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Learning Environment as an Influencer of Students' Performance in A University in China

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Abstract: This document investigates the impact of the learning environment on students' academic performance at Guangdong University of Technology in China. It underscores the crucial role of teachers in creating a supportive, inclusive, and engaging atmosphere that enhances student collaboration, motivation, and overall academic success. Key components of a positive learning environment—student cohesiveness, support, involvement, cooperation, and equity—are thoroughly examined. The study demonstrates how these elements contribute to a sense of belonging and academic achievement among students. By fostering strong relationships and promoting fairness, teachers can significantly influence students' academic experiences and outcomes. Using a descriptive-comparative-correlational design, the research collected data from 407 student respondents across various courses and year levels through survey questionnaires. The study identifies that while age significantly influences perceptions of student cohesiveness, other factors such as sex and course do not show significant differences in perceptions of support, involvement, cooperation, and equity. These findings highlight the importance of considering age-related dynamics in fostering a cohesive student community. The findings reveal that a well-established learning environment, characterized by strong teacher-student relationships and equitable practices, is crucial for fostering academic success and well-being. The study highlights the importance of teachers' feedback, classroom dynamics, and the educational context, especially during the COVID-19 pandemic, in shaping the learning environment. Recommendations for enhancing the learning environment include increasing teacher awareness and training, promoting collaborative learning, and ensuring consistent support and engagement opportunities for all students. The study emphasizes the need for continuous improvement and adaptation to meet the diverse needs of students, creating an environment conducive to their academic and personal growth. By implementing these strategies, universities can better support students in achieving their academic goals and preparing for future career success.

Keywords: Learning Environment; Academic Performance; Student Engagement; Teacher Support; Equity in Education.

1. Introduction

How can a teacher establish learning environment in a university setting where most of the students are more inclined to technology related learning. New learning ideas can transform an old tradition into a warm and welcoming aspect of a student's day. No longer just a place for students to check in and talk to friends, learning has evolved into a period where students can start (or end) their day at a safe, supportive home base or through the aid of technology.

Teachers can take the time to get to know their students, and they can offer guidance and information to help them navigate the day. Learning is also the perfect place to celebrate student success, welcome new students, and mark special occasions. Here are a few tips on how to use learning to build a culture that's inclusive, supportive, and fun.

Learning comes in many forms. Some students use the time to read, and sometimes there are jokes—we went through a spate of awful jokes one spring—or even a skit every now and then. A coach might even drop by to single out a student for special praise.

Another university in our area saves learning period for the end of the university day. Teachers' reasoning for the shift was that attendance was already being taken in each class period and daily announcements took care of the information or reminders that students needed. By moving learning to the afternoon, they could utilize that prime time at the beginning of the day for teaching. However, while teachers and students found that much of the camaraderie remained intact at the end of the day, energy was lower than in the morning. It was even tempting for some students to put their heads down on their desks.

According to Licupa (2020) as cited by Tirona (2021), in the first year of the Covid-19 pandemic, all the universities in China have included Learning Guidance (LG) subject as part of curricular program. It aimed to provide assistance in academic development, personal and social development and career development of the students. Although this is not part of academic achievement however, it served as enrichment activity to help students decide wisely for their future aspiration. With the promising goal of Learning Guidance program, Tirona (2021) conducted a study to understand the relationship between the evaluation of the academic performance of students in their subjects. The researcher used descriptive-correlational method of research. Wherein, it focused on describing the relationship of the dependent and independent variables. Moreover, the data were collected from 102 students enrolled in during the academic year 2020-2021. The students rating from Learning Guidance (LG) subject and their scholastic records were analyzed. Accordingly, the result of the LG assessment showed that students were still in the "Developing" level. In terms of the academic achievement. Furthermore, based on the results of the regression analysis, LG performance significantly affects the academic achievement of the students. Additionally, all of the learning areas have shown positive relationship as shown in the R-value. This study is limited to the grade 10 level population whereas the researcher intends to extend the study to other grade level and eventually, will be utilized in policy creation and other related programs. With the aforementioned,

conclusions were drawn and recommendations were offered.

Different studies have seen the importance of understanding the factors that might affect or increase academic performance of the students. Since the variability is in question, a constant perusal is inevitably necessary to get a vantage point to help learners achieve in their educational pursuit (Bonney, Amoah, Micah, Ahiamenyo, & Lemaire (2018); Francisco & Celon, (2020).

The academic development of the students is one target and an essential component in reaching holistic learner's success. Study.Com (2021) explained the significance of preparing the learners to use acquired skills and know-hows in order to perform well in university and build a repertoire of competencies in view of the future career.

Moreover, personal and social development are needed especially on today's situation. Thompson (2021) discussed in his module the importance of understanding the self-concept and how it interacts with the social influences around an individual, particularly a child and this process would determine the person he/she would become tomorrow. Since the students are facing new sets of challenges amidst the pandemic, Ministry of Education (2021) pointed out three aspects that would help in combating the negative effects of Covid-19 such as rational thinking, healthy behavior and positive disposition. Moreover, the significance of facilitating in remote location or through self-learning modules would affirm new hopes and bright aspiration for the future.

Further, career development is the long-term goal eyed by the learners, their families and the respective educational institutions. Mckay (2020) defined career development as an option to explore on available occupation that suits your personality, skills and interests through learning and guided decision-making process. Accordingly, each university is tasked to conduct career guidance programs which help students choose their ideal job and help them prepare for it. As an adage once said, "it takes a village to raise a child", thus, given our situation, Ministry of Education (2021) is encouraging the parents and other home para teachers to help guide learners in achieving such educational goals.

The education sector was confronted with the need to shift gears to meet the challenges posed by the pandemic's consequences. This has led to the discontinuation of face-to-face instruction in universities, colleges, and institutions (Pokhrel, 2021). There is no doubt that the current situation of the educational system in China will have an impact on the fields of development of our students. Although the Ministry of Education has been responsive, it is essential to support students' development of life skills that will enable them to overcome obstacles and adjust to the "new normal" brought about by the current worldwide crisis .

In China, a more robust program of learning guidance in public universities was put in place by the Ministry of Education (2020). The Learning Program provides guided opportunities for learners during Learning Guidance to supplement their educational activities. Academic Development, Personal-Social Development, and Career Development are the three aspects of Learning Guidance. Academic Development Domain involves all of a learner's academic demands and concerns. The Personal-Social Development Domain is concerned with concerns or issues relating to learners' uniqueness (self), relationships with others, and interaction with the community. The Career Development Domain encompasses all occupational and work- related difficulties and issues encountered by learners. This entails the learning of skills, attitudes, and knowledge that will help students to successfully transition from university to the workplace and from job to job throughout their lives.

2. Significance of the Study

The following will be benefitted from the results of this study:

Students will benefit from the findings of this study because strong relationship between teachers and students are essential to the development of all students in university, and that positive student-teacher relationships are a valuable resource for students which will allow them to be able to work on their own because they know they can count on their teachers if problem arise, that the teacher will recognize and respond to the problem.

The results will also provide teachers important and unique information for designing interventions in understanding better how students learn and what students need if they are to learn effectively and that they will incorporate that into their teaching. It is this idea of determining what needs to be incorporated into instruction for effective learning using an authentic learning environment through an illuminative case study.

The findings of the study will also help strengthen the student-teacher relationships that will allow students to feel safer and more secure in the university setting, feel more competent, make more positive connections with peers, and make greater academic gains.

This study will contribute to the field of education by providing teachers and administrators with guidance on relationship-building strategies that a highly effective teacher utilizes in a real world, authentic setting – the classroom.

3. Definition of Terms

In order for the intended readers to have a clearer understanding of this paper, the researcher has given the operational definition of the following terms:

Classroom Teaching refers to a process that allows teaches to control the learning and direction of their classrooms. Teachers usually keep students focused on learning while preventing disruption from slowing the learning process.

Learning refers to the class or room where students in the same grade meet to get general information and be checked for attendance.

Learning Environment refers to a space in which students feel safe and supported in their pursuit of knowledge, as well as inspired by their surroundings.

4. Ethical Considerations

The researcher constructively considered and carefully follow the ethical considerations that must be met to protect the rights of all the respondents. The following are the ethical considerations:

Conflict of Interest: Researchers should disclose any potential conflicts of interest that could influence the study's outcomes to maintain objectivity and accuracy.

Privacy and Confidentiality: Respecting participants' privacy rights and safeguarding their personal information is essential. Measures should be taken to ensure confidentiality and prevent unauthorized access or disclosure.

Informed Consent Process: Prior to participation, all participants should receive clear and comprehensive

information about the study's purpose, procedures, risks, and benefits, and provide voluntary consent.

Vulnerability: Recognizing and protecting the rights of vulnerable participants, such as teachers who may feel pressured to participate due to their employment status, is crucial.

Recruitment: The recruitment process should be transparent, fair, and non-coercive to ensure voluntary and informed participation.

Assent: If participants are minors or otherwise unable to provide informed consent, assent should be obtained in addition to consent from their legal guardians.

Risks: Potential risks associated with participation, such as breaches of confidentiality or emotional discomfort, were identified and minimized.

Benefits: Participants were informed about the potential benefits of the research to themselves and the broader educational community.

Incentives or Compensation: Any incentives offered to participants was reasonable and fair and should not unduly influence their decision to participate.

Community Considerations: The broader impact of the research on the local community and educational system were considered to ensure that the study contributes positively to knowledge and practice in the field of education.

Collaborative Study Terms of Reference: Researchers established clear terms of reference for collaborative studies, outlining the roles, responsibilities, and expectations of all parties involved. This ensures transparency, fairness, and mutual respect among collaborators, and helps prevent conflicts of interest or misunderstandings during the research process.

Collaborative Study terms of reference: Review of terms of collaborative study especially in case of multi-country/multi-institutional studies, including intellectual property rights, publication rights, information and responsibility sharing, transparency and capacity building.

5. Results and Discussions

The gathered data are presented here with the analysis and interpretation according to the statement of the problem. The profile of the student respondents in terms of sex, age, grade level, and years of basketball experience, their assessment of the student respondents on their learning environment provided by their teachers in a University of Technology, their performance level, differences in their assessments when profile is taken as test factor, and the relationship between the learning environment provided by their teachers in a University of Technology and their performance level are hereby presented with the end view of the proposed enhanced learning program.

5.1. Profile of the Respondents

Table 1 presents the frequency distribution of the student respondents' profile in terms of age, sex, course, and year level.

Age. One hundred and thirty-seven (137) or about 33.7% of the student respondents are 20 years old, one hundred and thirty-seven (137) or about 33.7% of the student respondents are 21 years old, and one hundred and thirty-three (133) or about 32.7% of the student respondents are 22 years old. This indicates that majority of the basketball athlete respondents are within the age group of 20-21 years old.

Table 1. Frequency Distribution of Respondents' Profile

	Frequency	Percentage
Age		
20 years old	137	33.7%
21 years old	137	33.7%
22 years old	133	32.7%
Total	407	100%
Sex		
Male	243	59.7%
Female	164	40.3%
Total	407	100%
Course		
Artificial Intelligence	12	2.9%
Automatization	14	3.4%
Chemical Engineering And Technology	6	1.5%
Civil Engineering	6	1.5%
Computer Science And Technology	21	5.2%
Data Science And Big Data	18	4.4%
E-Commerce	21	5.2%
Electrical Engineering And Its Automation	43	10.6%
Electronic Information Engineering	22	5.4%
Energy Chemical Engineering	17	4.2%
Environmental Science	8	2%
Food Science And Engineering	6	1.5%
International Economics And Trade	21	5.2%
Legal Studies	4	1%
Materials Science And Engineering	19	4.7%
Mechanical Design And Manufacturing And Its Automation	7	1.7%
Mechatronics Engineering	25	6.1%
Modern History	6	1.5%
Music Education	37	9.1%
Network Engineering	15	3.7%
Pre-School Education	17	4.2%
Product Design	15	3.7%
Public Administration	9	2.2%
Secretarial Science	15	3.7%
Security Engineering	7	1.7%
Web And New Media	16	3.9%
Total	407	100%
Year Level		
Year 1	223	54.8%
Year 2	70	17.2%
Year 3	53	13%
Year 4	61	15%
Total	407	100%

Sex. Two hundred and forty-three (243) or about 59.7% of the student respondents are male and the remaining one hundred and sixty-four (164) or about 40.3% of the student respondents are female. This goes to show that majority of the student respondents are female.

Course. Twelve (12) or about 2.9% of the student respondents are in Artificial Intelligence, fourteen (14) or about 3.4% of the student respondents are in Automatization, six (6) or about 1.5% of the student respondents are in

Chemical Engineering And Technology, six (6) or about 1.5% of the student respondents are in Civil Engineering, twenty-one (21) or about 5.2% of the student respondents are in Computer Science And Technology, eighteen (18) or about 4.4% of the student respondents are in Data Science And Big Data, twenty-one (21) or about 5.2% of the student respondents are in E-Commerce, forty-three (43) or about 10.6% of the student respondents are in Electrical Engineering And Its Automation, twenty-two (22) or about 5.4% of the student respondents are in Electronic Information Engineering, seventeen (17) or about 4.2% of the student respondents are in Energy Chemical Engineering, eight (8) or about 2% of the student respondents are in Environmental Science, six (6) or about 1.5% of the student respondents are in Food Science And Engineering, twenty-one (21) or about 5.2% of the student respondents are in International Economics And Trade, four (4) or about 1% of the student respondents are in Legal Studies, nineteen (19) or about 4.7% of the student respondents are in Materials Science And Engineering, seven (7) or about 1.7% of the student respondents are in Mechanical Design And Manufacturing And Its Automation, twenty-five (25) or about 6.1% of the student respondents are in Mechatronics Engineering, six (6) or about 1.5% of the student respondents are in Modern History, thirty-seven (37) or about 9.1% of the student respondents are in Music Education, fifteen (15) or about 3.7% of the student respondents are in Network Engineering, seventeen (17) or about 4.2% of the student respondents are in Pre-School Education, fifteen (15) or about 3.7% of the student respondents are in Product Design, nine (9) or about 2.2% of the student respondents are in Public Administration, fifteen (15) or about 3.7% of the student respondents are in Secretarial Science, seven (7) or about 1.7% of the student respondents are in Security Engineering, and sixteen (16) or about 3.9% of the student respondents are in Web And New Media. The result indicates that most of the student respondents are undertaking Electrical Engineering and Its Automation as their course.

Year Level. Two hundred and twenty-three (223) or about 54.8% of the student respondents are in Year 1, seventy (70) or about 17.2% of the student respondents are in Year 2, fifty-three (53) or about 13% of the student respondents are in Year 3, and sixty-one (61) or about 15% of the student respondents are in Year 4. The result shows that majority of the student respondents are from year level 1.

6. Conclusion

Based from the findings of the study, the researcher came up with the following conclusions:

1.Majority of the student respondents are 20-21 years old, females, are undertaking Electrical Engineering and Its Automation as their course, and are from year level 1.

2.The analysis highlights the importance of fostering a positive and supportive learning environment within the University of Technology. While the findings indicate a strong sense of student cohesiveness, there are opportunities for improvement, particularly in enhancing perceptions of classmates as special.

3.The findings emphasize the significance of teacher support in facilitating a positive learning environment within the University of Technology. While the assessment reveals strengths in teacher assistance and engagement, opportunities exist to further enhance personalized attention and interest in individual students.

4.The findings underscore the significance of teacher involvement in creating positive and interactive learning environments within the University of Technology. While the assessment reveals strengths in teacher explanation, student support, and integration of student ideas, opportunities exist to enhance questioning techniques to further engage students in critical thinking and exploration.

5.The findings highlight the significance of teacher-facilitated cooperation in promoting collaborative learning experiences and teamwork skills within the University of Technology.

6.The findings underscore the importance of fostering fairness and inclusivity in the learning environment within the University of Technology.

7.The assessment underscores the crucial role of teachers in fostering a conducive and effective learning environment within the University of Technology. While there are areas for improvement, such as enhancing student cohesion and participation equality, the findings highlight the commitment of teachers to prioritize collaboration, support, and inclusivity.

8.While significant differences were observed in perceptions of student cohesiveness among different age groups, the lack of significant differences in other aspects of the learning environment indicates a relatively consistent experience for students across various age groups within the University of Technology.

9.When considering the composite mean for the overall learning environment, no significant difference was observed between different age groups. Both male and female students reported similar mean scores, suggesting a consistent assessment of the learning environment across different age groups within the University of Technology.

10/Considering the composite mean for the overall learning environment, significant differences were observed among different age groups. This indicates variations in perceptions of the overall learning environment across different age groups and courses.

11.When considering the composite mean for the overall learning environment, significant differences were observed across different year levels underscoring the dynamic nature of student perceptions and experiences as they progress through their academic journey.

12.Based on the last performance evaluation, the students' performance level in the university showcases an overall positive trend, with a considerable portion achieving high grades. Nonetheless, it also reveals a varied distribution across different performance levels, underscoring the diverse academic capabilities and accomplishments within the student population.

13.The correlation coefficients for various aspects of the learning environment, such as student cohesiveness, support, involvement, cooperation, and equity, range all exhibited a significance level of 0.00. This outcome rejects the null hypothesis and indicates a noteworthy relationship between these components.

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