

## *Investigate the Difficulties of Indonesian Learner During Electronic Portfolio*

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### **Abstract**

Normal learning stopped, project delayed, school shut down. The universe seemed to have a halt because of Novel Coronavirus. On the other hand, students must continue their education through online learning which was currently the best alternative as keeping schools opened but safe for them. This study aimed to investigate how electronic portfolio as part of ICT tools could be used to facilitate course during Covid-19. It concerned with researcher's own teaching experiences due to the growing demand for lecturers' competence to integrate technology to support students' learning. It was applied for one semester through CAR. This research drew on ethnographic case study. In generating data, the researcher applied some methods, involved questionnaires, interviews, teacher's teaching journal, and an analysis on online portfolio entries. The research results showed that the online course during pandemic was good 52,4%; Course timing was somewhat convenient 39,5%; the course materials was very useful 54,8%; lecturer or instructor's explanation was very clear 43,8%; lecture or instructor's speed was the right amount 78,6%; the ability in answering students' questions was very well 51,9%; and students' voicing their opinion was very comfortable 43,3%. Therefore, it could stimulate students to reflect on their experiences; also serves as the main key in providing information on student learning progress; and they can still be active in informing the progress of the assignment, can receive feedback, and plan self-competency development based on the analysis that has been made previously.

Keywords: Indonesian Learner, E-portfolio, Course during Pandemic

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## Introduction

Novel Coronavirus made a big change in every single factor in our life - education system too. Since it happened, education sector is prepared to face teaching learning process. Then try to find the best and safe method, to keep the school open moreover keep the students away from that virus. The higher education and university in Indonesia prepare a learning system which fully support by the use of Information and Communication Technology (ICT). It could be a leading method to support teaching learning during pandemic.

Indonesia's diversity is the next challenge that must be faced by education units. Its vast territory, separated by the ocean, again the areas that are in the vicinity of dense forests be a challenge for this country. Problem arises during applying the e-portfolio such as technical problems, difficulty connecting to the internet, lack of suitably located computer and various shades of personal reaction to computer use<sup>1</sup>. The internet availability which can serve as a source of thousand materials, it could be a dream for some regions. The lack of investment and also some problems faced when laying the necessary submarine cables due to Indonesia's geography as an archipelago. Those are not easy to be solved.

Now, look what happened, even with unequal conditions, the education unit must struggle to keep the quality and competitiveness of institutions stable. Especially for vocational institutions, for example Health Polytechnic, which must maintain the qualifications of students, so that they remain skilled and professional in providing health services to the public. Therefore, to keep this matter on track, lecturers must apply careful and detailed assessments. So that it can measure the success of learning and also become a control function for students.

We believe that the use of electronic portfolios has been increasing rapidly especially in universities lately. In its application in the classroom, lecturers can design and develop learning and assessment activities. Lecturers can adjust the curriculum according to student needs while learning during the pandemic. Creating innovative learning activities while promoting measurable assessments at the end of each lesson. From here, lecturers can see the developments and obstacles that students have. This is a teaching and learning support for students. Because from the electronic portfolio, lecturers can classify students who can learn well, and those who experience obstacles.

Basically, the electronic portfolio is an appropriate home for such experimentation, for such new texts, and certainly for new exploration and understanding<sup>2</sup>. By applying it in learning can create disciplinary expertise and professional development which will create students who are more skilled and professional according to the cognitive level that has been designed at the beginning of learning. With its massive used in learning during pandemic, it will direct learning towards educational leadership. Formerly it has been artistic compilations of documents for presentations, but recently covered the collection, management and presentation of a far greater diversity of material for increasing array or professions<sup>3</sup>. Long distances are an obstacle in learning so that it can influence the lesson plan. The lectures have to change their teaching

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<sup>1</sup> Dornan, T., Carroll, C., & Parboosingh, J. (2002). *An electronic learning portfolio for reflective continuing professional development*. *Medical Education*, 36(8), 767–769. doi:10.1046/j.1365-2923.2002.01278.x

<sup>2</sup> Yancey, K. B. (1996). *The electronic portfolio: Shifting paradigms*. *Computers and Composition*, 13(2), 259–262. doi:10.1016/s8755-4615(96)90014-6

<sup>3</sup> Tochel, C., Haig, A., Hesketh, A., Cadzow, A., Beggs, K., Colthart, I., & Peacock, H. (2009). The effectiveness of portfolios for post-graduate assessment and education: BEME Guide No 12. *Medical Teacher*, 31(4), 299–318. doi:10.1080/01421590902883056

approach to obtain student's best results or let say change it to make them happy. There were a lot of training attended by lecturers in order to maximize and elaborate teaching strategies and approach which will be treated in her/his class.

The number of students is not small, different learning attitudes and habits will affect the learning process. Then it will give impact on learning outcomes. Therefore, electronic portfolio's function of being able to compile student work results in a sequence will make it easier for lecturers to understand how students learn, at least be able to improve teaching techniques based on the results of portfolios filled in by students. It allows for authentic formative evaluation by providing students with the opportunity to learn while being evaluated<sup>4</sup>. Authentic means real, valid, and reliable. Authentic assessment covers marking, measurement, testing and evaluation of three (3) aspects, namely attitudes, skills, and knowledge. It has a strong relevance to a scientific approach in learning, because it is able to describe an increase in student learning outcomes, both in the context of observing, reasoning, trying and building networks. Of course, it allows for the evaluation to be structured and criterion-based<sup>5</sup>. Again, it focuses on difficult and contextual assignments, so that students can demonstrate their competence. Assessment with an electronic portfolio, considers student involvement as the significance. It can be assumed that students will perform better learning activities when they know how they will be assessed. It is in line with the its aim which often as an instrument with which to stimulate students to reflect on their experience<sup>6</sup>. Based on the explanation given, the purpose of this study is how the electronic portfolio facilitate course during pandemic.

This study was conducted on a health campus with vocational education background. Electronic evaluation portfolios may play a role in learning and evaluation in clinical settings and may complement other traditional evaluation methods<sup>7</sup>. The health education provided to students requires a big effort, especially in pandemic situation like this. The distribution of subjects dominated by practical activities rather than theory presents its own challenges. This makes lecturers and students work harder than usual. Interestingly, this assessment model recapitulates history of individual experiences and performance colored by personal interpretation<sup>8</sup>, simple and easy to use<sup>9</sup>. But concerns still arise among students who have direct contact with humans as their patients. For example, students in nursing, dental hygiene, and midwifery. Detailed practical learning is hampered by the prevailing regulations, about not allowing face-to-face lectures. This forces lecturers to work more innovatively by utilizing all media that can optimize learning. Such as self-recording which will then be uploaded on YouTube, making it easier for students to watch recordings over and over again. In addition, several lecturers made limited meeting schedules with several students in the laboratory. These

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<sup>4</sup> Des Marchais, J. E., & Vu, N. V. (1996). Developing and evaluating the student assessment system in the preclinical problem-based curriculum at Sherbrooke. *Academic Medicine*, 71(3), 274–83. doi:10.1097/00001888-199603000-00021

<sup>5</sup> Tiwari A, Tang C: From Process to Outcome: The Effect of Portfolio Assessment on Student Learning. *Nurs Educ Today* 2003, 23:269-277

<sup>6</sup> Driessen, E. W., van Tartwijk, J., Overeem, K., Vermunt, J. D., & van der Vleuten, C. P. M. (2005). Conditions for successful reflective use of portfolios in undergraduate medical education. *Medical Education*, 39(12), 1230–1235. doi:10.1111/j.1365-2929.2005.02337.x

<sup>7</sup> Duque, G., Finkelstein, A., Roberts, A., Tabatabai, D., Gold, S. L., & Winer, L. R. (2006). *Learning while evaluating: the use of an electronic evaluation portfolio in a geriatric medicine clerkship*. *BMC Medical Education*, 6(1). doi:10.1186/1472-6920-6-4

<sup>8</sup> Driessen, E. (2009). *Portfolio critics: Do they have a point?* *Medical Teacher*, 31(4), 279–281. doi:10.1080/01421590902803104

<sup>9</sup> Torras, M. E., & Mayordomo, R. (2011). Teaching presence and regulation in an electronic portfolio. *Computers in Human Behavior*, 27(6), 2284–2291. doi:10.1016/j.chb.2011.07.007

meetings are regular, but still, students who are outside the region cannot attend due to the high cost.

There were 210 participants in this study which aimed to investigate how electronic portfolio as part of ICT tools could be used to facilitate course during Covid-19. It concerned with researcher's own teaching experiences due to the growing demand for lecturers' competence to integrate technology to support students' learning. It was applied for one semester through classroom action research. This research drew on ethnographic case study. In generating data, the researcher applied some methods, involved questionnaires, interviews, teacher's teaching journal, and an analysis on online portfolio entries. Besides, portfolio becomes the key instrument that fully services learning information<sup>10</sup>, it also contributes to self-regulated learning (SRL)<sup>11</sup>. Because of that, with this method student can do self-assessment. Adding a self-assessment section in the electronic portfolio assessment will enrich the data. Lecturers can do many things from this self-assessment. Students can report on work done, feedback received, progress made and their plans for improving competence<sup>12</sup>. From this, lectures can classify the students base on their report made in e-portfolio entries. Then give the, more attention and help to students who need it.

In the questionnaires, there were some questions to gain student's learning condition during pandemic. The researcher only took the top 3 data from it. The first question was, "*Overall, how would you rate the course during pandemic?*". There were 110 students chose "Good", 47 students chose "Very Good", and 21 students chose "Fair". From this statement, students enjoy doing lectures boldly by applying electronic portfolios. Because actually by studying at home, the concentration decreases a little, and the assignments given are often forgotten. But with the application of e-portfolios, students who feel that learning remains focused, they can re-access learning, get feedback, and of course get more attention for those who experience difficulties than other students. Students can feel responsive transparency. In conducting the middle test or final test, they can see the advantages and disadvantages of the project they are working on. Everything is recorded neatly and coherently. Portfolio assessment, either formative or summative, was the norm amongst higher quality studies<sup>13</sup>.

Second question was, "*How convenient was the time that course was held?*". Student's response was 83 students chose "Somewhat convenient", 60 students chose "Very convenient", and 35 students chose "Extremely convenient". The results of the interview showed that students felt happy because the lecturer divided the types of lectures into several methods. Among these are Synchronous, Asynchronous and Hybrid Learning. This of course helps alleviate student problems as they really were at the beginning. Different internet connections make it difficult for some students to have membership to do synchronous learning continuously at each meeting. The unstable internet made it difficult for them to join Zoom Meeting or Google Meet. Because as we know that lectures who using the e-portfolio faced challenges regarding access to and reliability of technology and the amount of time and effort

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<sup>10</sup> Driessen, E. (2016). Do portfolios have a future? *Advances in Health Sciences Education*, 22(1), 221–228. doi:10.1007/s10459-016-9679-4

<sup>11</sup> Van der Gulden, R., Heeneman, S., Kramer, A. W. M., Laan, R. F. J. M., Scherpbier-de Haan, N. D., & Thoonen, B. P. A. (2020). How is self-regulated learning documented in e-portfolios of trainees? A content analysis. *BMC Medical Education*, 20(1). doi:10.1186/s12909-020-02114-4

<sup>12</sup> Babovič, M., Fu, R.-H., & Monrouxe, L. V. (2019). Understanding how to enhance efficacy and effectiveness of feedback via e-portfolio: a realist synthesis protocol. *BMJ Open*, 9(5), e029173. doi:10.1136/bmjopen-2019-029173

<sup>13</sup> Buckley, S., Coleman, J., & Khan, K. (2010). *Best evidence on the educational effects of undergraduate portfolios*. *The Clinical Teacher*, 7(3), 187–191. doi:10.1111/j.1743-498x.2010.00364.x

involved in the process<sup>14</sup>. Therefore, Hybrid learning is a way out. Lecturers can record the lecture, which then the link will be shared with students. So, students who cannot join directly in lectures can access learning videos at any time.

The third question was, "How useful was the course material?". This question was designed because there are several materials that are made simpler. So that even with the explanation via video, students can understand and achieve the desired competence. Certain material requires students to make video recordings related to interactions with several patients when they practice at the health center to see their communication style. But because of the pandemic, students can replace these patients with their family members, so that role plays are carried out in accordance with the learning objectives.

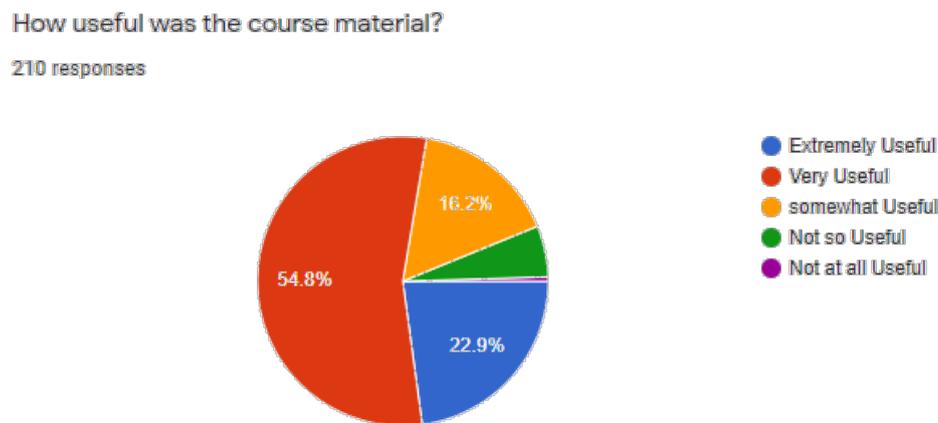


Figure 1. Chart of course material usefulness

The upcoming questions were, "How clearly did your lecturer or instructor explain the course material (using LMS. eg Google Classroom, Edmodo, Others?)". There were 92 students chose "Very clearly", 58 students chose "Somewhat clearly" and 49 students chose "Extremely clearly. The fifth question, "was the speed with which instructor presented the course material too fast, too slow, or about right?". This question is related to a different internet connection, which in the future will cause a delay to the sound that is heard. So, if the explanation is too fast, students will have difficulty understanding it. There were 165 students chose "The right amount", 29 students chose "too fast", and the other 13 students chose "Much too fast". In connection with the previous question, "How well did your instructor answer student's questions?". The response to this question can describe how the situation during the lecture took place, whether the interaction occurred well between the lecture and students or not. The activeness of asking students is also a benchmark for whether they pay attention to lectures, and whether the method of delivering the material works well. The response given was, 109 students chose "very well", 54 students chose "Extremely well", and 41 students chose "Somewhat well". A variety of purposes have been associated with the use of portfolios in teacher education, including a) documenting students' work; b) providing opportunities for reflection; c) developing student understanding of relevant competency levels<sup>15</sup>.

<sup>14</sup> Wetzel, K., & Strudler, N. (2006). Costs and benefits of electronic portfolios in teacher education: Student voices. *Journal of Computing in Teacher Education*, 22(3), 99– 108.

<sup>15</sup> Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. San Francisco, CA: Jossey-Bass

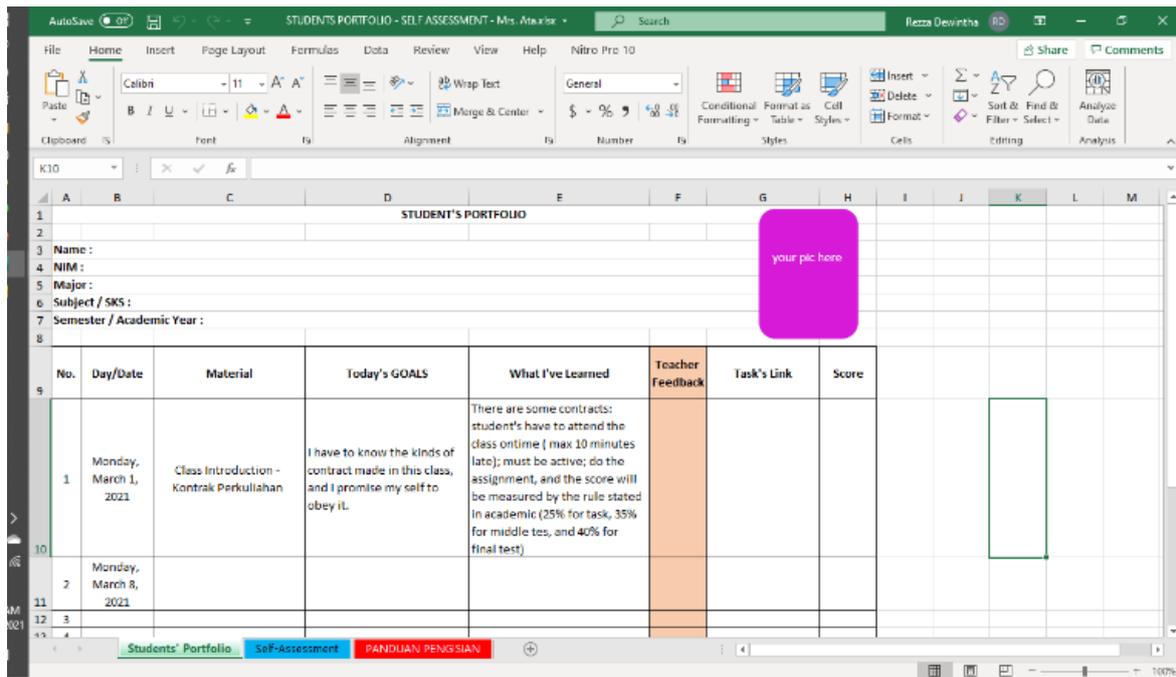
The next question was, “*How comfortable did you feel voicing your opinions in class?*”. There were 91 students chose “Very comfortable”, 77 students chose “Somewhat comfortable” and 30 students chose “Extremely comfortable”. Feeling comfortable in the course during pandemic also proves that learning is very friendly, which can combine teacher and student-centered learning. Not being monotonous, or being impressed by the lecturer is everything in course.

There were some obstacles faced by students during laboratory practice. Some argues that, “*yes, I experienced some problems in practicing, starting from the tools and materials, I don’t understand how to use it properly, and don’t understand the procedure also*” (S17); “*I got many obstacles while doing a lab practice at home, inadequate facilities for example, and I can’t understand while the lecturer teach me virtually about its steps*” (M24); “*It’s very hard. Moreover, if you asked to do group practice, can you imagine how could it run well? We need to manage the other person, focus on the task, then your internet connection got trouble!*” (S72); “*What I hate doing a lab practice during pandemic is, you have to do 2 different tasks in a day, but you just got once explanation from the instructors*” (S116), and the last is, “*Lab practice is hard, and the unstable internet connection make it harder*”. Here are some responses that are representative of the many other responses from students. This is what is happening now, the main obstacle is the internet connection that is not stable and uneven in each region. Besides that, the students' own ability to understand the material and explanations given, task complexity and limitation, learners’ ability to use technology<sup>16</sup> could be another obstacle arose course during pandemic.

The researcher designed the e-portfolio by herself. It was in excel format, consists of three (3) parts: students’ portfolio, self-assessment, and the guidance. Each student has to put her/his photo on it, intended to make it easier for lecturers to recognize it. In this e-portfolio, there are several subsections that students must fill in. Each meeting, students must write down the learning targets they want to achieve. This is written when they have heard the learning objectives conveyed by the lecturer. After that, they wrote down and adjusted it to their current condition - are they able to achieve the minimum target of learning or can even exceed the limit? The next column is related to “*What I’ve learned*”, in this section the students write down what they have learned at this meeting. Which will then be corrected by the lecturer, on the teacher feedback. At this stage the lecturer writes down what needs to be added and whether the student has succeeded in achieving learning objectives. This of course does not necessarily rely on student opinion, but is evidenced by structured assignments and projects that are in accordance with the material given. To measure learning achievement in accordance with the rubric that has been set. Students will send it to Google Classroom, and then will be assessed by lecturer.

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<sup>16</sup> Oblender, T. (2002). A hybrid course model: One solution to the high online drop-out rate. *Learning and Leading with Technology*, 29(6), 42–46.



Picture 2. Students' Portfolio

Many people may doubt the use of self-assessment, because it is difficult to generalize the results. Moreover, this is filled directly by students, who basically always want the best grades. However, the use of self-assessment is actually very good so that students can recalculate what things they have done and where their shortcomings are. This method is also supported by peer-reviewed on the tasks that have been done. In this table contains *What should I prepare?* ; *My feeling* ; *My Expectation*; and *Score* which is focused on before and after middle and final test.

SELF-ASSESSMENT				
3	Name :			
4	NIM :			
5	Major :			
6	Subject / SKS :			
7	Semester / Academic Year :			
8				
9		<b>What should I prepare?</b>	<b>My feeling</b>	<b>My Expectation</b>
10	BEFORE Middle Test (UTS)			
11	AFTER Middle Test (UTS)			
12				
13		<b>What should I prepare?</b>	<b>My feeling</b>	<b>My Expectation</b>
14	BEFORE Final Test (UAS)			
15	AFTER Final Test (UAS)			
16				
17				
18				

Picture 3. Self-Assessment

Lecturers must be able to create missed and fun learning. Lecturers must strive to create learning tricks so that all learning objectives and other important things in the curriculum are well conveyed. If we go back to contemplating our many shortcomings, we won't be able to get better. Like the availability of LMS, not all institutions have it. When an institution is deciding which program should be used to create the electronic portfolio – cost is the overriding factor<sup>17</sup>. But what about these limitations we can still give our best, and do our functions well too. Therefore, creating an e-portfolio that can be accessed by anyone is a way out of all the problems that exist on the course during the pandemic.

## **Conclusion**

This study proved that e-portfolio can be used effectively for education and help to enhance its quality in terms of its process and results<sup>18</sup>. The research results showed that the online course during pandemic was good 52,4%; Course timing was somewhat convenient 39,5%; the course materials was very useful 54,8%; lecturer or instructor's explanation was very clear 43,8%; lecture or instructor's speed was the right amount 78,6%; the ability in answering students' questions was very well 51,9%; and students' voicing their opinion was very comfortable 43,3%. Therefore, it could stimulate students to reflect on their experiences; also serves as the main key in providing information on student learning progress; and they can still be active in informing the progress of the assignment, can receive feedback, and plan self-competency development based on the analysis that has been made previously.

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<sup>17</sup>Luera, G., Brunvand, S., & Marra, T. (2016). Challenges and Rewards of Implementing ePortfolios Through a Bottom-Up Approach. *International Journal of ePortfolios*. Vol.6, No.2, 127-137, ISSN 2157-622X

<sup>18</sup>Fuglik, V. (2014). *Electronic Portfolio in Counselling and Guidance*. *Procedia - Social and Behavioral Sciences*, 159, 340–344. doi:10.1016/j.sbspro.2014.12.384

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