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Teachers' Self-Efficacy and Students' Learning Engagement

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Abstract

This study assessed teachers' self-efficacy and students' engagement in Shandong Electronic Vocational and Technical College, Jinan City, Shandong Province, China. Exploring the impact of teachers' self-efficacy on their engagement, the study employed third year students enrolled in Digital Information and Digital Media courses within Shandong Electronic Vocational and Technical College as respondents. Based on the results of the study, most of the respondents were male and within the age group of 19 -20 years old. It was also concluded that teachers' self-efficacy in terms of instructional strategies, classroom management, and student involvement is evident, as observed by the student respondents. This implies that while teachers are competent in key areas, enhancing student engagement could lead to even better learning outcomes and a more balanced approach to effective teaching. When it comes to the assessment of their profiles, significant age-based differences were revealed in students' assessments of teachers' self-efficacy, highlighting that age influences students' perspectives, while sex and academic major did not. The students exhibit behavioral, emotional, and cognitive engagement, though each area received varying emphasis. This suggests that while students are actively participating in their education, there may be imbalances in how they engage, highlighting the need for targeted efforts to promote a more holistic and balanced approach to student involvement in learning. Significant age-based differences were also found in students' assessments of engagement, with views on cognitive, affective, and behavioral engagement shifting with age. However, no differences were observed based on sex indicating similar opinions across these groups. Overall, the study showed that there was a strong positive correlation between teachers' self-efficacy and student engagement.

Keywords: Teachers' Self-Efficacy, Students' Learning Engagement, Instructional Strategies, Classroom Management, Student Involvement

INTRODUCTION

In everyday language, self-efficacy refers to a person's confidence in their capacity to complete tasks, overcome obstacles, and deal with different circumstances. An individual's life can be greatly impacted by this feature, which is essential for personal growth.

Within the realm of education, self-efficacy pertains to a teacher's assurance in proficiently doing their assigned tasks and obligations (Khanshan et al., 2020). Teachers' confidence in their abilities, expertise, and knowledge directly affects the learning and engagement of their students. A teacher's feeling of efficacy influences their approach to teaching, how they manage the learning environment, and how well they perform overall.

Basically, a positive, energetic, and stimulating classroom environment is created by teachers who are confident in their abilities. Increased student engagement and a more fulfilling learning experience are facilitated by its influence on communication styles, instructional methods, and the overall atmosphere.

The epidemic has made blended learning the new norm in post-secondary education (Chiu, 2022). The combination of online and face-to-face learning activities is known as blended learning (Moradimokhles & Hwang, 2020). Considering the limited time and resources available for the production of course materials, teaching methodologies, activities, and assessments, the pandemic's rapid shift to

blended learning caused issues for educators. Students' participation in the learning process might have been impacted by this circumstance (Aladsani, 2022; Khlaif et al., 2021).

Studies show that one of the most important factors in encouraging student involvement is the presence of the teacher. Because it is the duty of educators to support learning and integrate social and cognitive processes in order to create meaningful learning outcomes, teaching presence is therefore regarded as crucial (Zhang, et al., 2023). The difficulties presented by the abrupt shift to blended learning emphasize how important it is to address instructional presence in order to improve student engagement in this changing educational environment.

The problem that many Chinese higher education institutions are currently confronting is that, as students move through the system, their level of engagement appears to be dropping. This is true even though many schools have gone back to having a complete face-to-face setup. The decline in active learning begs crucial concerns about how to sustain and promote it over time, especially as students' progress through the educational system. It highlights how important it is to deal with student engagement as a fundamental aspect of the educational process.

Needless to say, student engagement plays an undeniable role in students' leaning outcome. Therefore, identifying the influential antecedents of promoting students' engagement is extremely crucial. Despite previous empirical studies that have delved into the part played by several student-related and teacher-related factors in triggering Chinese students' engagement, the exploration on the roles of teachers' self-efficacy is still scant. Thus, this study attempts to concentrate on the influence of teachers' self – efficacy on undergraduate students' engagement in China.

In his role as a School Counselor in Shandong Electronic Vocational and Technical College, the researcher carefully investigated the engagement levels of the third-year students studying Digital Information and Digital Media. Furthermore, this particular group of students was in a good position to provide insightful assessments on the efficacy of their teachers, given their in-depth understanding of their educational environment and approaches.

Even though these third-year students demonstrate a general mastery of digital technologies, they struggle to adjust to full face -to-face learning, which hinders their normal classroom participation. Through the researcher's interactions with the students, a number of factors related to this decline in interest in Digital Information and Digital Media courses were identified. The noticeable over-reliance on conventional teaching methods is one major issue. Students often become disengaged when teachers overuse lecture-based methods without incorporating interactive and collaborative activities.

In the course of his work as a School Counselor, the researcher observes that effective Digital Information and Digital Media classes frequently include group projects, discussions, and practical experience. When these kinds of participatory components are absent from lessons, students often become disinterested and bored. Another important factor is the limited opportunities for students to engage with the teacher or each other, which will lower their sense of community and participation in the class. Improving the overall learning experience of third -year students in Digital Information and Digital Media will require addressing these concerns.

Being a School Counselor in an administrative capacity as well, the researcher emphasizes the critical need for collaboration among educators, researchers, and educational institutions. This call for collaboration is prompted by the concerning trend of diminishing levels of student engagement in the later stages of education. The overarching objective is to develop and implement practical strategies that not only ignite students' interest right from the beginning but also strive to sustain their active engagement throughout their college years. This approach is viewed as

essential for addressing the challenges associated with declining student engagement and ensuring a comprehensive and enduring commitment to learning throughout the entire educational journey.

Statement of the Problem. This study assessed teachers' self-efficacy and students' engagement in Shandong Electronic Vocational and Technical College, Jinan City, Shandong Province, China. The result will pave the way towards designing a mentoring program for teachers. Specifically, it sought answers to the following questions:

1. What are the student respondents' demographic characteristics in terms of:
   1.1 Age;
   1.2 Sex; and,
   1.3 Major?

2. What is the assessment of the student respondents as regarding their teachers' self – efficacy in terms of:
   2.1 Student Involvement;
   2.2 Instructional Strategies; and,
   2.3 Classroom Management?

3. Is there a significant difference in the assessment of the student respondents as regards to their teachers' self - efficacy when their demographic profiles are taken as test factors?

4. What is the assessment of the student respondents of their engagement level based on the following domains:
   4.1 Cognitive;
   4.2 Affective; and,
   4.3 Behavioral?

5. Is there a significant difference in the assessment of the student respondents as regards to their engagement level when their profiles are taken as test factors?

6. Is there a significant relationship between teachers' self-efficacy and students' engagement?

METHODOLOGY

Research Design. Using a descriptive comparative-correlation design, the relationship between teachers' self-efficacy and students' engagement was explored. This design allowed for the description and comparison of variables as well as on their relationships.

Population and Sampling. The researcher used the third-year level students enrolled in Digital Information and Digital Media as respondents. The combination of academic knowledge and practical skills offered by both majors equip students on the changing needs of the digital age. They stress how crucial it is to keep up with emerging technological trends and cultivate a flexible skill set that is applicable to a wide range of fields.

A number of factors can impact students' levels of engagement in the classroom when they are majoring in Digital Information and Digital Media. For example, students may find it more difficult to stay involved if the teaching methods largely focus on traditional lectures rather than interactive or practical exercises. Real-world applications, project-based learning, and experiential learning are frequently the lifeblood of digital media and information studies. Furthermore, students accustomed to dynamic digital settings could not be completely engaged in courses without interactive elements like group projects, discussions, or practical exercises.

Selecting these students as respondents for assessing teachers' self-efficacy held significance for several reasons. Firstly, third-year students have developed a deeper understanding of their academic environment and teaching methodologies, providing more insightful feedback on their teachers' efficacy. Secondly, as they progressed through their academic journey, third-year students' perspectives on teaching effectiveness are more refined, allowing for a nuanced evaluation of teachers' self-efficacy compared to the earlier years. Lastly, by focusing on the third-year students, the study captured a crucial

phase in their educational experience, where the impact of teachers' self-efficacy on student engagement was particularly pronounced, thus offering valuable insights for educational improvement.

There are 1,069 third year level students from Digital Information and Digital Media in Shandong Electronic Vocational and Technical College. The researcher used stratified random sampling, wherein the population was divided into subgroups or strata based on certain characteristics that are relevant to the study. In this study, the random samples were independently selected from each stratum. In order to ensure that the results have broad applicability, a representative sample of 20% from the overall population in each major was selected. A 20% sample size offers enough statistical power to identify any differences or effects that may be present. Meaningful inferences can be drawn more easily as a result of the decreased margin of error and increased trust in the outcomes.

Throughout the sampling process, the researcher accounted for various variables, including but not limited to sex, age, and the academic majors of the participants in the school.

Instrumentation. In order to assess the correlation of teachers' self-efficacy on students' engagement, adapted questionnaires were used, however, they were modified accordingly to align with the objectives of the study.

Developed in 2001, the first survey tool was an adapted questionnaire called the Teachers' Sense of Efficacy Scale (TSES) of Tschannen-Moran and Woolfolk Hoy, which assessed teachers' self-efficacy using its factors namely, student involvement, instructional strategies, and classroom management.

The next adapted questionnaire was the Student Engagement and Satisfaction Questionnaire (SESQ). Experts from about 19 different nations collaborated to create the SESQ. The SESQ is a 109-item, self-report questionnaire in the Likert

form that can be completed with paper and pencil and is intended to give a detailed evaluation of the construct of student involvement. The concept of student engagement was agreed upon by experts, who then developed a questionnaire to cover it and evaluated the content validity of a set of questions that were selected from previously published studies. The original four composites that comprise the SESQ are Student Engagement in Schools, Motivational Beliefs, Social-Related Contexts, and Student Outcomes. Since the concept of student engagement was agreed upon by many experts, several of them had then developed a questionnaire to address it. For the purpose of this study, only the elements that indicated indices of student engagement namely, affective, cognitive and behavioral were taken into account.

Statistical Treatment. In terms of data processing, the researcher made use of statistical tools such as frequency count and percentage, weighted mean, standard deviation, T-test, ANOVA, and Pearson's correlation. When analyzing the hypotheses, the significance threshold of 0.05 will be applied. The null hypotheses were deemed valid if the estimated significance value is greater than the cutoff of 0.05; alternatively, they were not considered.

RESULTS AND DISCUSSION

1. The student respondents' demographic characteristics.

Majority of the student respondents are majoring in Digital Information while most of them are also male and within the age group of 19 -20 years old.

2. Student respondents' assessments of their teachers' self-efficacy based on student involvement, instructional strategies and classroom management.

Student Involvement. Student respondents agree that their teachers can persuade students that they can succeed in their academic endeavors, can help their students

value learning in many ways, can contribute a lot to help a failing students' comprehension, and can assist parents encourage their kids to do well in school with an assessment. As viewed from the students' views, this shows that teachers are competent and confident in their ability to involve students in the learning process.

Instructional Strategies. Student respondents agree that their teachers can offer an alternative explanation when students have doubts, and that they are capable of using alternative methods in the classroom with the highest assessment. This suggests that students find these teaching methods highly successful and valuable in resolving their questions and improving their learning experience.

Classroom Management. Student respondents agree that their teachers can manage troublesome students which was given the highest assessment. It can be inferred that most student responders believe their professors are competent at managing challenging or disruptive students. The result shows that teachers' self- efficacy in terms of classroom management was manifested among them as perceived by the student respondents. Students regard their teachers as capable and confident in good classroom management, which suggests the teachers' capacity to retain control and address behavioral difficulties.

3. Differences in the assessment of the student respondents of their teachers' self-efficacy when their profiles are taken as factors.

Age. When their age is considered as a test factor, the result showed that there is a significant difference in the assessment of student respondents on their teachers' self-efficacy based on their student involvement, instructional strategies and classroom management.

Sex. When their sex is considered as a test factor, the result showed that there is no significant difference in the assessment of student respondents on their teachers' self-efficacy based on their student involvement, instructional strategies and classroom management regardless of their sex.

Major. When their major is considered as a test factor, the result showed that there is no significant difference in the assessment of student respondents on their teachers' self-efficacy based on their student involvement, instructional strategies and classroom management regardless of their major.

4. Student respondents' assessment of their engagement level based on cognitive, affective and behavioral.

Cognitive Engagement. Student respondents agree that they try to match what they already know with things they are trying to learn for school which was given the highest assessment. It implies that students can absorb and retain material more successfully when they actively reflect on their learning processes and make connections between new concepts and prior knowledge. The result indicates that cognitive engagement was manifested among the students based on their own assessment.

Affective Engagement. Student respondents agree that they enjoy learning new things in class, and that they find joy in being a part of this school community which was given the highest assessment. The result shows that affective engagement was manifested among the students based on their own assessment. Based on their own assessments, the results indicated that students exhibited affective engagement, or pleasant feelings and emotional connection with their learning experience.

Behavioral Engagement. Student respondents agree that they are active participants of school activities such as sport day and other school events which was given the highest assessment. Based on the students' own assessments, it may be determined that there was behavioral engagement. In their assessments, they have demonstrated effort and active participation in their learning

processes. Students are probably enjoying a supportive and engaging learning environment if they are assessing their own engagement. Their involvement could indicate a feeling of connection with their learning experiences.

5. Significant differences in the assessment of student respondents on their engagement level when their profile is used as test factors.

Age. When their age is considered as a test factor, the result showed that there were significant differences in the assessment of student respondents on their level of engagement when age is taken as test factor. This indicates that student respondents have different perceptions on their level of engagement in terms of cognitive, affective, and behavioral engagements depending on their age.

Sex. When their age is considered as a test factor, the result showed that there is no significant difference in the assessment of student respondents on their level of engagement when their sex is taken as test factor. This further indicates that male and female student respondents have relatively the same assessment on their level of engagement in terms of cognitive, affective, and behavioral engagement.

Major. When their age is considered as a test factor, the result showed that there is no significant difference in the assessment of student respondents on their level of engagement when their major is taken as test factor. The result further shows that student respondents have relatively the same assessment on their level of engagement in terms of cognitive, affective, and behavioral engagement regardless of their major.

6. Relationship Between Teachers' Self-Efficacy and Students' Engagement

The result reveals that the overall self-efficacy of teachers were found to be positively correlated to a very high degree with the students' level of engagement. This goes to show that the self-efficacy of teachers gives a strong impact to the students' level of engagement. Generally, the findings show a significant positive relationship between students' engagement levels and teachers' overall self-efficacy.

Conclusion. Based on the findings of this study, the researcher came up with the following conclusions:

1. Data shows that most of the respondents are aged 19-20, are pursuing digital information majors, and reflect a strong interest in technology. However, the dominance of male students highlight the need for initiatives that promote gender inclusion and diversity in these fields.

2. Overall, it can be concluded that teachers' self-efficacy in terms of instructional strategies, classroom management, and student involvement is evident, as observed by the student respondents. This implies that while teachers are competent in key areas, enhancing student engagement could lead to even better learning outcomes and a more balanced approach to effective teaching.

3. The study reveals significant age-based differences in students' assessments of teachers' self-efficacy, highlighting that age influences students' perspectives, while sex and academic major do not.

4. The students exhibit behavioral, emotional, and cognitive engagement, though each area receives varying emphasis. This suggests that while students are actively participating in their education, there may be imbalances in how they engage, highlighting the need for targeted efforts to promote a more holistic and balanced approach to student involvement in learning.

5. Significant age-based differences were found in students' assessments of engagement, with views on cognitive, affective, and behavioral engagement shifting with age. However, no differences

were observed based on sex or major, indicating similar opinions across these groups. This highlights age as an important factor in assessing student engagement.

6. There is a strong positive correlation between teachers' self-efficacy and student engagement. This underscores the critical role of teachers' confidence in increasing students' interest, particularly in areas such as student involvement, teaching strategies, and classroom management. Enhancing teachers' self-efficacy is vital for promoting cognitive, emotional, and behavioral engagement among students. Ultimately, increasing teachers' confidence can result in heightened student engagement and motivation.

Recommendations. From the findings and conclusions of the study, the following recommendations are hereby given:

1. Offer scholarships and mentorship programs specifically for female to encourage more female students to pursue digital information majors, promoting gender diversity in technology fields.

2. Provide training for teachers on interactive technology tools to make lessons more engaging towards improving student engagement.

3. Tailor teaching methods to address age-based differences in student perceptions of teachers' self-efficacy.

4. Develop initiatives that promote a balanced approach to student engagement across behavioral, emotional, and cognitive dimensions.

5. Create age-specific strategies like peer mentoring programs where older students guide younger peers to address shifting student engagement levels and needs.

6. Encourage participation in educational conferences and workshops focused on innovative teaching methods for teachers to

enhance their self-efficacy, ultimately fostering greater student motivation and participation.

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