

THE EFFECT OF E-LEARNING TOOLS ON TLE SUBJECT IN PUBLIC SCHOOLS

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Technology and Livelihood Education (TLE) is a core subject in the Philippine education curriculum that aims at equipping students with technical and practical skills that are required for work and livelihood. With the introduction of e-learning tools, TLE education has also experienced a tremendous transformation, particularly in public schools. The tools present new learning and teaching approaches that prepare students to tackle real-life problems and bridge gaps in traditional approaches to learning. E-learning tools, such as digital platforms, online tutorials, and interactive software, have transformed TLE by giving students a more interactive and convenient learning experience. These tools enable students to learn practical skills in agriculture, ICT, home economics, and industrial arts through virtual simulations and online materials.

In a study by Dr. Villanueva (2021), it was found that the use of e-learning tools significantly improved student performance in TLE subjects. Dr. Villanueva's research emphasized that interactive learning platforms, such as Google Classroom and DepEd Commons, fostered student engagement and understanding of complex concepts. In the same vein, a study by Dr. Santos (2022) brought to the fore the effects of e-learning devices in rural settings. According to Dr. Santos, learners who were provided with digital means scored higher in entrepreneurship and technical drafting courses compared to those only using conventional techniques. The study emphasized the need for government and community intervention in offering equipment and internet to disadvantaged schools.

Public schools are advantaged by e-learning tools through the updating of their teaching methods. E-learning tools minimize the use of tangible resources, allowing

schools to provide quality education despite budget constraints. Besides, analysis of data in e-learning websites enables administrators to monitor the progress and weaknesses of students. Students receive a more engaging and flexible learning process via e-learning resources. For instance, websites like YouTube and Khan Academy offer step-by-step video tutorials on carpentry, baking, and web design, which enhance students' hands-on capabilities. Teachers benefit from e-learning tools by accessing ready-made lesson plans, digital teaching aids, and professional development programs. Dr. Villanueva's study highlighted that teachers trained in using e-learning platforms reported increased confidence and efficiency in delivering lessons. This not only improves the quality of education but also reduces the workload of educators. Key stakeholders in the process of e-learning integration are parents, local government units (LGUs), and business enterprises. To ensure that teachers and students can utilize the tools to their maximum capacity, these stakeholders provide money and support. With this in mind, Dr. Santos points out that the engagement of business and educational institutions has worked well for the implementation of community projects that seek to boost education.

Notwithstanding the advantages, a number of problems exist with the adoption of e-learning tools by TLE. Technical challenges such as poor devices, poor internet connectivity, and poor teacher training hinder smooth use of the tools. Dr. Santos' study recommended strengthening public-private partnerships to address these gaps, while Dr. Villanueva suggested the development of localized digital content to make lessons more relevant to Filipino students. Unquestionably, e-learning teacher tools of e-learning incorporation have brought with them the perspectives of teaching TLE in public schools in the Philippines. The TLE technologies make possible the application of learned theories to practical situations in shaping how teaching and learning are done. With the digital enhancement of education, as the situation becomes more accepted by schools, teachers, students, and other actors, the prospect of improving educational outcomes of TLE improves.

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