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Evaluating the Teaching and Learning Value of Tablets

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Abstract : The wave of new advanced computing technology that has been developed during the recent past has significantly changed the way we communicate, collaborate and collect information. It has created a new technology environment and paradigm in which our children and students grow-up and this impacts on their learning. Research confirmed that Generation Y students have a preference for learning in the new technology environment. The challenge or question is: How do we adjust our teaching and learning to make the most of these changes. The complexity of effective and efficient teaching and learning must not be underestimated and changes must be preceded by proper objective research to prevent any haphazard developments that could do more harm than benefit. A blended learning approach has been used in the Forestry department for a few numbers of years including the use of electronic-peer assisted learning (e-pal) in a fixed-computer set-up within a learning management system environment. It was decided to extend the investigation and do some exploratory research by using a range of different Tablet devices. For this purpose, learning activities or assignments were designed to cover aspects of communication, collaboration and collection of information. The Moodle learning management system was used to present normal module information, to communicate with students and for feedback and data collection. Student feedback was collected by using an online questionnaire and informal discussions. The research project was implemented in 2013, 2014 and 2015 amongst first and third-year students doing a forestry three-year technical tertiary qualification in commercial plantation management. In general, more than 80% of the students alluded to that the device was very useful in their learning environment while the rest indicated that the devices were not very useful. More than ninety percent of the students acknowledged that they would like to continue using the devices for all of their modules whilst the rest alluded to functioning efficiently without the devices. Results indicated that information collection (access to resources) was rated the highest advantageous factor followed by communication and collaboration. The main general advantages of using Tablets were listed by the students as being mobility (portability), 24/7 access to learning material and information of any kind on a user friendly device in a Wi-Fi environment, fast computing process speeds, saving time, effort and airtime through skyping and e-mail, and use of various applications. Ownership of the device is a critical factor while the risk was identified as a major potential constraint. Significant differences were reported between the different types and quality of Tablets. The preferred types are those with a bigger screen and the ones with overall better functionality and quality features. Tablets significantly increase the collaboration, communication and information collection needs of the students. It does, however, not replace the need of a computer/laptop because of limited storage and computation capacity, small screen size and inefficient typing.

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