

Introducing ePortfolios to Prevent Plagiarism

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Abstract

There are many effective tools available to make learning interesting in an English as a foreign language (EFL) classroom. One such tool is the use of an electronic portfolio, also known as a digital portfolio or an ePortfolio. This paper demonstrates how ePortfolios support formative assessment in a language classroom. An electronic portfolio could serve as a pedagogical tool to prevent plagiarism, as it is one of the authentic ways to assess the students' performance during the course. Introducing ePortfolios at tertiary level can bring about the much-needed change in teaching, learning and assessment methods contributing to students' academic success. The aim of the study was to enhance student learning by introducing ePortfolios to English for Special Purposes (ESP) learners at undergraduate level. The study explores the piloting of ePortfolio in ESP module for undergraduate students at a private college in Oman as part of the formative assessment in an attempt to prevent plagiarism and also to motivate the learners to showcase their coursework in a digital format. A qualitative and quantitative survey was conducted to evaluate the efficacy of the practice and the results of the study indicate that the learners seem to have recognized the learning potential of ePortfolios, as their response to the above mentioned assessment method was quite positive. The findings of this study serve as a determining factor in deciding whether ePortfolios could effectively be used as a formative assessment tool for academic courses in the specific learning environment.

Keywords: academic ePortfolios, english for special purposes, ePortfolios, formative assessment, higher education, plagiarism

Cite as: Narayanan, R. L. S. (2018). Introducing ePortfolios to prevent plagiarism. *Arab World English Journal (AWEJ)*. Proceedings of 1st MEC TESOL Conference 2018

DOI: <https://dx.doi.org/10.24093/awej/MEC1.6>

1. Introduction

An academic e-portfolio is a digital collection of texts, multimedia tools such as video and audio files, class assignments, reference materials, and lecture notes (Abrami & Barrett, 2005). It could effectively be used to monitor as well as document students' learning. It is a record that shows evidence of the students' learning and as a developmental portfolio, it forms an integral part of formative assessment, as students can share their assignments electronically with their tutor for evaluation and receive feedback on their progress. It should be noted that such a close monitoring of the learners' coursework aids in preventing plagiarism. There are two ways in which plagiarism could be prevented through the design of the programme or module, assessment methods and also by ensuring what constitutes good academic practice. "Messages of good habits need to be reinforced throughout the period of study, including through using formative assessment, and especially when students are introduced to new forms of assessment" (QAA, 2012, p.25).

Piloting of ePortfolio for the purpose of this research is done on an undergraduate Technical English module called English for Special Purposes. The aim of research is to introduce ePortfolio as a pedagogical tool to prevent plagiarism, as it is one of the authentic ways to assess the students' performance during the course. In addition, introducing the learners to such a formative assessment using ePortfolios could stimulate the learners to engage in reflective thinking and encourage autonomous learning.

In short, ePortfolio is introduced in English for Special Purposes module to:

- provide the learners with an opportunity to assess their growth and progression and also showcase their achievements during the course.
- encourage the learners to reflect on their own learning process.
- guide the learners step by step with a formative feedback mechanism and discourage them from plagiarizing the contents of their coursework.
- promote student-centred learning, and learner-autonomy.

2. Literature Review

Previous studies have identified the benefits of using ePortfolios in higher educational institutions such as providing an effective mechanism to encourage students to reflect on their own learning process and for tutors to give feedback, and also promoting an active learning process. Thus, students, while creating an ePortfolio are actually involved in the process of planning, collecting data, analyzing and synthesizing ideas, designing the layout of their ePortfolio as well as evaluating and reflecting on their own learning process. (Lorenzo & Ittleson, 2005 a ; Buzzetto-More, 2010). Most of the studies have defined ePortfolios based on the purpose of its use. It is potentially regarded as a tool that can facilitate "reflective, collaborative and lifelong learning" and allow students to display their skills, knowledge and understanding of the subject (Beresford & Cobham, 2010). Maher and Gerbic have categorized ePortfolios into three types: a learning portfolio, a showcase portfolio, and an assessment portfolio (as cited in Yousuf & Tuisawau, 2011).

The current research relates to the use of ePortfolios for learning and assessment purposes in an undergraduate course. An assessment ePortfolio includes a variety of digital records that represent students' learning such as students' self-reflection of their learning process and

experiences, as well as feedback from tutors and peers on their coursework (Lorenzo & Ittelson, 2005b). Such an ePortfolio is introduced as an alternative evaluation method where students are expected to document evidence of their competence in the chosen subject during the course (Alexiou & Paraskeva, 2010). The self-reflective task is a key-component of the assessment portfolio that requires students to reflect on and critically evaluate their own work (Cambridge, 2010). Chang (2001, p. 437) compares ePortfolio assessment to traditional assessment methods and claims that this newer form of assessment method is more “real and active” as it focuses not only on the results but also on the process involved. Barrett (2006, p.4) notes that just as students are motivated to use online social networking sites, they could be motivated to use formative electronic learning portfolios to create their own “Academic MySpace” which in turn could promote deep learning, thereby combining technology to both improve and showcase student achievement. Furthermore, using technology changes the way the classroom instruction takes place, as there is a shift from teacher-directed instructional methods to student-directed methods (Abrami & Barrett, 2005).

According to Dalziel (2008) electronic portfolios, in a well planned and carefully structured assessment could be used effectively to present the learning outcomes as well as learning process by taking the learners through the process of planning, drafting, giving feedback, and peer reviewing. The assessor can link ePortfolio submissions to a Turnitin Plagiarism software tool to derive an originality rating and use this data to scaffold the learners, focusing on the individual’s specific learning needs. Thus, ePortfolios could effectively be used to combat plagiarism by raising the learner’s awareness on what constitutes academic cheating. The author in his study claims that plagiarism is largely an issue in higher education due to students’ ignorance of what constitutes plagiarism or due to their lack of time management skills or lack of opportunities and activities provided to develop their own research skills. This is where ePortfolios prove to be effective as a formative assessment tool, as students while creating and developing their own academic ePortfolios can effectively be guided on how to reference, how to do research, paraphrase or summarize texts, thereby developing their research skills through formative feedback from the tutor during the course. Tutor’s feedback also motivates the learners to perform better (Sheen , 2010)).

Though a number of studies have outlined the benefits of using ePortfolios in higher education for teaching and learning purposes, further research is required to determine the efficacy of the use of ePortfolios as an assessment tool to combat plagiarism. The efficacy and effectiveness of ePortfolios as an assessment tool could depend on how well it is implemented and also on the response of the particular group of students and their attitudes towards using ePortfolios for assessment purposes. This leads curriculum designers to ponder on the inevitable question: How could ePortfolios be used in higher education not only for learning purposes but also as an assessment tool to effectively combat plagiarism?

Therefore, this research paper focuses on the benefits of using e-Portfolios in English for Specific Purposes Module to undergraduate EFL students, and also attempts to measure the effectiveness of using ePortfolios as a formative assessment tool to combat plagiarism. It also attempts to provide an insight into students’ attitudes and experiences in creating and developing an ePortfolio as part of their coursework assignment. The sample group selected for this study was

an ESP class of 26 learners who were distributed a questionnaire and their collective responses from the questionnaire and interviews formed the basis of this research.

The findings would provide information on the benefits of ePortfolio and its veritable role as a formative assessment tool in an EFL environment in institutions of higher education.

3. Aims and objectives

The aim of the study was to **enhance** student learning by introducing ePortfolios to ESP learners at undergraduate level and address the gap in literature, where there was not much research done on the use of ePortfolios as a formative assessment tool to combat plagiarism.

Research questions

1. What are the benefits of creating and developing an ePortfolio for an ESP course?
2. How is an ePortfolio useful as a learning tool?
3. How does ePortfolio as a formative assessment tool prevent plagiarism?

Rationale for introducing ePortfolios in formative assessment (Figure 1): Since it is technology based, it motivates the learners to use e-portfolio with more enthusiasm, and it may prompt them to use the electronic system more frequently.

Students can create their own ePortfolio using free applications such as Evernote and upload their weekly tasks, worksheets, videos, assignments and other evidence to show their progress in due course. Since class time is not adequate to give individual feedback, the e-portfolio helps the tutor to monitor the students' progress and give corrective feedback to meet their learning outcomes. In addition, one of the learning outcomes introduced in ePortfolio is a self-reflective task where the learners are expected to reflect on their learning progress and development during the course.

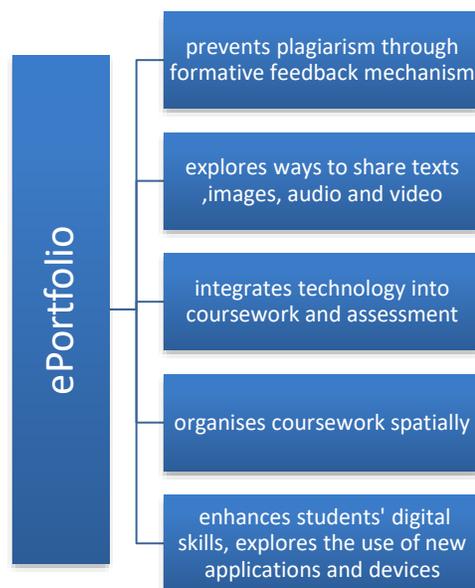


Figure 1. Rationale for introducing ePortfolio in formative assessment

4. Background and context

E-Portfolio was introduced in ESP 10001 module, offered as part of an Engineering programme at a private college in Oman. The college offers undergraduate and postgraduate programs in Engineering and Business Management Studies. Undergraduate students are required to complete the General Foundation Programme spanning a year before choosing their specialized courses. ESP is offered to UG students in semester 1 who must have completed GFP or have an IELTS score of 5.5 or equivalent to pursue the undergraduate courses.

English for Specific Purposes is a 100% course work module with the ePortfolio contributing to an overall of 10% through various tasks aimed at improving the students' academic writing and research skills. After assessing the efficacy of various applications, EVERNOTE was selected as a suitable application for ESP module offered in the first semester of undergraduate programme where the students had to choose ESP module as part of the course requirement. A successful completion of ESP module prepares the learners to be better equipped with research skills required for writing assignments and project reports in engineering courses.

Creating an ePortfolio: Creating an ePortfolio is a simple process. Students need to follow the steps as given in *Figure 2*.

1. Download an application called Evernote. Create User ID and password to sign in



2. Create a Notebook (ESP 10001) and share the link with your tutor by email.



- 3. Set up your files, folders and tags
- Upload your documents (Weekly tasks, audio / video files, notes)

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Figure 2. Creating an ePortfolio

Figure 3 presents a snapshot of an ESP ePortfolio created by a student during the course.

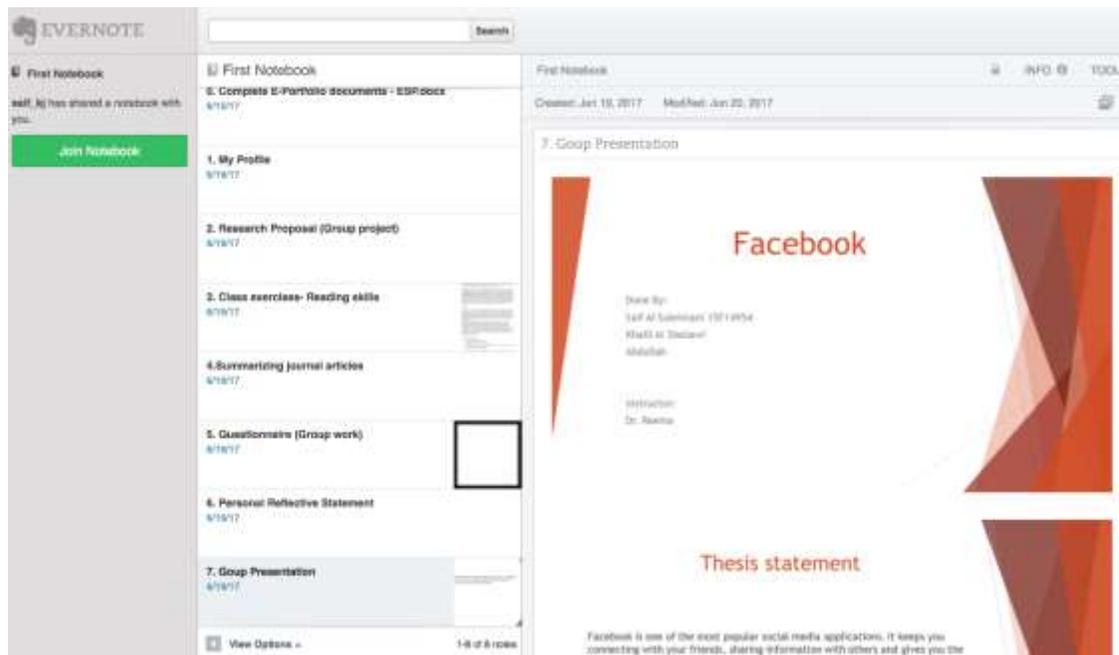


Figure 3. An example of student ePortfolio

Contents of ESP ePortfolio: As per the syllabus, the portfolio had 7 components such as self-introduction, research proposal, questionnaire, reading and summarizing from the text, summarizing journal articles, reflective writing and note-taking. The electronic portfolio was assessed for 100% and it contributed to 10% of the overall coursework grade as shown in Table 1.

Table 1. Contents of an EPortfolio in ESP (10001)

Contents of ESP 10001 E-Portfolio]				
S.NO	CONTENTS	Description	Week(s)	% Of Marks
1	About yourself	A paragraph (100 words)	5	5
2	Research Proposal	Proposal (Group Project)	6	10
3.	Questionnaire	Group project Questionnaire	7	10
4.	Reading Skills (from the text)	1-5	7-10	25 (5X5=25)
5	Summarizing journal Articles	I & II	8-12	20 (10X2=20)
6	Reflective Writing	200-250 words -Reflect on the research topic -How is it useful in Oman? -What are its future implications? -Comment on what you have learnt in your ESP course. -How are the skills that you have learnt useful in your specialization?	12	25 (5x5=25)
7.	Note-taking	Lecture notes	6-12	5

Electronic portfolio was introduced for the first time for ESP module and the students used ePortfolio mainly for getting formative feedback from the instructor on the components of group project report such as writing a research proposal, questionnaire, or a self-reflective report. Though the digital portfolio is introduced in the week 3 of the 15 weeks semester and the actual assessment begins from week 5. It was introduced as part of formative assessment in order to replace the traditional paper-based portfolios, which proved to be ineffective in the past as students could resort to plagiarizing part or most of its contents. Generally, at undergraduate level, students are required to submit all their coursework assignments through Turnitin, an anti-plagiarism software programme that is integrated with MOODLE to detect plagiarism. As per the institution's policy, the total similarity of the assignments submitted from the sources put together should not exceed 30% and similar material in any form of student work from a single source should not exceed 7% (MEC, 2018).

At the time of implementation, the students were not enthusiastic about the change in the assessment method as they were used to paper-based portfolios in GFP and in other modules and hence their initial response was not all that encouraging. Once the students became familiar with the ePortfolio application (Evernote), their response was more positive as they began to have a clear understanding of the purpose and the potential benefits of showcasing their work in a digital format.

The findings of this research paper are from the survey taken in the academic year 2016-2017 (Fall Semester) by piloting ePortfolio in an ESP class with the total strength of 26 learners, consisting of 15 male and 11 female, full time students, aged 19-23.

As the initial deployment of ePortfolios in ESP in 2017 was successful, the academic staff from *Centre for Language Studies (CFS, MEC)* are currently exploring the possibilities of introducing electronic portfolios in other English modules to provide similar learning support during the course.

5. Methodology

The study was carried out in two stages using a mixed research methods approach involving qualitative and quantitative survey tools.

The first stage involved collecting quantitative data using a questionnaire distributed to the target group of 26 learners doing ESP (10001) module. In the second stage of the survey, qualitative data was gathered from interviews with students and the corresponding module instructor to discuss the use of technology aided ePortfolio, its potential benefits and its overall effectiveness as a formative assessment tool to combat plagiarism.

Research instruments used for data collection:

The focus of the qualitative and quantitative survey questions were on the following:

- the purpose of ePortfolios.
- ePortfolio as an assessment tool.
- students' attitude towards using ePortfolio as a learning tool
- students' digital skills.
- support given by the module instructor during the course (feedback mechanism/

scaffolding).

- the potential benefits or advantages of using ePortfolios as perceived by the faculty.
- issues faced by the learners while using the electronic system.
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Student questionnaire: A questionnaire was designed to assess students' experience and attitudes towards creating and developing an ePortfolio as part of the formative assessment. The questionnaire had a total of 8 questions with 5 closed multiple choice questions (questions 1-5) and three open-ended questions (7-9) as given in Table 2.

Table 2 *Student questionnaire*

1. How many hours did you spend every week working on your electronic portfolio?
2. What is the primary purpose of using electronic portfolio for this course?
3. To what extent do you think the ePortfolio has helped you with the ESP course in terms of learning and assessment?
4. What were the multimedia tools used for creating your electronic portfolio?
5. Would you continue to use your ePortfolio after the completion of your course?
6. What do you like about the ePortfolio activity?
7. What were the issues faced while creating and developing your ePortfolio?
8. Suggest a subject module where e-portfolios could be introduced to support your learning.

Student interviews: One-to one student interviews were conducted to find out student attitude towards using ePortfolios as a learning and assessment tool, and how it helps to combat plagiarism, the support provided by the module instructor during the course and the difficulties faced during the course.

Faculty Interviews: The module Instructor of ESP was interviewed to find out the efficacy of using ePortfolios, the instructor's experience, as well as the challenges faced while implementing the new assessment method.

6. Findings

6.1 Quantitative survey (questionnaire): 26 learners, from the ESP class doing their UG programme in Engineering completed the questionnaire during the course and their responses are given below.

The data provides valuable insights into the use of ePortfolios as a learning and assessment tool as perceived by the learners.

a. **Number of hours spent by the students in creating and developing the ePortfolio:** The majority of students indicated that they spent about 2-3 hours on an average in a week to collect evidence for their learning and store it in digital format (refer to Figure. 4).

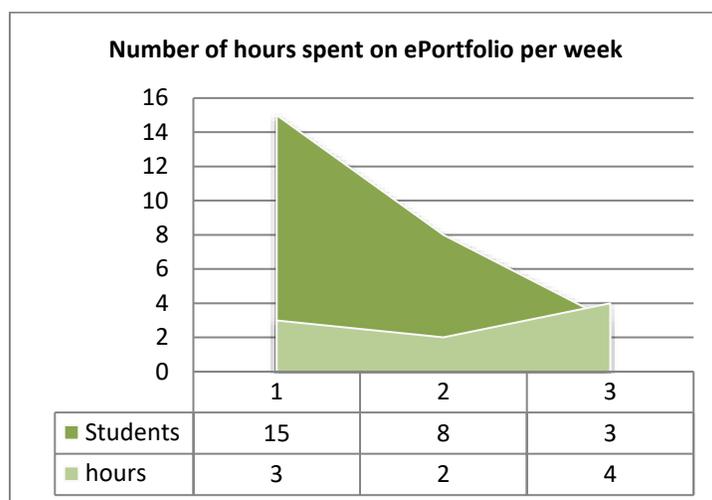


Figure 4. Number of hours spent in a week on ePortfolio

b. Students' feedback on the purpose of having an electronic portfolio for the course: The majority of the respondents (76%) agreed that it prevents plagiarism, for the electronic feedback mechanism gave them an opportunity to re-write and re-submit their work based on the tutor's feedback. All the respondents confirmed that it has helped them to organise the course work better and has also improved their digital skills (Figure. 5).

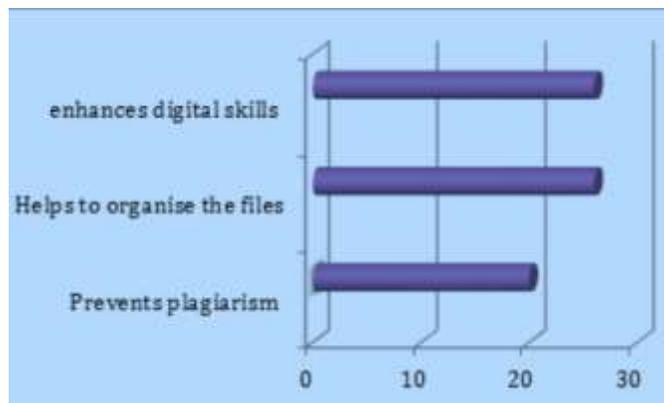


Figure 5. Learners' feedback on purpose of an ePortfolio

c. Advantages of using an e-portfolio as perceived by the learners: The majority of students felt that their digital skills have improved as a result of using an ePortfolio during the course for weekly submission of their assignment. Their comments ranged from enhancing their digital skills to learning certain skills for the first time like using advanced features of MS word or downloading videos or audios while creating their ePortfolio (Figure 6).

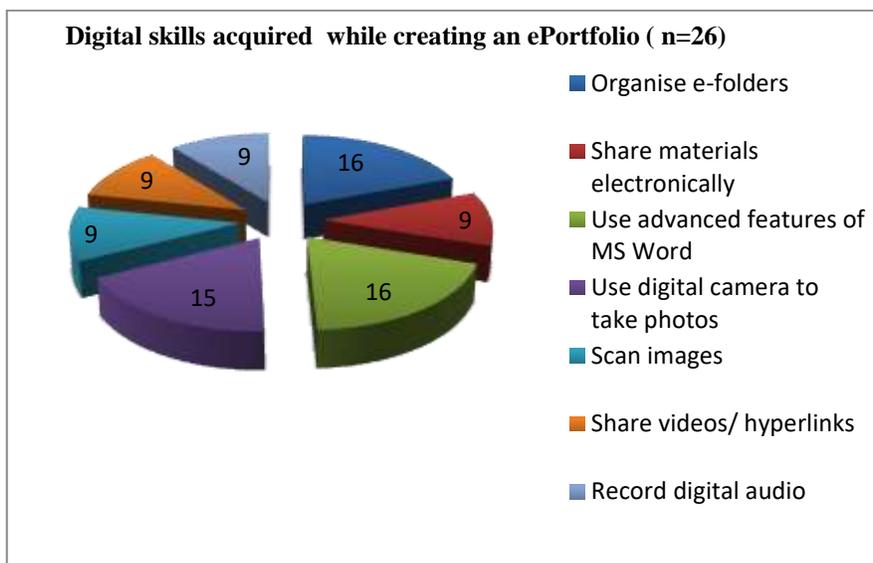


Figure 6. Enhancement of Digital skills as perceived by the learners

d. **Using ePortfolio in other modules:** The majority of students indicated that they would ‘definitely’ recommend the use of ePortfolio as an assessment tool in other modules. About 10 out of 26 remained neutral as they said they would ‘probably’ recommend its use in other Engineering modules. Only 2 students out of a total 26 were not in favor of using ePortfolio as an assessment tool (Figure7).

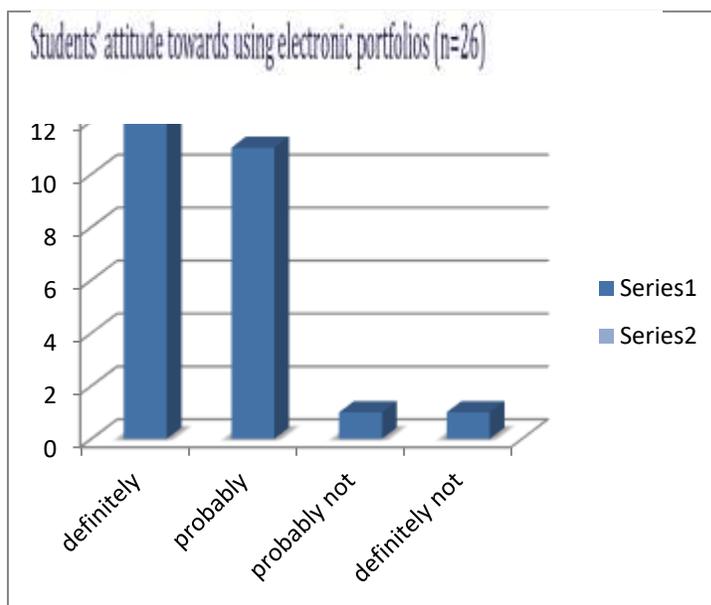


Figure 7. Use of ePortfolios in other modules

6.2. Qualitative Survey

Student Voices (n=26)

Students were also interviewed on a one to one basis to know about their views on using ePortfolios for future assessments. The majority of students expressed the view that ePortfolio is useful in many ways (Fig.8).

Their views included the following:

- It is a useful tool to get the tutor's feedback and reflect on our progress.
- It is also easy to use.
- Useful for organizing files using folders and tags.
- Multiple file upload option saves time.
- Electronic portfolio replaces the USB.
- ePortfolio allows authorization, as one can decide who can access the folder.
- One can synchronize the application (e.g. Evernote) with multiple devices and hence it is accessible anywhere.

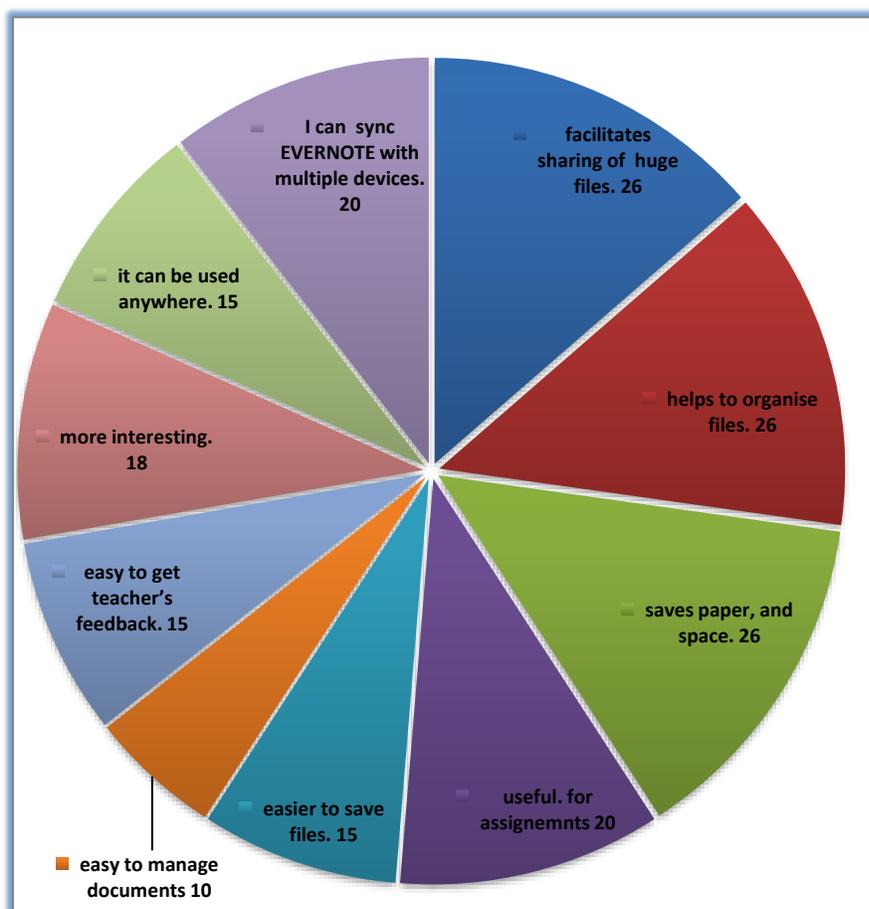


Figure 8. Benefits of using ePortfolio

Some issues with the use of ePortfolios as pointed out by the students: Though majority of the students (74%) indicated that they did not face any difficulty in creating an ePortfolio and indicated that they liked the idea of using ePortfolio as an assessment tool for their coursework. However, about 26 % of the students mentioned that it requires fast Internet connectivity and that it is also time consuming.

Some of the drawbacks pointed out by the students as given in *Figure 9*:

- It's not helpful when there's no Internet.
- Difficult to use it.
- It doesn't work if the Internet connection is slow.
- It takes time to organise the files.

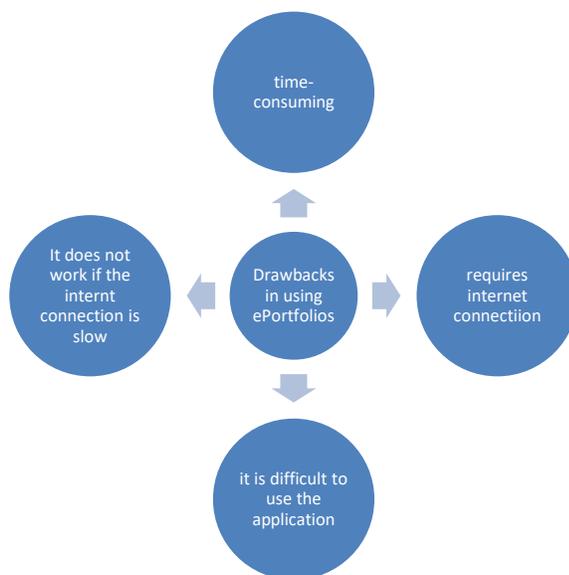


Figure 9. Drawbacks in using ePortfolios

6.3 Teacher's Feedback

Student response to the ePortfolio is positive and hence it is likely to be introduced in other modules as well. It also facilitates better feedback mechanism, as it is easier to monitor the learners' work, and give timely feedback. This also gives them an opportunity to review and resubmit their work. Hence, there is scope for re-correcting or reformulating. This method has considerably reduced plagiarism as evident in the percentage of similarity of the group assignments submitted via Turnitin. Moreover, it integrates their formative assessment with non-formal learning evidence.

Figure 10 presents Turnitin percentage of similarity of group reports submitted at the end of the course after being given formative feedback on their coursework using ePortfolio. The class that submitted its group assignment using ePortfolio demonstrated a considerably lower Turnitin similarity percentage (between 11-20%) as compared to the previous semesters involving traditional paper-based portfolio assessment where the Turnitin percentage of similarity was much higher.

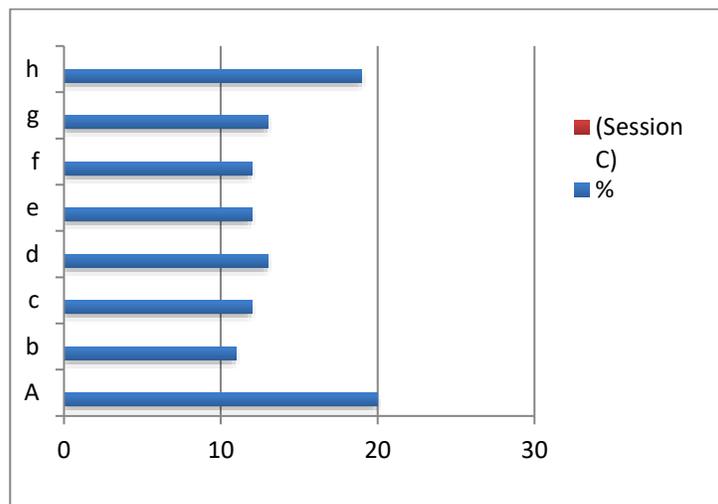


Figure 10. Turnitin % of similarity

7. Conclusions:

This study hopes that ePortfolio can cater to the general needs of students from all disciplines at higher education. However, the target of this research was limited to undergraduate level students enrolled in ESP course and hence it may need to be customized as per the requirements of other disciplines.

The findings indicated that ePortfolio can effectively be used to enhance the learning process through feedback and interactions between the teachers and students. Teachers could provide learning support through the use of such technology to discourage students from plagiarizing their assignments through constant monitoring and also by means of a structured, formative feedback mechanism. The findings also reflect Dalziel's (2008) claims that a blended solution using ePortfolios with plagiarism detection software like Turnitin could effectively combat plagiarism.

The results have revealed that there is room for further improvement and the proposed enhancement of the application are listed below.

Proposed Enhancement: Electronic Portfolios could effectively be used to promote active collaborative learning, self-reflection and critical thinking by means of:

- developing an institutional ePortfolio systems customized for its own use, and providing a link to integrate it with Moodle to have single sign-on functionality (Kent et al. 2010).
- introducing a blog feature or a forum for feedback from tutors and peers.
- promoting e-portfolio as an effective career tool to showcase skills, knowledge and experience to their potential employers.

8. Future research

The sample size was limited to 26 students of ESP class in the survey. Future research should target a larger sample size and the survey could be administered to a larger number of participants through the use of online survey tools like survey monkey.

Though the response from the majority of students was positive, the survey results indicated some limitations in using ePortfolios such as difficulties faced by the students during the course such as coping with the use of the new technology, and the time taken to master the digital skill. Probably, with more guidance and practice, students can overcome some of these difficulties when they become more familiar with the use of technology. A short training course or a workshop could be given to the students before introducing ePortfolios. Further research needs to address these issues regarding the use of ePortfolios as a formative assessment tool, and provide solutions to improve students' performance and encourage learner autonomy through such blended learning methods.

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