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Analysis of Tools Used to Create E-Portfolio for Assessment of Students in Higher Education

B. Jeyalakshmi¹ and P. Murugeswari^{2*}

¹Department of Commerce, ²Department of Computer Applications, V.H.N.S.N College (Autonomous), Virudhunagar, Tamil Nadu, India

*Corresponding author

Abstract

Digital portfolios or e-portfolios are great teachings, learning, and assessment tool. These are valuable tools to aid in students' academic growth and their evolution into the career setting. These are increasingly used in innovative ways, particularly in higher education, where they have the potential to transform teaching, learning, and assessment. Given that students are learning in a hyper textual, digitalized and multimedia world, there is an ever-pressing need for assessment to be more reliable, appealing, and to develop transversal skills. The rapid expansion of e-portfolios offers the opportunity to determine the goals of students, Explosive growth of e-portfolios provides the chance to identify learners' wishes, reflection, collaboration, self-assessment, peer-assessment, and self-regulation may be promoted in students by means of e-portfolios. This paper analyzed the various tools used by the students to create e-portfolios and its uses and purposes.

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Introduction

E-portfolios have become an important e-learning tool because of their potential to support more student-centered learning, reflective practices, and personalized forms of learning. An e-portfolio is an electronic format for learners to record their work, their achievements, and their goals, to reflect on their learning, and to share and be supported in this (Alwraikat and Mansour, 2012). The idea of portfolios is far from new. They have been used for recording evidence and work for many years. However, the 'e' in e-portfolios does add significantly to their utility, adding flexibility, ease of sharing, reuse of entries indifferent presentations for different contexts, portability, and different views for different contexts. For

college students, the e-portfolio represents a repository of selected work to convey their skills, provide narrative context to their life experiences, and reflect on their learning over time. In the context of higher education, generally, teachers or professors have been utilizing e-portfolio. Several previous studies about the implementation of e-portfolio reveal that e-portfolio is beneficial for the teaching and learning process. Research conducted by Barrot (2016) exhibited that e-portfolio allowed students to reflect upon their learning, check the learning progress, and motivate students in learning.

Electronic portfolios ('e-portfolios') are increasingly used in innovative ways, particularly with in higher

education, where they have the potential to transform teaching, learning and assessment (Elliott and Adachi, 2020). Given that students are learning in a hypertextual, digitalized and multimedia world, there is a pressing need for assessment to be more authentic and engaging. The creation of a purposeful aggregation of digital items 'presents' a selected audience with evidence of a student's learning and/or ability and creates opportunities for personal development through student reflection (Mason *et al.*, 2014).

Characteristics of E-Portfolio

In reviewing studies related to the use of e-portfolios, ten common characteristics were noticed.

The first characteristic of e-portfolios is being authentic. It is authentic because students take responsibility for their learning, so they are supposed to organize their e-portfolios, reflect on their own learning processes and findings, and improve their learning depending on their reflections. (Miller and Morgaine, 2009).

Second, it is controllable since students can organize their e-portfolios, reflect and assess their learning processes, and make necessary changes to their e-portfolios according to their reflections (Miller and Morgaine, 2009).

Third, it is communicative and interactive because students need to communicate and interact with their peers and teachers to improve their learning.

Fourth, it is dynamic since the structure of e-portfolios is continuously developing because of the organization of content, collection and selection of artifacts, the self-assessment and self-reflection of the learning process, and improvement made according to self-assessment and self-reflections (Alwraikat and Mansour, 2012).

Fifth, it is personalized because students form their e-portfolios on their own.

Sixth, it is integrative since e-portfolios create connections between students' lives and academic work.

Seventh, it is multi-purposed in that it can be used for the assessment of students' learning performances and of institutions' education programs.

Eighth, it is multi source as it provides students with feedback on their learning, teachers with the assessment

of students' performances, and institutions with the opportunity to assess their programs, courses, or departments.

Ninth, it is motivational because it gives students ownership of their own learning and leads to the improvement of their skills (Mason *et al.*, 2014).

Tenth, there are varieties of features that can commonly be found in electronic portfolio systems. When selecting an electronic portfolio system for the adoption, it is important to understand the possible features as well as to determine which are necessary to fit the long and short-term needs of a particular institution (Ahmet Erdost Yastibasa and Gülsah Cinar Yastibas, 2015).

Eleventh, these features include advisement, artifacts, assessment, communication and collaboration, course management, evaluations/observations, hosting and support, intended user and user type, learning outcomes, reflections, reporting, rubrics, sharing of information, surveys, templates, and technological requirements (Ahmet Erdost Yastibasa and Gülsah Cinar Yastibas, 2015).

Finally, it is reflective because e-portfolios require reflection on one's own learning, so students can self-reflect and assess their learning processes via e-portfolios.

Types of E –Portfolios

Showcase/Professional e-portfolios

These portfolios are primarily a way to demonstrate (showcase) the highlights of a student's academic career.

Learning e-portfolios

These portfolios are typically created by a student as part of a course as a way to demonstrate learning and the learning process. These portfolios are often shared with other students to elicit peer feedback. Learning portfolios support the idea of formative feedback as an essential part of the learning process.

Assessment/General Education e-portfolios

At Clemson the use of portfolios played a substantive role in the assessment of our general education competencies. Using both formative and summative assessments feedback was provided to colleges,

departments and instructors on the quality of evidence students used in their portfolios to demonstrate our general education competencies.

Benefits of Digital Portfolios for Students

Students can build a digital footprint that may help them gain future work or education opportunities, while learning about digital citizenship (Richardson, 2012).

Essential skills for a rapidly changing world and job market can be developed (Eg.Critical thinking, communication, and problem-solving) (Richardson, 2012).

Motivation for learning may increase when students are given independence and choice when building their portfolios. Students can express themselves according to their strengths or learning styles (eg.Video, Audio, Art, Music) (Richardson, 2012).

Students can keep track of their progress, successes, and learnings over time in an organized way (Richardson, 2012).

E-Portfolio Platforms for use in Higher Education

Below is a list of some of the e-portfolio platforms that can be used in the context of higher education.

Brightspace

(<http://www.d2l.com/en-eu/products/eportfolio/>)

Brightspace is created by Desire to Learn. Students can create content, share documents, add peers and mentors, and export portfolio elements (Ahmet Erdost Yastibas and Gülsah Cinar Yastibas, 2015).

Carbonmade (<http://carbonmade.com/>)

Carbonmade is a cloud-based solution for individuals. Pricing ranges from \$6 to \$18 per month depending on the number of projects and pieces (media) being shared. The platform is better suited to visual portfolios (art students, etc.) (Ahmet Erdost Yastibas and Gülsah Cinar Yastibas, 2015).

Chalk and Wire (<http://www.chalkandwire.com/>)

Chalk & Wire is a cloud-based solution that is aimed at enterprise-level clients rather than individuals. The system makes use of Learning Tools Interoperability

(LTI) interoperability standards and can be integrated with most institutional VLE systems. Pricing is dependent on student numbers (Ahmet Erdost Yastibas and Gülsah Cinar Yastibas, 2015).

Behance (<https://www.behance.net/>)

Behance is an Adobe company. It provides an online platform for sharing creative work. Individuals or organizations can quickly create visual and creative e-portfolios (Retta Sweat-Guy and Nicole A. Buzzetto-More, 2007).

Folio Spaces (<http://folioSpaces.org>)

FolioSpaces is a free e-portfolio hosting site for students and faculty. The site claims to be the world's most popular free e-portfolio platform. Portfolios created on the site can be exported in standards-compliant LEAP2A or HTML format. The site also supports institutional accounts and can be linked to VLE systems and directory services. Premium accounts for individual users are also available at a cost of \$9.95 per year (USD) (Retta Sweat-Guy and Nicole A. Buzzetto-More, 2007).

Mahara (<http://mahara.org/>)

Mahara is a free and open-source e-portfolio platform that is used in several Irish higher education institutions. Typically, the system is installed and managed alongside the VLE and it can integrate with several leading VLEs such as Moodle and Blackboard. Mahara includes an import/export system with Leap2A support and static HTML export (Siew Lee Chang and Muhammad Kamarul Kabilan, 2022).

myEdu (<https://www.myedu.com/>)

myEdu is a Blackboard-owned service. The free site allows students to create online profiles and portfolios of work (<https://www.studentartguide.com/articles/how-to-make-an-eportfolio-for-students>).

Pathbrite (<https://pathbrite.com/>)

Pathbrite is a cloud-based service offering individual and institutional services. For institutional accounts, the service integrates with the most popular learning management systems.

Students can create free individual accounts (not tied to an institution) and can quickly build portfolios using an

intuitive drag-and-drop interface and ‘what you see is what you get’ (WYSIWYG) editor (Ahmet Erdost Yastibasa and Gülsah Cinar Yastibas, 2015).

PebblePad (<http://www.pebblelearning.co.uk/>)

This platform is popular in the Irish higher education sector. It is an e-portfolio tool that also offers a range of assessment tools. The platform provides excellent integrations for a range of VLE systems. The service is only available to institutions and does not provide individual or free services (Siew Lee Chang and Muhammad Kamarul Kabilan, 2022).

Seelio (<https://seelio.com/>)

Seelio is a cloud-based service that allows students to create a free account and easily create an online portfolio. Students can select a custom URL and share their profiles with others (Siew Lee Chang and Muhammad Kamarul Kabilan, 2022).

The Following Tools Are Used To Create And Host Websites That Can Act As E-Portfolios

Blogger (<https://www.blogger.com/>)

Blogger is a popular and free Google blogging tool that can be used to create free e-portfolios. Helen Barrett provides an excellent guide on the use of Blogger for e-portfolios: <http://eportfoliosblog.blogspot.ie/p/using-blogger-to-maintain-eportfolio.html> (Siew Lee Chang and Muhammad Kamarul Kabilan, 2022).

Edublogs (<https://edublogs.org>)

EduBlogs is a blogging service that has been designed with education in mind. The site provides free accounts for students and faculty that can be upgraded with additional features. Cost for a pro account is \$39.95 (USD) per year. The site also allows faculty to create a class blog and to invite students to the blog. Institutional services are offered via <http://www.campuspress.com>. The platform is based on WordPress (Siew Lee Chang and Muhammad Kamarul Kabilan, 2022).

PBworks (Wiki) (<http://www.pbworks.com/>)

PBworks is a free wiki tool for teams but its features can allow individuals to create e-portfolio sites (<https://www.studentartguide.com/articles/how-to-make-an-eportfolio-for-students>).

Weebly (<http://www.weebly.com/>)

Weebly is a free web hosting service that can be used by students to create e-portfolios. Features can be added through paid upgrades. A guide on using Weebly to create e-portfolios is here: <https://www.smores.com/b5x5-weebly-com-for-eportfolios>.

WordPress.com (<https://wordpress.com/>)

Open source WordPress is the most popular online publishing platform, currently powering more than 26% of the web. WordPress.com offers a hosted version of the open-source software, which students and faculty can use to build websites or ePortfolios. Features can be added through paid upgrades (Ahmet Erdost Yastibasa and Gülsah Cinar Yastibas, 2015).

Yola (<https://www.yola.com/>)

Similar to Weebly, Yola is an easy-to-use website building and hosting service. Its free plan allows for a three-page site, 1GB of bandwidth and 1GB of storage. Paid plans allow users to upgrade features such as page count, custom domains, custom branding, mobile ready, etc. (Retta Sweat-Guy and Nicole A. Buzzetto-More, 2007).

LinkedIn (<https://www.linkedin.com/>)

LinkedIn can allow participants to create profiles, publish and share posts, and add blog posts to their profile. The service is free (base level). Features can be added through paid upgrades (Siew Lee Chang and Muhammad Kamarul Kabilan, 2022).

Google Sites

This is one of the best platforms. I have been recommending to teachers over the last few years. Students can use it to create and host their own digital portfolios. The site is simple and easy to use and they can set up their new website within minutes. They can create as many pages as they want, upload their content, and share with others (Siew Lee Chang and Muhammad Kamarul Kabilan, 2022).

Seesaw

Seesaw is a powerful tool to help students create and share digital portfolios. It allows them to capture and showcase their learning in multiple formats. They can

include videos, drawings, text notes, links, and several other materials in their portfolios. Teachers and parents can easily access and check students' work (Siew Lee Chang and Muhammad Kamarul Kabilan, 2022).

Evernote

This is another practical option for creating digital portfolios. Students record their thoughts using notes and then use things such as photos, audio files, links, and attachments to further enhance these notes. Evernote provides various organizational features that enable users to effectively organize their work so it can be easily searched and accessed across different devices (<https://www.studentartguide.com/articles/how-to-make-an-eportfolio-for-students>).

Education in its broadest sense presupposes a better understanding of teaching and learning. Being responsible for one's own education enables one to control their own learning processes. The e-portfolio-based assessment provides students with artifacts that they can use to monitor their own learning process. Monitoring one's own learning can enable one to assess and reflect on their own work, which can help to understand one's strengths and weaknesses. An e-portfolio-based assessment can assist students in forming positive attitudes toward learning, as they can understand what they can achieve. This feeling can make students more self-efficacious and self-confident. The e-portfolio-based assessment can prepare students behaviourally, meta-cognitively, and motivationally for their learning processes. It is necessary to consider strategies designed to promote the concept of learning with an e-portfolio. Though not all educators would directly agree with the idea of using e-portfolio as an assessment tool, there has been a great calling for teachers to integrate technology into teaching-learning activities.

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