

## **Newly-innovated E-portfolio to Promote Dynamic Collective Evaluation on Students' Extramural English Written Artifacts**

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### **Abstract**

Performance-based evaluation through digital portfolios is not new. In these portfolios, the teacher usually takes the central role in assessing students' artifacts. Peers and the students themselves have not been involved in the evaluation process. To provide solutions to the problem, a new e-portfolio model was developed. This research then investigated if an e-portfolio with its hold system could push students to get involved in an online collective-dynamic evaluation. As many as 25 students of English took part in this study and were required to collect at least 20 credit points to complete the study through dynamic online interactions. The students had to upload 4 to 7 5-paragraph English essays of any topics of their preference to be then teacher-validated, peer-evaluated, teacher-evaluated, self-evaluated, rated and petitioned if the scoring was considered unfair. Giving peer-evaluation was set voluntary; however, an upload had to receive at least 3 evaluative entries and each entry had to be composed of at least 30 words to be eligible for submission. Credit points were awarded to every upload and participation to be then automatically recorded in an online transcript. A certificate of accomplishment was printable when the 20 credits had been achieved. Data on peer-evaluation, self-evaluation, and petition recorded in the system was analyzed to see the rate of participation and enthusiasm in joining the collective-dynamic evaluation. First, results show that the number of entries and words used in each peer-evaluation significantly exceeds the required number (required: 3 and 30). Second, the average number of words used in the self-evaluation also significantly goes above the cut-off (174 words per entry, required: 40). Third, the petition cycle has been used by 9 students and they make 145 words for each petition (required: 40). In conclusion, the data confirms that the hold system is effective to build both individual and collaborative participation and to push students to get extensively and collectively involved in the dynamic online evaluation.

*Keywords:* e-portfolio, collective dynamic evaluation, web app, hold system, peer-evaluation, online petition

## Introduction

E-portfolio is not new in second language learning. The goal of using e-portfolios is to increase benefits for all the stakeholders (Love & Cooper, 2017). Compared to the traditional portfolio, e-portfolios offer extra benefits for teachers, students, and school administration. One of the benefits is that e-portfolios can provide a more comprehensive picture of all that students can do in second language communication (Richards, 2006) and that artifact management of texts, pictures, sounds, and videos is much easier today.

Mak & Wong (2017) suggested another benefit of portfolios that is to evaluate or assess students' performance through learning evidence and artifacts. Assessment through portfolios is also useful for promoting learning because the output and outcome of this assessment model can help develop learners in both their language learning skills and language production.

According to Green, Wyllie, & Jackson (2014), portfolio assessment can help monitor individual development, highlight self-perceived competence, encourage responsibility for professional development, and provide evidence for the professional competence of one's learning process. Portfolio assessment, either digital or printed, is a low stake practice and not judgmental. The nurturing nature of the portfolio makes it more appropriate when used as a formative thus for in-the-learning process evaluation. In a print-based portfolio, the evaluative practice is commonly carried out by the teachers themselves as already reported in Birgin & Baki (2007); Baturay & Daloğlu (2010); Newhouse (2014); Safari & Koosha (2016); and Love & Cooper (2017). The evaluation process is carried out solely by the teacher. The teacher would look at a physical compilation of learning evidence to be scored without student participation. Students' involvement has not been familiar with this portfolio-based assessment. Collective evaluation that involves students and peers has not been found common.

The previous portfolio-based assessment model is generally concerned with the learning product, not the process. The teacher would look at the learning evidence but not give dynamic evaluative-mentoring in the project development process. This is probably because in especially print-based format portfolios, technically it is not simple to get all portfolio stakeholders involved in the evaluation process. With digital technologies, a dynamic and collective evaluation that involves various parties is likely. Internet technologies, for instance, offer a promising mechanism to assess the front-end process of a product that can involve not only teachers but also students, peers, and even other parties.

E-portfolio technologies to store and display academic artifacts are already common. They are usually stocked up in the e-portfolio system's storage to be then displayed and evaluated. However, the technologies have not commonly had in them a systemic way to automatically push the stakeholders to actively upload their works to be then systemically, dynamically, collectively evaluated, and scored.

The e-portfolio developed in this research should be different from the previous models because it has attended the dynamic, systemic, collective evaluation feature. In this model, students, peers, and teachers are involved in evaluating one's learning evidence from the moment of upload. Evaluations from peers, teachers, and self are made possible in this information system. This web-based e-portfolio has some other features than storing, searching, and displaying as found in many e-portfolio models. It

systemically encourages collaborative and dynamic online activities that require mutual contributions to collectively succeed.

Through one of the new system's navigation, the results of the evaluation can also be digitally accessed by all system's inhabitants to be then evaluated and awarded credit points. A digital recognition through the award-giving application in the form of a certificate of achievement is also new and can be beneficial to increase motivation and participation. In this online learning model, automatic work recognition is used to appreciate students' outputs.

Digitally pushed language output has not been found common in the previous e-learning models either. In many e-learning designs, students are often reluctant to take part in online discussions. This is because, in a learning management system (LMS) like Schoology and Classroom, participation is just voluntary. Students may or may not want to contribute to the discussion. This new e-portfolio, on the other hand, can encourage students to increase language production, motivation, engagement, and participation. Collective participation will only guarantee students' mutual success. They can reach the required credit points if they are willing to mutually evaluate each other's works. This design can also increase continual language practice. The increasing frequency for language practice can improve students' language proficiency more effectively.

## **Theoretical Perspectives**

Brown (2006) wrote that in social constructivism, there should be a shift from courseware to performance ware. Currently, with the advance of ICT (Information and Communication Technology) and the getting-more-central new knowledge domain as also suggested by Brown (2006), learners, not the teachers, perform the main responsibility for their learning. And according to Nanjappa & Grant (2003), learning and knowledge construction can be developed through such strategies as collaborative learning, engagement in critical thinking, evaluations through portfolios, and a critical look at new teacher roles.

The current shift in language education from knowledge giving (courseware) by the teachers to knowledge building through experience can contribute to the improvement of English proficiency through real-life English use (Caddesi, 2018). Students perform their authentic English when in extramural-informal contexts (Isbell, 2018) especially when with the technology. Consequently, recognizing their self-triggered language practice as part of the institutionally graded works can be beneficial. Such technology as an e-portfolio can be powerfully used for this intent.

Bagheri & Ghaffari (2017) stated that electronic portfolios, e-portfolios, Web-based portfolios, technology-based portfolios, and digital portfolios are of the same tool; all rise from e-learning and become widely used in different content areas including language learning. They are all the same things with different labels and also share similar features and contents. The basic features are storing and displaying learning evidence and other artifacts.

As for the content, similar to the traditional learning portfolio, Thomas & Reinders (2010) contended that e-portfolio is a learner's collection of different kinds of learning processes. E-portfolios are the personal and digital collection of demonstrations, resources, and accomplishments for a variety of contexts and periods. E-portfolios can

digitize different content and media. An e-portfolio is an aggregation-with-purpose of digital works of such artifacts as ideas, learning evidence, reflections on learning, or feedback. It presents the learners' audience with evidence of a person's learning and/or ability. The various definitions of e-portfolios indicate that e-portfolios are more about the student's learning part (learner-centered).

E-portfolios should also promote computer-mediated communication (CMC). The core benefit of CMC for language learning is its potential to increase collaboration and to improve learner attitude (Chapelle & Sauro, 2017:34). CMC also allows students to create interaction, modification, and elaboration of their language input (Doughty & Long, 2009:361) while engaging in meaningful communication.

With its asynchronous characteristics, e-portfolio can reach out to those who are still worried about their language competence to venture into the CMC. This is because asynchronous CMC provides more planning time, monitoring, and revision opportunities to learners as compared with face-to-face communication (Chapelle & Sauro, 2017:34). This way, asynchronous media such as e-portfolios can be used to push interactive communication with low affective filters.

Collaborative learning is constructed based on the social constructivist model that believes learning is a concept that is socially constructed. The key skill of working with others includes the ability to contribute to class discussion and to work with others to meet a challenge (Pritchard & Woollard, 2010). Pritchard & Woollard (2010) continued that collaborative learning promotes social constructivist education whereby students interact and grow their understanding by questioning, proposing, arguing, agreeing, and reflecting on one's work. Hinkel (2011) also wrote that the reflective-evaluative dimension of a portfolio is central as it provides evidence of such on-going (dynamic) evaluation of perceptions of students' own and others' progress of learning. Nevertheless, e-portfolio to promote *systemic* interactive-collaborative learning, questioning, proposing, arguing, agreeing, and reflecting on one's work is not yet common.

Digitally augmented reflection on self and others' works can be systemically facilitated through the use of a redefined e-portfolio-based learning model. A new e-portfolio can push learners to join reflective activities over what they have done (or uploaded) and also what others have made. This way, learners will build better self-awareness about what needs to be improved in the process of learning by looking at their language output.

The new e-portfolio used in this research is developed with a 'pushed-output' principle. Pushed output (PO) can improve language accuracy and fluency as reported in Izumi & Bigelow (2000); Reza, Beniss, & Edalati (2014); and Gass (2015). This e-portfolio encourages students to create and upload works to get credit points that would be recognized as one component of the final scores for a writing class.

Language output both oral and written resulted from interaction has a significant effect on language learning (Rastegar & Safari, 2017). Incidental learning, for instance, takes place when producing output, especially real-life communication output (Watkins, Marsick, Wofford, & Ellinger, 2018). Words produced from oral or written communication are language output that also functions as language input. Learners will look at their output and input to assess their current level of proficiency and also figure out what needs to be improved. They also observe other works as language input that they can always get new language intake.

Different from print-based format portfolios, e-portfolios offer more advantages. First, they can create an asynchronous collaborative, reflective, and communicative learning environment. Students can interact in the system at any time and place collectively.

Second, with the advent of web technologies that allow online interaction, learners can obtain richer and quicker feedback from many people. The availability of language input must be far richer than that presented by their teachers. This technological environment can help construct new knowledge from the experiences that they have undergone.

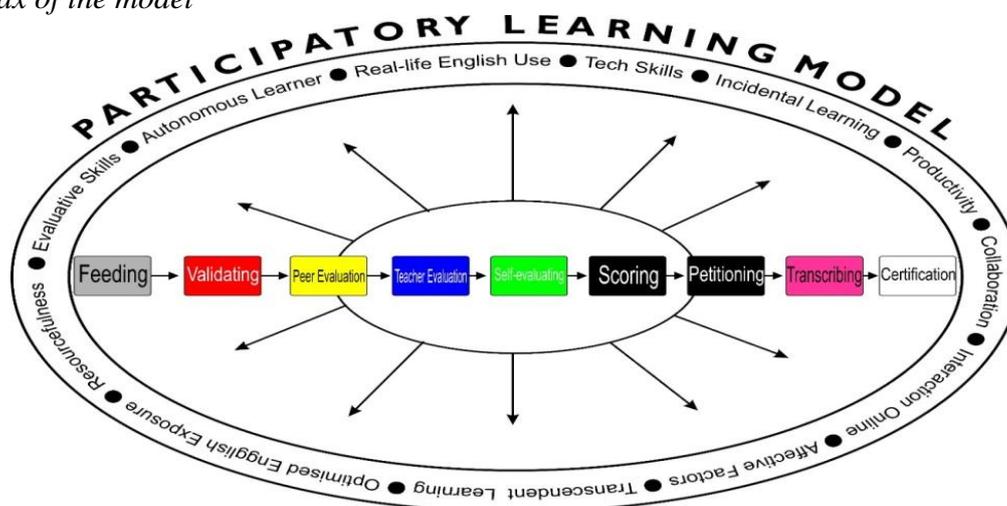
As for this newly developed e-portfolio, it is also designed to build self-determination and self-advocacy. Students can confidently determine what and when to write and to upload learning evidence and are facilitated to extend a petition to a given score. They are encouraged to negotiate scores to make scoring fairer. Note that the key objective of this e-portfolio learning model is to nurture students' extensive learning not really to give punishment.

Third, this technology provides greater opportunities for authentic and meaningful language use than are available in the classroom as also noted by Richards (2014). Technology beyond the classroom can raise independent learning as well (Lee, 2016 and Lee, 2019). E-portfolio which is commonly done extramurally can increase responsibility and motivation (Khodashenas & Rakhshi, 2017). This systemic Internet-based portfolio also increases responsibilities for students' learning. They, by the system, have to comply with the dynamic workflow. Participation needs discipline, self-determination, and teamwork. When one student makes an upload, the other students have to provide evaluative words. They need one another; they are collectively interdependent.

For this innovation, generally, learners have the freedom to choose activities of their preference. For those who are good at video making, they might want to upload such artifacts as vlogs, storytelling, monologs, and even stand-up comedies depending on their interests. For those of ardent writers, they may consistently upload any written artifacts of their hobbies. They can connect their participation with future post-schools goals. And the digital learning evidence will be guaranteed to receive evaluative comments from peers and the teacher.

Fourth, this e-portfolio model allows students to continually monitor and reflect on their progress and this is important to develop autonomous learning. Through portfolio technology, students can monitor and evaluate their learning progress (Yastibas & Yastibas, 2015). In this model, students are systemically notified through a color-coding system to which section their upload is progressing. Students are digitally notified if (1) their work is successfully validated by the teacher, if (2) it has received sufficient evaluation from peers, (3) if already evaluated by the teacher, (4) if needing self-evaluation, (5) if already scored, (6) if already recorded into the scoring system, and (7) if already extended to the certificate page. Each of the steps is coded using different colors to raise interest. The information system of the innovation is presented in model syntax as follows.

**Figure 1**  
*Syntax of the model*



In this model, students must continually upload projects to meet the already set-up minimum credit points. It carries rich evaluative processes from the grey to the black section. They are text validation, systemic grammar check, peer-evaluations (can be set to many), teacher-evaluation, self-evaluation, and evaluation-based petition. The long evaluative measure is intended to raise the accountability of scoring, increase participation, multiply language production, and repeatedly nurture critical thinking. The petition page is provided to maintain fairness in scoring; the area that often raises concern over validity and reliability issues. The petition helps maintain fairness.

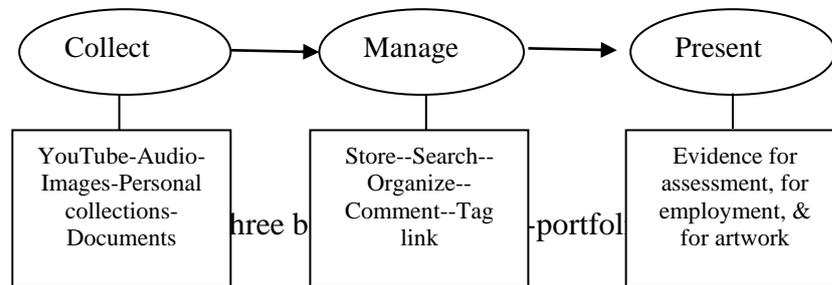
This e-portfolio design should also give a good impact on learning values such as resourcefulness, independent learning, collaboration, participation, increased motivation, high learning engagement, and learning transcendence. This design can also improve assessment skills as also suggested by Yastibas & Yastibas (2015).

In this model, students are required to continually feed the system with various texts to be processed to meet the cut-off of the participatory credits. When a certificate of completion is already viewable, it indicates that the student has successfully finished the rounds. In this model, authorities are distributed to three parties: admin, teacher (lecturer in charge/LiC), and students.

### **The Dynamic Evaluation Steps in the Information System Design**

One example of e-portfolio's functions is given by (Koch, 2010). Koch in her e-portfolio as an enabler for work-integrated learning developed a model to store, manage, and present artifacts. In this e-portfolio, the basic functions are to upload, store, and display a collation of learning artifacts.

**Figure 2**  
*Three basic features of e-portfolio*



In addition to this type of e-portfolio usefulness, this new e-portfolio proposes a technology that has such functions as:

1. pushed output and interaction
2. hold system for every incomplete stage of interaction
3. systemic control over a minimum amount of production
4. digitally set-up number of peer-evaluators
5. collective success promotion
6. color coding notification
7. appreciation of participation
8. a systemic cycle of score petition
9. credit points award
10. systemic award in the form of a certificate of learning completion

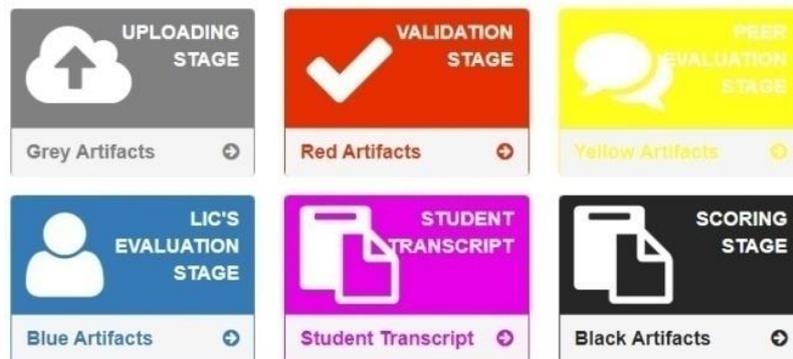
The "pushed interaction" principle is to guarantee that everybody dynamically takes part in all the evaluation steps and that success can be collectively achieved through online collaboration. This learning machine should promote both high English production and optimum online interaction as well.

### **The Hold System through Color-Coding Notification**

This app uses a color-coding notification to indicate the current progress of one's upload. Different colors call different activities from different parties. The teacher, the peers, and the students themselves are warned to immediately provide corresponding entries when a certain color appears on the page. The color is showed not only on the page but also on the project titles and the project symbol.

**Figure 3**

Color coding through the dashboard (the teacher's interface)



By noticing the boxes with colors, the students can always monitor up to which stage their upload is processed. Another way to get a progress notification is through the different colors of the project titles as follows.

**Figure 4**

Color coding through a list of titles



The different colors of the titles of the projects represent how far they are progressing. For instance, grey is to indicate that upload is successful. As for red, it indicates that the student needs to improve the work. By clicking the title, the students can view-edit-resubmit the work. The next is the notification via the color of a book icon as follows.

**Figure 5**

Color coding through the icon



In all the stages, student-student and teacher-student are continuously interacting by making teacher-evaluation, peer-evaluation, self-evaluation, and petition extension. If one party fails in performing the function, the system will automatically hold the process and will not allow the project to go to the next page. The evaluative measures start from the step of 'feeding' to the stage of 'releasing' a certificate of accomplishment. Each step requires different actions by the students, peers, and the teacher. Guidance is provided with pop-up help to ease up participation.

This system can accommodate all kinds of artifacts: texts, videos, audios, and images. But for this journal article, the sample is only about text upload. This article will use essays as an object of the front-end dynamic, collective, interactive, evaluation. It focuses on how students, peers, and the teacher are interacting in the system based on the text (essay) upload. There are 10 steps in the system.

### ***Grey: The feeding section (1)***

In the beginning, each student is to feed the system with texts of his own. The app is set-up in such a way that before he uploads an essay, it has to have gone through a language tool for grammar check and a plagiarism tool for similarity check. The text can be in the form of narration, description, exposition, or argumentation. Five-paragraph writing is suggested to ease up evaluations. Too long essays may reduce students' motivation to read and evaluate. Some sample texts are provided on the landing page of the app. Students can refer to the samples for an upload.

The minimum number of words of each upload is controlled digitally. For instance, if the number of words they write in one article is smaller than the cut-off, the system will automatically hold the student from submitting the text.

When one entry has been successfully uploaded, the system will change the color of the text page and the title of the essay into grey. This color notifies the student and teacher that paper submission has been successfully undertaken. The grey notification looks like the following.

### **Figure 6**

*Grey section*

Coffee shop as a New Lifestyle for Students of Yogyakarta by  
Berlianda Kunthi W

The grey color indicates that the upload is successful and it is waiting for the teacher's validation. The result of the validation determines the follow-up action that the students need to do. If rejected, the title of the essay will turn into the red with a "Revise" button.

### ***Red: The teacher-validation section (2)***

If the upload is rejected, the page will turn into red. Red indicates that the student needs to revise and resubmit the work. One way to notify it looks like the following.

### **Figure 7**

*Red section*

People and Social Media by Srikandi Ningsih W

This color tells us that the teacher has made an initial evaluation which informs the student that his work is rejected and needs revision. The student can view the page and see the color to know if it has to be revised and re-uploaded. The work will be validated one more time based on the suggestions written in the validation space (framed

in a red box). Without a teacher's validation, the machine will not be able to process the project into the next step, the peer-evaluation page (the yellow page).

### ***Yellow: The peer-evaluation section (3)***

Yellow indicates that a project has landed on another must-to-do page, the peer-evaluation stage. This is when the text is already accepted (valid) and the upload has turned into yellow and it tells the system inhabitants that it requires peer-evaluation. The peers give feedback about the upload based on the guidance already provided in the pop-up help. The notification should look like the following.

### **Figure 8**

*Yellow section*



The minimum number of peer-evaluators is determined digitally. The same is with the minimum number of words for this peer-evaluation which is also controlled by the machine. For the number of evaluators, for instance, when it is set 5 and there are only 4 or fewer evaluators, the system will not allow the text to go to the next color or to move to the next step.

The minimum number of words for evaluation is digitally set for some reasons. This is to avoid one or two-word comments like "good", "very interesting", or "You improve" and other short phrases. This is to encourage the students to come up with a long paragraph. In this situation, the evaluator is pushed to write more.

recognize their effort, the top commenter is systemically recognized on the landing page of the website (visit [www.pcsystem.web.id](http://www.pcsystem.web.id)) and this is to encourage more participation. The top commenter will be popping up 24 hours round and it may change every second depending on the number of comments in the online collective evaluation. A certain number of evaluative comments in this peer-evaluation are worth credits also (look at the setting in the subsequent part).

### ***Blue: The teacher-evaluation section (4)***

When peer-evaluation is complete, the page will turn into blue and it notifies that the teacher needs to provide teacher evaluation. This is the second responsibility of the teacher after the validation stage in the grey section. The teacher will look at the red and yellow notes to give the evaluation. The evaluation stage must be completed otherwise the system will hold the process. When the blue section has been completed, the system will change the page color into green. Note that each student is provided access to the whole teacher's evaluation given to other students. They can read and reflect on other's works as well. When the teacher has completed the blue section, the page will turn into green.

### ***Green: The student's self-evaluation section (5)***

Green indicates that the feeder or the student that has uploaded the text must fill in the final revision box and self-evaluation space. Failing to fill both will end up in no score for the work because it will never turn into the next color/next round. The minimum number of words for self-evaluation is also digitally set up. Failing to meet the minimum number will submit rejected. A self-evaluation essay with fewer words cannot be submitted.

The self-evaluation stage is for the student to write about what he has learned from the interactional activities regarding his work. He must read the notes from the teacher and peers to make the final version of the essay and the self-evaluation. When the self-evaluation is completed, the page will turn into black.

***Black: The scoring section (6)***

This page calls the teacher to give a score by looking at the final work and self-evaluation part. A score will appear on the student's communication page. The scoring section notification looks like the following.

**Figure 9**

*Black section: Scoring notification*

**Building Accessible Tourism in Yogyakarta by [Rahmiatun NK](#)**

The black color of the titles warns the teacher to be alert that he needs to immediately read and rate the project. The rating page looks like the following.

**Figure 10**

*The scoring page*



Score = 0

Score

5-10

Submit

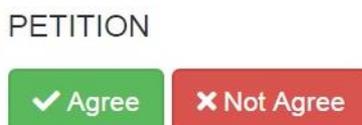
After reading all the responses and the final work and the self-evaluation section, the teacher will give a score that ranges from 5-10. The 5-10 score range is chosen because this learning model is essentially developed to encourage students to do more extramural English use not to punish them. The scores when converted will only have three qualities: average – good – excellent. No such attribute as poor or bad is used in this design.

***Black-2: The petition section (7)***

To make scoring fairer, after a score is given by the teacher, the student may or may not accept it. S/he has to select "yes" if s/he accepts; otherwise s/he will click "no". If "no" is selected, s/he needs to write a petition. The way to extend a petition is provided in the pop-up help. The number of words for a petition is also set-up digitally. When a student rejects the score, the system will notify the teacher. With the petition button, scoring becomes much fairer.

**Figure 11**

*Petition section*

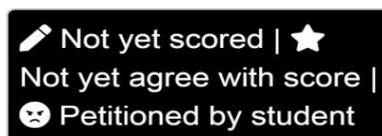


After being submitted, the petition will be rated by the teacher again. If accepted, the system will change the score in the temporary transcript.

The scoring round is composed of 3 steps, the teacher's scoring, the student's agreement, and the petition. The three steps are represented in symbols of pencil, star, and angry emoticon.

**Figure 12**

*The black section: Scoring symbols*

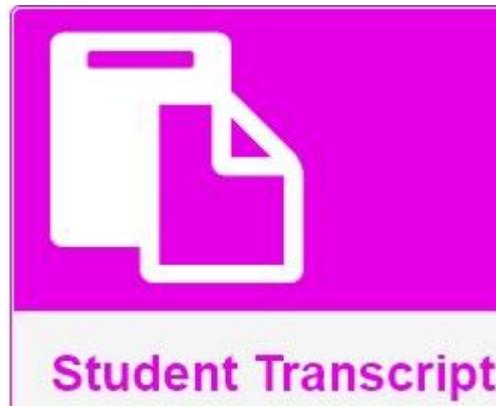


The pencil symbol warns the teacher to immediately read and rate the project. When the scoring is complete but the student has not taken actions to the score, the star symbol will appear. And if the student agrees, the score will automatically be recorded in the temporary transcript page. But when the student disagrees with the score, the angry emoticon will show up and the teacher has to take care of the scoring again. When the scoring process is complete, the panel will change into pink.

***Pink: The transcript section (8)***

When the student agrees with the score given by the teacher, the system will automatically record the score into a transcript represented in pink.

**Figure 13**  
*Transcript button*



The transcript shows such information as follows.

**Figure 14**  
*Transcript*



**Participatory Credit System**  
<http://pcsystem.web.id>

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**PCSYSTEM TRANSCRIPT**

Name : Ilhamsah DP  
 NIM : 2016101026  
 Class : PaperWriting Morning

TITLE	TYPE	GRADE	SKS
The Benefits of Reading Fiction	Article	Excellent	4
The Benefits of Being Bilingual	Article	Excellent	4
The Importance of Vitamin B12	Article	Excellent	4
The Benefits of Watching Sci-Fi Movies	Article	Excellent	4
Score for Comments			4
Total Sks			20

The transcript tells us about (1) the titles of the writing, (2) types of works - article, audio, or video, (3) the work quality, (4) the credits, score for comments made, and (5) the total credits achieved. Note that the cut-off number of credits is already set-up digitally in advance.

***The certificate section (9)***

When the total credits in the transcript have exceeded the minimum number, the system will automatically send the information to the next page, the certificate page.

**Figure 15**  
*Certificate of completion*



The certificate can only appear if students have repeatedly uploaded several articles until the minimum number of credit points is met.

### ***The print section (10)***

When the certificate is already viewable, it indicates that it is ready to print. Students can print the certificate and bring it to the teacher to be calculated as a score of participatory learning activities. And that is all about the dynamic workflow and the online tasks as regulated by the system.

## **Research Method**

To collect data, the machine was first digitally set-up. The class interaction was set-up in such a way to promote evaluative interaction and language production to the maximum. The complete system setting for the class was as follows.

1. Minimum (cut-off) credit points: 20 (min 4-5 uploads)
2. Minimum number of words for an article: 200
3. Minimum words for narration to the article: 20 (about 1-3 sentences)
4. Minimum words for peer-evaluation: 30 (about 3-4 sentences)
5. Minimum number of peer-evaluators: 3 students
6. Minimum words for final revision: 200
7. Minimum words for self-evaluation: 40 (about 4-6 sentences)
8. Minimum words for the petition: 40 (about 4-6 sentences)
9. Scoring setting
  - a. 5-6: Average and equals 2 credit points
  - b. 7-8: Good and equals 3 credit points
  - c. 9-10: Excellent and equals 4 credit points
10. Scoring for number of evaluative comments

- a. 1-10 equals 1 credit point
- b. 11-20 equals 2 credit points
- c. 21-30 equals 3 credit points
- d. More than 30 equals 4 credit points

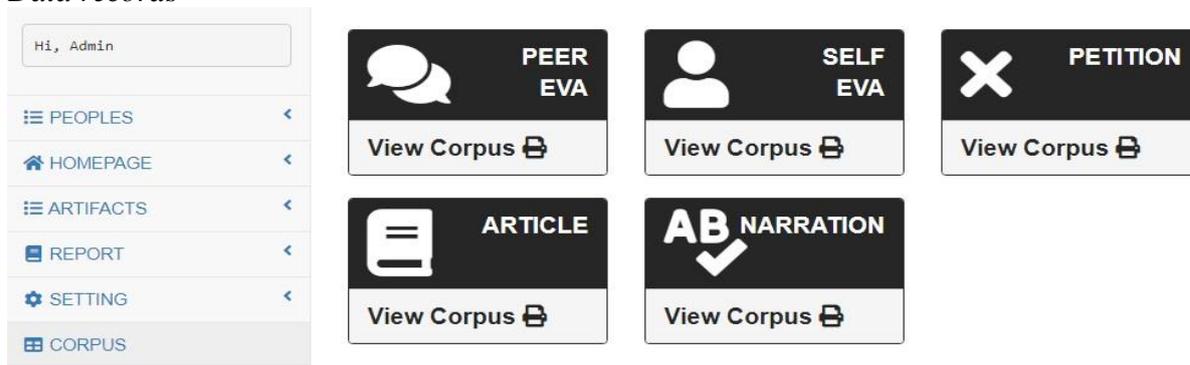
This setting was first communicated with the students. To ease up participation, all steps were provided with pop-up guidelines as to what should be written or evaluated in each of the steps. The certificate of completion was a prerequisite or a kind of passport for access to the final score of a writing class. Failing to show it would end up with the "incomplete" status of the class grade.

Data of evaluative activities that had been automatically stored in the system were retrieved for analyses. Note that the system allows the user to retrieve data based on the type of activities. The number of words used for each text in each activity by each student can be automatically accessed as well.

The analysis was carried out by following all numeric pieces of evidence of all online transactions. The increase of participation and language production in each of the evaluative steps was presented to determine the trends. The amount of any online participation data by individuals and by types of activities can be retrieved from the system. The interface is as follows.

**Figure 16**

*Data records*



Clicking the interface can give us any data that we want. Selecting PEER EVA, for instance, will give information regarding the number of evaluators, rates of individual participation, number of words, and even the frequency (interval) of participation.

## Research Results

As many as 25 students of English in one college in Indonesia took part in the study. They were informed that their participation would serve as one passport to get their final scores for a writing class. This served as additional extramural work for the writing class. The minimum credit points set in the system were 16. Since one project is worth 4 credits for the maximum and 2 for the minimum, they needed to upload 4 to 8 essays depending on the points obtained for each upload. And if they actively

participated in the peer-evaluation, they would get additional credit points of 4 for the maximum (look at the predetermined setting). This way, consequently, the required number of essays could be automatically smaller.

This study was conducted in 2 months. The automatically-recorded data of text artifacts that were already stored in the system was retrieved and then analyzed for the amount of online dynamic, collective, evaluative participation. The amount was determined by the number of entries of essays, peer-evaluation entries, amount of self-evaluation, and the number of petitions. Note that the two sections (peer-evaluation and petition) were voluntary. Students may or may not want to participate, for there is no direct penalty. However, it was "mandatory" because each upload had to receive at least 3 peer-evaluation entries to be processed into the next color (next section). Also, the students were made alert that if they were reluctant to write peer-evaluation entries; the other students would probably "retaliate" by not giving peer evaluation to their essay either. This is where collective success should lie.

After being calculated, it was found out that the 25 students managed to upload as many as 158 essays. Data also shows that numbers of evaluative entries from peers range from 4 to 80 entries with an average of 26.2 peer-evaluation entries for one student.

**Table 1**

*Number of Evaluation Entries and Essays*

N (respondents)	Number of Peer-evaluation Entries	Number of Uploaded Essays
N1	80	7
N2	58	12
N3	56	9
N4	53	6
N5	46	7
N6	45	8
N7	37	6
N8	31	9
N9	26	8
N10	25	5
N11	23	6
N12	22	8
N13	21	5
N14	20	6
N15	17	7
N16	15	7
N17	11	3
N18	11	4
N19	11	7
N20	10	0
N21	10	9
N22	8	5
N23	7	4
N24	6	6
N25	4	4
Total entries	653 entries	158 essays

For 2 months, the machine has managed to push students for voluntary-yet-mandatory peer evaluations for as many as 653 times (required: 474; 158x3). On average, the system can generate 39.180 (required: 30) words to give peer-evaluation and each essay receives 4 peer-evaluations (required: 3); the number of words in the peer-evaluation and the entries indicates that the amount of language production through the dynamic-collective evaluation is significantly extended.

The number of self-evaluation entries linearly corresponds with the number of essays fed into the system. In the 2 months, there were 158 essays uploaded into the system and each student was required to write one self-evaluation entry for each of his upload. It means that when N1 wrote 7 essays, he then had to write 7 self-evaluations and when N2 had written 12 essays, she had to write 12 self-evaluations. Also, the number of words in one's self-evaluation entry cannot be less than 40 as already set-up in the system. Failing to comply with this robotically-set value will end up with project hold. It cannot proceed to the next color.

Data indicates that the students wrote as many as 27.438 words to construct self-evaluation texts and on average each student wrote 174 words (required: 40). The language production through self-evaluation also far exceeds the cut-off. Students put extra effort to evaluate their essays based on the pop-up guide. This extensive self-evaluation practice, as also suggested by (Doughty & Long, 2009:616), can encourage students to develop critical thinking and meta-awareness of their language development.

Regarding the number of petitions, not many students (9) protested against the scoring for unidentified reasons yet. Some extended petitions repeatedly and the nine students made 1.301 words. On average, these students produced around 145 words (required: 40 for each). Those who extended petitions were usually those who belonged to the active online participants. They would extend a petition if their works were rated with any other status but excellent. Conversely, those who did not show a high rate of participation seemed to accept any score given.

## **Conclusion**

One characteristic of this e-portfolio innovation is that it carries machine and human control for dynamic-collective online evaluative measures which can help push students to practice giving evaluations to their peers collectively and dynamically. This dynamic assessment (DA) is different from a static one in the sense that DA is not about assessments *of* learning but *for* learning as also suggested by Doughty & Long (2009:616). This e-portfolio can also receive projects of videos, audios, and images that can serve as the bases for online dynamic-collective evaluation, the output of which can be officially recognized as students' participatory English activities that can be acknowledged as one type of learning achievement.

The front-end dynamic collective evaluation carried out by the teacher, peers, and self which takes place from the grey to the black section can nurture collective-systemic evaluative skills, collaborative learning, independent learning, and learning engagement. Furthermore, this system can increase participation, production, and critical thinking skills. That critical thinking skills can be developed from self-assessment is already noted by Doughty & Long (2009).

The hold system in this new e-portfolio learning model is effective to extend both individual and collaborative participation and push students to get extensively and collectively involved in the dynamic online evaluation. Students just have to help each other to get mutual success.

Also, through the system, it is well accounted that each upload is guaranteed to receive collective evaluations not only from the class members but also from different system's inhabitants: other teachers, peers, self, even from students of other classes that have become members of the system.

Furthermore, through this system, the scoring is more accountable since evaluations are given by at least as many peers as set by the machine and the rating is fairer because the petition is promoted. When one does not agree with a given score, s/he can always extend a petition by writing reasons for the petition.

### Suggestion for Further Usefulness

This app still needs further development, however. First, direct audio-based comments have not been possible yet. Second, inter-gadget notification needs to be developed in the next project. Third, a discussion forum which can accommodate questions and suggestion from the students should be provided on the landing page of the web. This way more intensive online interaction can take place.

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