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The E-Learning and Critical Thinking Skills on Students' Academic Performance: Basis For an Instructional Plan

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Abstract

In today's rapidly evolving educational landscape, the integration of e-learning platforms has significantly transformed how students access and engage with academic content. Simultaneously, the development of critical thinking skills remains a cornerstone of effective learning and academic success. This study assessed the e-learning and critical thinking skills of public and private Senior High School students as basis for an instructional plan in the Division of Iligan City during School Year 2022-2023.

In this study, there were 350 Senior High School student-respondents. The instruments used in gathering essential data are survey questionnaire patterned from Roper (2007) on the Development of Online Student Skills for quantitative approach, focus group discussion and in-depth interview for qualitative approach. Descriptive statistics such as frequency, percentage, mean, standardization, and f-test were utilized to describe the dependent and independent variables.

In our study, results revealed that there is a significant effect of the e-learning skills in motivation to English, Math, Science and Filipino. While, there is also a significant effect of the critical thinking skills in analysis on students' academic performance in Mathematics and Science subjects. It is recommended that Department of Education continuously provide and sustain ICT laboratories with adequate internet connections and technical maintenance.

Keywords: E-learning, E-learning Skills, Critical Thinking Skills, Students' Academic Performance, Instructional Plan

INTRODUCTION

In the realm of swift technological progress, e-learning stands out as an essential resource for improving education in the 21st century. By utilizing devices like mobile phones and tablets, students connect with digital materials both in and out of the classroom. With a solid grounding in e-learning and

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critical thinking abilities, senior high school students are anticipated to cultivate skills essential for triumph in higher education and beyond. Besides offering adaptable learning timetables, e-learning facilitates affordable education by minimizing transportation and living costs.

With a wealth of online resources at their disposal, students can work together, communicate, and innovate in complex, rapidly changing environments. By advancing through this learning approach, learners grow more autonomous and perceptive. Additionally, research indicates that e-learning provides significant benefits by accommodating the educational requirements of students across various locations and time zones. Therefore, the incorporation of e-learning into educational systems enhances the capacity to tackle real-world issues.

METHODOLOGY

This study employed mixed method research with 350 Senior High School students for quantitative approach while Focus-Group Discussion (FGD) and in-depth interview for qualitative approach. Focus-group discussion was conducted to students through 5 items of questions which focused on e-learning and critical thinking skills. On the same manner, in-depth interview was conducted to students comprised of 5 questions mainly about their e-learning and critical thinking skills development.

However, this study also utilized an adapted and patterned questionnaire from Roper (2007) on the Development of Online Student Skills: Successful Online Students Share their Secrets. Moreover, this study also used descriptive statistics such as frequency, percentage, mean, standard deviation, T-test and F-test were utilized to describe the dependent and independent variables of the study.

RESULTS AND DISCUSSION

This study's results indicate that the most of the respondents are 16 to 18 years old, females, parents are laborer/house keeper, and college graduate. Their study habits and attitudes towards e-learning and critical thinking skills are effective. They mostly come from public schools.

Additionally, the assessment level of e-learning skills as perceived by the respondents in terms of motivation and connection with the students are highly effective while time management and communication of instruction are effective. On critical thinking skills in terms of interpretation, evaluation and decision making showed highly effective while in analysis is effective. Then, the academic performance of the students in English, Mathematics and Science are all satisfactory while Filipino is very satisfactory.

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Moreover, in comparison with the respondents' academic performance were not satisfactory in terms of age, sex, parents' occupation and parents' educational attainment. Study habit and attitude towards e-learning are significant in English, Math, Science and Filipino. Most of the students are from public schools. Thus, there is only significant effect of the e-learning skills on students' academic performance in English, Math, Science and Filipino. There is a significant effect of the critical thinking skills in analysis to Mathematics and Science subjects. Thus, in the focus-group discussion (FGD) it revealed that e-learning skills and critical thinking skills required educational tool to improve academic performance.

On other hand, the e-learning and critical thinking instructional plan will link the gap between the students' skills and practices in e-learning integration and the standards set for students' e-learning competence. This plan indicates how the schools use e-learning to support developments under the key areas of concern including the enhancement of the schools' capacity to use e-learning in the teaching and learning process. This plan defines the key areas of improvement to achieve a successful e-learning integration strategy.

The instructional plan presented is an effective strategy to enhance e-learning and critical thinking skills for the school year 2022–2023. It concentrates on key areas such as time management, motivation, communication, and student connection, all vital for successful online learning. The plan emphasizes active participation from ICT experts, teachers, students, and parents, showing a strong collaborative approach. Activities like determining productive times, giving feedback, verbal instruction, and classroom discussions are strategically mapped out to address specific learning goals.

Furthermore, the integration of e-learning and critical thinking activities with differentiated instruction must be undertaken to develop consistency and sustain exemplary academic outcomes. While, in the in-depth interview students need digital resources in the integration of discussion but the difficulty in handling is evident. They are assessed using consistent hands on application of an e-learning and critical learning skills development activities.

Moreover, critical thinking skills are developed through activities like journal writing, note-taking, performance benchmarking, and brainstorming solutions. The plan’s structure, with specified time frames and expected outputs, demonstrates a strong commitment to both accountability and results. Overall, it reflects an organized, thoughtful approach to modern education challenges, ensuring students are not only engaged in learning but are also equipped with essential skills for independent and analytical thinking.

CONCLUSION

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Based on the findings of the study, the following conclusions are drawn: e-learning skills and critical thinking skills are associated with the constant application and positive perspectives. Students, essentially, influence their academic performance. If determination is poured their willingness to learn, it will eventually improve their skills that can be retained a lifetime. More so, teachers' consistency in the application of theories and techniques ignite students to be engaged in the differentiated instructions that will be undertaken to sustain the growth in e-learning and critical analysis.

Consequently, focus-group discussion (FGD) has justified that e-learning skills and critical thinking skills affect academic performance. Integration of e-learning resources to improve critical thinking skills essentially ignited students' interest in concept understanding.

In-depth interview with students simplified the use of digital resources to consistently enhance their critical thinking skills which eventually provides lifelong learning.

Furthermore, the influence of other factors possibly hampers in the development of the acquired e-learning and critical thinking skills a student possesses. Assistance in dealing with it may help reduce the risk factors. Thus, exemplary academic performance can be sustained through the planned e-learning and critical 2 undertakings reduces the delayed academic performance.

RECOMMENDATIONS

In light of the above finding, the following recommendations are hereby forwarded:

1. The Department of Education (DepEd) continuously provide and sustain ICT classroom or laboratory with adequate internet technology and technical maintenance through trainings.

2. The Division ICT Coordinators must provide trainings and support to all school ICT Coordinators to ensure and integrate e-learning and critical thinking systems. They should set trainings and orientations on the use of e-learning operation in the learning process.

3. School principals must conduct trainings not only the ICT coordinator as well as the TLE teachers and should create a committee for e-learning program or system that will help assist the development of students' academic performance. However, e-learning should enhance teachers and students' software application integration and skills through pedagogical approach.

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4. The school ICT coordinator should have ICT Program Plan and Policy aligned on Appropriate-Use Policy (AUP) using a consultative process. An ICT integration mentoring program should be conducted by the ICT Coordinator for teachers and students as well.

5. Teachers should make use of the multimedia presentation in their respective classes in such way to help students blend the e-learning and critical learning skills.

6. Students should develop innovation and adaptation of the different trends of technology through the integration of these technologies in the learning process to develop high performance in class.