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Exploring EFL Learners' Attitudes toward the Application of a Model of Writing E-portfolio

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Abstract

This study aimed to explore the attitudes of two groups of EFL learners toward the application of a model of writing e-portfolio in developing their writing skill. It was a follow-up study to an experiment on the effectiveness of this model on the writing performance of Iranian EFL learners. One group had used certain strategies based on the analytic traits of writing, while the other group had not used such strategies in the writing process. Four class members from each writing e-portfolio group were selected purposively for conducting the semi-structured interviews in this research. The findings showed that members of the group that used strategies based on analytic traits of writing had acquired a sort of awareness towards the different qualities of writing, claiming that knowing about the analytic traits of writing caused them to understand the necessity of paying attention to all aspects of writing and not just the usage and mechanical correctness of it. They referred to the role of Peer Checklist in reminding them of the writing qualities to be considered in their self- and peer-assessment. The results of the learners' feedback in both e-portfolio groups further revealed that the electronic environment of e-portfolios can play a significant role in facilitating the writing task performance of the learners and consequently improving their writing skill in both e-portfolio groups. On the whole, the student self-reports indicated that the use of strategies based on analytical traits was able to heighten awareness regarding important aspects of writing.

Keywords: writing e-portfolio, analytic traits, attitude, LMS, peer-assessment

1. Introduction

As research shows, the focus on ESL/EFL writing skill has often been less emphasized than the other skill areas both in research and instruction (Edelsky and Smith, 1989; Amiran and Mann, 1982; Graves, 1984), and this lack of attention resulted in less interest among ESL/EFL learners to improve their writing (Lipstein and Renninger, 2007). Writing e-portfolio is considered to be an alternative approach to compensate for the weakness of previous product and process methods in writing (Barrett, 2005; Lorenzo and Ittelson, 2005), because it emphasizes the important role of learners in doing self- and peer-assessment to raise their own awareness in the process of writing.

This study aimed to explore the attitudes of EFL learners towards the effectiveness of a model of writing e-portfolio in their writing skill development. As a follow-up study to an experiment on the effectiveness of a model of writing e-portfolio on the writing performance of Iranian EFL learners, this research wanted to investigate the viewpoints of the students who participated in an online writing course based on a model of writing e-portfolio. The following figure shows the model and the procedures which were followed in the experiment in two different groups.

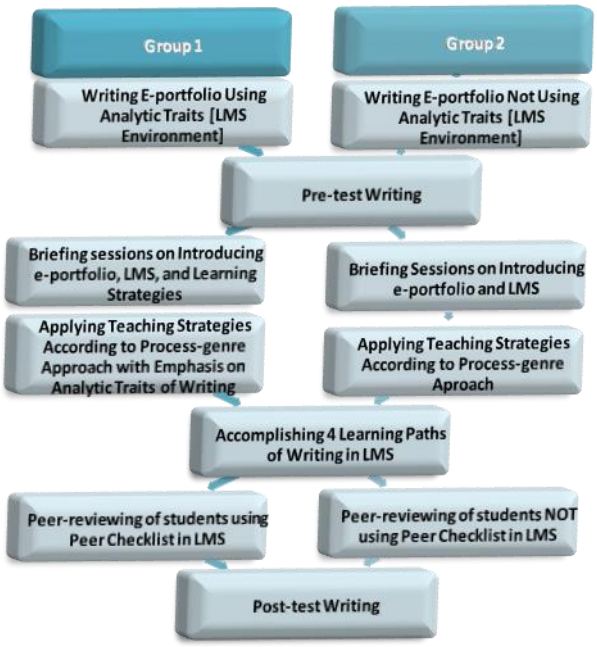

Figure 1. The procedures followed in two different models in the experiment

There are numerous reported benefits of e-portfolios. For example, e-portfolios might be used for instructional objectives; can represent variation and progress over a period of time; cause learner and tutor reflection; and link one educational semester to the next. They are also used to motivate autonomous learning, increase critical thinking skills, create a link between instruction and assessment, provide a way for students to value themselves as learners, and offer opportunities for peer-supported growth through constant interaction and exchange of ideas both synchronously and asynchronously in educational settings (Shin, 2013). According to Galloway (2007: 27), the prospect of electronic portfolio application in language instruction is quite promising and shows that 'electronic portfolios are on the rise and will eventually become the norm rather than the exception'.

Although much research emphasizes the role of students in expressing their attitudes towards the changes and new approaches in education (Fullan, 2007; Lam and Lee, 2010; Wetzel and Strudler, 2006), 'the literature on e-portfolios has rarely addressed students' needs and opinions' (Tzeng and Chen, 2012: 163), and studies into learner ideas and practices of applying portfolio and e-portfolio models in EFL/ESL situation has been insufficient (Lam and Lee, 2010). Fullan (2007) highlights the role of students in educational change by saying, "unless they have some meaningful (to them) role in the enterprise, most educational change, indeed most education will fail" (p.170). Based on these studies and in order to appraise the effectiveness of e-portfolio models, investigating the learners' viewpoints on e-portfolio models with their "rich educational potential" is now of high importance (Thanaraj, 2012: 28). The EFL respondents in this study had the experience of a new model of writing instruction, so their reflections towards the application of a new e-portfolio model could further support the feasibility and the degree of usefulness of the model in improving the writing skills of the learners.

1.1 Objective

The objective of this study was to explore the attitudes of Iranian graduate students in in a Malaysian public university towards the implementation of a model of writing e-portfolio using analytic traits. Two different groups participated in this study; one group using certain strategies based on the analytic traits of writing, and the other not using such strategies in the writing process. The respondents of this study in WE1 were introduced to shared vocabulary which provided a common language for both the teacher and the students to deal with the writing drafts of the students. Hence, the attitudes of learners in both WE1 and WE2 groups were obtained and then compared in order to better understand the effect of e-portfolio models on the writing ability of students, which may have been unnoticed in the experiment on this model.

1.2 Analytical traits of writing in e-portfolios

In the model of writing e-portfolio, the analytic traits of writing are considered most effectual when fully incorporated into the process of writing and can help students become 'reflective' learners. Bacha (2001: 379), in denoting the significance of analytic scoring of writing for assessment purposes, claimed that 'EFL programs and the teachers should re-visit the value of the scoring instruments adopted and consider not relying entirely on holistic scores to determine the improvement of their students' writing proficiency'. It is believed that since analytic measures are more informative than holistic ones, 'EFL programs would benefit from more analytic measures' (Bacha, 2001: 371).

The application of analytic traits is suggested because of their diagnostic potential in helping students realize the weak areas that English learners have in writing so that instructors are able to have lesson plans according to the weak writing

performance of the learners. In this study, the students were familiarized with the analytic writing traits through some sample writings which had varying scores on specific traits. These samples were modeled and practiced with the learners.

1.3 Online writing course in Claroline Learning Management System

The respondents of this study also had the experience of an online writing course in the environment of a Learning Management System, namely, *Claroline* (2014). This was an LMS functioning as an online server-based system, and in its most common use, the learners were able to upload or download their own or their friends' assignments while the teacher shared files related to the course content such as announcements, assignments, documents, and exercises.

2. Studies in the past

In a study conducted by Gerbic et al. (2011), the attitudes of students on e-portfolios were explored. Their survey results across four semesters showed a continuous rise in interest and positive feelings, and a decrease in feeling unsure and anxious towards e-portfolio application for language learning. The learners reported the anxiety about the application of technology as the first main hindrance to be overcome, then the development of new learning habits based on portfolio use was called for, as stated by the learners in their study.

In another research, Erice and Ertaş (2011) explored the impact of e-portfolios on the writing abilities of Turkish language students. A group of learners developed online portfolios working on word processing files in an online classroom environment. The computer attitudes of the students and their motivating strategies for learning were elicited and their attitudes examined through a computer literacy survey. The results of the survey on the attitudes of learners to e-portfolio emphasized its advantages such as being easy to carry, share and save; instant access; immediate feedback; and reviewer variety.

Some other studies have also explored the learners' reflection to e-portfolio use in education. The results of a research by Tzeng and Chen (2012) showed that university students emphasized the role of e-portfolios in providing evidence for and showcasing performed tasks with the purpose of giving feedback. The study of Atai and Dashtestani (2013), on the other hand, highlighted the usefulness of online education according to the views of university students. In the Malaysian context, a research conducted by Samad (2012: 106) showed that ESL teachers found the use of e-portfolio useful as a tool for assessment 'as it allowed both teachers and students to collaborate in the teaching, learning and assessment process'. Similarly, Yusuf and Tuisawau (2010) revealed that most of the learners considered electronic portfolio as a very valuable learning and assessment instrument in education.

In general, the merits of writing e-portfolios are mainly noted by many of the respondents in different qualitative studies as being more flexible, accessible, timeless, and placeless. According to the literature, the dynamic nature of writing, the useful interaction and collaboration of learners with their peers and teacher in e-portfolios is also underscored by the learners.

3. Method

In this qualitative study, the purposive sampling technique was used, and the learners were chosen based on their potential to provide the best insight into the results of the study. Hence, four respondents from each e-portfolio group were selected to take part in a semi-structured interview session. This interview was performed with the learners in order to explore their attitudes towards the implementation of the model of writing e-portfolio. The semi-structured interview protocol is illustrated in the appendix. This type of interview provides quick qualitative information and rough estimates of the type of information needed by decision makers to launch an operation. The flexible and adaptable questions in the interviews help clarify the problems and priorities of interviewees. Also, for analyzing the qualitative data, the general inductive approach of Thomas (2006) was used.

3.1 Participants

According to Creswell and Clark (2007), collecting data in a qualitative study can be from a much smaller sample than from that of a quantitative study. In this study, four class members from each writing e-portfolio group were selected purposively for the semi-structured interviews. The eight students were purposively selected based on their ability to provide detailed responses relevant to the study.

3.2 Instrumentation

A semi-structured interview protocol was used to collect the qualitative data and learn about the attitudes of students in two e-portfolio groups (Appendix). A Semi-structured interview as defined by Corbetta (2003: 579) is regarded as 'an interview in which the researcher has a clearer idea about the questions that are to be asked but is not necessarily concerned about the exact wording, or the order in which they are to be asked'. The reason for choosing this instrument was because the novelty of e-portfolios for students made it important for the researcher to learn about the real feelings of students through some open-ended questions. These questions prompted students to think and express their ideas and provide responses in their own words. This format of interview also allowed the learners to raise and discuss issues that the researcher might not have considered. In order for the respondents to go for the answers willingly, Patton (1990) suggested providing short and explicit questions for the interview. Hence, only one question was asked at a time. The interviews were audio-recorded, transcribed, and coded so as to identify and organize the themes for conducting the analysis and interpreting the data.

3.3 Procedure in the interview

In the interview, first the interviewer introduced himself to the respondents and then reminded them of his goals in the interview. It was important to tell the respondents that they were going to be interviewed as the representatives of the treatment groups. The respondents were also asked to sign a written consent reminding that their statements were to be kept confidential at all times. The interviews were individually schedulled for each of the learners, and each of the respondents were requested to get ready to participate in the online interview at a certain time.

The interviews were performed face-to-face, and the answers to 12 open-ended questions were elicited from the interviewees. Also, based on the content of the responses, the interviewer decided to resume or end the questioning. So, the interviews started with general, open-ended questions, and continued with questions to allow the respondents to do most of the talking. It was also important to respect the respondents' pace by not being concerned about the silences or pauses of the interviewees. Not judging the responses of the learners, keeping the interviews focused on the defined topics, and not asking closed questions from the respondents in order to let them elaborate on the topic were other key aspects used to encourage learner responses in the interviews.

In order to analyze the collected qualitative data, the interviews were edited, then transcribed, and prepared for coding. Any mistakes by the respondents such as false starts, stumbles, extraneous remarks, ellipsis points, interruptions, habitual qualifiers, and habitual connectives were corrected. Finally, a specialized Software – NVivo – was used to put the coded interviews into categories.

4. Data Analysis

In order to answer the research question about the attitudes of the learners towards the application and usefulness of the two different e-portfolio approaches, the interview results went through a qualitative data analysis following by and large the *general inductive approach* of Thomas (2006). This approach is claimed to be commonly used in social science research and was introduced as an alternative approach for analyzing the qualitative data (Bernauer, 2015; Bernauer et al., 2013). According to Bernauer (2015: 413), this approach has proved to be 'a useful and understandable way to analyze most qualitative data especially when coupled with a powerful software package such as NVivo'.

The main purpose of this approach was first to reduce the extensive and various raw text data into a brief format, then to create clear connections between the study objectives and the summary results drawn from the data, and finally to develop a model regarding the underlying structure of the experiences or processes that are evident in the text data. The general inductive approach of Thomas (2006) is consistent with the descriptions of qualitative data analysis by Miles and Huberman (1994) in that it emphasizes reducing the data, displaying the data, and drawing conclusion. It is also in line with the definition of qualitative data analysis by Creswell (2007: 60) in that, it denotes decreasing the data to major statements and then merging them into themes to 'convey an overall essence of the experience'.

Figure 2 shows the different levels of coding in this study adapted from Hahn (2008). Coding schemes can be developed both inductively and deductively. According to Zhang and Wildemuth (2009), deductive analysis is intended to test theories or address questions created from theories or earlier empirical studies, while inductive analysis initiates the examination of topics and themes, in addition to the inferences drawn from them in the data. At the same time, the grounded theory approach is for the purpose of developing a theory from a phenomenon (Cohen et al., 2007), while in this study, the qualitative data were collected to provide support for the previously collected quantitative data. Hence, the coding in this study, as shown in Figure 2, was according to the major themes related to the research question and followed the general inductive analysis approach of Thomas (2006) so as to determine the themes and interpret the results accordingly.

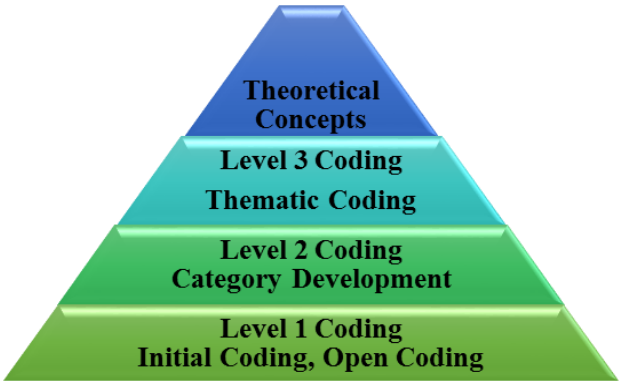

Figure 2. Levels of coding in qualitative study adapted from Hahn (2008)

4.1 Inductive analysis of qualitative data using NVivo Software

After transcribing the text data of recordings from semi-structured interviews, the first level of coding as initial or open coding started. According to Cohen et al. (2007), open coding involves generating categories and defining their features and components. Hence, notes and headings were written in the text while reading it. The written material was read

through again, and as many headings as necessary were written down in the margins to describe all aspects of the content. Open Coding was the analytic process through which concepts were identified and their properties and dimensions discovered in the data. In this level, the quantities of raw qualitative data were focused and labeled.

In level 2 coding, the first level codes were re-examined and the data became further focused. But in the third level of coding as thematic coding, the previous coding was studied to develop highly refined themes (Hahn, 2008). Finally, the theoretical concepts emerged from saturated themes in the last step of coding as closed coding. These successive levels of coding provided the researcher with documented and well-organized answers to the research question.

The data formatting for coding was done in Microsoft Word, but the category development and the thematic coding were performed through NVivo Software. This instrument manages the data as well as the ideas, and helps to organize the data by accelerating the qualitative data analysis and primarily making the process of analysis traceable. By using this Software, creating notes, categorizing and outlining the data became much easier and traceable. In NVivo, the significant codes identified by the researcher in the inductive process of the analysis are called 'nodes'. Nodes include free, tree, and child nodes, which are sequentially used in line with the different stages of the qualitative data analysis.

Figure 3 illustrates fitting of the responses of a respondent into free and tree nodes. 'Free Nodes' were developed while free coding using the portions of a text. A node is defined as the collection of references about a specific theme, place, person, or other area of interest. The references were gathered by working through interview transcripts, then coding the information into the relevant nodes. On the other hand, the 'Tree Nodes' were organized in a hierarchical structure to create categories and subcategories. The general categories in Tree Nodes were called 'Parent Nodes'. The specific categories underneath were called 'Child Nodes' which were considered as subcategories of the main nodes. As shown in Figure 3, these subcategories can also have their own branches and subdivisions.

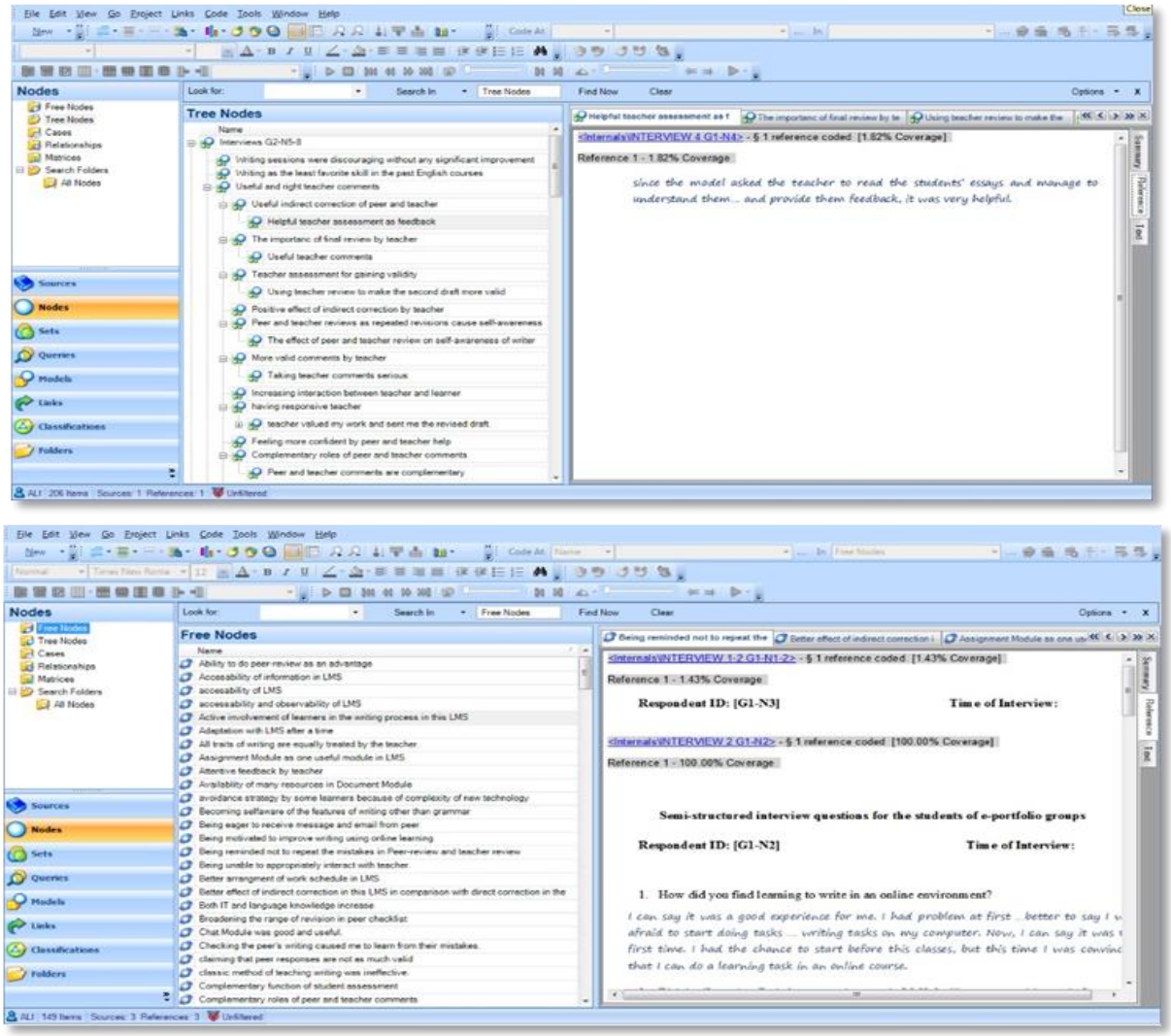

Figure 3. Open Coding by fitting the responses into free nodes & Category Development by fitting the free nodes into tree nodes

4.2 Coding and categorizing the attitudes of learners in semi-structured interviews

The first stage in inductive analysis was to identify the units of analysis. The researcher broke up the interview into useful chunks of data. As a starting point, each sentence of the interview was put onto a new line. If they involved several parts, they were broken into separate chunks of data. This was a line by line analysis to get a feeling from the data. In the second stage, which was called 'Open Coding', the researcher went through the interviews, and gave a summary or code to each chunk of line or data. The code was actually supposed to describe the meaning of the

segments of the text and based on the initial analysis, 149 codes were identified. In the third stage, closed coding was done in several phases. It was done through fitting and categorizing the free nodes into tree nodes by identifying the similar nodes, and excluding the redundant ones. Hence, the 149 free nodes were reduced into 67 tree nodes, and then those tree nodes were narrowed down to final 5 main nodes. These successive levels of coding provided the researcher with documented and well-organized answers to the research question about identifying the central themes.

4.3 Exploring the attitudes of the respondents

Going through the remarks of respondents on their most useful module and the function of 'Learning Path' in the process of writing, the researcher analyzed the free nodes related to this inquiry on NVivo, and came up with some tree and child nodes in the close coding stage.

Topic # 1: Usefulness of course in LMS

The following are the main attitudes of the respondents regarding the usefulness of the course in LMS and their favorite modules which were categorized for the final thematization in the WE1 Group:

- The writers were motivated to speak their minds with self-confidence in LMS.
- The pre-scheduled forums in LMS were exciting and challenging.
- Effective learning often happened in LMS through following the introduced learning strategies.
- The different features of writing were talked about in Peer Checklist, which made the users become self-aware of those features.
- Different media forms were used in LMS.
- It was convenient to follow the course through the most useful module in LMS namely 'Learning Path'.
- It was possible to track the amount of one's own progress and achievement through the progress line in e-portfolio LMS.
- Learning Path and Peer Checklist in it had the best use in LMS.
- The writers made the best use of Assignment Module in Learning Path.
- Many learning resources were available in Document Module in LMS.

As is clear in the above statements, the module 'Learning Path' was the most efficient and useful module for the learners to follow and make improvements in their writing. The respondents of both WE1 and WE2 groups stated that this module in LMS provided them the opportunity to directly follow the instructions of the teacher in order and according to the program of the course. They claimed that this module made them feel more comfortable to do the assigned tasks. The learners in WE2 also emphasized the effectiveness of online learning in writing e-portfolios:

- Some learners claimed as it was the first experience of doing tasks in an online environment, it was so enjoyable for them.
- One motivating aspect of the online course was the tracking of learners' amount of time, effort, progress, and achievement they could have in the course.
- One advantage of LMS was collecting the different drafts of e-portfolios and presenting the last draft as achievement.
- Introducing LMS to the learners caused some learners to feel different and motivated about writing.
- Some of the learners claimed that they had enjoyable and challenging chatting experiences in LMS.
- The writers believed that effective learning occurred through peer-review in LMS environment.

Topic #2: Relative advantages of course in LMS

The relative benefits and advantages of LMS was one other issue discussed by the respondents in both treatment groups. The interviewees of WE1 were mostly in favor of using e-portfolio system in LMS as a tool for learning. They believed that it was a motivating environment which was worthy of trying, and they found it effective and useful.

The following is a list of the main discussion points of the respondents in WE1 with the interviewer concerning the relative benefits of LMS:

- The learners compared learning in LMS environment with that of classic models of learning, claiming that they received no real feedback in that product approach, and they just occasionally had feedback from the tutor in the form of grammatical correction.
- The majority of learners claimed that they had experienced a detached rather than independent form of learning in the past.
- The learners believed that the classic method of teaching writing was ineffective.
- It was believed that knowledge on both Information Technology and language increased while working in LMS.

The respondents in the second treatment group or WE2 also expressed their ideas on the relative usefulness of e-portfolio system in LMS as compared to the classic approaches. An outline of their main points is as follows:

- Writing was considered as the least favorite skill in their past English courses.
- It was time-saving to work and do tasks in LMS.

The interview results of two experimental groups concerning the relative benefits of e-portfolios in LMS revealed that both groups had almost the same attitudes towards the application of e-portfolios. However, WE1 respondents put more emphasis on the effect of applying learning strategies on the writing performance of the learners.

Topic #3: Peer and teacher assessment in LMS

The following is a list of coded categories in Tree Nodes of NVivo about 'peer-evaluation' in WE1 Group which applied the 'Peer Checklist':

- Both Learning Path and Peer Checklist had the best use in LMS.
- Giving and receiving indirect response to peer writing through Peer Checklist was so much effective.
- Different features of writing were considered in Peer Checklist.
- Peer and teacher comments were complementary.
- The writer was always reminded not to repeat the same mistakes in peer and teacher review.
- The writer gave and received indirect responses to peer writing through Peer Checklist.
- Peer and teacher reviews as repeated revisions caused a feeling of self-awareness in the writers.

The respondents in WE2 also expressed ideas about peer assessment in the writing e-portfolio course:

- The writer felt at home with peer rather than teacher review after writing the first draft.
- Checking the peers' writings caused the writer to learn from their mistakes.
- The language and conventions of writing were improved by exchanging comments with peers.

Reviewing the comments of respondents on the role of teacher in the process of writing, the researcher came up with the following related attitudes and categorized concepts of the respondents in both WE1 and WE2:

- The teacher was usually responsive and provided attentive feedback to the learners in LMS.
- The teacher assessment caused the writers to consider their writing more valid.
- The teacher valued the works of writers and sent them their revised drafts.
- The indirect corrections of peer and teacher were so much useful and had positive effect on the writing skill improvement.
- The teacher review and continuous observation was encouraging.
- The writer felt more confident through peer and teacher help.
- The interaction between teacher and learner was increased through indirect feedback.
- The teacher comments were taken serious and preferred to peer comments by some LMS users.

Topic #4: Challenges of writing e-portfolios

Concerning the weaknesses of the e-portfolio models in LMS, the majority of the respondents declared that it was difficult at first to feel comfortable and do tasks online, but they gradually started to feel different and tried to adapt themselves with the new context of LMS. The following is a list of limitations and complexities experienced by the respondents in both e-portfolio groups:

- Some writers experienced technical complexities while working online.
- Some respondents were not used to expressing themselves to the others online.
- Some writers had experienced techno-phobia while first encountering LMS.
- A number of learners had no previous experience with LMS.
- Some learners were unable to interact with the teacher appropriately online.
- A few of the respondents made use of avoidance strategy because of the complexity of new technology.
- Some learners believed that trying new things required more energy and motivation.
- One learner said he did not feel any confidence in the feedback provided by the peer friend, claiming that online peer responses were not as much valid.
- Computer knowledge was deemed necessary for doing the tasks successfully.
- Not having continuous connectivity was the other issue of using e-portfolio in LMS.

Topic #5: Suggestions for more efficiency of e-portfolios

Some of the learners had also certain suggestions regarding the learning system and the procedure introduced to the users. For instance, one respondent suggested creating an option in LMS for providing further directions on how to deal with the initial complexities of the system for the users. One other respondent put forward an idea regarding promoting online courses in educational system by first training the faculty in order to be able to deal properly with the issue and make efficient use of the LMS.

The two different features of WE1 in comparison with WE2 were introducing the analytic writing traits to the learners, and requiring them to review each other's writing drafts through 'Peer Checklists' in the process of writing. The respondents in WE1 expressed that by becoming familiar with these qualities of writing, they became aware of them

while writing, and decided to consider all those traits in their own writing. They were also guided to remind their peer-group members to follow the principles of good writing, and, while their peers were returning the favor, pay attention to the comments provided by them.

4.4 Setting themes for the main categories from tree nodes

After developing the categories and leaving out the redundant and unimportant nodes in the closed coding stage, the categorized tree codes derived from the free nods in both treatment groups were analyzed, compared, and contrasted in order to come up with the main themes regarding the attitudes of the respondents. In the 4th stage of qualitative data analysis, all the interview codes were collected within the main themes, and the ideas that made up the main themes were examined. The way they interacted with each other and the sequence or order in which the information belonged were of particular interest to the researcher. Similarly, the evidence of any relationship between the overarching themes was of importance in the analysis. It was found that the codes which were initially hard to classify, fit into several themes, and they were good starting points for starting relationships.

4.5 Interpreting the similar themes

Since the tree nodes in WE2 were almost similar to the tree nodes in WE1, the main themes derived from the tree nodes were also similar with subtle differences. The only different issue was regarding the teaching and learning strategies according to the analytic traits of writing in Peer Checklist, which was more appreciated in WE1 group. The following are the 'common themes' derived after the closed coding stage in WE1 and WE2:

Theme 1 – Being well-matched with LMS users (Compatibility)

The adaptability of the learners with the new online setting was one main subject which took the attention of the researcher. It was an important attribute of online environment to observe the compatibility of the LMS with certain values, past experiences, and needs of the learners. The users of LMS expressed some ideas on the amount of their flexibility with the new atmosphere, such as the convenience of following the course online through a certain module, being time-saving of the online course, and gaining gradual interest in following the tasks of the online course. The accessibility of LMS through timeless and placeless communication with peer-group members, being fast, easy to follow, and convenient were among the other features of writing e-portfolios.

One important subject discussed by the respondents in WE2 was concerning the flexibility of the learners in dealing with the new online environment. The main concern was if the learners could adapt themselves to the new setting. The learner requirements, previous practices, and cultural values had significant and undeniable roles in forming this compatibility attribute. Having convenient learning through following the Learning Path module, and the better arrangement and scheduling of the tasks through LMS were the other qualities of writing e-portfolio course denoted by WE2 respondents.

Theme 2 – Learning through trying the model on LMS (Trialability)

Trialability was the other main feature of the LMS as observed by its different users in WE1. Trying the online system by the learners caused the weak points of the writing e-portfolio to be realized. At the same time, it should be mentioned that the early trial of the LMS in a certain context resulted in a quick improvement in the quality of LMS presented to the users. It was also possible for the writers to keep track of themselves through LMS to know which part was actually worked on and which part needed more work. At the same time, gaining self-awareness about the features of writing other than grammar and usage caused the learners to have more online practice and discussion on these traits of writing.

As claimed by the respondents in WE2 group, it was possible to realize the weaknesses of the online system while the learners were trying and doing the tasks in LMS. The earlier the learners tried doing tasks in LMS, the sooner the weaknesses of the LMS were identified and removed. The writers were also able to keep track of themselves in e-portfolios to decide on the weak areas they needed to do more practice on. The repeated revisions through peer and teacher assessment resulted in the formation of self-awareness and more confidence in online learning as a positive effect of the trialability attribute.

Theme 3 – Having difficulty in LMS application (Complexity)

Not having good computer skills was challenging and caused inability to perform some tasks. It was even worsened with a feeling of techno-phobia among some of the learners, especially in the first sessions of the course. At the same time, there were some technical shortcomings in online learning, such as several occasions of disconnection from the server causing interruptions in the learning process, or the inability to log in through the portal. Based on the results of the interviews with the learners in this study, having no e-portfolio experience, not being used to expressing oneself to others online, and being unable to appropriately interact with the teacher and hence using the avoidance strategy to evade talking with people were among the main hindrances in using LMS.

One other feature of online learning which was emphasized by the respondents was having difficulty in LMS application. This was the only theme which was negatively correlated with the rate of adoption of the e-portfolio model in LMS. The respondents in WE2 indicated that it was a bit difficult at first to initiate doing tasks according to the instructions provided for them in LMS, and it required more energy and motivation for trying that new learning environment. The learners had also encountered some problems while doing the tasks in the LMS, such as connectivity issues, and the technical faults of the LMS in some occasions, not allowing the learners to log in through their portals.

4.6 Interpreting the different themes

Theme 4 – The relative benefits of LMS (Relative advantage)

In WE1, the interviewees pointed out the relative effectiveness of writing e-portfolios using analytic traits of writing as compared with the classic methods of teaching writing. The majority of respondents claimed that this model resulted in a satisfactory level of improvement in their writing skill through the introduction of learning strategies. They referred to their empowerment to do peer-review through being introduced to the qualities of good writing along with the Peer Checklist they used for reviewing the writing drafts of each other as an advantage.

The respondents in WE2, on the other hand, believed that writing skill was the least favorite skill to follow in their past experience of English courses. They also referred to the useful and correct teacher comments as one advantage of online work in LMS. However, since they had not been introduced to all analytic traits of writing, they said nothing in the interviews about the peer checklist to use for peer evaluation, and they just referred to the recursive action of peer and teacher evaluation. After all, the motivating and interesting environment of LMS was emphasized by the learners in WE2, and the respondents believed that they could experience effective learning in the interactive setting of LMS through being involved in peer-review, exchanging drafts and ideas in the LMS, participating in forums and chatting with the other course members, which ultimately led to a different feeling about and causing improvement in the writing skill.

Theme 5 – Better learning in LMS through having peer and teacher assessment (Observability)

Based on the ideas of the respondents in WE1, one of the overarching themes which explained the distinguishing feature of peer and teacher feedback in the e-portfolio system, and played a key role in the effectiveness of WE1 model was observability. It was the amount of visibility of the results of e-portfolio as a new experience to the others. The respondents in WE1 group found peer and teacher comments useful. They specifically referred to the role of Peer Checklist claiming that it had the best use in accurate revision of writing, and exchanging the drafts with peers led to some improvement in different traits of their writings. The observability attribute was also evident in developing interest in writing by having a real audience for writing, feeling more confident by peer and teacher help, valuing the written works of the learners by the teacher, the significance and validity of teacher assessment for the learners, and broadening the range of revision for the learners in WE1 through Peer Checklist during the course.

The respondents in WE2, on the other hand, claimed that the teacher reviews and continuous observations were encouraging for them to continue the process of writing with a higher level of self-awareness and self-confidence. They talked about the accurate revision of their own writings as a result of peer and teacher reviews, both of which were considered to play a complementary role in improving the writing abilities of the learners. These repeated revisions caused them to stick into their minds the things learned in the course. It was also believed that the observability attribute had played a positive role in the whole-class interaction and discussion in LMS.

4.7 An overview of the qualitative findings

The central themes derived from among the category system in this study were reminiscent of the *attributes of innovations* of Rogers (2010) which are supposed to occur while encountering any new situation. Hence, the category system in this study was subsequently incorporated into a framework, and computer technology and the online management system created a new situation for the learners causing them to feel influenced by the 'diffusion of innovation'. Certain common characteristics were identified in the responses of the interviewees which were presumably considered by the students in making their decision to adopt the innovation. These attributes were, firstly, 'relative advantage' as the expected benefits of an innovation relative to prior innovations, 'compatibility' or the extent to which the innovation fits with the adopter's work habits, beliefs, and values, 'complexity' which is the extent to which the innovation is difficult to learn and use, 'trialability' or the extent to which the innovation can be tested on a trial basis, and 'observability' as the extent to which the results of using the innovation can be clearly observed. Other than 'complexity', the other four factors were positively correlated to innovation adoption.

The use of the social constructionism structure in this study was found to be a practical method to collect the views and discover the feelings that influenced the individual worlds of the respondents in the study. Hence, the analysis and interpretation of the experiences of the respondents based on their responses during the interview resulted in a substantial amount of support for and a new insight to the idea of the application of new model of writing e-portfolios using analytic traits.

The learners in both groups claimed that they could track their own progress in the course, and know about the weak areas and incomplete tasks which need to be completed. One other compatibility feature of learning in an LMS environment for the users was the convenience of following the course through one module of LMS namely 'Learning Path' in both treatment groups. The relative advantage of e-portfolio system to classic approaches of learning was one other point denoted by the learners of both groups. According to the interview results, the application of analytic writing traits in WE1 was found to be essentially contributing to the practicality of the online course. As it was mainly emphasized by the respondents in e-portfolio groups, the experience of reviewing and being reviewed by the students as well as the teacher provided an actual form of interaction among the participants in the LMS. Especially, according to the WE1 interview results, the easy-to-understand *Peer Checklist* was regarded as a means of raising self-awareness among the students as it pointed to the problematic and weak areas of the learners in their writing drafts when it went through peer reviews.

5. Conclusion

In answering the research question regarding the attitudes of the learners towards the application of writing electronic portfolios, the results were indicative of the gradual adaptation of the learners with online learning and feeling at home with the applied Learning Management System after a while. The results of both e-portfolio groups also emphasized the role of collaboration through peer and teacher assessment in the process of writing for obtaining better results from their writing tasks. Nevertheless, the respondents of WE1 believed that by applying Peer Checklist, they were usually reminded of the qualities of writing other than just language use and mechanics, and they were able to realize what areas needed to be focused on in the writings of their own and their friends in the group or in the course. The respondents also indicated that it was very constructive to observe the writing performance through the different drafts of the other students in the course and learn from the comments and corrections suggested for them either by the other students or the teacher. This was also considered an advantage and a motivating factor for the learners to know that other learners can see their works, and that they have a real audience for their writing.

The relative benefits of an online system in comparison with the classic approaches, the degree of compatibility of LMS with the learners, the possibility of learning through trying the model on LMS, and the benefits of peer and teacher review in e-portfolio were the common issues that the learners of both treatment groups had consensus on. They also had almost similar ideas on the shortcomings and weaknesses of the LMS referring mainly to the initial feeling of uneasiness and communication apprehension encountering the online environment.

Exploring and analyzing the various viewpoints of the interviewed learners brought the researcher to the conclusion that the learners in the two e-portfolio groups were experiencing almost the same feeling of anxiety while they first encountered the online learning environment. However, the respondents of the WE1 group emphasized the positive role of Peer Checklist in increasing the level of their self-awareness, and claimed that this checklist was quite useful in accurate revision of their writing. They believed that exchanging the drafts with peers, and applying this checklist while peer reviewing led to certain improvements in different traits of their writing. Therefore, the application of teaching and learning strategies based on the analytic traits of writing in WE1 was the reason for the difference between the viewpoints of the learners in WE1 and WE2 groups.

In addition to the feasibility and usefulness of electronic portfolios in improving the writing abilities of EFL learners, the findings of this study could be of great use to policy makers, educational administrators, as well as educators to keep a full record of their students' educational activities in their e-portfolios during different semesters. This record can provide a clear picture of the accomplishments of the students as a whole in order for the teachers to take appropriate educational measures.

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APPENDIX

Semi-structured Interview Protocol

Introduction	Thank you for agreeing to meet with me and take part in the interview. I'm Ali Yousefi, the online writing course instructor and the administrator of Folioclaro LMS. I am speaking with students to get various impressions of the online writing course they have experienced. As a participant in the course, we would like you to talk about your impression of the course, the usefulness of different modules, and the different components of the e-portfolio system. What we learn from today's discussion will help us improve the presented model of writing and the online system. We will treat your answers as confidential. We will not include your names or any other information that could identify you in any reports we write. **Do you have any questions about the study?**
Topic 1	***Topic #1: Usefulness of course in LMS*** 1. How did you find learning to write in an online environment? a. PROBE: Did the availability of the persons in the course caused you to feel convenient in LMS. b. PROBE: Did you find the introduced online environment a good place for learning how to write? c. PROBE: Did you gain confidence in yourself and feel at home with online learning? 2. Did the schemes presented in LMS facilitate your writing tasks? a. PROBE: What kinds of tasks were introduced to you in Learning Path? b. PROBE: Could you give me an example of the usefulness of Learning Path? c. PROBE: Did you feel satisfied with it because of the guidance it provided for you?

Topic 2	***Topic #2: Relative advantages of course in LMS*** Now, I'd like to discuss your impressions of the online course relative advantages. 3. Does the new experience of writing e-portfolios in LMS contribute to your independent learning in comparison with your previous writing experience? a. PROBE: Was it a different learning experience for you and you feel different now? b. PROBE: Were you hopeful or hopeless to improve your writing skill? c. PROBE: Did you feel satisfied with it because of the guidance it provided for you? 4. Which section of the online course did you find most/least motivating and useful? 5. Which Modules in the LMS did you make the best use of in this LMS? a. PROBE: Did you see the writing drafts of the other groups in this module? b. PROBE: Did you feel the teacher spent time on your writing so as to provide comments? c. PROBE: Were teacher comments of any use to you when you revised your compositions? 6. Do you feel that this Model allowed you to better achieve your goal of improving your writing skill? a. PROBE: Did you see the writing drafts of the other groups in this module? 7. How does the practice of e-portfolio contribute to your knowledge of grammar?
Topic 3	***Topic #3: Peer and teacher assessment in LMS*** I'd also like to discuss your impressions of the involvement and effect of peer and teacher assessment. 8. Did you find working with peers in peer-assessment groups helpful in revising your drafts of writing? a. PROBE: What about your comments to your friend? Did you benefit from giving comments to others? If so, what were the benefits? b. PROBE: would you like it if there were only peer comments but not teacher comments? Why? c. PROBE: Would you like it if there were only teacher comments but not peer comments? Why? 9. Did you find teacher assessment helpful in revising your drafts of writing? a. PROBE: What types of teacher comments did you prefer? b. PROBE: Did you feel the teacher spent time on your writing so as to provide comments? c. PROBE: Were teacher comments of any use to you when you revised your compositions?
Topic 4	***Topic #4: Challenges and benefits of writing e-portfolios*** One more thing I'd like you to talk about is the complexities and uses of e-portfolios 10. What were the main challenges / benefits of using the e-portfolio in LMS as an independent language learning tool? 11. Did you have any previous experience in using an e-portfolio? Where? When? How? How long?
Topic 5	***Topic #5: Suggestions for more efficiency of e-portfolios*** The last thing that I'd like to discuss with you is about the suggestions you can put forward 12. Do you have any suggestions or comments for the writing e-portfolio in LMS to become more efficient?