

## **Assessment Approach with Mahara and Moodle in E-Learning**

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**Abstract:** Various approaches regarding the assessment and evaluation system which is still effective today have been emerging. In recent years, portfolio (individual development files) evaluation approach have emerged with the necessity of alternative assessment and evaluation systems including learning, learning materials, and styles. In addition to classical evaluation methods of students, portfolio, a new teaching and evaluation system, is a method in which performance of students is evaluated with studies and projects they have carried out throughout their lives. Portfolio have been introduced since it is believed that portfolio shall have an importance role in terms of evaluating students in distance learning system in which communication is limited. With this aim, suggestions were proposed by touching on the subject what benefits a portfolio to be created through learning management system used in distance learning will have for distance learning students.

**Keywords:** Moodle, Mahara, Digital portfolio, Portfolio, Assesment, Learning Management System

### **Introduction**

Learning, which constitutes a huge part of our life, has become to be more important with technological advances. With learning opportunities provided thanks to these advances, the need of people regarding learning has increased significantly. Distance learning, a system which everyone can benefit from, has been a very important factor in terms of offering people different education environments. With distance learning, an updated, dynamic, and rich content is offered to students with a time and place independent learning environment. With this content, many educators aim at providing education to their students in the most effective and right way.

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In order to assess this, many assessment methods such as written, oral exams, homework, and projects involving short answer questions were being used. However, today there are different methods used to assess in-class and non-class activities, studies, experience, and knowledge. All of these approaches show that evaluating all knowledge and skills in the same way is extremely wrong (Gülbahar & Köse, 2006).

Different from traditional education, all activities (homework, quiz, project, and etc.), experience, knowledge, and studies of students are used to evaluate students by being gathered in collection with a file system called portfolio. It is thought that it is very difficult for educators to assess and evaluate students who receive education through internet, because face to face communication cannot be in question when evaluating students. Therefore, educators cannot help students about their future choices (Gülbahar & Köse, 2006). For this reason, e-portfolio system to be developed carries great importance for personal success, future education targets, motivation, and learning responsibility of students. Portfolios are used in order to gather studies together and display performance in various areas. Moreover, if the portfolio is prepared successfully, it will reflect the performance of students in the best way.

## **E-Learning**

E-Learning is a way of learning and a part of “learn anything, anytime, anywhere” approach. Internet technologies are used in this system and it is an alternative to the learning in class. Educators and students use this system without any physical environment (Duran, Önal & Kurtuluş, 2006). As we mentioned before, e-Learning is an alternative to the learning in class. With e-learning, students can receive education via internet independently from time and place. E-Learning, which constitutes the infrastructure of many universities and has become widespread today, is student-centered. When the student cannot understand the subject, he can communicate with other students or teachers by using communication tools.

Synchronous and asynchronous contents are provided for students with e-learning. In Asynchronous content, student reaches learning sources. In synchronous content, learning is carried out with the content offered

through internet as a class environment simultaneously. Student receives education simultaneously through the class environment created. This situation is a very effective form of learning because student can improve himself and his motivation throughout his life.

Portfolio (individual development file) system which is an evaluation method has begun to be used in order to reflect the studies of the student and offering achievements of the student to himself or others in the future of e-learning which has many advantages.

### **Portfolio Evaluation**

Portfolio is the overall studies reflecting the development and skills of students. It is accepted as an evaluation approach for the performance of students as an alternative apart from classical evaluation methods used in traditional education. Portfolio is a new evaluation method which isn't very common in our country.

According to Paulso, Paulson, and Meeyer (1991:60), portfolio is an evaluation method reflecting efforts, development, and achievements of a student. According to Wade (1996:65), portfolio is a structure that is important in education and development of students. It provides service to both students and teachers. While students reflect their own studies and achievements, teachers find opportunity to evaluate their success and development. Tests used in classical evaluation cannot uncover the potential and development of students (Tezci & Dikici, 2002).

Since the classical result evaluation methods are becoming a thing of the past, "Portfolio File", i.e. "Individual Development File" samples are being created because of the fact that all stages of learning, a product of a process, should be evaluated (Baki, Birgin, Güven & Karataş, 2003). Portfolio which is one of the most effective tools in dynamic evaluation processes is prepared separately for every student. In portfolio, all studies of every student are gathered together. In addition, portfolio includes all activities carried out and is a guideline supporting educators in the development of their students. Portfolio is created with an aim to monitor

the development of the student, document their learning processes, and provide an environment to the student in order that he can evaluate himself.

### **Features of Portfolio**

Criteria should be determined in order to select student students while preparing portfolio. Furthermore, criteria should be determined for the evaluation of student studies and contents that reflect students and their performances in the best way should be chosen. The features of portfolio are defined as below according to Wade and Yarbrough.

1. It is developmental: Portfolio represents the development and experience of a student during a certain time. Portfolio is collecting learning results in a long process; it cannot be defined as target behaviors that can be observed within a short time.
2. It is dual valued: Portfolios give information to teachers and are also important for students. In addition to providing opportunity for learner to reflect the records of learning process, it also offers a valuable method for teachers to evaluate learning situation and development of students.
3. It is selective: Portfolio gives a chance to the student to make a selection. In this way, he can decide how he will present his portfolio in terms of content and structure.
4. It is authentic: Portfolio combines the studies and performance of the student. Traditional tests cannot provide information about how the student develops himself or cannot reflect his potential with all aspects. However, portfolio is an authentic evaluation technique in terms of displaying the development of the student and concrete learning products.
5. It is reflective: Portfolio can help students to determine targets for their future learning by providing them to reflect evidence regarding their own learning. In addition, it can help them to realize that they can make everything better by observing their past efforts. After realizing this, they can carry out better studies and improve themselves thanks to portfolio.

6. It is individual: Portfolio shows the development of the individual on a basis prepared and structured in accordance with individual choices. In other words, there are individual content selection and reflection of individual style in portfolio.
7. It is interactive: Learner shares his studies with his teachers and friends through portfolio. In this way, he can receive suggestion and guidance. Because the student cooperates with his teachers and friends while creating and developing portfolio, interaction increases as a result (Kan, 2007).

### **Portfolio Evaluation Methods**

It is a process in which there are evaluation methods and the student presents some of his studies, interests, skills, and what he has learned within the system he lives in. In this process, portfolio is developmental and encouraging for students. In portfolio system, which is student-centered; thinking, interpretation, collaboration, and taking responsibility skills increase. Feedback continues during learning in all evaluations.

In these feedbacks, teacher analyses the formation process of the product, interprets the studies of the student, and helps him to realize his failures or mistakes. In this way, student finds opportunity to improve himself more quickly. Evaluation of students is carried out through many multi-dimensional homework rather than test exam systems implemented in traditional education. Furthermore, in traditional education, students are forced to learn, but in portfolio, there is evaluation during learning process. Textbooks are clear and informative. Students can easily harmonize old and new information.

In portfolio system, which is an alternative evaluation method, student is evaluated in accordance with a determined criterion, and he is aware of these criteria. Evaluation is carried out by the student and teacher together.

### **E-Portfolio (Digital Individual Development File)**

E-Portfolio is a portable and on-the-internet sharable file, which is created by students, and contains all the backgrounds and success of the

students. With e-Portfolio, individual backgrounds and every document, picture, blog, multimedia, hyperlink, and contact information that a person wishes to publish can be gathered on a single platform (Tezci & Dikici, 2002).

Once the individual development files are integrated with advanced information technologies it will be possible to get more concrete data regarding the development of students who are away; and with portfolio assessment it will be possible to monitor student's development process. By using advanced web technologies students are able to store data on different platforms. Thanks to it, every study in a text, sound, image, and picture format can be stored in an internet environment. If required, these files can be shared easily with teachers and other users. Thanks to these files, which are created solely by the learners, by choosing the learning materials, the sense of self-test and responsibility – important for a healthy functioning of distance education – can also develop; and not only the teachers but the students as well will be able to track their own development process easily.

During an education process based on e-learning, it is also necessary for students to have technically sufficient capacity on the web, so that they can prepare their digital portfolio. The portfolios may contain big files, thus it is important to allocate a specific space for each student and to inform students about how they can efficiently use this space. Another important aspect that should be kept in mind about the digital portfolios is that they can make a difference in your post-education job applications.

### **Why E-Portfolio?**

It is such a long process to gather a student's background and success both. Gathering all the background in a file, which only consists of papers, keeping all these studies up to date, and duplicating take a lot of time; and loss of data may also occur during these processes. In today's world, it is almost a must to be able to create all these studies, projects, and background of students on a digital environment and share them on the internet easily. Thanks to this digital environment called e-portfolio, the student is able to gather all the personal gains, all the documents, pictures,

blogs, multimedia, and contact info which s/he wishes to publish on a single platform and can update them at any time. On these online portfolios, users are able to develop their portfolios in a dynamic way.

On e-portfolio platform, with the student's permit, the student's portfolio may be viewed and evaluated by consultants, teachers, and other willing users. The student is able to choose which parts of the portfolio may be viewed by highlighting his/her successes or experiences. On E-portfolio, students may always access their portfolios and do not encounter problems such as lost data or deleted data (What is E-Portfolio, n.d.)

### **Evaluation with E-Portfolio at E-Learning**

Today's advancing technology provides the necessary environment for the development and usage of different methods and tools in e-learning (Doruk, 2005).

So far, so many tools like computers, internet, mobile phones, and PDAs (Personal Digital Assistant) have been used in distant education. With the introduction of publishable education environment audio, visual and interactive, synchronic and asynchronous contents can be provided in distant education. These technological tools are also used to assess the effectiveness of these contents provided to students. In this regard, with the learning management system used in e-learning, in addition to providing an educational content, it is also possible to make evaluations with applications such as exam and project. Generally it is thought that the evaluation methods of traditional education such as exam and homework are insufficient in e-learning. Owing to the fact that there is no one-to-one communication in e-learning, now different evaluation methods started to be applied. With the e-portfolio, which is one of these methods, now it is possible to evaluate all the background, studies and projects of students. While evaluating, attention is paid on what the student learned, what kind of method s/he used while learning, how s/he analysed the information, and what kind of difficulties s/he encountered.

### **Learning Management System and Moodle**

Learning Management Systems are software enabling automatic

realization of many functions such as providing asynchronous learning material through network, sharing, and discussing presented learning material in various forms, registering to classes, receiving homework, taking exams, giving feedbacks regarding these homework and exams, organizing learning materials, and keeping student, teacher, and system records etc. Learning Management Systems are software monitoring, managing, and reporting the interaction between students and materials, likewise teachers and students (Duran et al., 2006). There are Learning Management Systems offered whether commercially or freely. Moodle is one of the most common used learning management systems. Moodle learning management system is free open source software. Moodle learning system consists of tools enabling everything that can be performed through internet such as communication, posting content, collecting student works, managing student groups, questionnaires, and monitoring tools, wiki, blog, chat, and forum etc. Since it is an open source system, security gaps can be removed more quickly in comparison with commercial systems.

### **What is Mahara E-Portfolio System?**

Mahara is customisable and flexible. It is the perfect personal learning environment mixed with social networking, and also allowing you to collect, reflect on, and share your achievements and development online in a space you control.

An e-Portfolio has a much broader scope as an online collection of reflections and digital **Artefacts** (such as documents, images, blogs, resumés, multimedia, hyperlinks, and contact information). Learners and staff can use an e-Portfolio to demonstrate their learning, skills, and development and record their achievements over time to a selected audience (Mahara User Manual, n.d.).

- **What sets Mahara apart from other existing open source e-Portfolio platforms?**
  - Students have complete ownership of their e-Portfolio

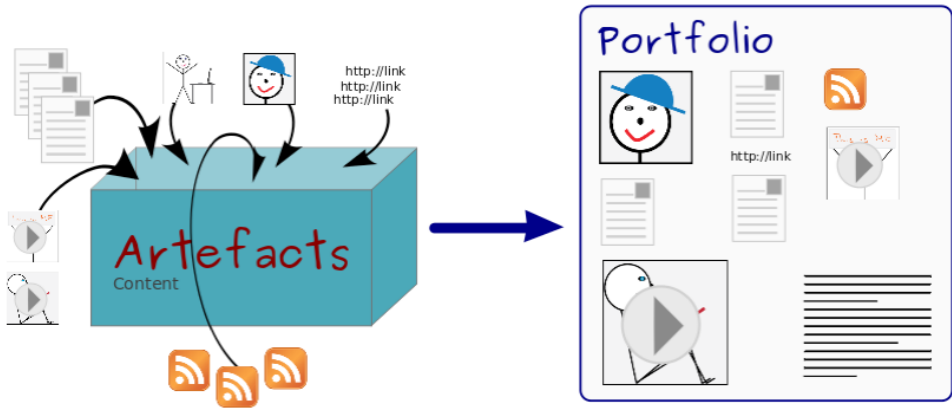


- Users have the ability to set permissions of access to various nominated groups
- All Artefacts have associated meta-data including user defined tagging
- Contextual help is available throughout the system
- Social networking functionality
- Flexibility to be used to create formal, informal, course related, personal, and/or professional environments
- Modular design, best practice programming, and full documentation allow for new features and functionality to be easily integrated into the application
- Language translation package based
- Designed for scalability, security and interoperability
- Strong consideration for pedagogy and policy during development (An overview of the e-Portfolio application, 2008)

### **Mahara Framework**

With Mahara, **you** control which items and what information within your portfolio other users can see. Such items and information are termed artefacts. To facilitate this access control, all artefacts you wish to show to other users need to be arranged into one area. In Mahara this compilation of selected artefacts is called a View. You can have as many Views as you like, each with a different collection of artefacts, and intended purpose and audience. Your audience, or the people you wish to give access to your View, can be added as individuals or as a member of a Group. It can even be made publicly available (Mahara User Manual, n.d.).

**Figure 1:** Portfolio works with Mahara



For example you could create a View for your friend and family that includes holiday photos and a personal Blog. You could create another View for your tutor, which includes assessments and your reflective learning journal. You could create a third View to showcase your best pieces of work and your resumé for potential employers. In fact you can create as many Views as you wish for work, study and leisure purposes. The diagram below of example artefacts, Views, and groups illustrates how content in Mahara can be shared and reused in different contexts and for different audiences (Mahara User Manual, n.d.).

**Figure 2:** Mahara Framework

Artefacts	Pages	Groups
CV	Assessment	Work Placement
Reflective Journal	Employability	Module Groups
CPD & Development Plans	Post-Graduate Study	Professional Membership
Uploaded Files & Images	Personal Interests	Clubs/Societies

## **How does Mahara fit in to the e-learning landscape?**

While Mahara's APIs are open to all, Mahara can integrate with Moodle to provide a streamlined user experience. Currently this is limited to SSO, but from Moodle 2.0, students will be able to export assignments, blogs, and much more straight into Mahara to use as artefacts (which can then, of course, be placed into Views) (Mahara User Manual, n.d.).

## **Conclusion and Suggestions**

Technological advances are continuously changing especially in educational field. These advances have become to be effective in assessment and evaluation. In traditional education, assessment and evaluation is carried out through written and oral exams which are highly classical in evaluation. However, it is seen that classical evaluations aren't sufficient enough in evaluating students. Therefore, portfolio evaluation system has become more important because of its effectiveness in evaluating students.

Portfolio is the total of studies revealing developments, works, and achievements of students. When it is considered that students receiving education with e-learning method are insufficient in terms of communication and evaluation; form of evaluation with portfolio will become necessary for the evaluation of distance learning students.

Portfolios to be prepared are based on a long process. In this process, participation of the students should be ensured and criteria should be determined in selecting student studies. All of these constitute a priority in an effective portfolio system. In addition, criteria should be determined in the evaluation of student studies. In education field, designers should prepare portfolios by considering these criteria. E-Portfolios have some advantages in terms of storing, updating, and issuing in comparison with traditional portfolios. Portfolios should have some targets such as making students realize their problems, observing their development, and increasing their problem-solving and thinking skills.

Consequently, portfolio can be seen as an evaluation method but in fact it is a learning method. Evaluation method with portfolio is an improving

method in terms of student's learning and an evaluation form reflecting the futures of students.

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