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NelCon Studio: An e-learning Content Development / Playing platform for Blended Learning and Micro-learning

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Abstract- There is an increasing demand for e-learning during the outbreak of Covid-19. Thus, the educational institutions stress the teachers to use digital educational tools to develop the lessons and share them with the students. In a context like this, consideration should be given to minimize the issues related to connectivity, accessibility and internet pricing since they are directly related to anytime/anywhere education for all. Therefore, the purpose of this study is to develop an e-learning content development platform to address the above problems faced by the users. Thus, the format of MP3 which has been the popular choice of Internet based music industry, is studied and revealed that it could not only carry audio, but also multiple images and text as well. This compliance with the learnativity content model where an MP3 lesson can be considered as a learning object consisting with audio, images and texts. Consequently, the NeLCon Studio is developed with NeLCon creator and NeLCon Player which allows both the teacher and the student to develop lessons as low volume files which allow students to work online as well as offline modes.

Keywords – *e-learning, MP3, blended learning, micro-learning, multimedia, learning object*

I. INTRODUCTION

Rapid development of information technology has affected the human life in many ways. One of such major area that information technology has made a greater impact is education. Thus, information technology has opened up many new opportunities in the field of teaching and learning. E-learning is facilitated by technological devices (with or without Internet) invented time to time such as desktop computers, laptops, personal digital assistants and tablet computers, mobile computers, USB drives, CD ROMs etc. A pool of software platforms was also developed to assist in e-learning content development and distribution.

As stated by Moore et. al.[1] by its definition, "e-learning is providing learning through electronic means mainly through internet". The delivery can be taken place in synchronous or asynchronous mode. If the delivery happens online synchronous method, then the student and the teacher interact with each other in real time. In asynchronous mode, it is not required for real time participation by the teacher and the student and mainly use a Learning Management System for the delivery. On the other hand, blended learning incorporates both online and face-to-face teaching and can gain benefits if used in the context of e-learning [2].