

# Edmodo Multimedia: Supporting Technology for Media Learning at Higher Education

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**Abstract**— In the digital era nowadays technological developments are expected to be optimally utilized in various sectors covering economy and business, politics to education. Development and use of multimedia in learning is one way in utilizing technology in the field of education. Utilization of technology in the field of education is closely related to technological pedagogical content knowledge and also the competence of learners as an effort to develop digital skills. Edmodo multimedia is one of the e-learning based media that is designed by raising the existence of social media for learning.

**Keywords**— *Edmodo Multimedia, Higher Education, Media Learning.*

## I. INTRODUCTION

The millennial period has had a significant impact on the demands of human resource competing quality with high adaptation to the development of Information Technology (IT). The development of Information Technology (IT) has

contributed significantly to the change of human potential towards Human Sustainable Development (HSD). Utilization of Information Technology (IT) is needed to create work effectiveness and overcome the human potential shortcomings. The report of the World Economic Forum (2016) states that performance and work skills that have many opportunities in the work industry in all areas is the expertise in the processing of Information Technology (IT). Utilization of Information Technology is not only applied in the world of business and social networking but all spheres of life have also used Information Technology as a way of preventing potential human resource capacity gaps. The education sector is a very dependent aspect of this field. Students in this millennial era require skills in applying technology as one of 21st-century skills. M. Alavi (2007) states that individuals who rely on Information Technology for educational purposes will tend to experience a higher level of understanding than those who do not use it.

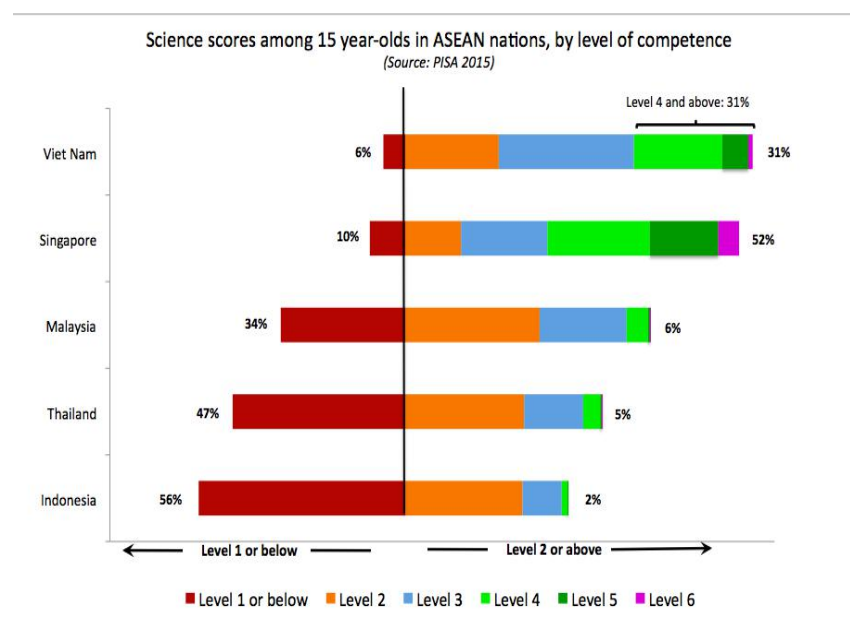


Chart.1: Competency Level of Indonesian Students

Source: Program for International Student Assessment (PISA) 2015

The demand for potential digital skills urges education stakeholders to be able to engage and participate in the progressive use of Information Technology (IT). A study conducted by J. Cao, et. al. (2008) shows responses from respondents stating that conventional learning practices are more potential than Web-based learning. They assume that web-based assignment practices have no significant effect on improving the quality of learning compared to conventional tests. The assumption in the above finding is inversely proportional to the study by Bannon et. al. (2005) and D.E. Leidner & S.L. Jarvenpaa (2015) arguing that the virtual interaction in the utilization of Information Technology provides significant results in streamlining learning. The use of Information Technology has a positive effect on the learning indicators achieved by the learner.

Learning that is attractively packaged will cope with their limitations in the absorption of information in the form of verbal and visual knowledge. PISA data, (2015) shows that Indonesian youth and students have low levels of skills and knowledge compared to those from other ASEAN countries. To get more information, refer to the chart below.

The data above shows that the quality of Indonesian students' competence is in the low classification with the point at level one. This becomes a reflection for researchers in finding an alternative to foster achievement and competence of learners in improving academic skills in general and soft skills in particular.

Utilization of multimedia-based technology is still considered very less applied in learning. This affects the quality of the ability of learners in developing the skills they have. Research conducted by Thakre and Thakre (2015) states that the use of media-based learning technology, mobile learning, and multimedia-based E- learning is a learning that is in great demand by students. Therefore teachers should be more selective in adjusting the motivation of students with the media to be used in learning.

The quality of technology utilization and the wealth of medium in information technology is a significant predictor of the attitude or behavior of learning and the level of student participation (J. Webster & P. Hackley, 2007). Studying human interaction with technology is the core of digital-based human interaction (Pallud 2016). Creating a highly adaptive and competitive generation is a target in shaping human resources with high empowerment.

Based on empirical facts on the above background, the problems encountered are as follows:

- a) The low interest and motivation of the learners.
- b) Weak awareness of learners about the importance of self-development potential.

- c) The potential, competence of competitiveness and adaptation to information technology are still very low.
- d) The least use of interactive multimedia in learning.
- e) The low quality of learning due to the fact that the pedagogic potential of teachers in the field of information technology is still at a low level.

Considering the problems encountered above, we need a solution in overcoming all forms of obstacles of students and teachers in utilizing the technology in the learning process. One way that teachers can use in using technology in learning is through the use of media tailored to the needs and objectives of learning. The utilization of multimedia in learning is expected to improve the quality of learning in general and increase the competence of teachers and students in particular.

## II. LITERATURE REVIEW

### Instructional Media

Learning media is a means of channeling messages in the context of education conveyed by teachers in the learning process (Seels & Richey, 2002). Gerlach (1980) argues that the characteristics of the media that essentially help the learning process are as follows:

#### 1) Fixative Features

The fixative feature gives an idea of how the media is capable of recording, storing and even reconstructing an object or event. An event or object can be sorted and rearranged through media such as photography, video or audio. A recording of an object or a particular event that occurs can be channeled without being limited by space and time because the media has a fixative feature.

#### 2) Manipulative Features

Media has a manipulative feature that allows the transformation of an event or object in the channeling of messages in it. Through the technique of shooting or recording on an event or moment that has a duration of hours and days, the presentation of information can be processed by reducing or adding the duration of time on the original event. This is what is meant by manipulative features. Information can be delivered more effectively and flexibly as needed.

#### 3) Distributive Features

Distributive characteristics are the most dominant features in the use of media in learning. The media is a messenger tool from the messenger to the recipient of the message.

Distributive features help learners in the processing of information in their cognitive structure. The information already recorded in the form of media formats such as video, sound or image will be enjoyed in any condition, whenever and wherever.

### **Interactive Multimedia of Edmodo**

Edmodo is a social media platform that is often described as a light social media like Facebook but in an educational perspective. Edmodo attracts teachers and students with social elements that resemble social media learning. Note however that Edmodo has a greater value in educational application than just as a social medium. Edmodo designed for educational purposes enables highly secure cloud-based collaboration. School stakeholders can easily manage a system that provides the very best practical features in engaging intense interaction with the learner (Susd, 2011).

Here are the advantages of Edmodo interactive multimedia. (1) Teachers and learners can collaborate in a safe and closed environment. (2) Communication messages between teachers and learners have a safe accuracy and are open so that teachers can monitor and control interactions with learners, (3) Facilitate monitoring of student interactions and activities, (4) Teachers can post assignments and conduct an electronic evaluation. This provides an advantage in time efficiency and accuracy of the assessment as the whole is governed by software, (5) The built-in survey tool can be used to check the degree of student's understanding of the material presented.

Further benefits of Edmodo are (6) Teachers and other school personnel can create professional groups, community

studies, and other networks in an effort to expand potential and professional development, (7) Teachers and students can store and share documents and files in various supported formats (8) The teacher can maintain a library of personal content and share content with members, (9) Students can easily access files through the library tools.

The other benefits of Edmodo are (10) Facilitating the arrangement of the file sharing by the teacher for the public or for the class unit or for certain groups only, (11) Parents can create separate account that serves to control the learning activities of their children, (12) The ability and convenience of communication and file storage in the system, (13) Edmodo is able to overcome the distance face to face between teachers and students if direct learning cannot be done (14) Edmodo is a free software and free of any advertising.

### **How to Develop Edmodo Multimedia**

#### **1. Start creating an Edmodo account**

The first step is to visit the website of Edmodo at [www.edmodo.com](http://www.edmodo.com). After that you will get a view like in picture 1 below. In the initial view, Edmodo provides three accounts that you can choose, either the account as a teacher, student or parent. In this case only the teacher account will be created as an example. Select the "I am a teacher" tool to start creating an account as a teacher. Fill in form fields that include email, password, group name, grade and subject. After successfully getting a new account, then the next step is to log in using the email and password that have been set at the beginning.

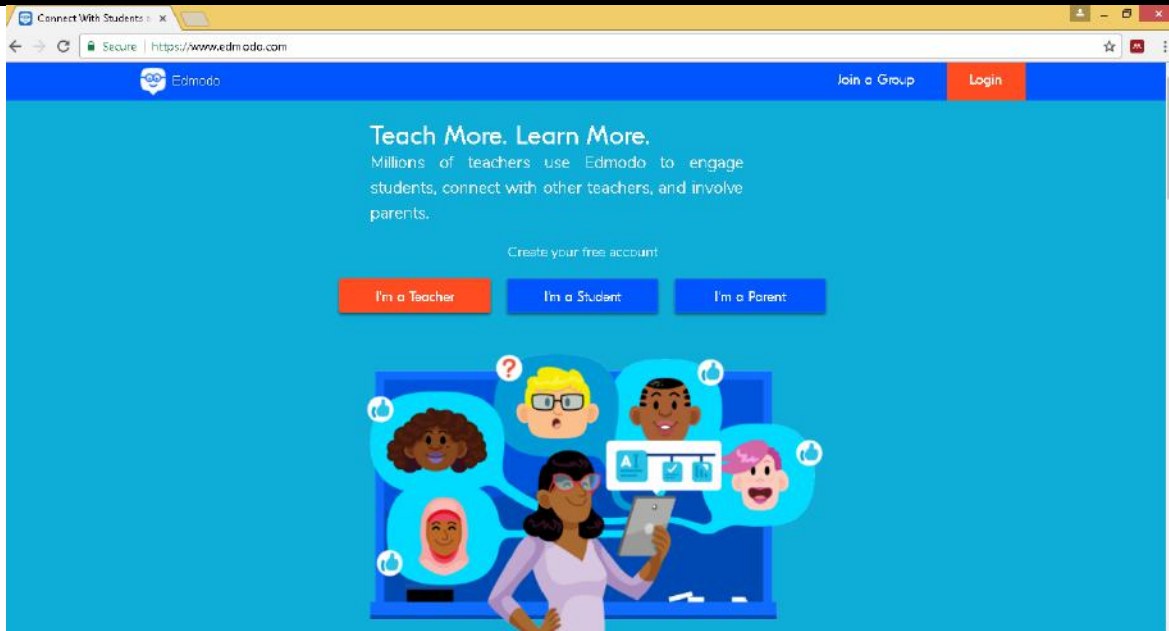


Fig.1: Initial view of Edmodo

## 2. Edmodo Home View

After successfully entering into the Edmodo account, then you will see the view of the homepage like the picture below.

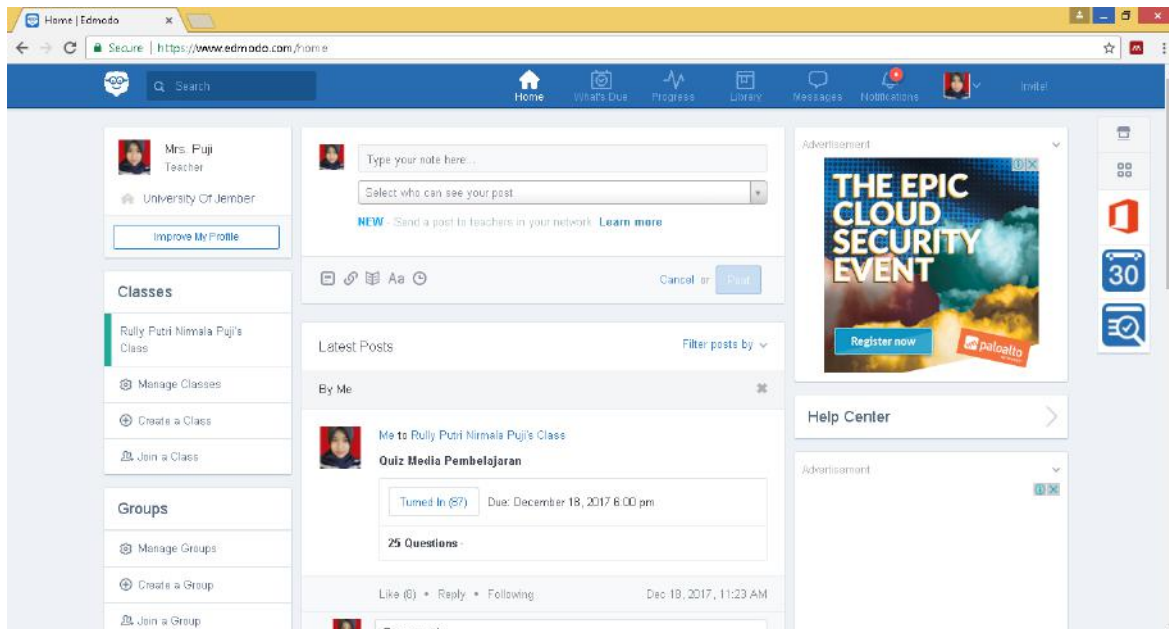


Fig.2: Edmodo homepage display

On this homepage feature, you will be able to view posts you have written and view posts from students and other teachers. In this homepage feature you can start updating your profile as a teacher or start to set up a new class.

## 3. Updating Profile

In this profile feature you can update personal data including Profile Picture, Educational Background, Professional Experience, Schedule Information, Education Information, and any account that allows you to stay connected through the available links. The Edmodo profile you have should be able to provide information about your bio-data as a teacher.

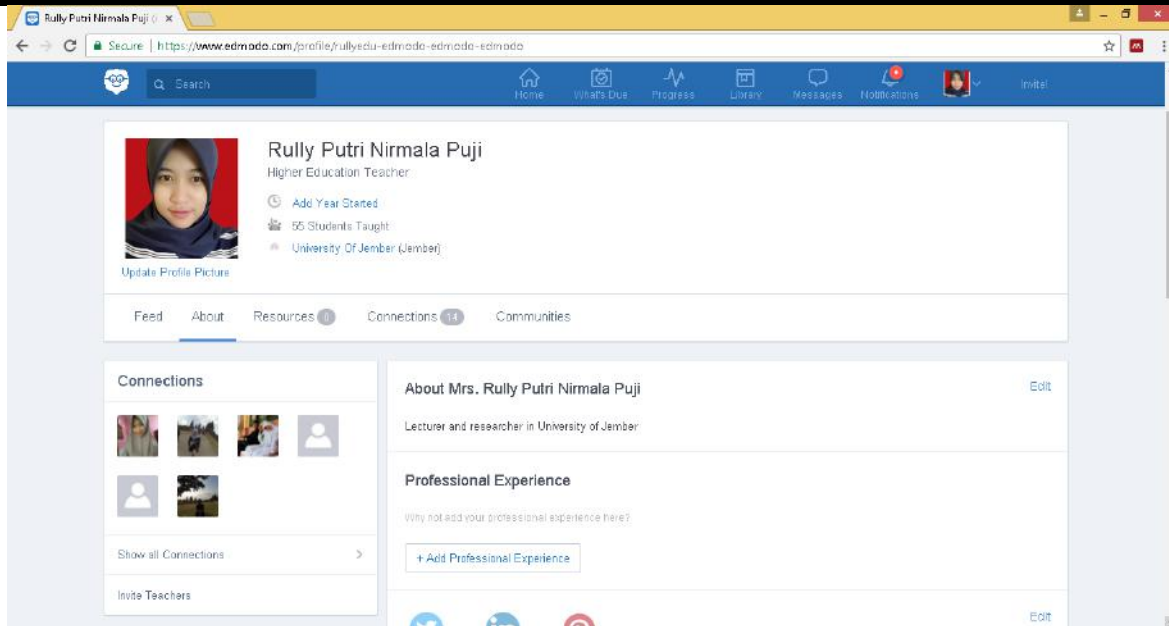


Fig.3: Edmodo profile display

**4. Create and organize classes**

The next step that you can do in Edmodo is to make the class in accordance with the subjects that you teach. Please go to the homepage view and then click the “create class” button, then the display will appear as shown in figure 4. In the “create class” window you will fill the name of the class in accordance with the subjects that you teach or in accordance

with the needs. In addition you can also add the grade according to the level of education of the students you are guiding. The subject area also needs to be tailored as an information related to the subjects you are in. You can also select an image icon in each class that serves as a differentiator with other classes.

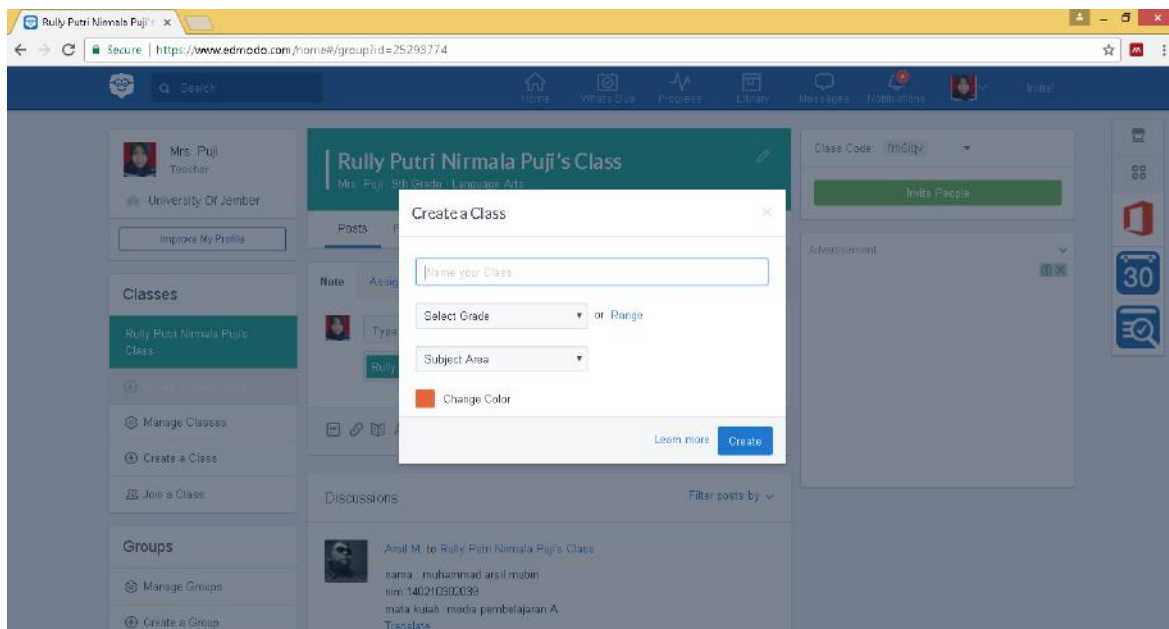


Fig.4: Create class view

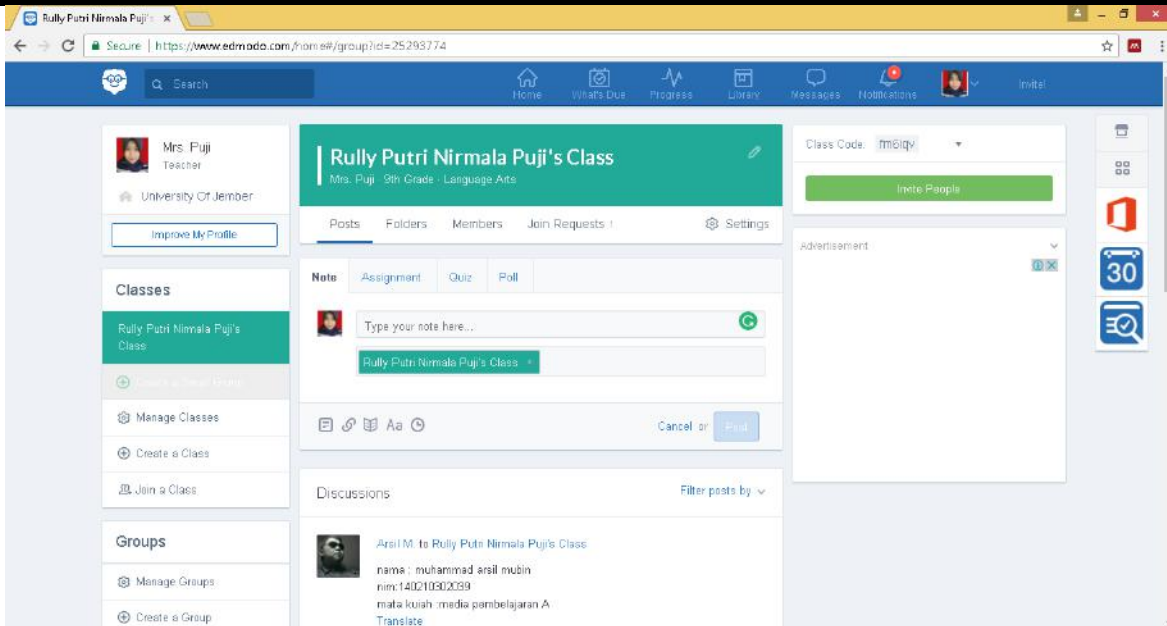


Fig.5: Class view already created

The class features you have created have some tools that you can take advantage of including Note, Assignment, Quiz and also Poll. Note contains all posts you can make. The thing to note is sharing class code to your students. Make sure they sign up for an Edmodo account using the code class you have given so they can keep in touch with you. This post can be information, data or material that allows to be shared with other Edmodo members. You can also add files in the form of documents, links, libraries, e-books, video and audio. This

provides many benefits to teachers to be able to attach any form of files in support of learning. Other tools that can be utilized by the teacher is the creation of assignment. The advantage of developing assignment in this Edmodo is the teacher can manage the workmanship and also the collection of tasks of students. The assignment features are equipped with task-locking that train learners to be disciplined and responsible. Notice picture 6 on the assignment display below.

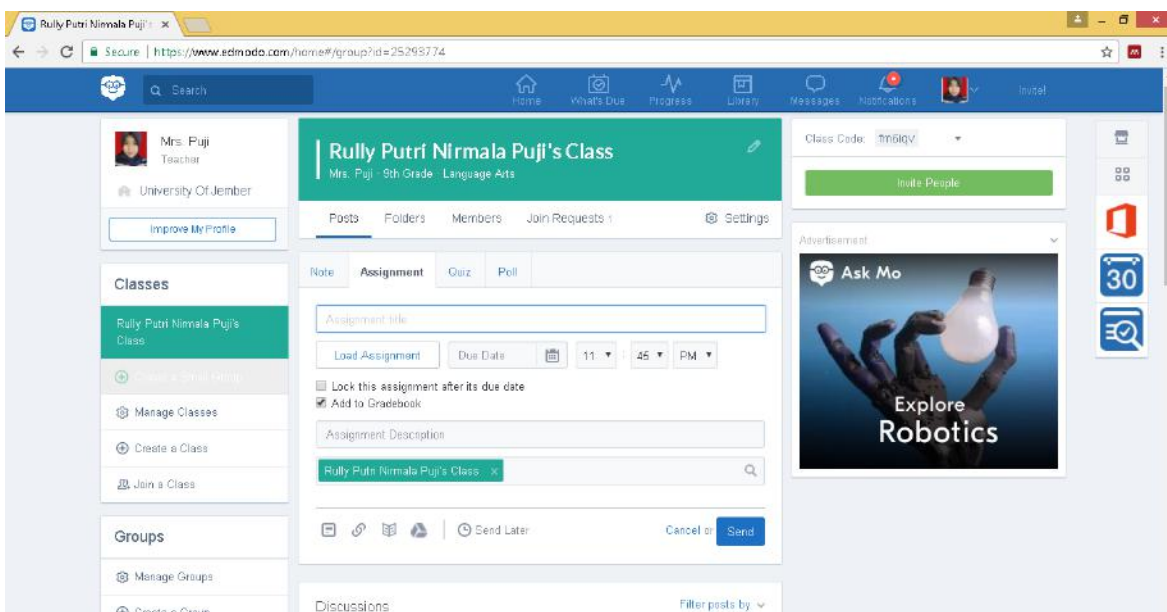


Fig.6: Assignment display

In this class feature, teachers can also use quiz tools. There are several types of quiz that can be developed by teachers using Edmodo, that is : multiple choice, true false, short answer, fill in the blank and matching. The developed quiz is completed with the work-answer key by system (Refer to figure 7 below). This facilitates the teacher in the process of correction. In this quiz feature teachers also freely can add

files in the form of images, video and audio so that the developed quiz has a more concrete visualization.

Another advantage that can be enjoyed by teachers in using Edmodo learning media is the process of evaluation of students. The teacher only develops the problem and chooses the correct answer so that the teacher can automatically evaluate the score that the learners have achieved in the progress feature as shown in Figure 8 below.

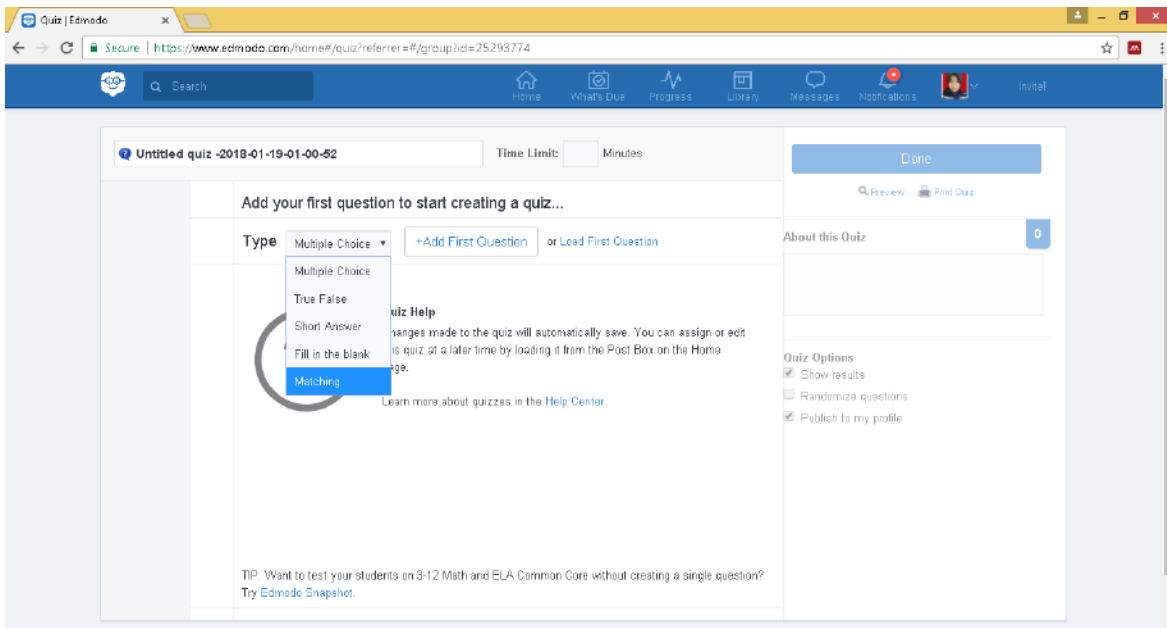


Fig.7: Display of Edmodo Quiz

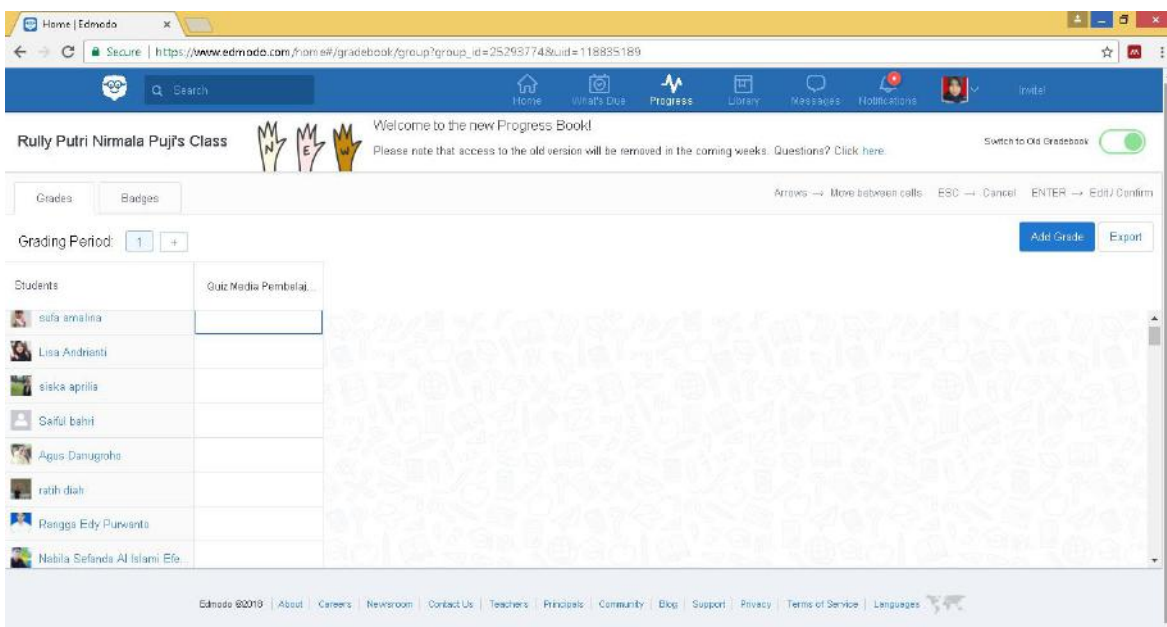


Fig.8: Progress View

### 5. Set up the library

Edmodo also provides complete facilities such as library features. This feature provides facilities in providing information and sharing of files of any kind to learners. Features of this library have things in common with google drive applications and also dropbox. Both of these applications also work in storing information and data in the

cloud. The advantage of this application is to provide backup protection to important files through the process of backing up. While the other advantage is the teacher can perform data transferring easily. In the practice of teaching and learning, it seems that libraries always function in distributing learning materials to be learned earlier by learners before the learning process is done at each meeting.

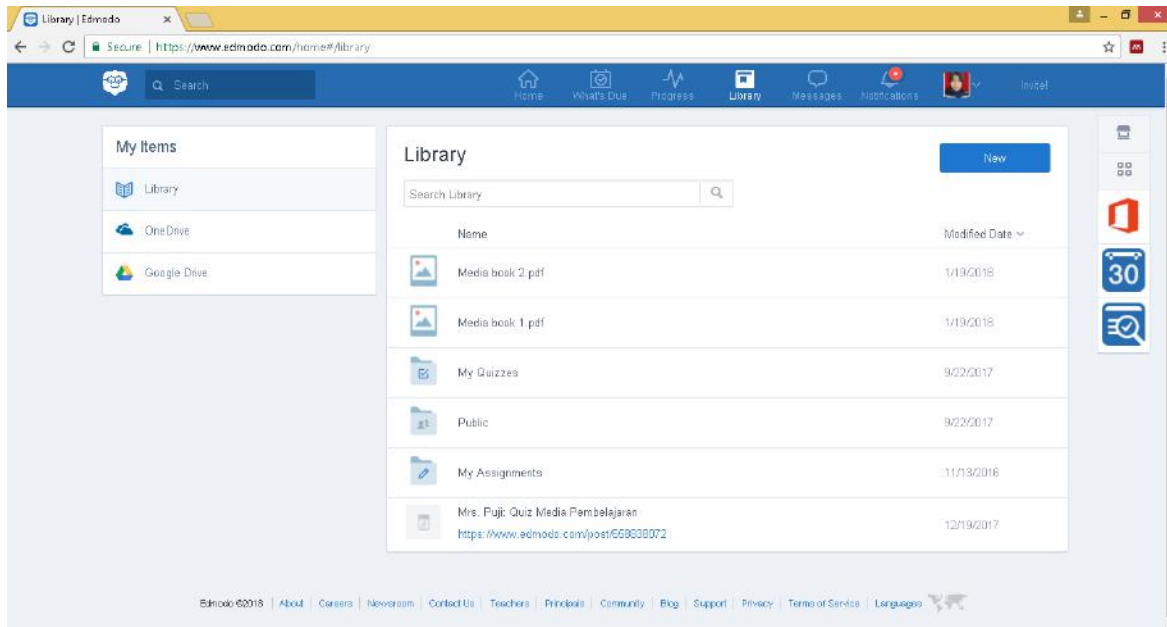


Fig.9: Library view

### III. CLOSING

Utilization of technology in the field of education provides several advantages to increasing the competence of teachers and also learners. Use of Edmodo multimedia is one of the media that provide facilities and ease in developing the interaction between teachers and also learners. Edmodo is one of the online-based media with the support of features that are very complete so it is suitable for various types of education. Utilization of Edmodo has a creative and educative function to learners through the exploration of technological skills in learning.

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