

# E-Portfolio-Based Assessment Review and Responsiveness to Instructional Design: An EFL Case Study

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**Abstract:** Chinese officials and educators are struggling with reform in educational evaluation and assessment in addition to the traditional assessment methods for several decades, such as the formative assessment, alternative assessment and authentic assessment. This study aims to design an instructional plan embedded with e-portfolio assessment for learning English writing through comprehending EFL learners' experience and perceptions to e-portfolios. The mixed research design is employed with data sources of classroom observations and semi-structured focus group interviews, as well as a survey questionnaire. The findings show that internal and external factors affect students' continually using e-portfolios in their English learning. Additionally, e-portfolio learning to assessment-initiated instructional design benefit in minimizing the gap, modifying instruction and promoting learning achievements. Furthermore, it will imply great insights to assessment for learning and instructional modifications.

**Keywords:** e-portfolios, assessment, feedback, self-reflection, peer-assessment, instruction

## 1. Introduction

Evaluation and assessment play key role in teaching and learning process. However, there are countless files and records in each class and difficult for teachers to collect and appraise immediately. As an alternative assessment, the portfolio has drawn deep concern by educators, employers and officials for its mutual benefits for both sides. In terms of language teaching, exercises and practices are conducted for assessment aims. Most importantly, due to the growing quantity of online tasks and assignments, on-line teaching and learning are common. As teachers, we seldom have the authentic chance to assess students by scores, grades in traditional way. The alternative assessments are open up in digital era, so instrument and methods should need transforming into electronic format, such as the ePortfolios.

Eportfolios has been attentive since digital era and widely and significantly used. By 2017, about one-third of US undergraduate students report using eportfolios in at least one class and over one third of faculty agree that eportfolios could help them become more effective instructors if they had better skills at integrating them into their courses [1]. The 2015 Gallup survey [2] stated that in spite of 96 percent of scholastic officials in universities accept understudies are sufficient set up to begin their careers, only 11percent of business pioneers see school graduate students getting ready for employment. At present, around 20 percent of their parents believe in the profit of higher education [3], and 35 percent students being prepared for work [4].

Assessment plays essential role in effective instruction. Following the call by Ministry of Education, the pedagogical reform is a must in the "shift from an over-emphasis on passive learning, rote-memorization and mechanical training to one that promotes students' active participation, independent inquiry, practical ability, problem-solving skills and teamwork". This highlights active, collaborative and transformative learning. Assessment is an integral part of the teaching and learning process, thus effective ways of assessment for learning has officially drawn great attention. In 2020, the State Council has published *The Overall Plan for Deepening the Educational Evaluation Reform in the New Era*, advocating "to improve summative assessment, reinforce formative assessment, explore added-

value assessment and strengthen comprehensive assessment.” Definitely, both the pedagogical and assessment reform set the aims and tasks for the educators.

This article aims to indicate an instructional plan embedded with e-portfolio assessment for English learning through comprehending EFL learners’ experience and perceptions to e-portfolios, which will illuminate assessment for learning and instructional modifications. To achieve research objectives, two research questions will be beneficially solved:

- 1) What factors affect students’ continually using e-portfolios in their English learning?
- 2) What are the implications to the instruction in the way including e-portfolio assessment?

## **2. Methodology**

To examine the factors and their affordances, this article employed mixed research design through data sources of semi-structured focus group interviews and a survey questionnaire Assessment Experience Questionnaire (AEQ). All data were collected and analyzed to demonstrate classroom implementations of e-portfolios assessment and students’ perception. Lecturer and students from local university participated in this study. In the quantitative approach, four-item Likert Scale was adopted from strongly agree, agree, disagree to strongly disagree. In addition, thematic analysis was used as this study aims to investigate factors related with electronic portfolios contribute to their commitment and engagement in English writing learning practice.

### **2.1 Participants and instrument**

This study involving a lecturer teaching College English and two cohort of 176 freshmen taking College English course in an eight-week period, the eleven students volunteering to be interviewed. All participants were in a local graduate university in China. They are all non-native speakers from the same age range, similar length of learning English and using English mainly in classrooms. The qualitative data were collected through focus group interviews.

### **2.2 Data collection**

Data were collected during eight-week period of attending College English class. The two focus groups were first interviewed in a quiet classroom and consent forms were signed by each participant. Discussions within each group were guided by a semi-structured interview designed by researcher and two other researchers as non-participants made sure the research objectives would be kept in the process. The open-ended questions were devised to obtain information about students’ perceptions and engagement of assessment they experienced. In the interview, participants were encouraged to actively and freely discuss their experience of assessment and the focus groups spent one and half hour, which has been video recorded using a smartphone and the verbal communication were transcribed manually and stored in Microsoft Word. Creswell [5] described a systematic method for analysing data. Therefore, the transcribed datasets were read repeated to elicit meanings in extractions. Then lists of codes were organized based on the research objectives and extracts. Eventually, interpretation of various themes was performed. Meanwhile, the questionnaires were distributed to 176 participants and collected with 176 copies. The data were analyzed to find out the correlations between amount of assignment, feedback and learning improvement via the software of SPSS.

### **2.3 Data analysis**

This semi-structured interview explored to understand students’ perceptions, experiences and approached of assessment with their learning process in English language learning, mainly reported by several themes, comprising skills/knowledge, ability, reflection, feelings and emotions, major interesting, feedback, use(ful)/help(ful)instruction, learning objectives, future plans and learning environment, broadly speaking internal and external themes (see Table1). These themes affected attitudes toward assessment and learning achievements. Additionally, the report is supported by extraction from two focus groups.

The reflection in first session is valuable for students with their prior learning experiences. Next the peer-assessment in groups need each member share works, and the other three members provide with three questions respectively which writer should answer and write down. In this stage, the assessment

techniques in e-portfolios are emphasized on the collaborative learning and sharing opportunities. Besides, all participants will obtain more advice and suggestions about their writing. Afterwards, general Feedback from lecturers, for instance, Chinglish expression and thinking ways, linking words missed, being illogic, the title not capitalized and the simple content. In the third session, a sample was provided and students are engaged with rewriting their drafts based on self-reflection, peer-assessment, group discussion and lecturer's feedback. Eventually, the finalized submission was done in their learning e-portfolios.

Table 1: Themes from codes analysis

Themes	Sub-themes	Codes
internal	skills/knowledge	study method, culture, culture competence, language points in textbooks and other knowledge, with majors, English, family rules and parental love, new words, texts and oral English, more English about major study, communicative skills, translation and reading content, effectively filling blanks with words given, listening, reading and usage of words, words and sentence learning, pronunciation and tone, filling-blanks, writing and translation, vocabulary learning and films for culture understanding, listening, vocabulary, and writing skills, customs, grammar/words/sentence usage, affix usage, basic skills
	ability	self-learning, problem-solving and self-control, problems and solutions, self-creativity
	self-reflection	once a week, benefit from reflection but a little hard, reflect what teacher ask me to do, I will reflect my English learning
	feelings and emotions	without monitoring becoming lazy, negative emotions, poor English, shy, lack of motivations,
	interesting	interesting things, more patient to read favorite things, English is interesting, like to listen to English songs, bring fresh things
external	feedback	classroom performance, writing and listening skills, professional development, more encouragement, my weakness, new ideas, useful feedback, encouragement and consideration, whole learning process in college, in-time correction, useful to improve myself, words, communicative skills, advice to correct errors, timely performance, keep enthusiastic, more interaction, more questions, correction, correct and adjust words, sources to lead and help build interest, grammar, weakness and potential progress
	use(ful)/help(ful) instruction	always follow teacher's instruction
	learning objectives	employment, related with major for the language needed for programming, to improve self-creativity, vocabulary and unknown sentences, for major study, pass CET4/6
	future plans	future planning, future plans to achieve goals
	learning environment	more questions and interaction, more directions

A Pearson correlation coefficient was conducted to evaluate the null hypothesis that there is no relationship between amount of assignment, feedback and learning improvement (See Table 2).

Table 2: Correlations between assignment, feedback, reflection and learning (N=176)

		assignment	feedback	reflection
learning	Pearson Correlation	.531**	.247**	.600
	Sig. (2-tailed)	.000	.001	.432

\*Correlation is significant at the 0.01 level (2-tailed).

There is significant positive relationship between assignment and student learning ( $r=.531$ ,  $p=.000$ ), between feedback and student learning ( $r=.247$ ,  $p=.001$ ), and nonsignificant positive relationship between reflection practice and learning ( $r=.600$ ,  $p=.432$ ). Therefore, as the number of assignments and feedback increases, the level of students learning improves. However, the relationship is moderate.

### 3. Findings and discussion

#### **RQ1: What factors affect students' continually using e-portfolios in their English learning?**

It is crucial to examine how and why students view assessment which will show in more detail the factors contributing to academic performance [6]. Findings in this study providing internal and external forces of assessment aligns with Asikainen et al. [7] who proposes that the factors including time management, self-regulation, motivation, conscientiousness and social support, impact leaning and assessment. However, it is more comprehensive to define the two broad categories as main themes before detailed subthemes.

Internal factors are defined as those within the individuals whereas external factors in education field refer to the outside influence individuals [8]. In this study, the former handles with variables to the view of assessment and these personal elements are interrelated with those outside components impacting perceptions. Generally speaking, learners hold negative views to their learning performance while concerning about assessing basic language skills and competencies, the knowledge connecting with their program study and interest. These themes are considered as internal factors influencing students' view of assessment. Although students are unsatisfactory about their academic performance they are still inactively engaged.

Externally, as those driving forces to promote learning, responsibilities of lecturers and learning context have the potential to influences to student's perceptions of assessment. They value quality feedback from teachers to meet their internal needs for skill improvement, the direction and guidance for future plan. Learning objectives are obliged to be clarified both for learning checking and instructional design.

These themes and sub-themes dynamically illustrate the views of assessment and the origins. Learners value learning language skills while assessed and feed backed effectively. Internal factors are indicators of where assessment originated whereas external ones imply the guidelines for improvement.

#### **RQ2: What are the implications of e-portfolio learning to assessment-initiated instructional design?**

A Pearson correlation coefficient was conducted to evaluate the null hypothesis that there is no relationship between amount of assignment, feedback and learning improvement (N=176). Preliminary analysis showed that there were no violations in the assumptions of normality, linearity. There was significant evidence to reject the null hypothesis and conclude that there existed significant positive relationship between assignment and student learning ( $r=.531$ ,  $p=.000$ ), between feedback and student learning ( $r=.247$ ,  $p=.001$ ). Therefore, as the number of assignments and feedback increases, the level of students learning improves. However, the relationship is moderate.

From the data source of classroom observation, three sessions were gathered and it was inferred that lecturers are struggling with motivating students to engage in their assignments collected in electronic portfolios and assessment techniques is prior to enhance learning since teaching task begins. Assessment techniques include "measuring the extent of active participation, conceptual novelty and creativity, concept mapping, and meaning compatibility between the teacher and the student on the one hand and among students themselves on the other, a task made especially difficult because of the indeterminacy of linguistic communication" [9]. Assessment for learning is aiming at identifying and remedying and learner's weaknesses, as well as improving learning and teaching. More efforts should be spent on learning reflection, synoptic analysis and performance assessment. E-portfolio assessment focuses on competency development and "the web created between artifacts – the connections, arrangements, arguments, and narratives that make a single text out of disparate ones and thereby chronicle a learner's learning [10]." Moreover, deep learning can be achieved through reflection, goal setting, and real language level and weaknesses. The most basic principle in e-portfolio selection is that technology has to meet pedagogical requirements [11] which means "creating technological solutions for classroom situations". Integrating traditional teaching methods into e-portfolios should be gradually and consistently.

Therefore, in the process of e-portfolio assessment embedded writing instruction, assessors take responsibility to define learning objectives at the beginning and motivate intention of using e-portfolio via design teaching plan. Then students are supportive with value recognition and decision-making to deploy e-portfolios not only as a learning tool but also as the initiative for classroom assessment. This will lead to active involvement in the lesson, course, collaborative-group activities and reflection, significantly in minimizing knowledge gap and enhancing learning. To ascertain effective assessment

part, lecturers provide guided prompts, criteria for successful performance with feedback.

### **Implications of learners' learning experiences in e-portfolio assessment**

From the interview data, students are worthy approach of e-portfolio-based learning with positive attitude and views, hence their academic performance can be empowered that is same to Tuerer that e-portfolios help students detect their prior knowledge and be more engaged in future learning. As Zubizarretta [12] advanced that portfolio assessment incorporates three essential components of reflection, documentation and collaboration. In this study, they can be supported by the coded themes as internal and external factors. The correlations between feedback, amounts of assignments and learning improving is positive. This can be found during the process of assessment for learning, immediate and sufficient feedback are beneficial to learners, and e-portfolios are perceived as an ideal medium to provide feedback between students and teacher-students [13]. For the reflection, the result shows a bit difference that its connection with improved learning is not significant, whereas Rogers [14] believe that reflective learning is significantly perceived as the tool of improving students' learning and practice in educational settings during their lifetime.

### **Implications for assessment-initiated instructional design**

Responsiveness refers to "the ability of an instrument to detect change over time in the construct to be measured" [15]. The actions followed by decisions on how to instruct in next step are informed by responses from students. The results presented here support the aims at indicating an instructional plan embedded with e-portfolio assessment for English learning through comprehending EFL learners' experience and perceptions to e-portfolios, which also illuminate assessment for learning and instructional modifications. It is consistent with statement from Paul Black and Dylan William [16] that assessment is pivotal aspect of effective education. William (2016) similarly proposed the instruction is prone to elicit and obtain evidence about learners' performance and competences, and also these data will be useful and helpful for adjust teaching and for the purpose of meet students' needs in a more efficient approach. In this study, students engage in a writing task which produces data and these data become evidence initially for e-portfolio assessment when they are utilized to support assessment to provide further information to teaching and instruction.

This e-portfolio assessment-initiated instructional design is constructed on the basis of classroom observations for implementing e-portfolio assessment, as well as factors impacting students' experiences in being assessed with se-portfolio and the relations between these factors. As it is shown that the themes are analyzed into three main categories which demonstrates that four participants reflect their instruction based on the lectures they give to students and the artefacts they collected and write. In addition, they mainly provide feedback such as: good, well-done, cool, excellent within classes, and two participants also offer some sources and assessment of students' learning beyond classes in the way of WORD file. Considering all the aspects analysed, e-portfolios play dynamic and prominent role in education and help instructors improve and re-design their teaching procedures, assessment aims and equivalent activities according to learners' needs and specific context, which is in line with the literature findings reviewed before.

## **4. Conclusion**

As the prime alternative tool to enhance learning and teaching, e-portfolio assessment become in popularity in technology-based learning environment. The cutting-edge technologies, such as internet, Internet of Things, Big Data, Blockchain, Artificial Intelligence and 5G, have deeply innovated educational technologies. The findings show that internal and external factors affect students' continually using e-portfolios in their English learning. Additionally, e-portfolio learning to assessment-initiated instructional design benefit in minimizing the gap, modifying instruction and promoting learning achievements. The ways to effective evaluation and assessment for learning concern the whole level and quality of education internally and externally. Educators should take responsibilities to improve assessment approach from their instructional experiences through electronic technology, for instance, to obtain procedural data and information and realize holistic, individualized and personal guidance and further suggestions. Future research will investigate e-portfolios implementation in authentic classroom settings in order to explore perceptions from learners' view. For the policy-makers, the implications of improving educating activities and assessment reform will be gradually fulfilled.

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