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Predictors of the Higher Education Psychosocial Learning Environment: Students' Perspectives

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ABSTRACT: Research indicates that the psychosocial learning environment in higher education substantially influences the quality of teaching and learning by shaping classroom instructional practices. However, the extent to which teachers' communication style, classroom management strategies, and the classroom physical environment predict the learning climate remains largely unexplored. Using the structural equation modelling technique, this study aimed to determine how these factors predict the psychosocial learning environment in Ghanaian public universities. A cross-sectional survey design was adopted, involving 403 students from four public universities in Ghana. Exploratory and confirmatory factor analyses validated the conceptual framework of the psychosocial learning environment. Structural equation modelling revealed that teachers' communication style and classroom physical conditions positively and significantly predict the psychosocial learning environment in higher education. The study concludes that teachers' classroom management style and physical environment jointly play critical roles in shaping the psychosocial learning environment, which encompasses students' sense of belonging, emotional support, involvement, cohesiveness, interactions, cooperation, satisfaction, and task orientation. The researcher argue that these factors are essential and should be prioritised to enhance the higher education psychosocial learning environment. Teachers and higher education authorities must take deliberate steps to improve the classroom physical environment by providing necessary facilities and resources that ensure student comfort and security. Furthermore, improving the communication style and effectiveness of higher education teachers should be a key focus in initiatives aimed at enhancing teaching, learning, and student welfare. Future research should explore the impact of the psychosocial learning environment on students' motivation and self-reported academic achievement."

KEYWORDS: Psychosocial learning environment, teachers' communication style, classroom management style, classroom physical environment, higher education.

INTRODUCTION

Teaching is a fundamental aspect of higher education service delivery. Most higher education institutions assess teacher and teaching effectiveness based on students' learning outcomes. However, research has documented a wide range of factors beyond classroom teaching that contribute to students' learning outcomes. These factors include teacher characteristics (Cole & Knowles, 2000; Norton et al., 2005; Schönwetter, Sokal, Friesen, & Taylor, 2002), the effectiveness of classroom instructional practices (Amakyi & Adu-Aboagye, 2016; Amartey & Yalley, 2020; Yidana & Darkwa, 2024), school environmental conditions (Guneya & Al, 2012), home or family support (Chowa et al., 2013), and the classroom learning environment (Liberante, 2012). Research has also evaluated predictors of teacher effectiveness (Blazar, 2017) and perceptions of the effect of psychosocial factors in the classroom environment on students' academic achievement (Aji et al., 2021). Limited research appears to have examined possible predictors of the psychosocial learning environment in higher education, despite its fundamental role in shaping students' overall learning experiences."

Research studies (Phillips et al., 2010; Bronfenbrenner, 2005; Hughes & Chen, 2011) suggest that the psychosocial learning environment in higher education has a substantial impact on quality teaching. For instance, Hughes and Chen (2011) found that the classroom psychosocial environment significantly influences the types of instructional practices adopted in the classroom. The teacher-student connection serves as the foundation and social context in which teaching and learning occur. Furthermore, among the multiple reasons for student dropout in higher education, previous research has demonstrated a strong relationship between positive psychosocial environments, students' academic satisfaction, and study completion (Grøtan et al., 2019; Lipson & Eisenberg, 2018; Truta et al., 2018). Moreover, research concludes that a sense of belonging and the quality of psychosocial learning environments are key determinants of study progress, as well as intended or actual dropout in higher education (Foss, 2014)."

Thus, considering the critical role of the psychosocial learning environment in higher education in fostering students' learning outcomes, this study sought to identify the predictors of a psychosocial classroom learning environment in higher education. It

addresses a gap in the literature by employing the Structural Equation Modeling (SEM) technique to examine factors that predict the psychosocial learning environment. It is the first study to examine how the classroom physical environment, teachers' communication style, and classroom management style predict the psychosocial learning environment in higher education within the Ghanaian context using the SEM technique.

Knowledge of the predictors of the psychosocial learning environment in higher education will inform policy decisions regarding which factors to prioritize to enhance students' learning outcomes. In particular, higher education authorities should aim to create a psychosocial learning environment that transcends traditional classrooms and is specifically designed to support critical thinking. In other words, authorities should create a psychosocial learning environment meticulously designed to stimulate critical thinking, expand students' horizons, and adapt to their individual needs. Learners aspire to be active participants in an educational environment that fosters intellectual growth and provides a sense of accomplishment. They seek interaction, adaptability, and meaningful engagement with both peers and instructors.

Purpose of the Study

The study sought to determine the predictors of Higher Education Psychosocial Learning environment.

LITERATURE

Higher Education Psychosocial Learning Environment

A psychosocial learning environment is commonly defined as the relationship between a student's psychological development and his/her engagement with the social environment (Che Ahmad et al., 2013). The term is frequently used to describe the distinct processes that emerge from an individual's interactions with his/her surroundings. According to Fraser (1994), the psychosocial environment encompasses relationships between instructors and students, as well as interactions among students and their settings. It reflects the size and character of the class, as well as the interactions among students and between students and the teacher.

Creating an atmosphere of respect and rapport among students and with the teacher, fostering a culture of learning, ensuring sustained emotional support, regulating classroom procedures, managing student behaviour, and organizing the physical space are all integral aspects of the classroom's psychosocial environment.

Dimensions of the Classroom Psychosocial Learning Environment

A review of the literature has revealed different dimensions of the classroom psychosocial learning environment. Dorman (2009) identified 7 dimensions: student affiliation, interactions, cooperation, task orientation, order and organization, individualization, and teacher control. Özüdoğru (2019) suggested some aspects of the classroom psychosocial environment such as satisfaction, cooperation, student involvement, task orientation and student cohesiveness. These aspects are frequently the primary focus of prior research into the sequences of effects and impacts obtained by the connection on the student's academic progress. Taylor, Fraser and Fisher (1997), Fraser and Treagust (1986) mentioned satisfaction, cooperation involvement, task orientation, students' cohesiveness and difficulty as properties of the classroom Psychosocial environment. The 'satisfaction' property of the classroom environment is about whether students enjoy class tasks or not. 'Cooperation' property of the classroom environment is about the cooperation of students rather than being in a race with each other while conducting in-class tasks. The 'involvement' property of the classroom environment is about students' participation in different activities like class discussions, their interest in the course, conducting research willingly, doing additional studies. Besides, when the 'task orientation' property of the classroom environment is taken into consideration, it is important to complete arranged activities and continue working on the tasks related to the course. The 'student cohesiveness' property of the classroom environment is about the intimacy of relationships and related to how well students know each other, how much they help when anyone needs, and how much they support each other while conducting class tasks. The 'difficulty' property of the classroom environment is stated as to whether students find the work hard or not. The trust of this current research is to determine the predictors of these different dimensions of the higher education classroom psychosocial learning environment. Thus, the dimensions of the higher education classroom learning environment which this study has considered include sense of belongingness, emotional support, involvement, cohesiveness, interactions, cooperation, satisfaction and task orientation

Conceptual Framework and Hypothesis

A review of the literature indicates a wide range of factors that seem to predict the various dimensions of the classroom psychosocial learning environment. Some of these factors include teachers' communication style (Winters 2014), teachers' classroom management style (Sterling, 2009), and the classroom physical environment (Sterling, 2009). Based, on this review, a conceptual framework is built suggesting the relationship among the various predictors and their overall relationship with the psychosocial learning environment. The framework also depicts the relationship between the psychosocial learning environment and students' perceptions of their academic achievements. The framework is shown in Fig. 1.

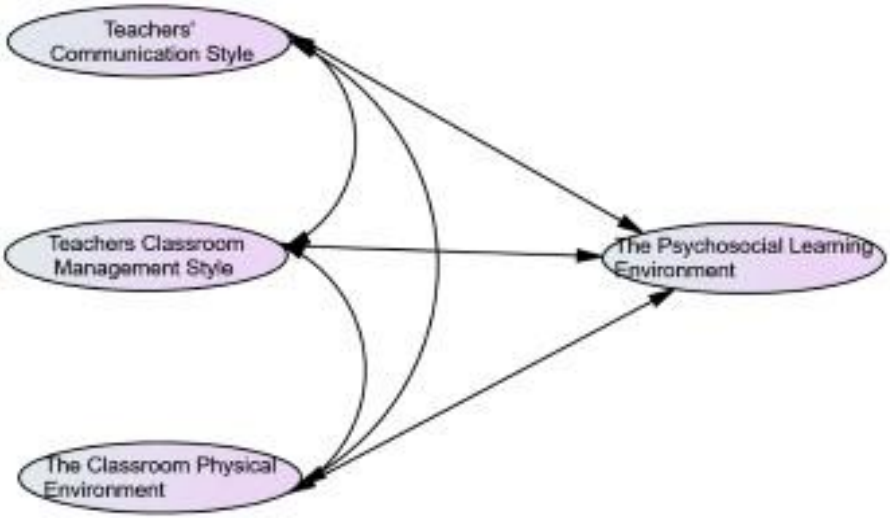

Figure 1. Conceptual framework of the psychosocial learning environment

Classroom communication is an interaction between the teacher and the students in the classroom through verbal, nonverbal and written. Through communication, members of the classroom share thoughts with one another. It is a tool that is used in the classroom to inform, motivate, suggest, order warn or change behaviour. Classroom communication is also a vital tool for establishing better relationships, to make interaction meaningful and make oneself understood. Communication makes learning easier, helps students achieve goals, increases opportunities for expanded learning, strengthens the connection between student and teacher, and creates an overall positive experience. Communication skills are most vital for interactions with students, because the act of teaching itself requires them. Teachers are responsible for understanding and synthesising complex information, conveying this information clearly to students in a manner that sustains their attention, and listening to and resolving their questions or problems. Teachers are expected to use communication as a strategy to create a psychosocial learning environment in the classroom. For instance, teachers are to adapt content for different learning styles, motivate students to learn, build emotionally supportive relationships using encouragement and empathy, manage the classroom, give feedback and make classroom a safe and supportive learning environment through effective communication strategies. This supportive learning environment should in turn enhance students learning outcomes. Thus, the model hypothesised a positive predictive power of teacher communication style on the psychosocial learning environment. There have been a large number of research findings (Freeman, Anderman & Jensen, 2007; Frisby & Martin, 2010; winters 2014) that support this hypothesis. Winters (2014) for instance found that a favourable atmosphere and a sense of belonging in the classroom are influenced by effective communication. He argues that students in these supportive classes are able to express themselves freely and honestly in non-judgmental ways, allowing deep friendships to form. Worley, Titsworth and Cornett-Devito, (2007) additionally provide evidence that indicate a correlation between interpersonal communication and the classroom atmosphere. Teven and McCroskey (1997) further discovered that teachers strive to "promote a sense of connection in the classroom through communicative acts such as caring. Worley et al. (2007) recognise the ability to create a coherent classroom atmosphere as a skill needed of teachers who display instructional communication competency. Numerous studies (Darling & Civikly, 1987; Gordon, 1988; Teven & Monte, 2008; Johnson, 2009; Trees, Kerssen-Griep & Hess 2009; Forward, Czech & Lee, 2011) have also been conducted to establish the relationship between these positive communication activities, the development of a supportive classroom environment and students perceived academic achievement. The trust of this paper is to determine the extent (significance) to which teachers communication style in the classroom predict the classroom psychosocial learning environment.

Classroom management refers to a set of skills and strategies used by teachers to ensure that classes run smoothly, that disruptive student behaviour is minimized, and that instructional materials and activities enhance learning. The ultimate objective is to make sure that both students and teachers get the most out of their classroom experience. Good classroom management should aim to create an organised and functional psychosocial learning environment for the teacher and students, establish opportunities for academic learning and personal growth, reduce bad classroom behaviour and other disruptions ensures that students are focused, motivated, and productive. Effective classroom management should further promote an inclusive environment that caters for all ability levels. All in all, effective classroom management should engender a positive psychosocial learning environment that facilitates the learning experience of students. Classroom management has thus been hypothesised to be a predictor of the psychosocial learning environment. The hypothesis conforms to Sterling (2009), and Oliver (2007) contention that teachers' ability to organize classrooms and manage divergent students' behaviour is critical for achieving positive psychosocial learning environment.

The physical learning environment refers to the space, equipment, facilities or resources in the classroom. Lehtinen (1997), argues that this concept should embrace a much more complex structure which includes teaching materials, information sources and events

outside the classroom, where students can participate directly and virtually in the learning process. Researchers (Hutchinson 2003; Baafi, 2020) contends that the physical learning environment in the classroom includes the spatial arrangement of furniture, walls, ceiling, chalkboard, lighting, fittings, classroom temperature, seating comfort, background noise, visual distractions, tutorials, seminars decorative and all the physical enablers of teaching and learning in the classroom. These environmental factors can affect learners' comfort, security, concentration and motivation. Thus, a conducive physical environment is an agent of intellectual stimulation and an essential factor in strengthening students' learning outcomes (Baafi, 2020). To the extent that the physical environment of the classroom engenders comfort, security and sense of belongings, its effective management should provide the needed psychosocial climate that is conducive for learning. The classroom physical environment has thus been hypothesised to predict the psychosocial learning climate. The trust of this paper is to determine the extent to which the various factors predict the higher education learning environment.

Hypothesis

The following hypothesis was set to guide the study.

1. H_1: Teachers' classroom management style positively and significantly predicts higher education psychosocial learning environment.
2. H_1: Teachers' communication style positively and significantly predicts higher education psychosocial learning environment.
3. H_1: The classroom physical environment positively and significantly predicts higher education learning environment.

METHODOLOGY

Research design

The researcher employed the descriptive cross-sectional survey design for the study because the purpose was to determine the predictors of higher education psychosocial learning environment. This purpose made it suitable to use the descriptive survey design because as Cohen, Manion and Morrison (2007) indicated, "such studies look at individuals, groups, institutions, methods and materials in order to describe, compare, contrast, classify, analyse and interpret the entities and the events that constitute their various fields of inquiry". The researcher was only interested in determining relationship among the various elements that contribute to higher education psychosocial learning environment without any manipulation of the variables. That is to say that in using the cross-sectional research design, the interest of the researcher was not to manipulate the variables but just determine and describe the relationship that exists among them.

Population, Sample and Data Collection

The population for the study was all final year students in public universities in Ghana during the 2020/2021 academic year. Final year student's population in the sixteen (16) public universities was estimated at 25, 871. This population was targeted for the study because the students had been in the universities for well over three years and had experienced a lot more of university life than the rest of the undergraduate students. Thus, they stood a better chance of giving valid perception of the higher education psychosocial learning environment. To guarantee that each student had an equal chance of being chosen for the research, probability sampling procedures namely, the stratified and simple random sampling techniques were employed in sampling the students. In all, a total of 403 students made up of 213 males and 190 female students from 4 public universities were sampled to take part in the study. The sample size was determined using the Krejcie and Morgan (1970) table of sample size determination.

The researcher employed a questionnaire to collect the data. To provide a simple and rapid answer to the questionnaire items, each section's items were composed entirely of closed-ended statements using the Likert Scale: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) formats.

The instrument was developed based on the recommendation of Churchill's (1979). The first step as recommended by the author was review of literature. Literature related to previous models of HE teaching was reviewed and questionnaire items covering the various domains of higher education psychosocial learning environment were developed. A 24-item questionnaire which incorporated the output of literature review, focus group discussions and experts inputs was then developed.

The questionnaire consisted of two sections. Section A dealt with students' demographic details such as age, religious affiliation and gender. Section B dealt with classroom management, classroom physical environment teachers' effective communication strategy and psychosocial learning environment.

A total of 206 students were then sampled and used in the pilot testing of the instrument. The Sample was taken from the C. K. Tedam University of Technology and Applied Science. These students (3rd and final year students) were admitted to the university to study mathematics with an emphasis on Economics. The sample averaged 17.0 years of age and had a standard deviation of 0.50 years. The pilot test's objective was to establish if the questionnaire's items accurately represented the constructs they were supposed

to measure. To this end, exploratory factor analysis, validity and reliability tests were done to determine the suitability of the data for confirming the hypothetical model of the psychosocial learning environment.

Following the factor analysis, the 24 items were reduced to 12 and condensed into 4 factors. The data were first of all screened for univariate outliers. No extreme univariate outliers were found. The minimum amount of data for factor analysis was satisfied, with a final sample size of 206. Initially, the factorability of the 24 items was investigated. The determinant of the correlation matrix was .345 indicating good multicolinearity over the lower threshold of 0.0001(Field, 2018). This suggests high intercorrelations among the various items of each of the constructs. Second, the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy was .558, which was slightly lower than the frequently suggested value of .6 (Tabachnick & Fidel, 2013), and the Bartlett's test of sphericity was significant (2 (66) =386.367, p<.001). The Cronbach Alpha Reliability Coefficient for the constructs average .784 indicating strong internal consistency among the test items.

Having established the reliability and factorability of the 24 item questionnaire, the Principal Components Analysis (PCA) was used to identify and compute composite scores for the factors underlying the Higher Education Psychosocial Learning Environment. The Scree Plot shown in Figure 2 shows the number of factors that were determined after the analysis.

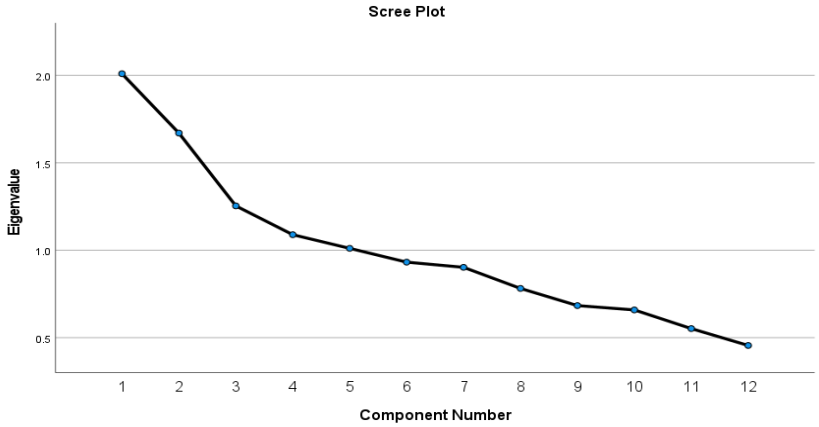

Figure 2. Scree Plot

As shown in the diagram, the curve flattens after the 3 factor suggesting that only 3 factors were sufficiently loaded unto the various items. The 3 factors explain 50.189% of variance in the model. Items that loaded onto each of the constructs are presented in Table 1

Table 1. Factor loadings

		Component			
	Item	1	2	3	4
CM1	Teacher control over disruptive students behaviour			.600	
CM4	Teacher enforces classroom rules and regulations			.507	
CM2	Teacher has good strategy in group management			.772	
CPE4	Classroom has all resources I require to learn	.747			
CPE5	Classroom is comfortable to sit and learn	.644			
CPE6	I feel secured when in class.	.762			
ECS1	Free interaction and communication is encouraged in the class		.691		
ECS2	Teacher offers immediate feedback for all questions and queries		.656		
ECS4	Teacher uses words of encouragement as a motivation during lessons		.701		
CSE3	I feel a sense of belongingness in this class				.630
CSE5	I feel emotionally supported in this class				.820
CSE6	I feel satisfied and comforted in this class,				.514

RESULTS AND DISCUSSION

This study was undertaken to determine the predictors of higher education psychosocial learning environment. Three (3) hypotheses were formulated to guide the study. To test this hypothesis the structural equation modelling method was used. Table 2 shows the results of the hypothesis

Table 2. Results of hypothesis test

Hypothesis	Indigenous Variable	Direction	Exogenous Variable	Estimate	S.E.	C.R.	P
H_1	Psychosocial Learning Environment	<---	Classroom Management	.028	.067	.424	.671
H_2	Psychosocial Learning Environment	<---	Effective Communication Strategy	.149	.075	1.982	.047
H_3	Psychosocial Learning Environment	<---	Classroom Physical Facilities	.169	.062	2.727	.006

Hypothesis 1

Teachers' classroom management style positively and significantly predicts higher education psychosocial learning environment. The research sought to determine whether teachers' classroom management style positively and significantly predicts the higher education psychosocial learning environment. The results as presented in Table 2 shows that teachers' classroom management style does not significantly predict the higher education psychosocial learning environment (ß= .149, p=.67). The hypothesis of a positive and significant predictive power of classroom management style on the psychosocial learning environment is thus rejected. The implication is that as teachers improve their classroom management styles by 1 standard deviation unit, the higher education psychosocial learning environment improves insignificantly by .028l. It implies that teachers' classroom management style doesn't have a significant impact on the psychosocial learning environment, or that there may be other variables not accounted for in the model that is driving the relationship. Oliver et al. (2007) had earlier on contended that teachers' ability to organize classrooms and manage divergent students' behaviour is critical for achieving positive psychosocial learning environment. While the current study results agree with this contention, the classroom management abilities potency in influencing the psychosocial learning environment is limited. Other factors might significantly impact the psychosocial learning environment other than classroom management. Therefore higher education authorities should not consider only the classroom management style of the teacher in their bid to improve the psychosocial learning environment.

Hypothesis 2

Teachers' communication style positively and significantly predicts higher education psychosocial learning environment. The study further sought to determine whether the teachers' communication style positively predicts the higher education psychosocial learning environment. As indicated in Table 2, the results show that teachers' classroom communication style significantly predicts the higher education psychosocial learning environment (ß= .149 , p= .047). Thus, the study fails to reject the hypothesis that teachers' communication style positively and significantly predicts the higher education psychosocial learning environment. The implication is that as higher education teachers improve their classroom communication style by 1 standard deviation unit, the higher education psychosocial learning environment improves significantly by .149. This implies that the communication style of the teacher has a significant impact on the psychosocial learning environment. The results are expected because the teacher-student interaction as well as the student-student interaction "promotes a sense of connection in the classroom through communicative acts such as caring (Teven & McCroskey1997). This sense of care in turn creates a sense of comfort, belongings and satisfaction all of which constitute the psychosocial learning environment. The results of this study confirm previous research finding studies (Teven & Monte, 2008; Johnson, 2009; Trees, Kerssen-Griep & Hess 2009; Forward, Czech & Lee, 2011) of a significant relationship between positive communication activities and the development of a supportive classroom environment. Since communication style is a significant predictor of the higher education psychosocial learning environment, higher education authorities must place premium in improving teachers' communication strategies in order to create the needed psychosocial environment conducive to learning.

Hypothesis 3

The classroom physical environment positively and significantly predicts higher education learning environment. The study additionally sought to determine whether the classroom physical environment significantly predicts higher education psychosocial learning environment. Results of the analysis suggest that the classroom physical environment positively and significantly predicts the psychosocial learning environment(ß= .169, p= .006). The researcher fails to reject the hypothesis that "The classroom physical environment positively and significantly predicts higher education learning environment". It means that as the quality of the classroom physical environment improves by 1 standard deviation units, the psychosocial learning environment improves significantly by .169. This implies that the classroom physical environment has a significant impact on the psychosocial learning

environment. The results conform with Dees (2007) contention that factors such as seating arrangements (whether the room allows students to be grouped and arranged in a variety of ways, or is more rigid), technology available (teacher's station with projector, Internet access, as well as wireless access and power supplies for student laptops), or basic human comforts, such as appropriate heating, cooling, and lighting, cooling, or lighting significantly impact the classroom psychosocial learning environment. Thus, it is important for teachers and authorities of higher education to put in place the necessary classroom facilities and equipment that will create the needed comfort and security for students to learn. Dorman (2009) suggests that this arrangement will go a long way to affect the organisation and orderliness of the classroom which is an important aspect of the classroom psychosocial learning environment.

Fitness of the Hypothetical Model

Initial examination of model was done to ascertain of the data to the theoretical model. The model fit indices are all within specifications (Hair, et al., 2006). CMIN/DF is 1.773; p = 0.093 (spec. < 3.0), GFI = 0.873 (spec. > 0.90), NFI = 0.932 (spec. > 0.90), CFI = .961 (spec. > 0.90), and RMSEA = 0.054 (spec. < 0.05). By implication, the psychosocial environment conceptual model was deemed a good fit model and therefore could be used to do further analysis of the structural relationships. The final model of the psychosocial learning environment is presented in Figure 2.

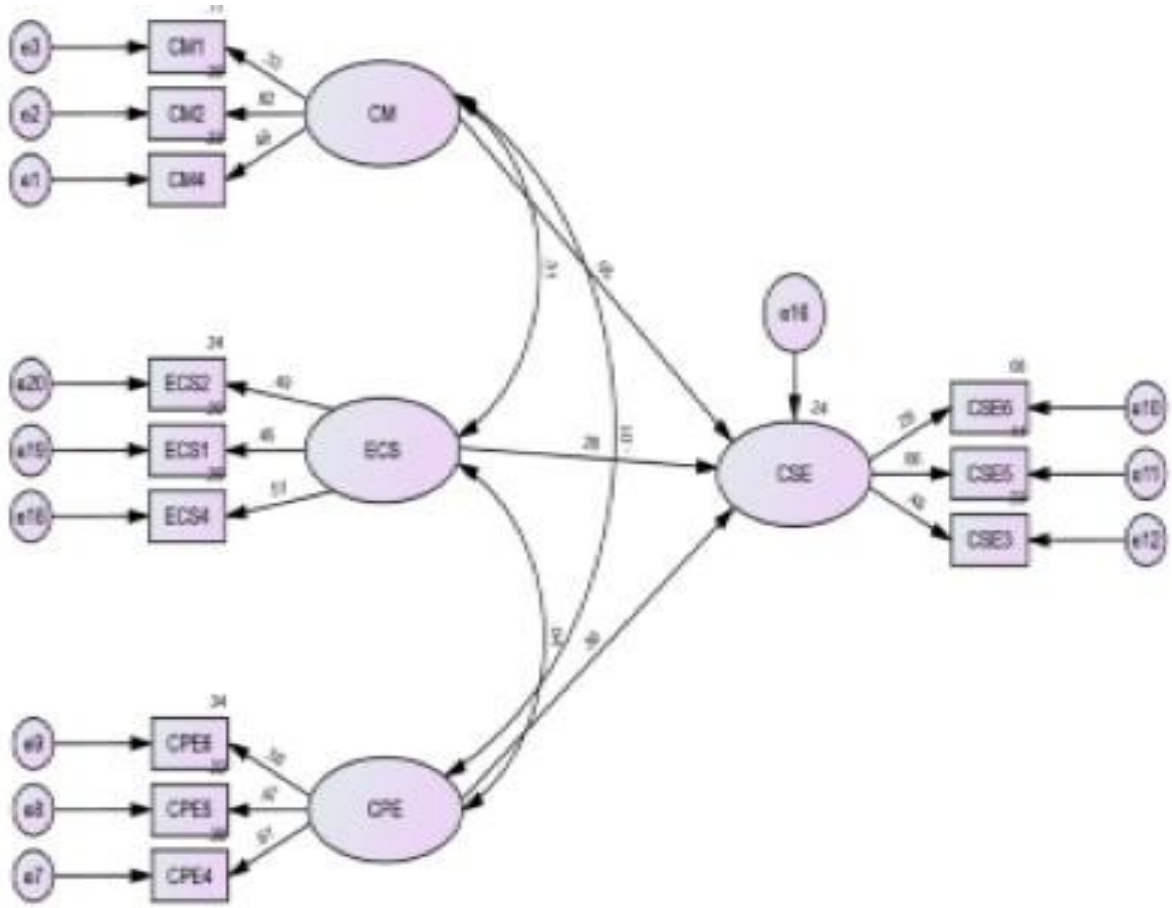

Figure 3. A model of Higher Education Psychosocial Learning Environment

CONCLUSION

From the results it can be concluded that teacher's communication style and the classroom physical environment positively and significantly predict higher education psychosocial learning environment. However, classroom management style of the teacher does not significantly explain the higher education psychosocial learning environment.

RECOMMENDATIONS

Teachers and higher education authorities must take steps to improve upon the classroom the classroom physical environment by putting in place the needed facilities and resources that will engender students comfort and security while in class. This will go a long way to create the needed psychosocial climate conducive for teaching and learning. The Communication style and effectiveness of higher education teachers must also be given a priority in efforts that are aimed at improving teaching, learning and welfare of

students. Future research should consider the impact of the psychosocial learning environment on students' motivation and self-reported academic achievement.

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