had 11 to 15 years of experience, 77 teachers (11.1%) had experience between 6 to 10 years, and 137 (19.7%) had at most 5 years of teaching experience.

### 3.1. School Climate Level in the Sixth Form Centers

Overall, we found that the school climate in all of the sixth form center modes in Selangor was high (mean = 3.60, SD = 0.44), as shown in Table 3. Dimensional analysis showed that the social (mean = 3.87, SD = 0.49) and academic (mean = 3.87, SD = 0.49) dimensions were high, while the physical dimension was moderate (mean = 3.08, SD = 0.62).

This shows that the school climate in the sixth form centers was in good condition, further reflecting the positive feelings of the sixth form teachers. This is in line with Loukas [33], who stated that the school climate is an individual attitude and feeling that is influenced by the school environment. Therefore, a good school climate will shape positive attitudes and feelings. These findings regarding school climate are also in line with some recent studies conducted in secondary schools in Malaysia, which showed that the school climate is at a high level [65–68]. However, of the three dimensions tested, the academic and social dimensions were high, while the physical dimension was moderate.

This study found that the school climate level for the physical dimension in the sixth form centers was moderate. This indicates that the physical environment has yet to meet the ambition of the Ministry of Education, Malaysia, in providing infra- and infostructure through the provision of Informational Technology (IT) facilities and equipment to create a university-based learning environment that is conducive to teacher work. This finding supports the studies by [69–71] which showed that the physical condition of school buildings and facilities influences teachers' attitudes and morale and, thus, the learning environment and academic achievement in schools.

**Table 3.** School climate level mean score by dimension.

Dimension	Mean	Standard Deviation	Interpretation
Academic	3.87	0.49	High
Social	3.87	0.49	High
Physical	3.08	0.62	Moderate
Total mean score	3.60	0.44	High

### 3.2. Teacher Efficacy Level in the Sixth Form Centers

Overall, we found that the sixth form teacher efficacy level in Selangor was high (mean = 4.11, SD = 0.42), as shown in Table 4. This finding can be further explained by the three dimensions involved in classroom management being at very high levels (mean = 4.25, SD = 0.49), followed by high levels of teaching and learning strategies (mean = 4.11, SD = 0.48) and high levels of student engagement (mean = 3.96, SD = 0.49).

The findings of the overall study showed that the sixth form teacher efficacy level in Selangor was high. This shows that sixth form teachers in Selangor have high confidence in their ability to carry out their teaching responsibility. This finding is in line with the studies by [72–76] which showed that teacher efficacy in Malaysia is high. Meanwhile, from the three dimensions tested, the classroom management dimensions were at the highest level, followed by high levels of teaching and learning strategies and student engagement. This finding is in line with the findings of Aziah et al. [77] and Yeow [76], who also showed that classroom management dimensions are at a higher level than the other dimensions.

**Table 4.** Teacher efficacy level mean score by dimension.

Dimension	Mean	Standard Deviation	Interpretation
Classroom management	4.25	0.49	Extremely high
Teaching and learning strategy	4.11	0.48	High
Student involvement	3.96	0.49	High
Total mean score	4.11	0.42	High

### 3.3. Relationships between School Climate and Sixth Form Teacher Efficacy

The findings of the Pearson correlation test analysis between school climate and teacher efficacy are presented in Table 5.

**Table 5.** Pearson correlation relationship between the school climate and teacher efficacy.

School climate	Teacher Efficacy	
	Pearson correlation	0.527 **
	Sig. (two-tailed)	0.000
	N	695

\*\*  $p < 0.05$ .

The results of the correlation test analysis showed that there was a significant positive relationship between school climate and teacher efficacy, with a Pearson correlation coefficient of  $r = 0.53$  ( $p < 0.05$ ). This finding is consistent with previous studies showing that there is a positive relationship between school climate and teacher efficacy [28,78–80].

The findings also showed that the school climate, in all three dimensions (i.e., physical, academic, and social dimensions), was significantly related to teacher efficacy. However, the social and academic dimensions had a stronger relationship with teacher efficacy when compared to the physical dimension. These findings also prove that the school climate can enhance or decrease teacher efficacy. This finding is in line with those of Tschannen-Moran et al. [62] and Hosford and O’Sullivan [28], who correlated school climate aspects with teacher efficacy.

### 3.4. Factors Predicting School Climate Dimensions Influencing the Effect of Sixth Form Teacher Efficacy in Selangor

Based on the unstandardized coefficient values in Table 6, we found that each unit of social dimension change in school climate gave a positive change of 0.38 units, and each unit of academic dimension change in school climate gave a positive change of 0.18 units toward sixth form teacher efficacy.



**Table 6.** Coefficients for the social and academic dimension predictors.

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	Correlation
	B	Standard Error	Beta			
(Constant)	1.942	0.108	-	18.034	0.000	-
Social	0.384	0.039	0.447	9.895	0.000	0.599
Academic	0.175	0.039	0.203	4.500	0.000	0.537

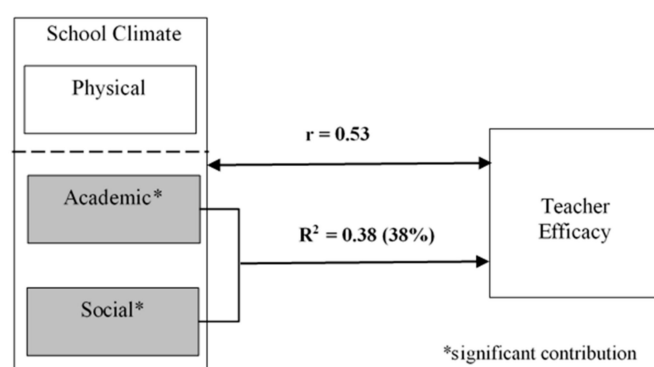
The social dimension comprised the school climate dimension that most influenced teacher efficacy compared to the academic dimension. This shows that social dimensions are a key factor in influencing teacher efficacy. While academic achievement is always emphasized in schools, the social aspect also needs to be given due attention. The evaluation of success, mainly focusing on academic success, causes teachers to become overwhelmed with tasks that interfere with their emotions and morals. Teachers should be in a social environment that can provide encouragement and support of their welfare, regardless of academic or non-academic matters.

The results of the stepwise multiple regression analysis in Table 7 show that the two predictors of social dimension and academic dimension accounted for 38% of the variance in the teacher efficacy level ( $R^2 = 0.377$ ).

**Table 7.** Social and academic dimensions of the school climate contribution model.

Model	R	$R^2$	Adjusted $R^2$	Estimated Standard Error
2	0.614	0.377	0.375	0.33593

Of the three school climate dimensions tested, the academic and social dimensions were the predictors that accounted for 38% of the variance in teacher efficacy levels, as shown in Figure 2. This indicates that there were other school climate predictors that contributed to the other 62% of variance in teacher effectiveness that were not included in this study. According to Wang and Degol [35], the other factors that contribute to school climate and, thus, can be considered in further studies are individual physical safety, discipline and regulation, emotion, attachment, and organizational structure.

**Figure 2.** Correlation and contribution between the school climate and teacher efficacy.

## 4. Discussion

### 4.1. Implications for the Ministry of Education

These research findings can serve as a guide for the Ministry of Education to develop a more comprehensive and effective plan for improving sixth form transformation planning. In particular, the Ministry of Education has been able to develop appropriate action plans for sixth form teachers to ensure that sixth form centers are always in a positive school climate that can impact teacher efficacy. This can be done by identifying aspects that impact the school climate and teacher efficacy in sixth form centers.

Overall, the school climate and teacher efficacy in all sixth form centers in Selangor are high. However, there are still aspects that must be addressed to improve and further the transformation planning being implemented. One of the focuses mentioned in the transformation planning process is infra- and infostructure. Although the findings showed that there was no significant contribution of the physical dimension to teacher efficacy, these aspects of infra- and infostructure still require improvement and create a gap for sixth form centers.

The aspects of infra- and infostructure planning that the Ministry of Education intends to address are crucial in ensuring that the quality of education is improved. In addition, the Ministry of Education aims to drive education system improvements in the second wave of the National Education Policy [2]. Therefore, improving the education system should not override the importance of the education infrastructure, particularly at the university level, to ensure that teachers and students are in a conducive learning environment.

#### *4.2. Implications for School Leaders*

School leaders can use the findings of this study to assist in planning at the school level, which can support the improvement of teaching and learning quality. However, sixth form school leaders need to be equipped with the necessary skills and knowledge to guide university administration. This is because school leaders, as administrators, need to ensure that every aspect of the school climate is considered in the quality and sustainable school planning process. Therefore, school leaders must be trained to master all of the important aspects that can help them better manage a sixth form center.

School leaders also need to carry out school climate assessments from time to time to obtain input on current situations before a program or initiative is introduced to ensure its success and effectiveness. By conducting an assessment, school leaders can monitor the school climate in sixth form centers and take appropriate action to create a conducive environment for teachers and students. School leaders also need to be exposed to the management implemented at other university institutions to improve the management in their sixth form centers.

This is to ensure that school leaders can better plan for the goal of making sixth form education comparable to that of pre-university education. Successful school leaders play a role in ensuring that the school climate is in a good position to help improve teacher efficacy. Therefore, leaders can fulfill their responsibilities with the help of highly qualified teachers to meet the MOE's policy aspirations in line with sixth form education transformation.

In addition, this study is expected to contribute to the field of school climate studies, particularly pertaining to sixth form, which need to be conducted in Malaysia based on the findings of school climate studies concerning the physical, academic, and social dimensions. The findings can serve as inputs and guides for education planning in general in transforming education in Malaysia.

#### *4.3. Implications for Theory and Research*

This research has contributed to educational research relating to school climate and has highlighted the importance of social and academic dimensions to teacher efficacy. It replicated previous findings that teachers' perceptions of school climate influenced their self-efficacy. Hence, the present study revealed the unique contribution of teachers' perceptions in explaining the aspects of the school environment that contributed to their own efficacy.

In addition, no other study in Malaysia has used sixth form teachers from all three modes of sixth form as respondents to explore the school climate–teacher efficacy link. Hence, this study has enriched the school climate field by including sixth form teachers, answering research calls for measuring the school climate–teacher efficacy link from different groups of respondents.

## 5. Limitations and Future Directions

There are several limitations to this study. First, this study only focuses on the physical, social, and academic dimensions of school climate. The findings illustrated potential targets of mentioned interventions from the Ministry of Education, school leaders, and theory and research within the suggested dimensions. Second, this study investigates the link between school climate and teacher efficacy only. Many studies have linked school climate with other variables such as students' achievements and improvement of learning. Lastly, this is a self-perception study in which only sixth form teachers were involved. Hence, the perceptions may not represent a larger group of teachers who are not teaching sixth form students in the state of Selangor. Future studies should include different perceptions of headteachers and students to obtain a complete and wider view. It is also suggested that more variables should be included into this school climate study.

## 6. Conclusions

A good school climate reflects the attitudes and feelings of its members toward the school environment. The school climate also has a significant impact on every individual level in the school, particularly on teachers, in creating a conducive environment for teaching and learning. This is evidenced by the high school climate and high teacher efficacy in sixth form centers. However, the physical dimensions of the environment, resource availability, and safety are critical aspects that need to be addressed in sixth form transformation planning.

There are gaps in the physical infrastructure aspect of each of the sixth form center modes. However, the school climate under the social and academic dimensions shows that the sixth form centers can still create a good school environment and can influence teacher efficacy. A high level of sixth form teacher efficacy provides the impression that the environment in sixth form centers as a whole influences teachers to perform their roles and responsibilities effectively. Therefore, the important aspects of the school climate should be taken care of by all stakeholders to ensure successful planning of sixth form transformation.

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**Data Availability Statement:** The data presented in this study are available on request from the corresponding author.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. Filardo, M. *Good Buildings, Better Schools: An Economic Stimulus Opportunity with Long-Term Benefits*; Economic Policy Institute: Washington, DC, USA, 2008.
2. Ministry of Education (MOE). *Dasar Pendidikan Kebangsaan (Edisi Keempat) (National Education Policy)*, 4th ed.; Educational Planning and Research Division: Putrajaya, Malaysia, 2017.
3. Bronfenbrenner, U. Ecological systems theory. In *Six Theories of Child Development: Revised Formulations and Current Issues*; Vasta, R., Ed.; Jessica Kingsley Publishers: London, UK, 1992.
4. Yegoh, E. Developing a School Climate Model for Effective Public Secondary. *Baraton Interdiscip. Res. J.* **2017**, *7*, 1–14.
5. Goldhaber, D.; Walch, J.; Gabele, B. Does the model matter? Exploring the relationship between different student achievement-based teacher assessments. *Stat. Public Policy* **2014**, *1*, 28–39. [[CrossRef](#)]
6. Bottiani, J.H.; Bradshaw, C.P.; Mendelson, T. Promoting an equitable and supportive school climate in high schools: The role of school organizational health and staff burnout. *J. Sch. Psychol.* **2014**, *52*, 567–582. [[CrossRef](#)] [[PubMed](#)]

7. Osman, A.A. School Climate: The Key to Excellence. *J. Emerg. Trends Educ. Res. Policy Stud.* **2012**, *3*, 950–954.
8. Keefe, J.W.; Kelley, E.A.; Miller, S.K. School Climate: Clear Definitions and a Model for A Larger Setting. *Naasp Bull.* **1985**, *69*, 70–77. [\[CrossRef\]](#)
9. Brookover, W.B.; Schweitzer, J.H.; Schneider, J.M.; Beady, C.H.; Flood, P.K.; Wisenbaker, J.M. Elementary School Social Climate and School Achievement. *Am. Educ. Res. J.* **1978**, *15*, 301–318. [\[CrossRef\]](#)
10. Haynes, N.; Emmons, C.; Ben-Avie, M. School Climate as a Factor in Student Adjustment and Achievement. *J. Educ. Psychol. Consult.* **1997**, *8*, 321–329. [\[CrossRef\]](#)
11. Petrie, K. The Relationship between School Climate and Student Bullying. *TEACH J. Christ. Educ.* **2014**, *8*, 26–34.
12. Cohen, J.; McCabe, E.M.; Michelli, N.M.; Pickeral, T. School Climate: Research, Policy, Practice and Teacher Education. *Teach. Coll. Rec.* **2009**, *111*, 180–213.
13. Economic Planning Unit. *Garis Panduan Dan Peraturan Bagi Perancangan Bangunan Edisi Tahun 2015 (Guidelines and Regulations for Building Planning, Year 2015 Ed)*; Economic Planning, Unit Prime Minister's Department: Putrajaya, Malaysia, 2015.
14. Ngang, T.K.; Mei, T.Y. Penjenamaan Semula Sistem Pentadbiran Tingkatan Enam: Satu Kajian Kes (Rebranding of Form Six Administrative System: A Study Case). *J. Educ. Leadersh.* **2014**, *1*, 52–60.
15. NSCC. Why Is School Climate Important? 2007. Available online: <https://www.schoolclimate.org/about/our-approach/why-is-school-climate-important> (accessed on 28 August 2018).
16. Bryk, A.S.; Schneider, B. Relational Trust. In *Trust in Schools: A Core Resource for Improvement*; Russell Sage Foundation: New York, NY, USA, 2002; pp. 12–33.
17. Awani, A. PNGK Nasional STPM 2017 Meningkatkan (HSC National CGPA 2017 Increased). 2017. Available online: <http://www.astroawani.com/berita-malaysia/pngk-nasional-stpm-2017-meningkat-169729> (accessed on 3 December 2018).
18. Bandura, A. Social Foundations of Thought and Action: A Social-Cognitive View. *Acad. Manag. Rev.* **1986**, *14*, 361–389.
19. Gavora, P. Slovak pre-service teacher self-efficacy: Theoretical and research considerations. *New Educ. Rev.* **2010**, *21*, 17–30.
20. Protheroe, N. Teacher Efficacy: What is It and Does It Matter? *Principal* **2008**, *87*, 42–45.
21. Tschannen-Moran, M.; Hoy, A.W. Teacher efficacy: Capturing an elusive construct. *Teach. Teach. Educ.* **2001**, *17*, 783–805. [\[CrossRef\]](#)
22. Redmond, B.F. *Self-Efficacy Theory: Do I Think That I Can Succeed in My Work? Work Attitudes and Motivation*; The Pennsylvania State University, World Campus: University Park, PA, USA, 2010; Available online: <https://cms.psu.edu/> (accessed on 1 December 2019).
23. Klassen, R.M.; Tze, V.M.C. Teachers' self-efficacy, personality, and teaching effectiveness: A meta-analysis. *Educ. Res. Rev.* **2014**, *12*, 59–76. [\[CrossRef\]](#)
24. Barni, D.; Danioni, F.; Benevene, P. Teachers' Self-Efficacy: The Role of Personal Values and Motivations for Teaching. *Front. Psychol.* **2019**, *10*, 1645. [\[CrossRef\]](#)
25. Fives, H. What Is Teacher Efficacy and How Does It Relate to Teachers' Knowledge? A Theoretical Review. 2003. Available online: [https://msuweb.montclair.edu/~fivesh/Research\\_files/Fives\\_AERA\\_2003.pdf](https://msuweb.montclair.edu/~fivesh/Research_files/Fives_AERA_2003.pdf) (accessed on 30 November 2019).
26. Holzberger, D.; Philipp, A.; Kunter, M. How teachers' self-efficacy is related to instructional quality: A longitudinal analysis. *J. Educ. Psychol.* **2013**, *105*, 774–786. [\[CrossRef\]](#)
27. Lunenberg, M.; Willemse, M. Research and professional development of teacher educators. *Eur. J. Teach. Educ.* **2006**, *29*, 81–98. [\[CrossRef\]](#)
28. Hosford, S.; O'Sullivan, S. A climate for self-efficacy: The relationship between school climate and teacher efficacy for inclusion. *Int. J. Incl. Educ.* **2016**, *20*, 604–621. [\[CrossRef\]](#)
29. Sundie, D.; Peters, M.; Schumacher, G. Principal self-efficacy, school climate, and teacher retention: A multi-level analysis. *Alta. J. Educ. Res.* **2017**, *63*, 357–378.
30. Gruenert, S. School Culture: They Are Not the Same Thing. 2008. Available online: <https://www.naesp.org/sites/default/files/resources/2/Principal/2008/M-Ap56.pdf> (accessed on 1 December 2019).
31. Creswell, J.W. *Educational Research—Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, 4th ed.; Pearson Merrill Prentice Hall: Upper Saddle River, NJ, USA, 2010.
32. National School Climate Center. *The Comprehensive School Climate Inventory*; National School Climate Center: New York, NY, USA, 2008.
33. Loukas, A. What Is School Climate? *Leadership Compass*. Available online: <http://www.naesp.org/ContentLoad.do?contentId=2311&action=print> (accessed on 5 October 2020).
34. Thapa, A.; Cohen, J.; Guffey, S.; Higgins-D'Alessandro, A. A Review of School Climate Research. *Rev. Educ. Res.* **2013**, *83*, 357–385. [\[CrossRef\]](#)
35. Wang, M.; Degol, J.L. School Climate: A Review of the Construct, Measurement, and Impact on Student Outcomes. *Educ. Psychol. Rev.* **2016**, *28*, 315–352. [\[CrossRef\]](#)
36. Creswell, J.W. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 4th ed.; SAGE Publications: Thousand Oaks, CA, USA, 2014.
37. Educational Planning and Research Division (EPRD). *Pelan Strategik ICT KPM 2011–2015 (ICT Strategic Planning MOE 2011–2015)*; Ministry of Education: Putrajaya, Malaysia, 2012.
38. Cohen, J. *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed.; Erlbaum Associates: New York, NY, USA, 1988. [\[CrossRef\]](#)
39. Pallant, J. *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS*, 6th ed.; Allen & Unwin: Sydney, Australia, 2016.

40. Bronfenbrenner, U. *The Ecology of Human Development: Experiments by Nature and Design*; Harvard University Press: Cambridge, MA, USA, 1979.
41. Lacks, P.K. *The Relationships between School Climate, Teacher Self-Efficacy, and Teacher Beliefs*; Liberty University: Lynchburg, VA, USA, 2016.
42. Maxwell, S.; Reynolds, K.J.; Lee, E.; Subasic, E.; Bromhead, D. The impact of school climate and school identification on academic achievement: Multilevel modeling with student and teacher data. *Front. Psychol.* **2017**, *8*, 1–21. [\[CrossRef\]](#)
43. Johnson, B.; Stevens, J.J. Student achievement and elementary teachers' perceptions of school climate. *Learn. Environ. Res.* **2006**, *9*, 111–122. [\[CrossRef\]](#)
44. Zullig, K.J.; Koopman, T.M.; Patton, J.M.; Ubbes, V.A. School climate: Historical review, instrument development, and school assessment. *J. Psychoeduc. Assess.* **2010**, *28*, 139–152. [\[CrossRef\]](#)
45. Malaysia, K.P. *Sarana Sekolah (School Facilities)*; Ministry of Education: Putrajaya, Malaysia, 2013.
46. Rapti, D. School Climate as an Important Component in School Effectiveness ÖNEMLİ. *Acad. Int. Sci. J.* **2012**, *69*, 110–125. [\[CrossRef\]](#)
47. Tableman, B. School climate and learning. *Best Pract. Briefs* **2004**, *1*, 1–10.
48. Samad, R.S.A.; Jamaluddin, S. Peranan Kepimpinan Guru Dalam Mempengaruhi Iklim Bilik Darjah (The Role of Teacher Leadership in Influencing Classroom Climate). *Educ. Probl.* **2005**, *28*, 79–95.
49. Mohd, N.H. Pembangunan Profesionalisme Keguruan Menerusi Penyeliaan Pengajaran Dalam Kalangan Guru-Guru Pendidikan Teknik Dan Vokasional (Teacher's Professional Development through Instructional Supervision among the PVT teachers). Bachelor's Thesis, Universiti Teknologi Malaysia, Skudai, Malaysia, 2014.
50. Barth, R.S. Improving relationships within the schoolhouse. *Educ. Leadersh.* **2006**, *63*, 8–13.
51. Crosnoe, R.; Cavanagh, S.; Elder, G.H. Adolescent Friendships as Academic Resources: The Intersection of Friendship, Race, and School Disadvantage. *Sociol. Perspect.* **2003**, *46*, 331–352. [\[CrossRef\]](#)
52. Hopson, L.M.; Lee, E. Mitigating the effect of family poverty on academic and behavioral outcomes: The role of school climate in middle and high school. *Child. Youth Serv. Rev.* **2011**, *33*, 2221–2229. [\[CrossRef\]](#)
53. Uline, C.; Tschannen-Moran, M. The walls speak: The interplay of quality facilities, school climate, and student achievement. *J. Educ. Adm.* **2008**, *46*, 55–73. [\[CrossRef\]](#)
54. Bandura, A. *Self-Efficacy: The Exercise of Control*; W.H. Freeman: New York, NY, USA, 1997. [\[CrossRef\]](#)
55. Mcleod, R.P. An Examination of the Relationship between Teachers' Sense of Efficacy and School Culture. Ph.D. Thesis, The University of Toledo, Toledo, OH, USA, 2012.
56. Beattie, S.; Woodman, T.; Fakehy, M.; Dempsey, C. The role of performance feedback on the self-efficacy–performance relationship. *Sport Exerc. Perform. Psychol.* **2016**, *5*, 1. [\[CrossRef\]](#)
57. Lopez-Garrido, G.; Self-Efficacy. Simply Psychology. 2016. Available online: <https://www.simplypsychology.org/self-efficacy.html> (accessed on 2 January 2021).
58. Kolbe, K.; Self-Efficacy Results from Exercising Control over Personal Conative Strengths. Wisdom of the Ages. 2009. Available online: <https://e.kolbe.com/knol/index.html> (accessed on 2 January 2021).
59. Fredricks, J.A. *Eight Myths of Student Disengagement: Creating Classrooms of Deep Learning*; Sage Publication: Thousand Oaks, CA, USA, 2014.
60. Persinski, J.L. The Impact of Teacher Efficacy and Student Engagement on Eleventh-Grade South Carolina U.S. History and Constitution End-Of-Course State Exam Scores. Ph.D. Thesis, Gardner-Webb University, Boiling Springs, NA, USA, 2015.
61. Cason, M. The Impact of Student Engagement, Instructional Strategies and Classroom Management on Self-Efficacy of Christian Private School Teachers. Ph.D. Thesis, Liberty University, Lynchburg, VA, USA, 2018.
62. Tschannen-Moran, M.; Hoy, A.W.; Hoy, W.K. Teacher Efficacy: Its Meaning and Measure. *Rev. Educ. Res.* **1998**, *68*, 202–248. [\[CrossRef\]](#)
63. Djigic, G.; Stojiljkovic, S. Classroom management styles, classroom climate and school achievement. *Procedia Soc. Behav. Sci.* **2011**, *29*, 819–828. [\[CrossRef\]](#)
64. Emmer, E.T.; Hickman, J. Teacher efficacy in classroom management and discipline. *Educ. Psychol. Meas.* **1991**, *51*, 755–765. [\[CrossRef\]](#)
65. Faizul, M.; Noor, M.; Omar, M.S.; Hussin, F. Hubungan Iklim Sekolah Dan Stres Guru Sekolah Menengah Di Daerah Kuala Nerus, Terengganu (The Relationship School Organization Climate and Secondary School Teachers' Work Morale at Kuala Nerus District, Terengganu). *Proc. ICECRS* **2016**, *1*, 39–48. [\[CrossRef\]](#)
66. Ibrahim, H.B.; Ismail, S.N.B.; Kasim, M.A.B.M.; Mohammad, S.B. Iklim Sekolah Dan Efikasi Kendiri Dalam Kalangan Guru Bimbingan Dan Kaunseling Sekolah Menengah Di Kelantan (School Climate and and Self-Efficiency among Secondary School Guidance and Counseling Teachers In Kelantan). *Proc. ICECRS* **2016**, *1*, 1033–1042. [\[CrossRef\]](#)
67. Yusoff, S.M.; Saidin, K. Tahap Iklim Sekolah, Tahap Komitmen Guru Serta Hubungan Di Antara Iklim Sekolah Dengan Komitmen Guru Sekolah-Sekolah Menengah (School Climate Level, Level of Teacher Commitment and the Relationship between School Climate and Secondary School Teachers' Commitment). *Proc. ICECRS* **2016**, *1*, 635–646. [\[CrossRef\]](#)
68. Fei, E.L.E.; Han, C.G.K. Hubungan Kepimpinan Pengetua dan Iklim Sekolah dengan Motivasi Guru (The Relationship between Principal Leadership and School Climate with Teachers' Motivation). *Malays. J. Soc. Sci. Humanit.* **2018**, *3*, 1–16.
69. Corcoran, T.B.; Walker, L.J.; White, J.L. *Working in Urban Schools*; Institute for Educational Leadership: Washington, DC, USA, 1988.



70. Lowe, J. *The Interface between Educational Facilities and Learning Climate in Three Elementary Schools*; Texas A&M University: College Station, TX, USA, 1990.
71. Bowers, A.J.; Urick, A. Does High School Facility Quality Affect Student Achievement? A Two-Level Hierarchical Linear Model. *J. Educ. Financ.* **2011**, *37*, 72–94. [[CrossRef](#)]
72. Johari, K. Perkembangan Efikasi Guru Sekolah Menengah Di Sabah (Development of Secondary School Teachers' Efficacy in Sabah). *J. Humanit.* **2012**, *20*, 32–43.
73. Yahya, R.; Samsuddin, N.; Jizat, J.E.M.; Krishnan, H. Hubungan Antara Latihan Dalam Perkhidmatan Dan Efikasi Kendiri Guru (The Relationship between In-Service Training and Teacher Self-Efficacy). *Int. J. Educ. Psychol. Couns.* **2017**, *2*, 34–45.
74. Mohd, A.B.; Nawawi, A.B.M.; Ismail, D.S.N.B. Tahap Efikasi Guru Dan Hubungannya Dengan Pencapaian Sekolah Di Sekolah-Sekolah Menengah Dalam Daerah Bachok (Level of Teacher Efficacy and Its Relationship with School Achievement in Secondary Schools, Bachok District). *Proc. ICECRS* **2017**, *1*, 25–27. [[CrossRef](#)]
75. Yahya, N.; Baharudin, H.; Hamzah, M.I. Efikasi Kendiri Guru Dalam Pengajaran Bahasa Arab (Teacher Self-Efficacy in Teaching Arabic). *Malays. Online J. Educ.* **2018**, *2*, 10–17.
76. Shiang, Y.Y. Gaya Kepimpinan Inovatif Guru Besar Dan Tahap Efikasi Guru Di Daerah Melaka Tengah Negeri Melaka (The Innovative Leadership Style of Headmaster and Level of Teacher Efficacy in Central Melaka District, Melaka). Master's Thesis, Universiti Kebangsaan Malaysia, Selangor, Malaysia, 2018.
77. Ismail, A.; Yen, L.H.; Abdullah, A.G.K. Komuniti Pembelajaran Profesional Dan Efikasi Kendiri Guru Sekolah Menengah Di Pulau Pinang (Professional Learning Community and Self-Efficacy among Secondary School Teachers in Penang). *J. Educ. Leadersh.* **2015**, *2*, 1–12.
78. Haron, S. Hubungan Antara Efikasi Kendiri Kaunselor Dengan Iklim Sekolah (The Relationship between Counselor Self-Efficacy and School Climate). Master's Thesis, Universiti Putra Malaysia, Serdang, Malaysia, 2010.
79. Haron, S.; Jaafar, W.M.W.; Baba, M. The influence of school climate towards counselor's self-efficacy. *Procedia Soc. Behav. Sci.* **2010**, *5*, 445–448. [[CrossRef](#)]
80. Hashim, H.; Nasri, S.M.M.; Mustafa, Z. Cabaran Yang Dihadapi Oleh Guru Dalam Pelaksanaan Persekitaran Pembelajaran Maya Frog Di Bilik Darjah (Challenges Faced by Teachers in the Implementation of the Frog Virtual Learning Environment in the Classroom). *Asia Pac. J. Educ. Educ.* **2016**, *31*, 115–129. [[CrossRef](#)]