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Original Research

The Influence of Self-Regulated Learning and Institutional Climate on Academic Achievements of Teachers' College Education Students in Wollega Zones

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Abstract

This study used a correlational research method to evaluate the impact of institutional atmosphere and self-regulated learning on college students' academic attainment. Purposive sampling strategies were used to pick third-year students from the two teacher colleges of education in order to obtain a thorough picture of the students' academic achievement. Then, proportionately from each department and both sexes, 278 students were chosen using a stratified simple random sampling procedure. The registrar offices of the institutions provided a five-semester cumulative academic achievement, and data was gathered through questionnaires on self-regulated learning and institutional climate. The study's conclusions showed a correlation between students' academic success and self-regulated learning as well as the institutional climate. The results of the multiple regression analysis also demonstrated a strong relationship between the students' academic progress and the institutional atmosphere and self-regulated learning. Thus, it was determined that students' academic progress is positively impacted by self-regulated learning and the institutional climate.

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INTRODUCTION

For a long time, education was seen as a formal discipline, and it was commonly believed that pupils' limited intelligence was the reason they were unable to learn. Students were therefore required to go above their personal limitations in order to benefit from the school's curriculum. Subsequently, educators grappled with the existence of significant variations in each student's learning style and environmental background as the subject of individual differences in education drew broad attention (Chen, 2002; Zeigler et al. 2011; Zimmerman, 2002). Scholars have examined a range of non-cognitive skills, including self-regulation in learning and institutional climates, to explore why some students perform better than others and to comprehend variations in student performance levels. A variety of psychological traits and motivational practices, such as persistence, drive, self-control and self-regulation, diligent study habits, the educational environment, and other associated categories, are examples of these non-cognitive qualities. According to Kyllonen et al. (2011) and Rosen et al. (2010),

non-cognitive attributes are those abilities and characteristics that are academically significant but are not primarily cerebral or analytical in nature. Research suggests that school atmosphere and self-regulated learning are not necessarily a result of maturation or intelligence (Cobb, 2003; Zimermman, 2002; Winne quoted in Mezei, 2008). This means that when the environment is favourable and appealing for being active, self-regulation is a learnt behaviour rather than an innate one. As a result, students can benefit from and have engaging, active learning experiences when they are in a self-regulated learning environment.

In the study of learning and academic accomplishment, the idea of self-regulated learning is becoming more and more important. According to education and psychology researchers, students who engage in self-regulated learning must guide and evaluate their own learning (Duckworth et al., 2009; Wolter, 2010). In self-regulated learning, students assess their work, go over the useful techniques they used to complete it, and keep track of how well those strategies worked (Schunk, 2005 and Zumbrunn et al., 2011). Through self-regulated learning, students take control of their education, guide their own knowledge acquisition, and enhance their general academic performance (Zimmerman, 1990).

Cobb (2003) defined meta-cognitive strategies and cognitive strategies as two categories into which self-regulated learning strategies fall. Meta-cognition is conceptually defined as higher-order thinking entailing active regulation of the cognitive process involved in learning. According to studies, meta-cognition is a regulatory framework that consists of objectives, experiences, knowledge, and tactics (Cubukcu, 2009). Meta-cognitive methods assist students manage their affect, anxiety, and attention by addressing the behaviours they exhibit in the learning environment. Moreover, conscious cognitive or emotive experiences pertaining to any facet of an intellectual endeavour are referred to as meta-cognitive experiences. According to Cobb (2003), learners who exhibit metacognitive self-regulation plan, organise, self-instruct, self-monitor, and self-evaluate at various stages of their learning process. Understanding the importance of metacognitive concepts in education, Zimmerman (2002) made a strong case for the idea that self-regulated learning is directed by metacognitive concepts. While self-regulation entails managing one's time and study environment, controlling one's effort, learning from peers, and asking for assistance and support from others, cognitive strategies concentrate on information processing techniques like rehearsing, elaborating, and organising (Nevgi, 2002; Somtsewu, 2008). Students who effectively manage their time, use effective study techniques, and choose a suitable study space typically perform better academically in academic contexts (Yalew & Tilahun, 2013).

Students' academic performance is also influenced by the institutional climate, or favourable learning environment, in a manner similar to self-regulation. In its broadest sense, "school climate" can refer to a variety of factors, such as the physical characteristics of the building, the personalities of the teachers and students, academic achievement, levels of physical activity, and the tools and materials used in instructional procedures (Johnson,

1993). The concept of school environment is multifaceted, encompassing aspects related to the physical, social, and intellectual domains. The following categories of school climate dimensions were added: community, which includes relationships, connectedness, respect for diversity, and community partnership; academic, which includes leadership, teaching and learning, professional development; institutional environment, which includes environmental adequacy, structural organisation, and resource availability (Loukas, 2007).

According to research, school atmosphere is influenced by norms, objectives, values, interpersonal interactions, instructional strategies, organisational structures, and patterns of people's experiences with school life. In actuality, the educational environment differs greatly throughout organisations. While some schools have an inviting, appealing, and helpful vibe, others feel uncomfortable, unwelcoming, and even dangerous. "Norms, values, and expectations that support people feeling socially, emotionally, and physically safe" is the definition of a positive school climate (National School Climate Council, 2007). Furthermore, the quality of the interpersonal relationships between students, parents, staff, and administrators is also thought to influence the school atmosphere. Consequently, when everyone in the school shares the same values of respect and consideration for everyone, a happy and healthy school climate is created. The aspect of a school that encourages students to engage in self-regulated learning in order to improve their academic performance is known as the school environment.

Within the field of education, self-regulating students assess the tasks they are given, go over the strategies that will help them complete the tasks, put in the effort to finish the tasks, keep an eye on the effectiveness of their strategies based on the results, and examine their model for handling tasks that are similar in the future (Schunk, 2005; Zumbrunn et al., 2011). According to Toranno and Carmen (2004), self-regulated learning is therefore a combination of talent and will that needs work, time, and attention to keep students engaged because their learning environment is appealing in some way. Only then can self-regulation occur. Self-regulated learners therefore believe they are capable, self-sufficient, and independent (Schraw et al., 2006). As a result, self-regulated learning is seen as a non-cognitive component; rather, it describes a self-directed process by which students convert intellectual capacities into academic skills relevant to tasks in a supportive learning environment.

The interactions between teachers and students that foster trust and a strong dedication to academic performance are embodied by the institutional climate. Student-centered instructional techniques are supported by the collective teachers' faith in their students, which arises from responsible and engaged student behaviour. Teachers are more aware of students' needs, listen to their worries, show care in their overall development, and assist with their learning when students' trust is normative (Forsyth, 2011). The general sense of trust that students have in their teachers is a reflection of a long-standing pattern of behaviour on the part of teachers, which shows concern for the growth and welfare of their charges and internally

encourages self-control in the classroom in order to achieve better results. Consequently, student trust creates the relational framework necessary to transfer competence-building experiences and autonomy (Reeve, 2006). This study focuses on the impact of self-regulated learning and institutional climate on academic achievements of college students. It is evident that a variety of factors, including intellectual ability level, study habits, self-concept, socioeconomic status, and the standards and types of educational institutions in which students receive their education, can influence students' academic achievement.

Even while the usage of self-regulated learning, institutional climate, and smart learning environments is growing, there is a lack of theoretical understanding and empirical support for these notions. Lack of self-regulation in the classroom and the absence of a supportive institutional environment are two other important contributing factors to academic failure. According to certain earlier research (Matuga, 2009; Mezei, 2008; Wolters, 2010), students' involvement and persistence in academic tasks were predicted by self-regulated learning. From a pedagogical perspective, active learning involves the learners themselves planning, carrying out, regulating, controlling, providing feedback, and maintaining learning activities. By concentrating on these ideas, academics firmly emphasise that teaching students to become masters of their own learning ought to be one of the goals of education (Xu, 2008; Montalvo & Toress, 2004). The aim of education is to produce lifelong learners who possess the ability to generate, obtain, store, and recall knowledge on their own. These self-regulated learners can be identified by their methodical use of behavioural, motivational, and metacognitive strategies (Zimmerman, 1990). Strong metacognitive self-regulation tactics are used by students to set goals for the job at hand, ask questions to clarify their comprehension of the subject matter, and continuously modify their approaches based on how well they work (Kistantas et al., 2008).

Numerous research, like those by Mih and Mih (2010) and Martha (2016), have shown a strong correlation between students' academic success and self-regulation. In his research, Hunde (2013) also discovered that 52% of university distance learning students' critical reading was accounted for by contextual self-regulated learning mechanisms. The results of Kitsantas et al. (2008) likewise supported the notion that self-regulation learning accounted for almost 47% of the students' academic success.

According to Wang et al. (1997), school climate was also determined to be one of the major factors influencing students' academic progress. According to Freiberg and Stein (1999), the institutional atmosphere is what makes a school special and what makes instructors and students desire to work there. It is the essence of the school. One of the most important variables that affects student accomplishment in a way that is comparable to self-regulation learning is the school atmosphere. A positive institutional climate can foster an atmosphere where students can learn self-regulatedly, which will benefit their academic performance.

According to Birnbaum et al.'s 2003 study, there is a strong correlation between students' academic success and the institutional atmosphere. Academic achievement of pupils

is positively correlated with the quality of the educational environment (Berry, 2012; Marzano, 2003; Wentzel & Watkins, 2002). The quality of the school environment influences the attitudes of students, teachers, and staff; these attitudes then influence teaching and learning behaviours, which ultimately impact students' academic progress. In this sense, facility management systems determine the environmental quality in schools. Furthermore, the physical state of classrooms and the size of the class have a significant impact on the educational system (Gregory, 2010; Osher, 2010). For example, larger student-teacher ratio schools are associated with lower academic achievement, more negative teacher attitudes, and more student suspensions (Jimerson, 2012). Regarding this idea, Smith (2002) discovered that 33% of the variance in student math achievement may be explained by the institutional atmosphere.

But as noted by Miller (1993); MacNeil et al. (2009), there hasn't been much research on the relationship between institutional atmosphere and academic accomplishment among students. Furthermore, Yalew (2004) underlined in his study that until students' engagement in learning could degrade the quality of education, teachers must support students in developing their own unique learning strategies to get meaning from the interactions they make with their surroundings. This suggests that there hasn't been much focus on educating students about self-regulated learning in our educational system.

Furthermore, the study area does not particularly evaluate the worldwide impact of self-regulated learning characteristics and the institutional climate on students' academic accomplishment in the context of college students. Thus, this study adds to our understanding of the relationship between the academic success of teachers' education students in Wollega Zones and the institutional climate as well as students' self-regulated learning. Therefore, the study addressed the following fundamental research questions in light of its goal, which was to investigate the impact of institutional atmosphere and self-regulation learning on college students' academic accomplishment.

1. *How much is the academic success of college students connected with their ability to learn independently?*
2. *Is there a strong correlation between the academic success of college students and the institutional climate?*
3. *How much do the academic success of college students stem from the institutional climate and students' self-regulated learning style?*
4. *Does the academic achievement of students differ statistically significantly based on gender?*
5. *Does the academic achievement of students at different colleges differ statistically significantly?*

MATERIALS AND METHODS

Design of the Study

The impact of self-regulated learning and the institutional (school) environment on the academic achievement of college students in Wollega zones was investigated using a quantitative research methodology and correlational design. Third-year students at Nekemte and Shambu colleges of teacher

education were the study's target group. There are 750 pupils in total (N = 450; 222 males and 228 girls). Israel (1992) cited Yamane's (1967) formula to determine sample size. Subsequently, via stratified simple random sampling procedures, 287 students who responded to the formula were chosen to ensure representation from various departments.

Instruments

College students' self-regulated learning is assessed using Magno's (2010) Academic Self-Regulated Learning Scale (A-SRL-S). Thirty-one closed-ended items exhibited a high degree of reliability, and the majority of the items were heavily modified or transformed. 87 people were working. Every question is answered on a five-point Likert scale. 1 means never, 2 seldom, 3 occasionally, 4 frequently, and 5 constantly.

The institutional climate was assessed using the thirty-item School Climate and School Identification (SCASIM-St) scale developed by Moos (1973) and having a reliability coefficient of.90. A five-point Likert scale ranging from 1 (not at all) to 5 (always) was used for the item.

Based on the codes that students provided on the questionnaire, the registrar offices of the sample colleges provided the cumulative grade point average (GPA) of their students, which was used to calculate academic accomplishment.

RESULTS AND DISCUSSION

Results

Among the 278 participants in total, 141 (50.7%) were men and 137 (49.3%) were women. This demonstrates that there were an equal number of male and female responders.

In terms of age, 2 (0.7%) of the respondents were between the ages of 15 and 18, 204 (73.4%) were between the ages of 19 and 22, and 72 (25.9%) were between the ages of 23 and older. This suggests that young people make up the majority of college students.

Regarding the academic performance of the students, 185 (66.5%) of the respondents fell between the 2.00 and 2.99 cumulative grade point average range, followed by 35 (12.6%) in the range of 3.00 and 3.24, 53 (19.1%) in the range of 3.25 and 3.74, and 5 (1.8%) in the range of 3.75 and 4.00, with respect to academic achievement. Based on the data, the majority of students had cumulative grade point averages in the range of 2.00 to 2.99, with relatively few falling into the great distinction category. Regarding the college departments, there were 84 (30.2%), 79 (28.4%), and 115 (41.4%) in the natural science, social science, and language departments. This suggested that the majority of the students' study fields were within the department of natural science.

Table 1

Analysis of coefficient Correlations of Self-Regulated Learning and institutional climate with Academic Achievement

Variables	Academic Achievement	SRL	Institutional Climate
Academic Achievement	1	0.530**	0.424**
Self-regulated learning	0.530**	1	0.548**
Institutional Climate	0.424**	0.548**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Table 1 shows that student academic accomplishment in colleges is favourably correlated with both institutional climate and self-regulated learning (r =.530 and R =.42, P<0.01), respectively. This indicates a moderately direct link (Pearson, 1896; Ratner, 2009). This suggests that academic achievement will rise in tandem with an increase in students' self-regulated learning within a supportive institutional school climate. Additionally, the data indicates that self-regulated learning and institutional climate have a positive and moderate association (r =.548, p<0.01), demonstrating the interdependence of these two variables.

Multiple Regression Analysis

The dependent variables in multiple regression analysis are those that are jointly regressed against the criterion variable by several predictors. This study examined the impact of institutional atmosphere and self-regulated learning on students' academic attainment using standardised multiple regressions.

Table 2

Regression Analysis of SRL and Institutional Climate on Academic Achievement

	B	Std. Error	Beta	R^2	Adjusted R^2
(Constant)	-2.387	0.455		0.307	0.302
SRL	0.9	0.127	0.426		
Institutional Climate	0.289	0.091	0.191		

Dependent variable: Performance in the classroom, Constant, institutional atmosphere, and self-regulated learning are predictors.

The standardised multiple regression analysis of the impact of institutional atmosphere and self-regulated learning on students' academic achievement is displayed in Table 2 above. According to the findings, adjusted R2 = 30.2% was found at F (2, 275) = 60.844, P <.001. This suggests that 30.2% of college students' success and academic accomplishment can be attributed to both institutional atmosphere and self-regulated learning. Furthermore, as demonstrated in Table 2, institutional atmosphere provided a coefficient Beta of.191, whereas SRL had a considerable positive influence with a coefficient Beta of 0.426 to academic accomplishment. This suggests that students' CGPA rises by.426 for every standard deviation increase in the SRL and by.191 for every standard deviation increase in the institutional environment. This demonstrates that, although both institutional atmosphere and SRL influence students' academic success, SRL has a greater impact than the latter

.

Table 3

Independent t-test analysis of gender academic achievement

	Gender	N	Mean	Mean difference	Std. Deviation	t	df	Sig. (2-tailed)
cumulative GPA of 5 semester	Male	141	2. 80	0.49	0.40	8.036	276	0.01
	Female	137	2.31	0.49	0.36	8.048	274.184	0.01

Table 3 shows that there is a statistically significant difference in academic achievement across genders at t (276) = 8.036, p =.01. The mean difference in academic achievement between males and females is 0.49, indicating a considerable difference in academic accomplishment between the sexes. The mean value of males is 2.80, while the mean value of females is 2.31. This suggests that there were differences in the performance of the two student groups, with males outperforming girls.

Table 4

t-test on colleges students' academic achievement

	College	N	Mean	Mean Difference	Standard deviation	t-test		
						Df	T	Sig. (2tailed)
Academic Achievement	Shambu	111	2.63	0.12	0.943	276	1.063	0.289
	Nekemte	167	2.51		0.798			

There was no statistically significant difference in the academic achievement of students between the two colleges, according to the results of the independent t-test in Table 4 (t (276) = 1.063, p =.289). Given that the mean difference between the two institutions is only 0.12, which is not a significant difference, it indicates that students' intellectual achievement was almost equal in both.

Discussion

This study's primary goal was to investigate how college students' academic achievement is impacted by institutional atmosphere and self-regulated learning. The study's findings indicated that college students' academic achievement was positively and significantly connected with both institutional atmosphere and self-regulated learning. Previous research (Ziegler et al., 2011; Mango, 2011; Pintrich and De Groot, 1990) corroborated this result. They argued that there is a strong correlation between students' academic achievement and their capacity for self-regulated learning. For instance, Mih and Mih (2010) noted that whereas people with weak metacognitive skills are typically viewed as inept, those with strong metacognitive skills are correlated with successful academic performance. The prior research by academics Hoy & Hannum (1997), Smith (2002), and Tschannen et al. (2006), which demonstrated a modest association, also supports the institutional atmosphere.

The results of multiple regression analysis demonstrate that institutional atmosphere and self-regulated learning both positively and significantly impacted college students' academic success. This outcome is consistent with a local study on distance learning learners, which found that approximately 52% of university students' critical reading performance was attributable to behavioural, environmental, and personal self-regulated learning techniques (Hunde, 2013). Additionally, the current result somewhat

corroborates the findings of Kitsantas et al. (2008), who confirmed that self-regulation-related variables accounted for approximately 47% of the students' academic achievement; Ohio State (United States) also confirmed that school climate affects student academic achievement in math and accounted for approximately 33% of the variance in math academic achievement (Smith, 2002); with regard to gender differences, the results indicate a significant difference. This finding was in line with the findings of a study by Kitsantas et al. (2008), which showed that there was a gender difference in cumulative college (CGPA) in the sophomore year, with females achieving a higher CGPA.

The current findings regarding the academic performance gap between the two colleges indicate that there is not a statistically significant difference in academic achievement. It is more likely to be the case that there are no statistical disparities between the two colleges' student accomplishment results because both use similar teaching and evaluation strategies. The Regional Education Bureau oversees the creation of course materials in teacher education colleges in a highly centralised manner. Each module is developed under the Bureau's central supervision and approval. Furthermore, the pedagogical approaches and evaluation strategies employed in these universities are rather comparable, which may have mitigated disparities and anomalies.

CONCLUSIONS

Improving self-regulation learning procedures in a suitable institutional setting helps universities to encourage greater student involvement in their own education while also helping students attain their full potential in college. It was proposed that self-regulated learning techniques in a supportive college environment are especially crucial in college, since students are allowed more flexibility to participate in extracurricular activities and get ready to be critical thinkers. Therefore, it is possible to draw the conclusion that the two independent variables that were shown to be most significant for college students to closely monitor their learning in order to succeed academically were self-regulated learning and institutional climate.

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DECLARATION

There is no conflict of interest.

DATA AVAILABILITY STATEMENT

All data included in the article are available from the corresponding author upon request.

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