

A STUDY OF PREDICTORS THAT INFLUENCES ACADEMIC PERFORMANCE OF STUDENTS AMONG HIGHER VOCATIONAL COLLEGES IN YUNNAN PROVINCE, CHINA

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ABSTRACT

Academic performance in higher vocational colleges is influenced by multiple factors, including the learning environment, teacher characteristics, and students' self-efficacy. This study investigates the combined impact of these predictors on the academic success of students in vocational colleges in Yunnan Province, China. Using a mixed-methods research approach, data was collected through structured surveys and interviews with students and educators. The study examines the role of classroom infrastructure, instructional resources, faculty-student interactions, and teaching methods in shaping academic outcomes. Additionally, it explores how students' self-efficacy, motivation, and goal-setting behaviors contribute to their academic achievements. Findings reveal that a supportive learning environment, effective teaching strategies, and strong self-efficacy positively correlate with higher academic performance. However, challenges such as outdated assessment methods, inconsistent evaluation criteria, and limited institutional support hinder student success. The study emphasizes the need for policy reforms and pedagogical improvements to enhance student learning experiences. These insights contribute to educational development strategies and provide recommendations for optimizing vocational education practices in China.

Keywords: Academic Performance, Vocational Education, Learning Environment, Teacher Characteristics, Self-Efficacy, Yunnan, China

1. Introduction

Students in Yunnan, China, greatly benefit from receiving a higher vocational education since it helps them become more prepared for the requirements of the modern workforce. Considering the fact that the higher vocational college system is continuously growing and developing, it is of the utmost importance to have a comprehensive understanding of the elements that influence the academic performance of students within this educational setting. The learning environment, the qualities of instructors, and the self-efficacy of students have emerged as major elements that have the potential to greatly affect academic performance (Smith, J., & Johnson, A. 2020).

First and foremost, the atmosphere of the classroom is an essential component of the educational experiences of the pupils. (Zhang, L., & Wang, Y. 2019) Students are provided with the resources, facilities, and opportunities that are essential to improve their learning and academic performance

when they are in an atmosphere that is accommodating and supportive of their educational pursuits. It comprises issues such as the infrastructure of the classroom, the availability of instructional materials, the support of technology, and the ambiance of the classroom as a whole. The authors Biggs, J. B., and Tang, C. (2011) state that having an understanding of the function that the learning environment plays in higher vocational institutions may assist educators and policymakers in the creation of settings that maximize the learning and accomplishment of students.

The second point is that the qualities of instructors have been universally acknowledged as important elements in the academic success of pupils across the board. Students are able to be inspired and engaged in the learning process when they are taught by teachers who possess effective teaching techniques, excellent communication skills, and motivating tactics (Chen, X., & Liu, Q. 2018). The motivation, involvement, and academic outcomes of students may be considerably influenced by instructors via the utilization of a variety of instructional strategies and the development of constructive connections between teachers and students. Therefore, it is vital to investigate the characteristics of instructors and the influence that these qualities have on academic performance in order to improve teaching methods in higher vocational institutions (Smith, J., & Johnson, A. 2020).

In conclusion, self-efficacy is a psychological concept that describes an individual's conviction in their own capacities to complete activities and achieve the results that they seek. According to Biggs, J. B., and Tang, C. (2011), students who have a high level of self-efficacy are more likely to establish objectives that are difficult to attain, to persevere in the face of challenges, and to put out effort in order to achieve academic achievement. On the other side, students who have a low level of self-efficacy may constantly question their capabilities and have difficulty performing to the best of their skills (Smith, J., & Johnson, A. 2020). It is possible to gain useful insights into how to build and strengthen students' beliefs in their own capabilities by gaining an understanding of the role that self-efficacy plays in academic achievement among students attending higher vocational colleges.

Although there has been some research done on the individual factors that are associated with academic performance, there is a need for a more comprehensive study that investigates the collective influence of the learning environment, characteristics of teachers, and self-efficacy on the academic outcomes of students attending higher vocational colleges in Yunnan, China (Chen, X., & Liu, Q. 2018). The purpose of this study is to offer a comprehensive knowledge of the intricate relationship that exists between the learning environment, the qualities of the instructor, both self-efficacy and academic success. This will be accomplished by analysing these elements simultaneously. According to Li, W., and Zhang, Q. 2020, the findings of this research have the potential to inform educational policies and practices, therefore facilitating the creation of an ideal educational environment that offers support for the academic performance of students attending higher vocational colleges in Yunnan, China.

Despite the growing attention that is being paid to understanding the role that learning environment, characteristics of teachers, and students' self-efficacy play in relation to academic performance among students attending higher vocational colleges in Yunnan, China, there is still a gap in the literature regarding the investigation of these factors in a comprehensive and integrated manner. Previous research has often concentrated on specific features in isolation, which has resulted in an insufficient knowledge of the intricate interactions and interrelationships that exist between these factors (Huang, L., & Li, C. 2017).

While there have been research that have investigated the effect of the learning environment on academic performance (Zhang & Wang, 2019), other studies have focused on the influence of teacher qualities (Chen et al., 2017) or students' self-efficacy (Li & Zhang, 2020) in isolation.

The comprehensive aspect of the higher vocational education experience is not captured by such fragmented research, and it is possible that the combined impacts of these elements on students' academic progress are overlooked.

It is also possible that the assessment concept, techniques, and instruments that were used in some research were not sufficiently thorough, standardized, or scientifically rigorous (Li et al., 2018). There is a possibility that the validity and generalizability of study results might be hindered by the use of antiquated assessment methods and the absence of defined standards. Additionally, according to Zhou and Wang (2019), the inefficient implementation of assessment findings in educational practices may impede the translation of research insights into real changes in the learning environment and teaching methodologies.

This study aims to examine the learning environments within higher vocational colleges in Yunnan, China, and identify key factors influencing teachers' academic performance. It also analyzes the personal characteristics of teachers, including demographic factors, educational backgrounds, and professional experiences, to assess how these attributes may affect their performance. Additionally, the study investigates the self-efficacy beliefs of higher vocational college teachers and explores their role in shaping academic outcomes. Furthermore, it examines the interplay between learning environments, personal characteristics, and self-efficacy, assessing their combined impact on teachers' academic performance.

It has been implemented in a number of nations, including the United States of America, the United Kingdom, Japan, and others. used within the context of educational teaching. However, research conducted inside the United States on outcomes-based education is the system is not mature, and there are deficiencies in both the creation of the theoretical system and its implementation (Chen & 2018 according to Liu).

There are practical consequences for instructors at higher vocational institutions as a result of the findings of the study (Liu, L., & Xu, J. 2021). Teachers have the ability to reflect on their practices and make any required improvements if they acknowledge the relevance of their teaching techniques, communication skills, and motivating tactics. This research highlights the significance of establishing constructive connections between teachers and students and putting into practice teaching strategies that provide students with opportunities to interact and be inspired. It is beneficial for educators to get an awareness of the impact they play in the academic achievement of their students and to adopt practices that are supported by evidence in order to improve their effectiveness as educators (Li et al., 2019).

According to Yang and Li (2017), students may focus on improving their self-efficacy by cultivating the ability to create objectives that are attainable, requesting help when it is required, and being resilient in the face of adversity. Developers of curricula and those who formulate policies: In the process of creating higher vocational education in Yunnan, China, this study provides policy makers and curriculum creators with vital insights that might lead to better decisions. The results have the potential to contribute to the formulation of educational policies that place an emphasis on the significance of fostering good teaching practices and establishing learning environments that are supportive of students (Liu, L., & Xu, J. 2021). Decision-makers have the ability to allot resources for the purpose of enhancing infrastructure and providing essential educational materials. In addition,

the study stresses the need of including teacher training programs that strengthen the instructional abilities of teachers and place an emphasis on the construction of good learning environments. The results that pertain to self-efficacy may also serve as a reference for curriculum creators when it comes to the development of interventions that encourage students to believe in themselves and have confidence in themselves (Wang, J., & Li, Y. 2019).

According to Zhang, Y., and Pun, S. (2018), the research will be carried out with the intention of constructing a project-based curriculum that will shatter the original disciplinary system and rebuild the content of the curriculum. According to Zheng, Q., Zhang, L., and Yang, L. (2017), a project-based curriculum needs to emphasize the ability target and include the core professional ability within the curriculum.

It important that the content of the course be based on professional activities and the work process; The course material is conveyed via the use of projects and assignments; The process of putting the project tasks into action should be meticulously planned out, and the implementation and assessment of the is curriculum should place an emphasis on the students as the primary body, with the instructors serving as the leading figures; In Chen and Liu's (2018) words, the teaching process is what brings about the combination of teaching and practicing learning.

The higher vocational colleges that are situated within the geographic region of Yunnan in China will be the primary focus of the research. According to Yang and Li (2017), Yunnan is one of the provinces in China with the highest population and is well-known for its multifaceted higher education institutions. These institutions include vocational colleges that provide education that is focused on practical and skills-oriented education.

Only the province of Yunnan in China is included in the geographical scope of this PhD research, which focuses on the effect of learning environment, characteristics of instructors, and self-efficacy in relation to academic achievement among students attending higher vocational colleges. According to Zheng, Q., Zhang, L., and Yang, L. (2017), Yunnan is a province in eastern China that is noted for its dense population and diversified population. It is also known for its strong focus on education and its many higher education institutions, including vocational colleges.

The province of Yunnan is an excellent location for this research because it has a diverse landscape of higher vocational education. It provides a broad variety of fields of study and programs that are specifically designed to meet the requirements of the local and national labor force. According to Chen and Liu (2018), the higher vocational institutions in the province provide students an education that is both skill-oriented and practical, therefore preparing them for professional work in a variety of industries and sectors.

By concentrating on Yunnan, the purpose of this research is to get a more nuanced comprehension of the variables that influence academic performance within the unique context of higher vocational institutions in the area. According to Yang and Li (2017), the varied student population, teaching techniques, and learning environments that are present throughout the many institutions in Yunnan will give useful insights into the interactions that occur between the learning environment, the characteristics of the teachers, self-efficacy, and academic success.

Furthermore, due to Yunnan's prominence as an economic and educational center, the results of this research are applicable not just to the province of Yunnan itself, but also to other places in China and overseas that have higher vocational education systems that are comparable to those in Yunnan (Wang, J., & Li, Y. 2019). The insights that were gathered from this study have the potential to

contribute to the development of higher vocational education practices and policies in Yunnan, as well as possibly guide educational reforms in other areas and countries that have vocational education frameworks that are similar to Yunnan's.

2. Literature Review

The learning environment plays a crucial role in shaping students' academic performance and learning outcomes (Zhang & Wang, 2020). Previous research has highlighted the significance of various aspects of the learning environment, such as the physical infrastructure, teaching resources, and peer interactions, in influencing students' academic achievements (Lee & Wang, 2020). A supportive and conducive learning environment has been associated with higher student engagement, motivation, and positive learning experiences, ultimately leading to improved academic performance.

The learning environment in higher vocational colleges plays a crucial role in shaping students' academic performance and overall learning outcomes. It encompasses a range of factors that influence the educational experience and engagement of students within the college setting (Eccles, J. S., & Roeser, R. W. 2011).

Physical infrastructure and resources in higher vocational colleges, such as classrooms, laboratories, and libraries, significantly impact students' academic performance (Smith & Johnson, 2019). Well-equipped and conducive learning spaces can create a positive atmosphere for students, promoting their engagement in academic activities and enhancing their overall learning experiences.

Peer interactions and social support within the learning environment also influence academic performance among higher vocational college students (Li & Zhang, 2020). Positive peer relationships can foster a sense of belonging and motivation to excel academically. Moreover, collaborative learning and group activities can enhance students' understanding of subject matter and promote knowledge sharing.

The teaching methods and pedagogical approaches employed by instructors in higher vocational colleges have a significant impact on students' academic performance (Zhang & Wang, 2019). Engaging and innovative teaching practices that encourage active participation and critical thinking can improve students' comprehension and retention of course content, leading to better academic outcomes.

The faculty-student ratio and class size are critical aspects of the learning environment that influence academic performance (Lee & Wang, 2020). Smaller class sizes and a lower faculty-student ratio often led to increased individualized attention and interaction between students and instructors, resulting in enhanced academic support and personalized learning experiences.

Effective classroom management and discipline strategies adopted by teachers also contribute to students' academic performance (Chen & Liu, 2018). A well-organized and disciplined learning environment can minimize disruptions, promote focused learning, and create an atmosphere conducive to academic achievement.

Teachers' characteristics and teaching practices have been widely studied as influential factors in students' academic performance (Chen & Zhang, 2018). Effective teachers possess specific attributes, including subject knowledge, instructional expertise, and classroom management skills, which

positively impact students' learning experiences and academic outcomes. Research has shown that teachers who use innovative and student-centered teaching methods foster a positive learning environment that enhances students' academic achievements.

The characteristics of teachers in higher vocational colleges are critical factors influencing students' academic performance and overall learning outcomes. Effective teachers possess specific attributes and pedagogical approaches that foster a positive learning environment and contribute to students' academic success.

Teachers' subject knowledge and expertise significantly impact students' academic performance (Chen & Zhang, 2018). A deep understanding of the subject matter allows teachers to deliver accurate and comprehensive explanations, which enhances students' understanding and mastery of the content.

The teaching styles and instructional methods adopted by teachers are essential determinants of academic performance (Lee & Wang, 2020). Teachers who employ student-centered and interactive teaching methods promote active engagement and critical thinking among students, leading to improved learning outcomes.

Effective classroom management and organization contribute to students' academic achievements (Zhang & Wang, 2019). Well-organized classrooms with clear routines and expectations create a conducive learning environment, minimizing disruptions and maximizing learning opportunities.

Positive teacher-student relationships have a significant impact on students' academic performance (Smith & Johnson, 2019). Teachers who demonstrate care, support, and encouragement can foster a sense of belonging and motivation in students, leading to increased effort and commitment to academic tasks.

The feedback and assessment practices of teachers also influence students' academic performance (Li & Zhang, 2020). Constructive feedback that highlights areas for improvement and recognizes students' strengths can enhance their learning and boost their confidence.

Self-efficacy is a psychological construct that plays a significant role in students' academic performance and achievement. It refers to an individual's belief in their own capabilities to successfully complete tasks, overcome challenges, and achieve desired outcomes. In the context of higher vocational college students in Yunnan, China, understanding self-efficacy is crucial in identifying factors that influence their academic performance.

Self-efficacy, the belief in one's capability to perform specific tasks, has been recognized as a significant predictor of academic performance among students (Chen & Liu, 2018). Students with higher levels of self-efficacy are more likely to set challenging goals, persist in the face of obstacles, and demonstrate greater effort in their academic pursuits. Consequently, they tend to achieve better academic results compared to those with lower self-efficacy beliefs.

Students' self-efficacy beliefs influence their level of effort and persistence in academic tasks (Lee & Wang, 2019). Individuals with high self-efficacy are more likely to exert greater effort and perseverance, even in the face of setbacks or difficulties, which can positively impact their academic performance.

Self-efficacy is closely related to students' self-regulation skills (Zhang & Wang, 2019). Students with high self-efficacy are better equipped to manage their time, set priorities, and employ effective study strategies. These self-regulatory abilities contribute to improved academic achievement.

Self-regulation is closely linked to students' goal-setting processes (Chen & Liu, 2018). Students with effective self-regulatory skills are more proficient in setting clear and achievable academic goals, which guides their learning efforts and contributes to better academic achievement.

Self-regulation includes effective planning and time management skills (Lee & Wang, 2019). Students who can organize their study schedules and allocate time appropriately for different tasks are more likely to maintain consistent study habits, leading to improved academic performance.

Self-regulation involves the ability to organize and structure learning materials effectively (Zhang & Wang, 2019). Students who can categorize and integrate information from different sources can enhance their comprehension and retention of academic content, positively impacting their academic achievement.

Humanistic theory is one of the main schools of contemporary American psychology, represented by Maslow, Rogers and others (Huang, L., & Li, C. 2017). Humanistic theory pays more attention to the development of human dignity, the value of survival and creativity, and holds that the exertion of potential is the decisive factor of self-realization of human nature. The greatest contribution of humanistic theory is that it recognizes the unity of human psychology and nature, and advocates that psychology must study human psychology based on human nature (Huang, L., & Li, C. 2017). In the field of education, humanistic theory believes that education should cultivate people with fully developed personality, initiative and sense of responsibility, self-development and self-realization. At the same time, the humanistic school set up the "student-centered" educational view. In 1952, Rogers put forward the idea of "student-centered" education for the first time. He believed that education should be student-centered, teaching is for the development of students, and students' independent initiative in learning should be fully mobilized to create a good learning environment. He opposed the traditional educational idea that only attaches importance to teaching and ignores student development. His thought is of enlightening significance to the development of modern teaching theories.

Bloom mastered learning theory, In the 1970s, Bloom, a famous American psychologist and educator, put forward the school teaching theory of "mastering learning". The core idea of mastering learning theory is that "all students can learn well". Bloom argues that differences in learning ability do not determine whether a student can master knowledge, but only how long it takes to master knowledge, and that given enough time and proper teaching, all students can, in theory, master what they are learning very well.

Taylor is one of the most influential figures in American education and is known as the "father of modern curriculum theory". In his book "The Basic Principles of Curriculum and Teaching", he pointed out that the development of any curriculum and teaching plan should be clear about four basic questions: first, what educational goals should be achieved by the school; Secondly, what kind of educational experience is most conducive to achieving these goals; Thirdly, how to organize these educational experiences effectively; Fourthly, how to determine whether these goals are being achieved. These four basic questions form what is known as the Taylor Principle.

In the 1960s, a trend of thought of vocational education and training arose worldwide, and competency-based education emerged at the historic moment (Hattie, J. 2009). Competency-based

education is a kind of vocational education system established with the goal of acquiring the operational ability of the post. The core of its establishment is to determine the ability target from the needs of the vocational post. In education practice, the school first hired industry experts' professional construction enterprise steering committee, then, the steering committee for the professional demands of the professional construction, carding and analysis needed to draw up to the professional ability, in the end, schools and teachers to these skills as the goal, curriculum setting, organization, teaching content and evaluation methods were determined (Hattie, J. 2009).

3. Materials and Method

In the Outcome-Based education, the focus of the results is not the scores obtained by the students, nor the accumulation of the students' previous learning experience, but the specific abilities that are internalized in the students' mind at the end of a period of learning (Ma Jinjing, 2012). To be more specific, Outcome-Based education emphasizes learning outcomes and the formulation and achievement of graduates' abilities. The Outcome-Based education model is regarded as an innovation of education paradigm, and its content is broad and profound (Yue Geni, Che Ping, Wang Cuiying, 2016). Generally speaking, it can be summarized as one core goal, two requirements, three premises, four principles, four supports and five implementation steps. Specifically, a core goal is to enable all students to achieve final results. There are two requirements: first, accurate definition and clear presentation of learning outcomes, construction of outcome blueprint, so that students have a clear understanding of the final outcome; The second requirement is to use concrete results to guide the curriculum (Lee, C., & Wang, H. 2020). However, the second requirement is often ignored. There are three premises: first, all students can learn and succeed, but the method of learning and the time required for success vary from person to person; Second, success is the mother of success, that is, the achievement of an achievement can promote the next achievement, successively, and finally succeed; The third is that school has full control of success, that is, the school should expand more learning opportunities for students and provide learning resources to promote the achievement of the final results. Four principles and four supports: The four principles are clarity of focus, Expanded Opportunity, Higher Expectation and Design Down (Chen, X., & Liu, Q. 2018). Four-point support means that what students need to learn should be clearly defined; Student progress should be based on demonstrated results; Provide a variety of teaching and assessment strategies to meet the needs of each student; Provide adequate time and assistance to enable each student to reach his/her maximum potential (Zhang & Wang, 2019).

The five implementation steps are as follows: First, Outcomes should be defined. Outcomes should not be considered as a single outcome, and we should set key Outcomes, specific Outcomes, evaluation indicators and performance indicators on a tiered basis. Second, Design Curriculum, guided by the final results, combined with the social environment, pay attention to the intersection and integration of various fields. The third is to Deliver Instruction (Zhang, L., & Wang, Y. 2019). The teaching method should be combined with the final results to be achieved, giving teachers full autonomy and enabling teachers to carry out learning in the most conducive way. Fourth, Results Review, the implementation of multiple evaluation, self-reference and standard reference-based way. OBE emphasizes that success is possible for all students, but that there should be several stages at which a student can achieve success in his or her studies.

This study employs a mixed method of both semi structured interviews and quantitative research design to investigate the relationships between learning environment, characteristics of teachers, self- efficacy, and academic performance among Higher Vocational College students in Yunnan, China.

The target population includes Higher Vocational College students in Yunnan. A stratified random sampling method will be utilized to ensure representation from diverse programs and academic levels. The sample size will be determined based on statistical power calculations to ensure the reliability of the findings. As for the qualitative method, I was the primary data collector as the researcher for this study. Ho (2012) asserted that the primary data collection instrument in qualitative research is the researcher. Interviewing formed the major source of qualitative data collection of rich, in- depth, and individualized form (Oye, Sorensen, & Glasdam, 2016).

Qualitative method provides an opportunity for the interviewer to interact with the participants on individual bases as the participants shared experiences and opinions. The interview was conducted in two primary forms, one-on-one (individual) or field notes. However, in recent years, technology has widened the processes of conducting these interviews to include a telephone interview, email interview, and other internet interviews like Skype (Leedy & Ormrod, 2015).

Individual interviews are one-on-one moments between the interviewer and the participant where the interviewer asks either structured, unstructured, or semi structured questions for the participant to respond. Individual interviews intended to obtain independent, in-depth personal data from each of the participants (Oye et al., 2016). The main factors of selecting participants were the purpose of the study, research question of the study as the interviews were conducted independent of each participant, and the information were confidentially processed. For the data collection, I used individual interviews, field notes through observation, and document reviews.

Survey Questionnaires: Structured survey questionnaires will be distributed to students, focusing on variables related to the learning environment, teacher characteristics, self-efficacy, and academic performance. Likert scales and multiple-choice questions will be used to quantify responses. **Academic Records:** Official academic records, including grades and performance evaluations, will be obtained with participants' consent to provide objective measures of academic performance. **Survey questions** will assess perceptions of infrastructure, institutional support, and resource availability. The variables that were included in the questionnaire were learning environment (IV1), Characteristics of Teachers (IV2), Self-efficacy (IV3) & Academic Performance (DV). **Characteristics of Teachers (IV2):** Teaching methods, communication skills, and motivational strategies will be quantified through self-reported student perceptions. **Self-efficacy (IV3):** Students' self-efficacy will be measured using validated scales, assessing personal beliefs, motivation, and goal-setting. **Academic Performance (DV):** Academic records will provide quantitative data on grades, course completion, and overall academic achievement. **Multiple Regression Analysis:** Multiple regression models will be employed to assess the unique contributions of the learning environment, characteristics of teachers, and self-efficacy to academic performance.

This study aims at the current situation and problems in the implementation process of provincial courses, combines the Outcomes — Based Education concept, designs a reasonable questionnaire, and tests the reliability and validity of the questionnaire (Smith, J., & Johnson, A. 2020). In the process of sample selection, considering the representativeness of samples, the operability of actual data collection and the feasibility of research, several representative provincial undergraduate universities were selected for questionnaire and interview survey. By sorting out the collected questionnaires, obtaining data and using SPSS software for statistical analysis, this paper analyzes the status quo and influencing factors of provincial courses, providing reliable data support for the study of provincial courses standard (Li, W., & Zhang, Q. 2020).

In order to make up for the deficiencies of questionnaire survey, this study cannot obtain data through questionnaire survey in some aspects. In order to influence the value of the study, a certain number of ordinary undergraduate teachers were selected for interview. Get information. The interview is divided into two parts, one is an open interview, through which the author understands. The basic information of courses in selected schools will provide references for follow-up in-depth interviews and questionnaire compilation (Smith, J., & Johnson, A. 2020).

The interviews consist of a guide to specific questions or a protocol to delineate the process based on the conceptual framework and literature review. As for the qualitative study field notes will be utilized. An observation and field note in a qualitative study is a data- collecting tool that allowed the researcher to acquire data from participants in the context of the activities or the environment (Leedy & Ormrod, 2015; Ravitch & Carl, 2016). Groenewald (2004) explained that the field note is commonly used by qualitative researchers to collect an observational field note that includes: (a) notes that recorded occurrences and events as they happen in the course of the interview (b) notes were taken which reflect the preliminary understandings and connotation that are given to the meanings (c) procedural notes and protocols were written to serve as a reminder to the researcher on certain steps to be taken at the designated time and (d) memos were taken to close out each interview session, that served as a brief abstract of summaries. Yin (2013) gives the steps in case study as (a) data compilation, (b) data disassembly, (c) data reassembly, (d) data interpretation, and (e) data conclusion and meaning derived.

4. Results and Discussion

The anticipated results of this study are expected to show that several factors significantly influence the academic performance of students in higher vocational colleges in Yunnan Province, China. These factors include the learning environment, characteristics of teachers, and students' self-efficacy.

First, the findings are expected to indicate that a supportive learning environment positively influences students' academic performance. Adequate classroom infrastructure, access to learning resources, and institutional support may help students focus better on their studies and improve their learning outcomes. Students who study in well-equipped learning environments are likely to perform better academically compared to those with limited resources.

Second, teacher characteristics are expected to play an important role in students' academic success. Teaching methods, communication skills, and the ability of teachers to motivate students may significantly affect students' understanding and engagement in the classroom. Teachers who provide clear explanations, interactive teaching approaches, and regular feedback may help students achieve better academic results.

Another anticipated finding is the strong influence of students' self-efficacy on academic performance. Students who believe in their abilities to complete academic tasks and achieve their goals are more likely to show higher motivation and persistence in their studies. High self-efficacy may encourage students to participate actively in learning activities and overcome academic challenges.

The quantitative analysis using multiple regression is expected to show that learning environment, teacher characteristics, and self-efficacy are positively associated with academic performance. Among these predictors, self-efficacy may emerge as one of the strongest contributors to students' academic success.

However, the study may also identify several challenges affecting academic performance. These may include limited learning resources, inconsistent teaching strategies, and differences in students' motivation levels. These challenges may reduce the effectiveness of teaching and learning processes in vocational colleges.

Overall, the findings are expected to highlight that improving the learning environment, strengthening teacher effectiveness, and enhancing students' self-efficacy are important for improving academic performance in higher vocational colleges.

5. Conclusion

This study investigates the predictors that influence academic performance among students in higher vocational colleges in Yunnan Province, China. The anticipated findings suggest that the learning environment, teacher characteristics, and students' self-efficacy play important roles in shaping students' academic outcomes.

A supportive learning environment and effective teaching practices can enhance students' engagement and understanding of course content. At the same time, students with higher levels of self-efficacy are more motivated and confident in achieving their academic goals.

The study highlights the importance of improving educational practices in vocational colleges. Institutions should focus on strengthening classroom infrastructure, providing adequate learning resources, and supporting teachers in adopting effective teaching strategies. In addition, programs that enhance students' confidence, motivation, and goal-setting skills may further improve academic performance.

Overall, the study contributes to a better understanding of the key factors influencing academic success in vocational education and provides insights for educators and policymakers to improve the quality of vocational education in China.

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