USING EXPERIENTIAL LEARNING THEORY TO DESIGN A REFLECTIVE ONLINE LEARNING ENVIRONMENT

Zahari Hamidon
Open University Malaysia, Malaysia
zahari_hamidon@oum.edu.my

Wan Mohammad Ubaidillah Bin Wan Abas
Open University Malaysia, Malaysia
ubaidillah@oum.edu.my

Harvinder Kaur
Open University Malaysia, Malaysia
harvinder@oum.edu.my

Ghazali Lateh
Open University Malaysia, Malaysia
ghazali_lateh@oum.edu.my

ABSTRACT

Today, the methods of delivering knowledge online have become diverse, and online learning environments have reached maturity as evidenced by the fact that most institutions of higher learning are either using them or considering making them one of the leading modes of teaching and learning. Learners today are becoming open-minded due to the technology that provides communication channels with different features and functionality. This study aims to observe the level of interaction between the facilitator-student and student-student in the Reflective Online Learning Environment and the progress of the learner's reflection and the facilitator's feedback. Based on a case study and literature review, this study seeks to determine the components of Experiential Learning Theory to be visualised into the learning process in order to create an effective instructional strategy for effective lesson design. The study reveals that reflective activity plays a vital role in the transformation of grasp experience into new experiences.

***Keywords**: Experiential Learning, Reflective Online Learning Environment, Lesson design*

INTRODUCTION

This section introduces experiential learning theory (ELT) in the context of its application in a postgraduate programme, in the Masters of Instructional Design and Technology (MIDT) at Open University Malaysia (OUM). MIDT is a fully online course, which has a course structure that enables the learners to share and build their knowledge based on their experiences. The scope of the definition of ELT is confined to the method of course delivery, wherein most

activities require learners to reflect on their prior knowledge then construct it and turn into new knowledge.

The Apple Inc. Dictionary (2016) defines 'reflect' as "think deeply or carefully about," while the British English Thesaurus gives meanings of 'reflecting as' "think about, give thought to". In reference to the meaning of the term, 'reflection' seems to be very closely linked with cognitive processes, as supported by Demetriou and Wilson (2008) state that "reflection is a cognitive process that helps teachers to gain insights into the 'big picture' and rethink their practice, learn from their experiences and help them to cope with similar situations in the future". Reflection in online learning is considered vital in the learning process as it involves the process of digesting information, especially in determining discrepancies and problems in understanding certain concepts that can occur in the learner's experience.

Issues and challenges

All OUM learners are working adults. The main challenge for working adults as learners is their readiness to undergo the learning process. The lesson is designed around task-based instructions. The task, which is a part of the whole activity, aims to create a high interactivity and collaborative discussion amongst learner-learner and learner-facilitator. The activity is combined with online quizzes as part of its formative assessment.

Another challenge for adult learners is maintaining focus during the learning process, most notably because their minds are also preoccupied with other commitments in their daily lives such as work and family. These factors can affect their learning engagement. The lessons, therefore, need to be designed in a manner that can assist the learners in their learning process.

Kaur, Fadzil, and Abas (2010, p.6) state that "online engagement to a degree has to be engineered. That is, it needs to be part of an intended design. For example, you cannot expect students to engage in meaningful discussion on a particular topic if each student is at a different stage of the learning programme. Also, group work and ongoing dialogues are best maintained if there is a common goal or purpose". Keeping the online learners engaged during most of the activities, as laid out in OUM's virtual learning environment, myINSPIRE, can be a great challenge due to their lack of focus in performing the tasks. Therefore, the tutors have to play their roles to facilitate the occurrence of learning.

In an online course, students can choose the extent, date, and nature of their interaction with other participants. Online course interaction is personal, allowing an intimacy between the students and lecturers and among the students, and students see this as one of the strengths of the course (Shonfeld & Ronen, 2015, p.24). Moreover, online interaction is considered crucial and vital, for online learners to attain a meaningful learning session. Abas and Fadzil (2008) suggest that the minimum percentage of faculty interaction in online classes should vary between 10 and 25 per cent for students to achieve an effective learning session. At OUM, online discussion interaction of 30 per cent is the norm.

The purpose of this study was to observe:

(1) The level of interaction between the facilitator-student and student-student in a Reflective Online Learning Environment (ROLE); and
(2) The progress of the learner's reflection and the facilitator's feedback.

LITERATURE REVIEW

Experiential Learning

From his study of student perceptions of the learning experience and related learning outcomes in a field learning project of an undergraduate consumer behaviour class, Schaller (2018, p.102) concludes that overall, students who participated in the field learning activity reported positive perceptions of their experience and learning outcomes. Moreover, Ally (2008, p.30) states that learning should be an active process. Keeping learners active doing meaningful activities results in high-level processing, which facilitates the creation of personalised meaning. The resources that support the learning should be very close to the students, so that they will be able to align the information to the outcomes. The richness of the learning process relies on the choices given to the learners in selecting the best way for them to learn. This scenario shows the importance of the learner's experience in order to attain successful learning. In Kolb and Kolb's Experiential Learning Theory (ELT), it was highlighted that grasping experience refers to the process of taking in information, and transforming experience is how individuals interpret and act on that information (A. Y. Kolb, & D. A. Kolb, 2017, p.31).

Operationalising ELT

In operationalising ELT, one of the most important factors is to determine the components of ELT, as provided by A. Y. Kolb and D. A. Kolb (2017), and the practical side of ELT, as described by Beard and Wilson (2013). The terms of ELT by A. Y. Kolb, and D. A. Kolb (2017 p.5), is defined as a particular form of learning from life experience, were used as part of the ideas that were formulated and synthesised, and then contextualised into the instructional setting in OUM. In ELT, experience seems to be essential in the whole learning cycle. This is shown in Figure 1, which depicts the learning cycle as beginning with the concrete experience.
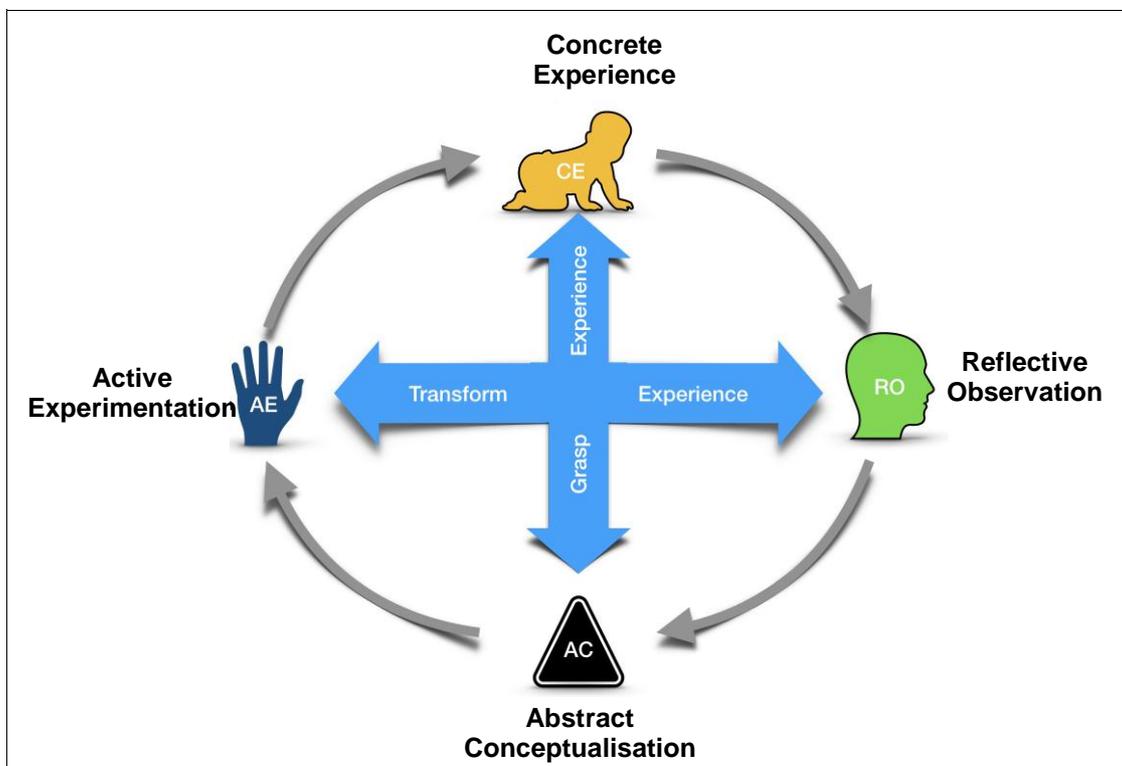

Figure 1: Experiential Learning Cycle (A. Y. Kolb, & D. A. Kolb, 2017 p. 32)
Source: Enhanced diagram based on Figure 2.1 "Experiential Learning Cycle," by A. Y. Kolb, and D. A. Kolb (2017, p. 32)

As shown in Figure 1, ELT posits that there are two related modes of gaining experience: Concrete Experience (CE) and Abstract Conceptualisation (AC). The two modes then transform the experience into Reflective Observation (RO) and Active Experimentation (AE). David (2007) simplifies the transaction between the two modes as encompassing four stages: CE (as DO), RO (as OBSERVE), AC (as THINK) and AE (as PLAN).

Experiential Learning in the Context of Open University Malaysia

As a whole, the implementation of ELT in the learning process involves two main components referred to as 'experience', as shown in Figure 2. Thus, the ideas of ELT emphasise experience. The overall learning cycle is described as a recursive circle (A. Y. Kolb, & D. A. Kolb, 2017, p. 33). In other words, the process from the 'grasp experience' phase to the 'transform experience' phase in the learning cycle, from Stage 1 to 4, is an iterative process.
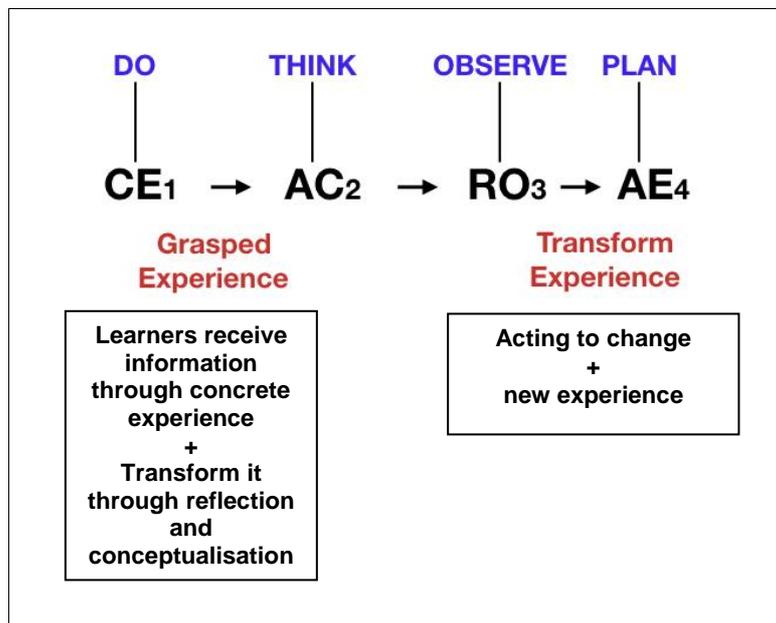
Figure 2: Four Stages of Learning Cycle in ELT
Source: Conceptualisation of ROLE is synthesised from David (2007) and A. Y. Kolb and D. A. Kolb (2017)

Figure 3 shows the learning process in the ELT learning cycle. As a whole, the learning occurs over two stages: 1) Grasp Experience and 2) Transform Experience. The learners receive the information through their concrete experience (CE) and transform it through conceptualisation (Abstract Conceptualisation (AC)) and reflection (Reflective Observation (RO)). This is then transformed through Active Experimentation (AE) to create a new experience.

The learning process should involve active participation from both learners and the tutor. The learners should be more attentive in performing the task given by the tutor. Active participation means the learning process should incorporate active interaction with the learning experiences for the learners to reflect. The result of the active participation should be 'high-level processing.'
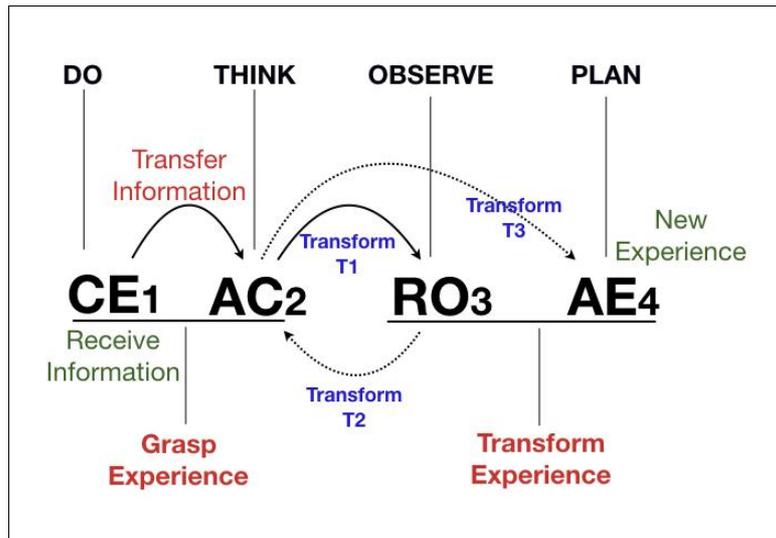
Figure 3: Learning Processes in ELT Learning Cycle
Source: Synthesised from David (2007) and A. Y. Kolb and D. A. Kolb (2017)

METHODOLOGY

In the context of this study, the initial process only involved the planning, design and development of the prototype. A prototype is defined as *"a draft version of a product that allows you to explore your ideas and show the intention behind a feature or the overall design concept to users before investing time and money into development"* (usabilty.gov, n.d.). In order to collect meaningful data, low-fidelity prototypes are used, where the outputs of the interface are used to simulate the task.

The strategy was designed, as shown in Figure 2 and 3, and used in teaching and learning in the fully online MIDT programme. Five students were involved in this study. They were required to follow the structure of the contents that have been laid out. The learning process is conducted to reflect the *do*, *think*, *observe* and *plan* stages. It is structured in a self-paced manner over ten (10) weeks on the Learning Management System (LMS), where the learning sequence is controlled by the learning activities.

After an initial try-out, the insights gained from the initial data will be used as an indicator to further the study and to deepen the knowledge and then to design a more efficient learning environment, so that it can benefit the facilitators and the learners in the long run. The interactions between the learners-learners and facilitator-learners will then be analysed by studying numbers of interaction nodes. Also, the learning analytics from the LMS will be used to analyse the numbers of interaction modes.

The report (learning analytic) is gathered at the end of the semester and analysed according to the stages below:

Stage 1: Concrete Experience (CE)

The learners complete their reading activity and use their understanding of the readings (grasp experience phase) to discuss the outcomes in the online forum (Task 1) (CE).

Stage 2: Abstract Conceptualisation (AC)

After the discussion, each learner wrote a reflective paper (Task 2) (AC) to reflect on the ideas discussed in the online forum. After undergoing the CE and AC in the grasp experience phase, the learners proceeded to the transform experience phase, which involves reflective observation (RO) and active experimentation (AC).

Stage 3: Reflective Observation (RO)

In this phase, the learners identified specific problems based on their reflective paper. The information synthesised from the reflective paper is discussed in the online forum (Task 3).

Stage 4: Active Experimentation (AE)

Based on an online forum in Task 3, the learners proceeded to plan and develop the instructional system.

The content that is planned through the skill hierarchy technique to determine the entry level and the learning path. On the whole, the content is organised in five levels to achieve two terminal objectives (TO). Each level of the content has dedicated enabling objectives (EO). Figure 4 shows the organisation of content according to the level of skill and knowledge (S/K). The core and the lowest skill and knowledge (S/K) in Level 1 is considered as the foundation before proceeding to the next level. This brings about the question of how the six required S/K components can be delivered efficiently in a short time. Figure 5 depicts how the six S/K components may be simulated into the ELT learning process.
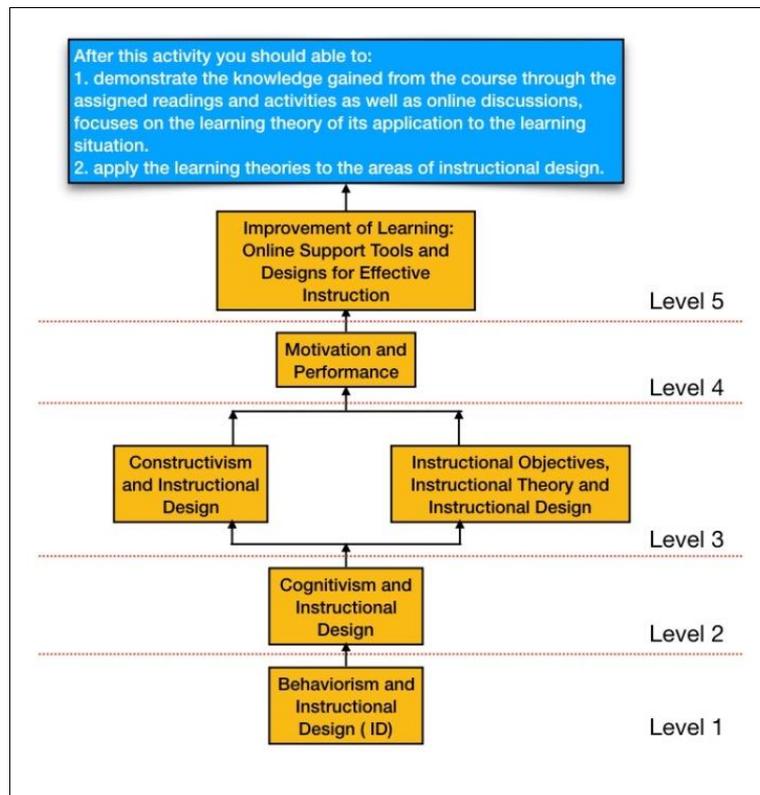
Figure 4: Activity Structure
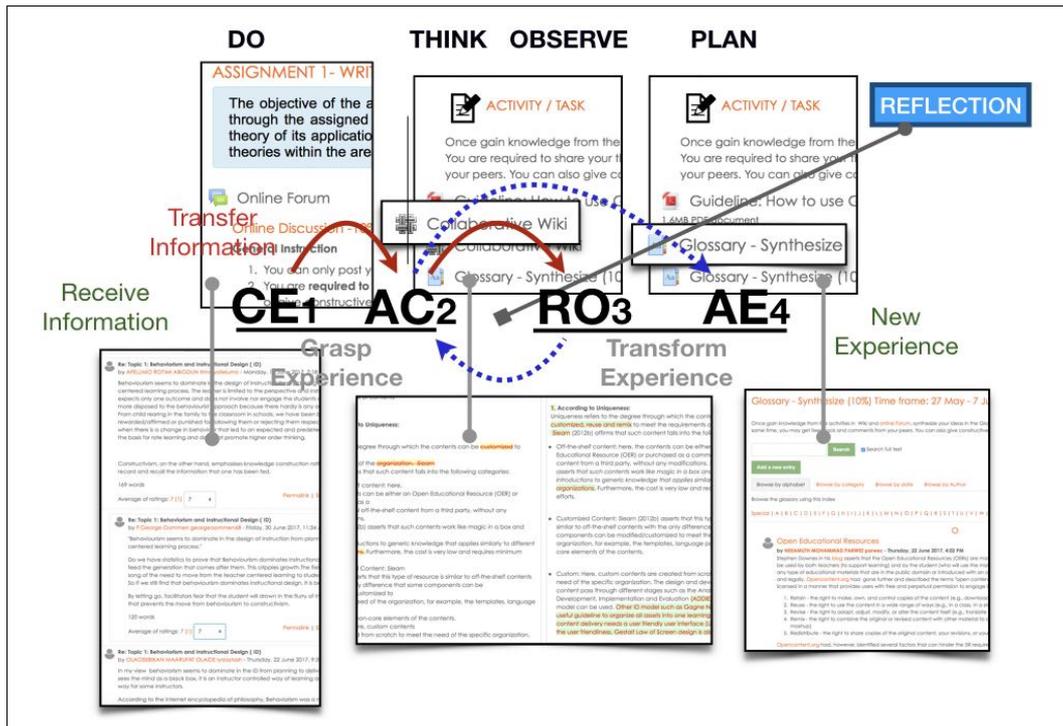
Figure 5: Content Structure and ROLE

FINDINGS

Level of Interaction between Facilitator-Student and Student-Student in ROLE

Since the design of ROLE is still at the initial stage, not much data has been gained from the system. However, some preliminary data has been used to observe the effects of the learning process. After undergoing the learning process for 10 weeks, some of the related data has been collected to observe the consequences of the reflection area. Collaborative Wiki and Online Forum are used as activities to achieve the enabling objectives from level 1 to level 2 of the learning hierarchy.

The first activity on the online forum provides the learners with relevant information. The information is gathered through online discussions where the students are free to post any information according to the topics determined by the facilitator. This activity is done before they synthesise the information in the Collaborative Wiki. Figure 6 shows an example of posting in the online forum between the facilitator and four learners. The analysis indicates that there is a tendency to post quality information and the information posted is improved or added to by the peers. The information flow shows that there is a dynamic interaction among peers. As seen in the figure, the facilitator triggered the discussion by initiating the fundamental question, to which student 1 (S1) reacted and posted. Student 2 (S2) then replied to student 1, and student 3 (S3) responded to student 1 (S1) and the facilitator (F).

The postings continue to expand after student 4 (S4), and student 5 (S5) replied to student 3. The initial findings show that there is a reciprocal interaction between the facilitator-student and student-student.

Figure 6: Posting in the online forum between the facilitator and four learners

Progress of the Learner's Reflection and the Facilitator's Feedback

Figure 7 shows the data of history in Collaborative Wiki between the facilitator and the learners. The data shows a difference in input between the learners and the facilitators according to the version. The version demonstrates the progress of the learner's reflection and the facilitator's feedback. The history shows that the students reflect within an average of two minutes, from 6.32 - 6.51 pm in one day.

Figure 7: Data of history in Collaborative Wiki between the facilitator and the learner

Figure 8 shows the learner's input and the facilitator's feedback in Collaborative Wiki. The input and feedback shows that there is a tendency to create a highly engaging learning experience for the learners provided there is guidance from the facilitator.

Figure 8: Learner's input and the facilitator's feedback in Collaborative Wiki

CONCLUSION

This study is still in the early stages of the design and development of the ROLE. In operationalising the concept, the indicators and criteria are clearly reflected in the framework, and for the operation at the micro level, the components in the learning architecture are considered significant. This study, on the whole, reveals some results about the learner's experience. The grasp experience, that is, a learner's background, is used to strengthen the learning process through reflective activities in the forum and Collaborative Wiki. Reflective activity plays an important role to transform the grasp experience into new learning experiences. This study focused on the application of ELT into the lesson design in ROLE. The data provided are just preliminary information that is used as indicators to improve the structure of the activity in ROLE. More studies will be conducted, especially on usability testing, cognitive load, and user experience. In addition, further debate and critical analysis of the conceptualisation of ELT by A. Y. Kolb and D. A. Kolb (2017) are necessary to build a good case study. Also, more work needs to be done, particularly in deliberating on the framework and the learning architecture, as these aspects will significantly affect the design and development of ROLE.

REFERENCES

Abas, Z. W. & Fadzil, M. (2008). *Towards a more effective engagement of learners and tutors in online discussion forums*. Paper presented at the 22nd AAOU Annual Conference. "The New Development, New Trends and New Missions of Open and Distance Education in Asia and the World", Tianjin, China.

Ally, M. (2008). Foundations of educational theory for online learning. In A. Terry (Ed.), *The theory and Practice of online learning* (2nd ed., pp. 16-42). Edmonton, AB: AU Press, Athabasca University.

Demetriou, H., & Wilson, E. (2008). A return to the use of emotion and reflection. *The Psychologist, 21*(11). Retrieved from https://thepsychologist.bps.org.uk/volume-21/edition-11/return-use-emotion-and-reflection

Dictionary (Version 2.2.2 (203)) [Computer software]. (2005-2017). Apple.

Beard, C., & Wilson, J. P. (2013). *Experiential Learning. A handbook for training and coaching*. Philadelphia, PA: Kogan Page.

David, L. (February 13, 2007). *Experiential Learning (Kolb.* In *Learning Theories.* Retrieved from https://www.learning-theories.com/experiential-learning-kolb.html.

Kaur, A., Fadzil, M., & Abas, Z. W. (2010) *Pure online learning: Pedagogical, technological & human designs for greater access & success*. Paper presented at the 6th Pan-Commonwealth Forum on Open Learning, Kochi, India.

Kolb, A. Y., & Kolb, D. A. (2017). *The experiential educator: Principles and practices of experiential learning*. Kaunakakai, Hawaii: EBLS Press.

Schaller, T. K. (2018). Field learning: Experiential learning through participant observation and self-reflection of consumer behaviour at sporting events. *Marketing Education Review*, *28*(2), 98-103. doi:10.1080/10528008.2018.1437354

Shonfeld, M., & Ronen, I. (2015). Online learning for students from diverse backgrounds: Learning disability students, excellent students and average students. *IAFOR Journal of Education, 3,* 13-29. doi: https://doi.org/10.22492/ije.3.2.01

usability.gov (2013, October 08). *User Research Basics*. Retrieved from https://www.usability.gov/how-to-and-tools/methods/prototyping.html