Interview Session done in A Personal Learning Environment Framework to Enhance Communication Skills

¹Hoo Chai Sing, ²Linda Khoo Mei Sui, ³Faaizah Binti Shahbodin

Received: 19- June -2023 Revised: 10- July -2023 Accepted: 18- August -2023

¹Institute of Technology Management and Entrepreneurship, Universiti Teknikal Malaysia Melaka, Malacca, Malaysia

²Centre for Language Learning, Universiti Teknikal Malaysia Melaka, Malacca, Malaysia
³Faculty of Information and Communication Technology (FTMK), Universiti

³Faculty of Information and Communication Technology (FTMK), Universiti Teknikal Malaysia Melaka, Malacca, Malaysia

Abstract — This article aims to design a framework related to the research design and methods used in this study. The research design, population and samples, research instruments, research procedure and the method of data analysis are also described in detail. In addition, it discusses briefly the class organization techniques and the procedures for administering the interview session which will be used as one of the instruments. This chapter outlines the research methodology used for this study. Research methodology is a collection of theories, ideas and comparative study of different approaches used to conduct a research.

Keywords—framework, open-ended questions, procedures, methods

I. INTRODUCTION

Web 2.0, first coined by Tim O'Reilly [1], changes how we interact and deal with the World Wide Web. Social Networking Software is growing rapidly and helps to connect people worldwide to share their thoughts, collaborate on topics of same interest and discuss in the virtual space.

Of course these changes influenced the learning and teaching behaviour in a new and complete different way. Bearing in mind that learning proceeds through communication [2], Web 2.0 technologies offer much more possibilities for interaction, collaboration and conversation. Mixing and connecting content by using the MashUp principle will allow learners to build their own learning environment, which is described by Stephen Downes [3] as "future learning environment which becomes not an institutional or corporate application, but also a learning center, where content is reused and remixed according to the student's own needs and interests. It becomes, indeed, not a single application, but a collection of interoperating applications – an environment rather than a system".

At the Universiti Teknikal Malaysia Melaka research work is taking place to investigate how so called PLEs (Personal Learning Environments) can improve the daily learning and teaching behaviour. Therefore a closer look must be taken to address to the core issues.

Wilson [4] expressed the user-centred philosophy of PLEs and Harmelen [5] agreed by pointing out that traditional LMSs (Learning Management Systems) are not flexible enough or are not addressing to the individual needs of a specific learner. A further approach is the use of common, internet based Social Software as mentioned in some other research [6] [22] to create an individual pool of information and knowledge. The implementation of own systems became interesting and necessary, not only because of the learner's arbitrariness but lots of problems concerning service stability, accessibility and data protection have been occurring. Nevertheless own systems often need high effort and technical support [7] [8]. Finally, Wild [9] mentioned that MashUp technology would help to create next generation learning environment.

However, even current research cannot point out what a highly personalized learning environment should look like in detail. Furthermore from an institutional point of view the question "How adaptable must a PLE launched by a University be?" is from high interest. The approach described in this publication is following the thoughts of Schaffert & Hilzensauer [10], who pointed out that LMS and PLE are both technological concepts and that both allow several pedagogical methods or personal learning strategies.

II. ELEMENTS OF PLES THAT SUPPORT LEARNING

Student Ownership of Learning

In a personalized learning framework, responsibility for the learning and culture is shared by students and teachers. To foster the students' sense of responsibility, teachers create a collaborative classroom community at the same time that they provide rigorous academic instruction. In this community, students feel empowered, supported in

taking risks, and responsible to themselves and the group. They learn how to agree and disagree respectfully, share opinions and listen carefully to the opinions of others, and reflect on their interactions with one another and brainstorm ways to avoid problems in the future. These skills effectively transform the learning environment into one that is student-centered.

The learning in this collaborative community becomes personalized when teachers engage in one-on-one conferences with students to work on a particular skill or strategy that is being learned, and to provide guidance for applying that learning to each student's own reading and writing. The discussions in these conferences provide guidance to the students so they know what they are learning, why they are learning it, how they will learn it, and how they will know and show what they have learned. Outside of these conferences, students have opportunities to engage with one another around the content, practicing what they have learned as they apply it.

Formal and Informal Assessment Data

Teachers who utilize a personalized learning framework also use evidence of learning from multiple sources, including pre- and post-assessments and frequent formative assessments, to create a unique learner profile for each student. The summative assessments enable teachers to evaluate and measure students' learning growth as a result of instruction, while the formative assessments, which include observations and individual conference notes, help teachers reflect on students' growth over time. The multiple data points that the assessments provide can be used to identify each student's strengths and needs. With this picture of the "whole child" as a learner and citizen of the world, teachers can tailor instruction to the individual, beginning at each student's developmental level and scaffolding the learning experience from that base.

Developing Learner Profiles and Learning Pathways

The unique learner profiles inform the development of student-specific learning pathways. To develop learner profiles, the knowledge, skills, and traits of a college- and career-ready graduate are recorded alongside each student's individual strengths, areas for growth, and learning goals. Multiple sources are used to develop this profile and keep it current, including pre- and post- summative assessments and formative assessments throughout the year. Using the learner profiles they've developed, the teacher collaborates with each student to create an individualized learning pathway that supports the student in achieving standards-based academic outcomes. The learning pathways are constantly adjusted as each student progresses through instruction to meet and go beyond the outcomes.

The pacing of instruction in a classroom based on learning pathways is different from that in a traditional classroom, where pacing is typically determined by a general scope and sequence based on district timelines and state standards. In a personalized classroom, the pace of instruction is based on individual student needs: an individual student may spend more time on one topic or standard or accelerate through another based on their personal learning pathway.

Utilizing Flexible Learning Environments

The learning environment in a collaborative classroom takes into account the diverse needs of each individual student: the learning space is adjusted to meet the needs of both the learners and the instruction; anchor charts provide constant support; students are gathered closely together during whole-class lessons to allow them to hear and respond to one another; classroom libraries are organized to help students easily locate books of interest at their reading levels; and well-established procedures and routines allow students to work independently at stations while the teacher works with small groups.

Through whole-class instruction and individual conferences, students become independent learners who have the propensity to extend learning beyond the lesson and school day into all aspects of their lives.

It is important to remember that personalized learning is a framework that looks different from district to district, school to school, and classroom to classroom. Whatever the setting, the framework demonstrates a common trait: student-focused first. Starting from a clear understanding of students' strengths, skills, and needs can transform a traditional setting into a personalized classroom.

III. METHODOLOGY

This research is conducted in a university in Malacca. This research took four months. The duration for this research was enough as the sample for this study consisted of 120 students from the Faculty of Information and Communication Technology. There will be 120 students from the English for Effective Communication class. The students were divided to group 1, group 2, group 3 and group 4. Therefore the samples for this research were chosen from all the third year student from the class. All these samples were chosen using stratified sampling.

Diploma students will be chosen because they will be exposed to computer technology and how to use latest technologies for learning in their English class. Besides, they will also know how to use tools for learning such as Ulearn. Furthermore they have already been exposed to the computer technology. Besides that, they can also use the software above to do presentation and create videos for learning. This strengthens the reasons for the claim that they would be one of the research samples that could give detailed feedback for this research.

Forty students were chosen for interview purposes based on stratified sampling. Ten students from group 1 were chosen for interview. Out of the thirty students who were ranked from G1 to G30, 10 students were chosen randomly to be interviewed based on their language proficiency. Ten students from group 2 were chosen for interview. Out of the thirty students who were ranked from G31 to G60, 10 students will be chosen randomly to be interviewed based on their language proficiency. Ten students from group 3 were chosen for interview. Out of the thirty students who were ranked from G61 to G90, 10 students were chosen for interviewed based on their language proficiency. Ten students were chosen randomly to be interviewed based on their language proficiency. Ten students were chosen randomly to be interviewed based on their language proficiency. Ten students were chosen for interview. Out of the thirty students who were ranked from G61 to G90, 10 students were chosen for interview. Out of the thirty students who were ranked from G91 to G120, 10 students were chosen for interview. Out of the thirty students who were ranked from G91 to G120, 10 students were chosen randomly to be interviewed based on their language proficiency.

One of the instruments used for this research is the list of interview questions. One of the easiest and oldest methodology instruments of a qualitative approach is interview. Interview is normally used in collecting a more precise data of an opinion or skill. That is why interview is meant to be one of the ways of collecting data from an individual subject. Interview is flexible and people who are involved in an interview can actually describe and explain their state of mind and problems easily. Plus, if there were some areas of difficulties that needed to be explained, it could be done there and then by the interviewee himself or herself. In addition, by conducting an interview, the researcher was also granted with the opportunity to see and know the interviewees personally. Besides, a research instrument like interview also allows the researcher to end the research at any time and any place he or she wants if he or she had reached the conclusion of the study.

Through interview sessions authentic and useable data were also gathered. The samples' response to the questions that were posed to them during the interview was also jotted.

The rationale for interviewing the students is to find out whether Personal Learning Environment help the students to improve their communication skills. It also find out whether the Personal Learning Environment help the students to collaborate to improve their learning. At the same time it also intend to find out whether Personal Learning Environment will motivate students to learn

By the end of the research, the researcher will interview forty students. All the interview data will be taperecorded. The researcher will get the consent of the employer to interview them so that the researcher could get more authentic data. The interview results among the employers and students will be compared after the researcher has analysed all the interview data.

A set of interview questions will be prepared for the purpose of interviewing the students. These sets of questions will be based on the first, second, third and fourth research questions. The rationale for setting the list of interview questions is to ensure that the researcher could make full use of the data that will be collected. The interview questions that have been constructed will be used as a guideline to interview the students.

A structured interview method is possible to reach a large number of people at the same time. A representative sample is possible and questions and answers can be modelled on such samples and models. Questions can be structured and answered in a way that is easy for the candidates to answer. Hence, a clear perspective and opinion can be received. Interview creates a very little room for any form of confusion or misinterpretation of the questions asked. Interview methods are more personal in nature. The candidates feel more confident in answering through such processes. These types of interviews always use a closed set of questions, hence they are limited in number. This can create a definite impression about the candidate and hence can be used as a reliable method for choosing the right candidate. Interview methods are great for creating quantitative data. Hence, they can be more flexible and can be applied to various other processes.

Structured interviews are comparatively easier to conduct and analyse and since they are limited to a group of the population, they act as a great tool for conducting surveys and data collection. A large population base can be reached within a short period of time through various interview methods. Unstructured interview questions can be made more flexible and adaptive depending on the candidates answers. Unstructured interview questions can be used for creating qualitative data. This gives a chance to the respondent to frame the answers in their own words. This shows the employer how much the respondent knows about the whole situation. Interview methods also have a deeper validity and originality since the employer tries to probe through the candidate to get some valued remarks and information about what they think about the company and how a third person sees the company as. Interview questions also gives the employer to know what all expectations the respondent has towards

the company Respondent steers the course of the interview in case of structured and unstructured interview. Try to ask for clarification and other aspects before and allow the interviewee to steer the direction of the interview. Group interviews can make the candidate feel less awkward since they might feel more comfortable in talking in groups rather than conversing with a single person.

IV. RESULTS AND DISCUSSION

Interview questions analysis

This section is divided into two sections. The first section is divided into two parts. The first part consists of the students' perception towards learning English which is gathered from the interview data through interview questions. The interview questions consisted of ten questions related to interpersonal communication.

The questions included in the first section are as follows:

Interpersonal Communication

1. Do you think having a good interpersonal communication skill will help you in your studies? Please explain.

2. How can Ulearn help you to improve your writing skills through the written reflection entries? Please explain.

3. How can the oral communication with your peers in the class help you to improve on the materials that you have uploaded to Ulearn? Please explain.

4. How can the oral communication among peers in the class help you to improve your interpersonal communication skill? Please explain.

5. How do Ulearn help you to generate new ideas which will motivate you to learn? Please explain.

6. Do you think writing the reflection entries can enhance your written communication skill? Please explain.

7. How can the oral communication among peers in the class help you to improve your learning? Please explain.

8. What are your suggestions to encourage your peers to give good comments to improve your materials in Ulearn?

9. Do you think your oral communication have improved at the end of the semester?

10. Do you think your written communication have improved at the end of the semester?

The second part consists of the students' perception about the use of Ulearn in learning gathered from the interview data through interview questions. The data gathered from the interview questions consisted of twelve questions.

The questions included in the second section are as follows:

1. How can you motivate your peers to learn using Ulearn? Please explain.

2. Do you think by sharing your materials in Ulearn with your friends help you in your learning? Please explain.

- 3. How can the materials in Ulearn help you to improve your learning? Please explain.
- 4. How can Ulearn boost your confidence level during oral presentation? Please explain.
- 5. How can Ulearn help you to communicate better with your peers? Please explain.
- 6. How do you save all your materials in Ulearn? Please explain.
- 7. What are the advantages of Ulearn? Please explain.
- 8. What are the disadvantages or limitations of Ulearn? Please explain.
- 9. How can Ulearn help you in your life-long learning? Please explain.
- 10. Do you use Ulearn outside the classroom for learning purposes?
- 11. Do you think Ulearn is a good platform for learning purposes?
- 12. Any comments or suggestions?
- Data gathered from the interview questions

The students were divided into three main groups. The first group consisted of students from Manufacturing Faculty. There are 40 students in this group labelled from A 1 to A 40. These 40 students were selected as the samples of the research as they fulfil the requirements of the research. Out of these 40 students only 10 students are selected randomly for the purpose of interview. They are labelled from A1 to A10.

The second group consisted of students from Manufacturing Faculty. There are 45 students in this group labelled from B 1 to B 45. These 45 students were selected as the samples of the research as they fulfil the requirements of the research. Out of these 45 students only 10 students are selected randomly for the purpose of interview. They are labelled from B1 to B10

The third group consisted of students from Mechanical Engineering Faculty. There are 55 students in this group labelled from C 1 to C 55. These 55 students were selected as the samples of the research as they fulfil the requirements of the research. Out of these 55 students only 10 students are selected randomly for the purpose of interview. They are labelled from C1 to C10.

4.3.1. Having a good interpersonal communication skill will help you in your studies

A1, A3, A5 and A10 agreed that having a good interpersonal communication skills will help them to discuss with their friends on how to solve problems or discuss assignments so they can complete them before due date.

B2, B4, B5, B7 and B9 also said that having a good interpersonal communication skills can help them during a discussion session as they communicate well with other group members.

C1, C2, C4, C6 and C9 mentioned that having a good interpersonal communication skills can help them to improve their speaking skills. It also can improve them to improve their grammar and vocabulary.

4.3.2. Ulearn can help you to improve your writing skills through the written reflection entries

A2, A4, A7 and A9 stated that Ulearn can help them to improve their writing skills by writing reflection entries because their writing skills is not so good so it can help them to improve their grammar and vocabulary.

B1, B4, B7 and B10 mentioned that Ulearn can help them to improve their writing skills because they have to write many reflections for each activity that they did in the class.

C1, C4, C5 and C9 agreed that Ulearn can help them to improve their writing skills because they keep practising writing the reflections entries and also proof reading.

4.3.3. Oral communication with your peers in the class help you to improve on the materials that you have uploaded to Ulearn

A3, A5, A6 and A9 mentioned that the oral communication with their peers in the class helped them to improve on the materials that they have already uploaded to Ulearn. They added that they can learn through each other mistakes and they could improve on it.

B1, B4, B5 and B10 added that the oral communication with their peers in the class can help them to improve on the materials that they have uploaded to Ulearn because they can get to know the mistakes that they have written wrongly through their peers' feedback so they can learn from their friends' feedback.

C2, C5, C8 and C9 agreed that oral communication with their peers in class how can help them to improve their English because they can exchange different ideas to get better results in the end.

4.3.4. Oral communication among peers in the class help you to improve your interpersonal communication skill

A2, A3, A5 and A7 mentioned that the oral communication among peers in the class helped them to improve their interpersonal communication skill by increasing their confidence to speak in English even though their English may not be so good. So with peers' guidance they can know about their mistakes this will help them to improve their English.

B2, B4, B5 and B8 agreed that the oral communication among peers in the class helped them to improve my interpersonal communication skill because it can improve their confidence level when they speak in front of the audience.

C3, C5, C9 and C10 agreed that the oral communication among peers in the class helped them to improve their interpersonal communication skill as they can exchange different ideas and more beautiful context so that they can improve their language when they are doing their presentation or speaking to others in the future.

4.3.5. Ulearn can help you to generate new ideas which will motivate you to learn

A1, A4, A5 and A7 mentioned that Ulearn helped them to generate new ideas which will motivate them to learn because Ulearn have many notes that can help them in their studies.

B2, B3, B7 and B10 mentioned that Ulearn helped them to generate new ideas through the notes or videos that their lecturers have upload. This will help them in their study.

C3, C5, C6 and C8 agreed that Ulearn helped them to generate different ideas by the medium upload by the lecturer and the feedback from their friends and from this feedback they can overcome their weakness and the correct their mistakes from their written or the oral communication and improve on it.

4.3.6. Writing the reflection entries can enhance your written communication skill

A2, A4, A7 and A9 think that writing the reflection entries can enhance their written communication skills because it can improve their grammar and vocabulary. Once their vocabulary and grammar have improved they will be able to write better next time. Other than that they can also improve on their mistakes and do better next time.

B3, B5, B6 and B10 added that writing the reflection entries can definitely enhance their written communication skills through the grammar skills and the vocabulary. They admitted that they are weak in this two skills. Other than that through the reflection they also can learn from each other that will help them to improve their communication skills for their presentation on the stage. Besides that they can also learn from each other mistakes.

C1, C5, C8 and C9 further elaborated that writing the reflection entries can enhance their written communication skills because when writing the reflection entries they realised their mistakes which gave them a chance to look for better ways to improve their written communication skills.

4.3.7. Oral communication among peers in the class help you to improve your learning? Please explain.

A1, A2, A7 and A 10 stated that oral communication among peers in the class can help them to improve their learning because they can improve their social communication skills. By then they would have the confidence to speak in the class with full confidence and would not be nervous anymore.

B3, B6, B9 and B10 agreed that oral communication among peers in the class helped them to improve their learning so that they will not be nervous when doing presentation or activities in the class. A good oral communication will not just help them in the class but will also help them in my future especially during an interview.

C1, C4, C7 and C9 mentioned that oral communication among peers in the class helped them to improve their learning because they can exchange their learning experience with each other so that they can learn the good things from their peers to improve their weakness.

4.3.8. Suggestions to encourage your peers to give good comments to improve your materials in Ulearn

A1, A3, A7 and A10 mentioned that when their peers give them good comments it will help them to improve their materials in Ulearn. They further suggested their peers not only to give good comments for their materials in Ulearn. They said their friends can just give them any comments even in class because their feedback is very important for them.

B2, B3, B5 and B10 agreed that they will encourage their friends to give good comments to improve their materials in Ulearn because when they get good comments from the others it will help them to improve their English.

C3, C6, C7 and C10 stated that they will encourage their peers to give good comments to improve their materials in Ulearn because through these good comments they can know their weakness on the oral communication on a big skill and they can improve on it. Besides that they also can exchange their ideas through oral communication which will help them to improve their writing skills to be better in the future.

4.3.9. Oral communication have improved at the end of the semester

A1, A3, A5 and A9 mentioned that their oral communication have improved at the end of the semester because they could write better and have more confidence to speak in front of the audience.

B2, B4, B7 and B10 felt that their oral communication have improved at the end of the semester because they have written many reflections and communications in the class helped them to improve their vocabulary, grammar, and speaking and it will give them confidence to speak in front of the audience.

C1, C5, C7 and C9 agreed that their oral communication have improved at the end of the semester because now they are able to speak in front of audience with confidence and they have overcome their nervousness during conversation too.

4.3.10. Written communication have improved at the end of the semester?

A1, A5, A7 and A10 mentioned that their written communication have improved at the end of the semester because they managed to write their reflections by themselves. This can help them to improve their grammar because they are not good in English.

B3, B6, B8 and B9 agreed that writing so many reflections and peers' feedback during this semester helped them to improve their written communication and they can better essay or composition in future.

C2, C5, C7 and C9 stated that they believed their written communication have improved because at the end of the semester their sentence structure, grammar, vocabulary have improved because they have written so many reflections and peers' feedback.

4.3.11. Motivation of peers using Ulearn

A1, A4, A6 and A9 mentioned that they will motivate their peers to learn using Ulearn because Ulearn have more benefits such as it can improve their written communication skills and oral communication skills. So they will advise their friends to learn, to give more feedback using Ulearn so that they can give information in the future.

B3, B4, B7 and B10 stated that they can motivate their peers to learn using Ulearn by sharing with them the activities of Ulearn and the presentation in Ulearn because it will help them to learn new vocabulary and new words.

C4, C5, C8 and C10 agreed that will motivate their peers to learn using Ulearn by sharing their materials with them through Ulearn and having discussion in Ulearn about the assignment, the journals and so on.

4.3 12. Sharing your materials in Ulearn with your friends help you in your learning

A1, A4, A7 and A10 mentioned that sharing their materials in Ulearn with their friends helped them in my learning because it will help me to improve and they can get more information from their friends that they need so they think it is good.

B2, B3, B6 and B8 agreed that sharing their materials in Ulearn with their friends can help them in their learning because they can share information, the knowledge, or idea or opinion with each other through the materials and they can get to learn more knowledge through the materials.

C1, C4, C6 and C10 stated that sharing their materials in Ulearn with their friends can help them in their learning. It is because they can have the discussion in the Ulearn, they can share materials in Ulearn and they can teach each other regarding the subjects that they don't understand.

4.3.13. Materials in Ulearn help you to improve your learning

A1, A3, A5 and A8 stated that the materials in Ulearn helped them to improve their learning with the video uploaded by the lecturers that can help them to improve their learning. They said the lecturer notes uploaded by the lecturer in Ulearn will also help them to improve their learning.

B2, B5, B8 and B10 agreed that the materials in Ulearn helped them to improve their learning because in all the lecturer notes will be uploaded to Ulearn that they did not need to refer to things other than Ulearn and everything in Ulearn is very complete. So they thought that Ulearn have more benefits to improve their learning.

C4, C5, C7 and C9 mentioned that the materials in Ulearn helped them to improve their learning by referring to some lecture notes and also Ulearn is very user friendly and they can use them in class. Besides that, there are also exercises that they can do in Ulearn that can help them to improve their learning.

4.3.14. Ulearn can boost your confidence level during oral presentation

A2, A5, A8 and A10 stated that Ulearn can boost their confidence level during oral presentation through their peers' feedback. They admitted they are lacking in their speaking skills so in Ulearn they can learn how to use anything and it can improve their mistakes based on what is given in the notes.

B1, B5, B9 and B10 agreed that the materials in Ulearn helped them to improve their learning. Ulearn boost their confidence level during oral presentation through the peers' feedback and the interview sessions they have done and the example that the lecturer gave them. They can refer to the examples to practice their presentation.

C3, C6, C9 and C10 believed that Ulearn can help them to boost their confidence level during oral presentation. They could use the feedbacks given by their peers and used the notes prepared as a guideline to improve their future presentation technology.

4.3.15. Ulearn can help you to communicate better with your peers

A4, A5, A7 and A10 mentioned that Ulearn helped them to communicate better with their peers because it help them during chat session with their peers and they can share their ideas. They just like Ulearn.

B1, B3, B7 and B8 agreed that Ulearn will help them to communicate better with their peers through some discussion or some exchange of opinion of the assignments that lecturers have uploaded.

C3, C4, C6 and C8 stated that Ulearn can help them to communicate better with their peers through the communication session and also the chat area. They can get to discuss about different problems that occurred and also ideas that they want to share but it is better to face to face direct talk to each other so they can build up the confidence level during the speech.

4.3.16. Ways to save all your materials in Ulearn

A1, A3, A5 and A10 mentioned that they saved their materials in Ulearn in their laptop. After that they transferred it to their pen drive. They also printed out some notes.

B2, B4, B9 and B 10 added that they saved their materials in Ulearn by downloading the materials, notes, pictures from Ulearn so when they read they can understand it. Other than that, they also printed it out so they can write notes and put some lecturer notes back in class.

C4, C5, C9 and C10 said that they saved their materials in Ulearn by downloading it to their phone and their laptop. Besides that they will also print some notes out in case they need to read it.

4.3.17. The advantages of Ulearn

A2, A5, A9 and A10 stated that the advantage of Ulearn is that the notes uploaded to Ulearn enabled them to learn. Other than that it will improve their writing skills through the written reflection entries and lastly it improved their oral communication with their peers.

B1, B4, B6 and B7 agreed that the advantages of Ulearn is it is easy to surf and it is easy to use and they are having a closer communication with our lecturer.

C1, C4, C8 and C10 mentioned that the advantages of Ulearn is they can exchange their ideas or knowledge in the chat session in Ulearn and they also can get the notes upload by their lecturers.

4.3.18. The disadvantages or limitations of Ulearn

A1, A4, A8 and A10 mentioned that the disadvantage of Ulearn is they lacked the communication with lecturers when they did the activities.

B2, B5, B8 and B9 agreed that the disadvantages or limitations of Ulearn is it cannot be accessed without internet connection then theycannot access the lecturer notes.

C1, C4, C6 and C8 said that the disadvantage of Ulearn is sometimes when they upload their assignments or the other things there will be system error and they cannot avoid it.

4.3.19. Ulearn can help you in your life-long learning

A4, A6, A7 and A9 stated that Ulearn helped them in their life-long learning because they still can download the notes and the videos the lecturer provide and read it later when they need it.

B1, B3, B6 and B8 agreed that Ulearn can help them in their life-long learning because they can share their information in Ulearn.

C3, C5, C7 and C9 also agreed that Ulearn can help them in their life-long learning but they have other websites that they can get more information, more accurate information.

4.3.20. Usage of Ulearn outside the classroom for learning purposes

A2, A3, A5 and A8 mentioned that Ulearn helped them outside the classroom for learning purposes because Ulearn have a lot of meaningful stuff and they can just focus on that.

B1, B5, B6 and B10 agreed that they used Ulearn outside the classroom for their self-learning so they can learn by themselves during their free time.

C4, C5, C7 and C8 stated that they used Ulearn outside the classroom for learning purpose when they have the free time outside the classroom and they can read the notes that is uploaded by their lecturer through their phone.

4.3.21. Ulearn is a good platform for learning purposes

A2, A5, A7 and A10 stated that Ulearn is a good platform for learning purposes because they can have discussion, chit-chat and other things in it.

B1, B4, B6 and B9 agreed that Ulearn is a good platform for learning purpose because they can get more information from there and at the same time it will benefit them more.

C3, C7, C8 and C10 stated that Ulearn is a good platform for learning purposes because they can exchange their ideas and knowledge through the chat session in Ulearn.

4.3.22. Comments or suggestions

All the students mentioned that they do not have any comments and suggestions to be added.

V. CONCLUSION

The development and support for Personal Learning Environments would entail a radical shift, not only in how we use educational technology, but in the organisation and ethos of education. Personal Learning Environments provide more responsibility and more independence for learners. They would imply redrawing the balance between institutional learning and learning in the wider world. Change is difficult but it is probable that the rapid development and implementation of new technologies and social change make change in our educational provision inevitable.

There are also many unresolved issues, including who provides technology services, security of data and of course the personal safety of students. Notwithstanding these issues, we are beginning to see how these new tools might practically be used in education, especially through wide scale experiments in the use of blogging.

Some education institutions are providing blogs for all students and encouraging there use. This is not linked to any course as such, but rather blogging is seen as an important activity for communication and the development of ideas. Launched under the banner of 'Persuade, Promote, Publish', Warwick University aimed to provide students and staff with an easy method of publishing a personal web site. "There are many different uses for blogs at Warwick", they say, "from developing an essay plan, to creating a photo gallery and recording your personal development process. Blogs have been designed as a tool that will be useful for staff in research and teaching, and have many different applications in e-learning." A publicity campaign was planned and delivered to coincide with the launch of the blogs system.

An important and brave part of the Warwick experiment, was that there is no limitations on how students use their blog. Subject to normal blog use rule, students are free to publish what they wish and there are a number of reports of flame wars having broken out! As of the 11 September 2006, there were 4042 blogs with 73380 entries, 9167 tags, 168753 comments and an amazing 99534 images.

Warwick blogs is built on the blog builder system. Similarly Brighton University in the UK is providing all students with an ELGG account from autumn 2006 which will be for their own personal use, independent of curricular activities. These developments are not confined to the UK. Graz University is also using ELGG to provide personal learning areas for all students.

Many institution are experimenting with the use of blogs and other social software tools in a more restricted environment as part of the curriculum. One interesting issue is the extent to which 'communities' continue after the end of a particular course. This also raises questions about what responsibilities institutions and teachers or moderators have for supporting such learning, outside course times.

Other institutions are attempting to provide Personal Learning type environments linked to institutional Learning Management Systems. The New Zealand government has funded a project to provide an integration layer between the Open Source Moodle VLE and ELGG. The system is being piloted with nine institutions with the intention of rapidly extending provision following the pilots. "Our plan", they say "is to create a learner centred eportfolio system that sits outside of the Learning Management Systems. It will serve students from right across the sector and not be institutionally aligned. This is analogous to the informal learning that takes place outside of a classroom at a 'bricks and mortar' campus."

Course based learning outcomes can be exported directly into ELGG, with a single sign on providing access to both systems. One of the big advantages is that the when students move institution they maintain their own ELGG account.

A fourth potential application for PLEs is for self-supported and peer group learning. MIT have provide free access to all their course materials. The Open Course Ware is, they say "a large-scale, Web-based publication of the educational materials from the MIT faculty's courses. This unique initiative enables the open sharing of the MIT faculty's teaching materials with educators, enrolled students, and self-learners around the world. MIT OCW provides users with open access to the syllabi, lecture notes, course calendars, problem sets and solutions, exams, reading lists, even a selection of video lectures, from 1400 MIT courses representing 34 departments and all five of MIT's schools. The initiative will include materials from 1800 courses by the year 2008."

MIT do not provide any teaching or facilitator support for their courseware. But, from autumn 2006, they will launch a customised version of ELGG, allowing learners to develop their own portfolios and to gain peer group support through the networking functionality. This experiment may prove a model for how institutions can provide wider learning support for communities of practice.

A number of institutions are looking at the potential of PLE type applications for Continuing Professional Development. In large institutions there may be little interaction and communication between staff in different departments. In other dispersed institutions there are still greater problems in communication. Klagenfurt University is piloting the ELGG-Moodle integration for professional development for all staff in autumn 2006.

Indeed it may be that PLEs offer considerable potential for knowledge development and sharing and what has been called organisational learning. For some time, researchers have been aware that much knowledge in organisations is tacit. Nonaka and Konno (1998) and John Seely Brown and Paul Duguid (2002) amongst others have looked at models about how tacit knowledge can be externalised and how knowledge spirals can lead to the development and externalisation of new knowledge. However learning and knowledge development have been seen as laying in separate domains. PLE applications, used within companies, have the potential to facilitate training and development and at the same time develop organisational learning within the enterprise.

Personal Learning environments are not an application but rather a new approach to the use of new technologies for learning. There remain many issues to be resolved. But, at the end of the day, the argument for the use of Personal Learning environments is not technical but rather is philosophical, ethical and pedagogic.

PLEs provide learners with their own spaces under their own control to develop and share their ideas.

Moreover, PLEs can provide a more holistic learning environments, bringing together sources and contexts for learning hitherto separate. Students learn how to take responsibility or their own learning. Critically, PLEs can bridge the walled gardens of the educational institutions with the worlds outside. In so doing learners can develop the judgements and skills or literacy necessary for using new technologies in a rapidly changing society.

VI. ACKNOWLEDGEMENT

The authors would like to thank Institute of Technology Management and Entrepreneurship, Research and Innovation Management Advancement (RIMA), Strategic & Innovative Resources for Human Development (SIR-HD), Centre of Language Learning (IPTK) and Universiti Teknikal Malaysia Melaka (UTeM), for supporting this research.

REFERENCES

- Abou-Khalil, V.; Helou, S.; Khalifé, E.; Chen, M.A.; Majumdar, R.; Ogata, H. (2021). Emergency Online Learning in Low-Resource Settings: Effective Student Engagement Strategies. Educ. Sci. 11, 24. https://doi.org/10.3390/educsci11010024
- Admson, B., & Po, T. (2019). Juxtaposing comparative education and teacher education. In M. A. Peters (Ed.), Encyclopedia of Teacher Education (pp.1-17). Springer, Singapore. https://doi.org/10.1007/978-981-13-1179-6_307-1
- Alexander, S., & Bound, D. (2001). Learners still learn from experience when online. In J. Stephenson (Ed.), Teaching & learning online, pedagogies for new technologies (pp. 1-13). https://doi.org/10.4324/9781315042527
- Alsaaty, F. M., Carter, E., Abrahams, D., & Alshameri, F. (2016). Traditional versus online learning in institutions of higher education minority business students' perceptions. Business and Management Research, 5(2). http://dx.doi.org/10.5430/ bmr.v5n2p31
- Anagnostopoulou, V., & Izquierdo, V. (2020). The role of audiovisual resources in active learning methodologies. Πανελλήνιο Συνέδριο Επιστημών Εκπαίδευσης, 1, 3-12.
- 6. Attwell, G. (2007). The personal learning environments: The future of eLearning? ELearning Papers, 2(1), 1–8.
- Bali, S., & Liu, M. C. (2018). Students' perceptions toward online learning and face-to-face learning courses. Journal of Physics: conference series, 1108. http://dx.doi.org/10.1088/1742-6596/1108/1/012094
- Bartolomé, A., Castañeda, L., & Adell, J. (2018). Personalization in educational technology: the absence of underlying pedagogies. International Journal of Educational Technology in Higher Education, 15(1). http://dx.doi.org/10.1186/s41239-018-0095-0
- 9. Bereday, G. (1964). Comparative Method in Education. Holt, Rinehart & Winston.
- Bray, M. (2004). Methodology and Focus in Comparative Education. In M. Bray & R. Koo (Eds.), Education and Society in Hong Kong and Macao: Comparative Perspectives on Continuity and Change (pp. 237-350). CERC Studies in Comparative Education. http://dx.doi.org/10.1007/1-4020-4449-6
- 11. Brinson, J. R. (2015). Learning outcomes achievements in non- traditional (virtual and remote) versus traditional (hands-on) laboratories: a review of the empirical research. Computer
- 12. & education, (57), 218-237. http://dx.doi.org/10.1016/j. compedu.2015.07.003
- Caldwell, G., Bilandzic, M., & Foth, M. (2012). Towards visualising people's ecology of hybrid personal learning environments. MAB '12: Proceedings of the 4th Media Architecture Biennale Conference (pp. 13-22). https://doi. org/10.1145/2421076.2421080
- 14. Castañeda, L., & Adell, J. (2013). La anatomía de los PLEs. In
- L. Castañeda & J. Adell (Eds.), Entornos Personales de Aprendizaje: Claves para el ecosistema educativo en red (pp. 11-27). Alcoy: Marfil. Retrieved from: http://digitum.um.es/ xmlui/bitstream/10201/30408/1/capitulo1.pdf
- 16. Castañeda, L., Cosgrave, M., Marin, V., & Cronin, C. (2016). Personal Learning Environments: PLE Conference 2015 Special Issue Guest Editorial. Digital Education, (29). https://bit.ly/3eIaKi0
- Castañeda, L., Dabbagh, N., & Torres-Kompen, R. (2017). Personal Learning Environments: Research-Based Practices, Frameworks and Challenges. Journal of new approaches in educational research, 6(1), 1-2. https://doi.org/10.7821/naer.2017.1.229
- 18. Castañeda, L., & Tur, G. (2020). Resources and Opportunities for Agency in PLE Related Pedagogical Designs: a Literature Exploration. IxD&A, (45), 50-68.
- 19. Chan, R. Y. (2016). Understanding the purpose of higher education: An analysis of the economic and social benefits for completing a college degree. Journal of Education Policy, Planning and Administration, 6(5), 1-40.
- 20. Chaves-Barboza, E., Trujillo-Torres, J., Hinojosa-Lucena, F., & Cáceres-Reche, P. (2019). Personal Learning Environments (PLE) on the bachelor's degree in early education at the University of Granada.

In P. Novais et al. (Eds.), ISAmI 2018 (pp. 381-388). https://doi.org/10.1007/978-3-030-01746-0_45

- Chen, M., Lin, H., & Lu, G. (2017). Virtual geographic environments. International Encyclopedia of Geography: People, the Earth, Environment and Technology. https://doi. org/10.1002/9781118786352.wbieg0448
- 22. Consejo Nacional de Ciencia y Tecnología [CONACYT] (2014). Fundamentos sobre calidad educativa en la modalidad no escolarizada. https://bit.ly/3eHytis
- 23. Dabbagh, N. & Castañeda, L. (2020). The PLE as a framework
- 24. for developing agency in lifelong learning. Education Tech Research Dev, 68, 3041–3055. https://doi.org/10.1007/s11423-020-09831-z
- Dabbagh, N., & Kitsantas, A. (2012). Personal Learning Environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. The Internet and Higher Education, 15, 3-8. http://doi.org/10.1016/j.iheduc.2011.06.002
- García, M. F., Navarro, F. G., & Espinosa, G. E. (2014). Entornos Personales de aprendizaje en Universidades Publicas Mexicanas, Estudio de caso Sistema de Universidad Virtual, Universidad de Guadalajara. https://bit.ly/3cCoZTF
- Gerkushenko, G., Gerkushenko, S., Shabalina, O., Kamaev, V., Davtyan, A., & Hostoveckey, M. (2014). Comparative analysis on Personal Learning Environment of Russian and Slovakian students. In A. Rosipliosi & S. Greener (Eds.), Proceedings
- 28. of the European Conference on Social Media (pp. 183-192). Academic Conferences and Publishing International Limited.
- 29. Ghavifekr, S., & Rosdy, W. A. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. IJRES, 1(2), 175-191. http://bit.ly/2XIGcTz
- Gros, B., Garcia, I., & Escofet, A. (2012). Beyond the net generation debate: A comparison between digital learners in face-to-face and virtual universities. The International Review of Research in Open and Distributed Learning, 13(4), 190-210. https://doi.org/10.19173/irrodl.v13i4.1305
- 31. Haworth, R. (2016). Personal Learning Environments: a solution for Self-Directed Learners. TechTrends, 60, 35-364. http://doi.org/10.1007/s11528-016-0074-z
- Halimi, K., Seridi-Bouchelaghem, H., & Faron-Zucker, C. (2014). An enhanced personal learning environment using social semantic web technologies. Interactive Learning Environments, 22(2), 165-187. https://doi.org/10.1080/10494820.2013.788032
- Jurisch, M., Kremar, H., & Wolf, P. (2013). Using the case survey method for synthesizing case study evidence in information systems research. Proceedings of the Nineteenth Americas Conference on Information Systems. https://bit.ly/2zlCtVI
- Kaliisa, R., Palmer, E. & Miller, J. (2017). Mobile learning in higher education: a comparative analysis of developed and developing country contexts. British Journal of Educational Teaching, 00(00). https://doi.org/10.1111/bjet.12583
- 35. Klandermans, B., & Smith, J. (2002). Survey research: a case for comparative designs. In B. Klandermans & S. Staggenbord (Eds.), Methods of social movement research (pp. 3-31).
- 36. University of Minnesota Press.
- 37. Kosmützky, A. (2018). International Team Research in Comparative Higher Education: Shedding Some Light on its Social Side.
- 38. Journal of comparative and international higher education, 10, 14-23. https://bit.ly/3btNr9Q
- Kühn, C. (2017). Are Students Ready to (re)-Design their Personal Learning Environment? The Case of the E-Dynamic.Space. Journal of New Approaches in Education Research, 6(1), 11-19. http://dx.doi.org/10.7821/naer.2017.1.185
- Li, F., Qi, J., Wang, G., & Wang, X. (2014). Traditional classroom vs e-learning in higher education: difference between students' behavioural engagement. i-jet, 9(2), 48-51. http://dx.doi. org/10.3991/ijet.v9i2.3268
- 41. Manyukhina, Y., & Wyse, D. (2019). Learner agency and the curriculum: a critical realist perspective. The Curriculum Journal, 30(3), 223-243. https://doi.org/10.1080/09585176.20
- 42. 19.1599973
- 43. Manzon, M. (2007). Comparing places. In M. Bray, B. Adamson, &M. Mason (Eds.), Comparative Education Research (pp. 97-138). Springer Netherland. https://doi.org/10.1007/978-1-4020- 6189-9
- McNess, E. (2004). Culture, Context and the Quality of Education: Evidence from a Small-Scale Extended Case Study in England and Denmark. Compare: A Journal of Comparative Education, 34(3), 315-327. https://doi.org/10.1080/0305792042000257158
- 45. Meza, J. M., & Cejas, R. (2016). Los Entornos Personales de Aprendizaje como estrategia de aprendizaje desde la Teoría del Actor-Red. Didáctica, innovación y multimedia, 11(33). https:// bit.ly/2VGOJr6
- 46. Miertschin, S. L., Goodson, C., & Stewart, B. (2015). Time management skills and student performance

in online course. 122nd ASEE annual conference & Exposition (pp. 26.1585.1- 26.1585.16). http://doi.org/10.18260/p.24921

- Mödritscher, F., Petrushya, Z., & Law, E. L.-C. (2011). The applications of pattern repositories for sharing PLE practices in networked communities. Journal of Universal Computer Science, 17(10). http://doi.org/10.3217/jucs-017-10-1492
- Moreno, O., & Cárdenas, M. (2012). Educación a distancia: nueva modalidad, nuevos alumnos. Perfiles de alumnos de Psicología en México. Perfiles educativos, 34(136), 118-136. https://doi. org/10.22201/iisue.24486167e.2012.136.31767
- Muthupoltotage, U., & Gardner, L. A. (2018). Rules governing the use of personal learning environments for self-regulated learning: an activity theory approach. Research-in-Progress Papers, 20. https://bit.ly/3eEw0Fr
- Nasution, A., Surbakti, A., Zakaria, R., Wahyuningsih, S. & Daulay, L. (2021). Face to Face Learning vs Blended Learning vs Online Learning (Student Perception of Learning). Journal of Physics: Conference Series, (1783). https://doi.org/10.1088/1742-6596/1783/1/012112
- 51. Ni, A. Y. (2013). Comparing the Effectiveness of Classroom and Online Learning: Teaching Research Methods. Journal of Public Affairs Education, 9(2), 199-215. https://doi.org/10.1080/15236803.2013.12001730
- 52. Oleksiyenko, A., Blanco, g., Hayhoe, R., Jackson, L., Lee, J., Metcalfe, A., Sivasubramaniam, M., & Zha, Q. (2020). Comparative and international higher education in a new key? Thoughts on the post-pandemic prospects of scholarship. Compare: A Journal of Comparative and International Education. https://doi.org/10.1 080/03057925.2020.1838121
- 53. Olom, P., & Okute, L. (2021). Effect of mentoring approach on skill acquisition among business education students in tertiary institutions in cross river state. Nigerian Journal of Bussines Education, 8(1), 159-165.
- 54. Ordaz, T., & Gonzales, J. (2019). Valoración de estrategias de construcción del conocimiento en los entornos personales de aprendizaje. Apertura, 11(2), 6-21. https://doi.org/10.32870/ Ap.v11n2.1598
- Pan, W., Sun, L.-Y., & Chow, I. H. (2011). The impact of supervisory mentoring on personal learning and career outcomes: The dual moderating effect of self-efficacy. Journal of Vocational Behaviour, 78(2), 264–273. http://doi.org/10.1016/j. jvb.2010.05.001
- Pelletier, K., Brown, M., Brooks, D. C., McCormick, M., Reeves, J., Arbino, N., Bozkurt, A., Crawford, S., Czerniewicz, L., Gibson, R., Linder, K., Mason, J., & Modelli, V. (2021). EDUCASE Hrizon Report, teaching and learning edition. Boulder: EDUCASE.
- Prendes, M. P., Castañeda, L., Solano, I., Roig-Vila, R., Aguilar, M. V., & Serrano, J. L. (2016). Validation of a questionnaire on work and Learning habits for future professionals: exploring personal learning environments. Relieve, 22(2). http://dx.doi. org/10.7203/relieve.22.2.7228
- Prendes, M. P., Román, M., & González, V. (2019). How University Students Use Technologies to Learn: A Survey about PLE in Spain. Education in the Knowledge Society, 20. https://doi. org/10.14201/eks2019_20_a10
- Ramírez-Mera, U., & Tur, G. (2019). Seguridad y fiabilidad en la gestión de la información de los entornos personales de aprendizaje (PLE) en la Educación Superior. EDUTEC, 70, 18-33. https://doi.org/10.21556/edutec.2019.70.1435
- Reece, A., & Butler, M. B. (2017). Virtually the Same: A Comparison of STEM Students Content Knowledge, Course Performance, and Motivation to Learn in Virtual and Face-to-Face Introductory Biology Laboratories. Journal of College Science Teaching, 46(3), 83-89.
- 61. Román, M. M. & Prendes, M. P. (2020). Personal Learning Environments: quantitative instrument for university students (CAPPLE-2). EDUTEC, 73, 82-104. https://doi.org/10.21556/
- 62. edutec.2020.73.1709
- Serrano, J. L., Carrera, X., Brescó, E., & Suárez-Guerrero, C. (2019). Tratamiento crítico de la información de estudiantes universitarios desde los entornos personales de aprendizaje. Educ. Pesqui., 45. http://doi.org/10.1590/s1678- 4634201945193355
- Soltanimehr, E., Bahrampour, E., Imani, M., Rahimi, F., Almasi, B., & Moattari, M. (2019). Effect of virtual versus traditional education on theoretical knowledge and reporting skills of dental students in radiographic interpretation of bony lesions of the jaw. BMC Medical Education, 19. https://doi. org/10.1186/s12909-019-1649-0
- Tolman, S., Dunbar, M., Slone, K. B., Grimes, A., & Trautman, C. A. (2020). The transition from teaching F2F to online. In L. Kyei- Blankson, E. Ntuli, & J. Blankson (Eds.), Handbook of Research on Creating Meaningful Experiences in Online Courses (pp.67- 84). https://doi.org/10.4018/978-1-7998-0115-3.ch006
- 66. Tomé, M., Herrera, L., & Lozano, S. (2019). Techers' opinions on the use of Personal Learning Environments for intercultural Competences. Sustainability, 11. https://doi.org/10.3390/ su11164475

- 67. Tu, C.-H., Sujo-Montes, L., Yen, C.-J., & Blocher, M. (2012). The Integration of Personal Learning Environments & Open Network Learning Environments. TechTrends, 56(3), 13-19. http://doi. org/10.1007/s11528-012-0571-7
- Wiseman, J., Davies, E., Duggal, S., Bowes, L., Moreton, R., Robinson, S., Nathwani, T., Birking, G., Thomas, L., & Roberts, J. (2017). Understanding the changing gaps in higher education participation in different regions of England. BMG Research. https://bit.ly/3buHCZD
- 69. Yen, C.-J., Tu, C.-H., Sujo-Montes, L., & Sealander, K. (2016). A Predictor for PLE Management: Impacts of Self-Regulated Online Learning on Students' Learning Skills. Journal of Educational Technology Development and Exchange, 9(1), 29-48. https://doi.org/10.18785/jetde.0901.03.