

# Case study on information systems in education

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Education at present has the necessity for proficient technological tools to create, evaluate multimedia texts, and perform principles of excellent practices in every classroom in every learning institution. In educational environment, emerging technologies create various opportunities in the field of teaching and learning of different subject matters both in individual and collaborative aspects across the disciplines and different levels of learning. Many beneficial outcomes are available to the educators and learners respectively; there are many expansions of technological capabilities it offers but for the educators in particular, they are often undecided regarding how to convey technology and the Internet into their instructional performances and to their administrative or professional activities. The application of information systems, on how technology affects learning, and in education in general; it is mainly focusing on the impact of information system in the current or future classroom in every institution. The present educational environment needs information system technology as part of the curriculum. Information system varies in different views such as teaching and learning in digital age for natives and immigrants, software and learning support for students with learning disabilities, responses of teachers in digital games, and the government funds for database on learning. “ Every institution, every classroom, and every learner uses information system. There must be no child be left behind not knowing how to use information system tools and a school setting is the best place to begin this learning on information system in education”.

In the United States of America, digital game play is the common activity for teenagers and it engages them in the subject matters that provides more

interest to perform well in problem solving skills and it offers comprehension on some difficult concepts in the subject matter (Lenhart et al., 2008). It is believe that digital games encourage students to perform well in an academic setting and has an impact on learning in the classroom. There are improvements in learning and an increased in attention to digital games in every school in particular where next generation digital games are growing faster with great interest that shift toward a culture simulation and investigates different views on educational learning. The learning is relevant for several reasons; it approaches the teaching of the course content with collaborative problem solving, sharing of knowledge, and cooperative exploration by means of discussion and reflection (Sarone & Scherer, 2010). Digital games and the teaching strategies are matched accordingly to the teaching objectives of the lessons delivered in the classroom. In addition, well-designed digital games possess a developmental learning for the students to learn how to perform functionally in individual or collaborative aspects. Students learn both in the positive interdependence and in accountability (Gee, 2007). These frameworks call for the knowledge, expertise, and skills necessary for innovation and creativity in critical thinking and problem solving. Digital games allow the students to think critically and act accordingly in the real-world issues that arise anytime in their course of learning. It offers the students to understand on current issues and provide them the opportunity to think potential avenues in preparation for their future workforce with technical skills and the ability to compete globally, innovatively, and critically. Critical thinking and problem solving are very important in the learning skills of every student and for

them to enhance better through practical exposure to computer games and more digital multimedia activities in school (Day, 2001). It helps the students to increase their intelligence, this intelligence is due to the immersion of their cognitive complexity on video or digital games, and other source of entertainments for the students to learn how to recognize and read visual images represented in various multidimensional visual-spatial skill. In addition, it enhances their mathematical, reading-comprehension, and solving problem abilities in the classroom. Students develop their inductive reasoning if they are involved in information system technology as provided in every institution. Teachers are needed to expose themselves to a wide range of instructional strategies and to develop their individual confidence and ability to facilitate game-based instruction in the classroom. Through their engagement in the information system technology in education, teachers are more equipped and competitive enough to lead a digital game and easily design lessons for their students using game-based methods. In addition, teachers determined the best performances for their learning strategies for their students' learning and improvement.

Appropriate accommodations and technology are necessary for students who have cognitive, sensory, physical, and learning disabilities in learning a challenging mathematics problem. In this event, software and learning support for mathematics are provided for students with learning disabilities. It is more accessible for students with learning disabilities and suitable for them to use in their learning challenges in the classroom. Teachers are expected to support more in this event to motivate students and boost their confidence individually and as a group in general. Information system

technology provides what are necessary for mathematics classes and resources to expand knowledge, teaching methods, and appropriate tools for every student with disability. There is specific mathematics software and learning support intended for students with pencil, visual, learning, cognitive, and hearing impairments. The software has no restrictions in terms of functionality on a particular group of students with disabilities specifically. As noted by the Center for Applied Special Technology, the program is developed according to principles in universal design and appropriate considerations are made for all the learners involved in the subject areas of learning. There are additional resources made that includes database of software, hardware, and other applicable technology for accessibility with great value to all learners or students, educators, and the involvement of parents as well. Several organizations help maintain the support to enhance the knowledge of the students with learning disabilities particularly on the products on communications and learning mathematics. The National Center for Technology Innovation (CITED) developed TechMatrix; this is an excellent resource for mathematics, writing, and technology products for grade eight students with special needs. Its instructional features involves differentiation, customizable interface options, cursor control options, text to speech capability, input or output options, drafting options, embedded resources, text-embedded prompts, and word prediction capabilities. This technology is very helpful to students for them to compete and provide them potentials to find a job in the future and enhance their level academically in the field of education. In addition, not a single child with disability is left behind without the knowledge served for them as regular students are learning these

information systems in education.

The teaching and learning in digital age for native and immigrants has cognitive effects on digital technology and the effect on human creativity and creativity needs mental space. There are some experts discussed whether digital technology destroys or enhance concentration of an individual. The fact that technology helps improves the knowledge of every individual and develops the skills respectively. According to Matt Richtel, a technology reporter, the average person uses information three times each day; it implies that due to limitless amount of information is available through the Internet from personal computers or personal Smartphones. The human brains process the information and the moment the information exceeds the human brain, the cognitive load or the limit of the short-term memory is lose to think deeply and it draw some connections between things and new information the person have known (Nicholas Carr, 2008). It means that the way the person read the web does not changed the way the person read instead it has changed the way that person thinks. The “ Mindful Voice” is an examination of cognitive function in the digital age; both in digital natives or those who are born in the digital age and the digital immigrants or those who migrated to the digital age. Neither native nor immigrant, a life without the digital media is a practical choice. According to some experts, the growing concern on technology leads potential addiction but to choose the path is a way of missing the wonders of digital multimedia aspects. Teachers who dislike technology fail to engage because of their personal views and technology is highly recommended on their teaching strategies to develop their skills and impart their expertise to the students. The way the

teacher teaches the lesson in terms of technical skills reflects how students learned. Therefore, the understanding on the cognitive implication of information system in education is very important for teaching the new tribe of digital natives. There should be a continuous use of technology for more benefits since information system challenges every person to emphasize human values; technology is not good or bad, it is powerful and at the same time it is complicated. Every person must grab the opportunity of this modernized world of technology advancement on what it can do to the skills and what is learned. Eventually, there are better outcomes if a person is engaged in the scheme of information systems.

The government fully supports the development of databases for students that track the students' performances and teachers as well. The databases provide insight toward the effectiveness of the key to academic programs in respective institutions in every state. The student database or CalPADS and teacher database or CalTIDES are scheduled to go online and determine its effectiveness in the field of learning. The databases are essential to determine effective key programs in education. For example, some educators can determine whether the students are learning and acquire potentials in their English subject with progress in their test scores compared on their previous results in terms of performances in the classroom.

Information systems in education are truly the key to success of every student on their learning. Either students with learning disabilities or regular students deserve to have this kind of technology tools for them not to be left behind not knowing the importance of technology and the vitality and impact on their present course of study and in the future. Every teacher has the

responsibility to assist every student to learn computer-based lessons; digital games or digital strategies with high functionality to compete globally, critically, and innovatively. Every school setting promotes a better learning to every student in the classroom. It is believed that information systems in education mold the values of the students, enhance every skill, and promote advancement on the technical aspect of the ability to perform well in the classroom, community, and in the entire world of real application of technology learned in every institution. Advanced technology promotes advanced learning.

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