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A Case Study of Using Padlet to Capture Insights in Class

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Abstract

Active learning appears to become more and more popular. One of the key principles is its reflective nature where learners learn by generating insights on their own. Generate insights can be challenging sometimes. This research studies a case of using Padlet to capture insights in university teaching targeted young learners. The key research questions of this paper are: (1) Compared with using paper and pen, are learners able to generate more insights by using Padlet (quantity)? (2) Are learners able to create deeper insights (quality)? In order to measure the impact of this new approach, the number of insights generated and the quality of insights was examined among 273 learners in 3 batches from February 2016 to May 2017. There are two ways to measure the education performance of learners. Firstly, by evaluating of insights generated by students, and secondly, by collecting personal feedback in a more detailed manner through interviewing 10 learners in a focus group setting. Focus group questions include “By co-creating insights by Padlet, are you more inspired than doing silent brain-storming using pen and paper on your own? Why?” and “Do you find Padlet easy to use? In what sense?” The preparation time before class and technological challenges are covered. The findings reveal the advantages and drawbacks of using Padlet compared with the traditional way of using paper and pen. The results of the study will help program designer in formulating a better-fit strategy when deciding what tools to deploy to capture insights during reflection in their class.

Keywords: Active learning, Collaborative learning, Experiential learning, Coaching, Reflection

Introduction

Most traditional classrooms are dominated by teacher’s one-way presentations. As a result, there is also too little time left for class practice, not to mention time for asking learners to reflect on their learning. Teaching contents are in most cases one-size-fit-all, and learners are busy taking notes on their own rather than absorbing new knowledge through a reasonable level of team-workmanship and collaboration. Another drawback of the traditional classroom is that it does not encourage critical thinking - the ability to actively apply information gained through experience and reasoning [1]. The learning contents are only simple concepts at surface level.

The current study investigates the effectiveness of deploying Padlet to generate insights in class using the case of Career Building Course. The main objective is to study the impact of using Padlet on the educational performance of 273 learners in terms of quality and quantity of reflection after a learning experience. The key research questions of this paper are:

- (1) Compared with using paper and pen, are learners able to generate more insights by using Padlet (quantity)?
- (2) Are learners able to create deeper insights (quality)?

Literature Review

According to Costa and Kallick [2], reflecting on experiences encourages insight formation and complex learning. To reflect, learners must act upon and process the information, synthesizing and evaluating the data. Reflecting also involves applying what learners have learned to contexts beyond the original situations in which they learned something. Schön (1987) pointed out that “professional education should be centered on enhancing the practitioner’s ability to ‘reflect-in-action’—that is, learn by doing and developing the ability for continued learning and problem solving throughout the professional’s career” [3]. Active learning and collaborative learning is the way to go.

In view of the importance of reflection and given the advanced technology nowadays, Padlet is often deployed in class. It is a free online virtual “bulletin” board, where learners and teachers can collaborate, reflect, share links and pictures at a secure location. Padlet also allows users to create a hidden wall with a customized URL. Creators can also moderate and remove posts, and manage their board anytime [4].

Methodology

Career Building Course is a one-credit general education elective offered by the Hong Kong University of Science and Technology. The key objective of this course is to enhance the career and employability skills of learners. Only a maximum of 30 undergraduate students are enrolled in each class, which takes 13 weeks, and final-year students are given the highest priority to register in the course. This course is divided into Science and non-Science classes. Students can enroll based on their academic major. In terms of grading at the end of each term, learners are given either “Distinction”, “Pass”, or “Failure”. In order to get a pass, a learner has to maintain an attendance of at least 80% (accounting for 10% of total subject grade), participate actively in class and on CANVAS discussion forum (30%), submit their CV and a cover letter for a job application (30%), and attend a mandatory 1:1 mock interview conducted by real industry professionals (30%).

In order to fulfill one of the learning outcomes of the course, “to demonstrate winning interview skills”, learners are required to apply the interviewing skills learned to the real assessment setting, that is, the mock interview, in Week 11. A reflection then takes place in Week 12 after the mock interview session with industry seniors. All humans are hard-wired to learn from experience. Objective of the reflection is to allow learners to articulate the most important discovery about them from this active learning experience.

In the past, learners were invited to make meaning of their learning experience by answering a coaching question “what are your insights?” using paper and pen. Learners were given 10 minutes to brainstorm silently on their own. Afterwards, there would be a ‘circle of voice’ sharing session for each learner to articulate their insights succinctly.

Padlet replaced paper and pen in Spring term, 2017. Preparation before class included a Padlet account created by the instructor and a blank page for that class. What learners had to do was to simply scan a QR code put on the screen and type their insights directly using a smartphone in class. It was not necessary for learners to download any app or to create an account on Padlet before the class. For comparison purposes, learners were also given 10 minutes to type their insights.

In order to measure the impact of this new approach, the following areas were examined: (1) The number of insights generated, and (2) The quality of the insights. The number of insights generated is a significant indicator. From the perspective of neuroscience,

it indicates the number of new wiring created in the brain based on that learning experience [5]. In other words, it represents how much the learner has learned. A higher number of insights indicates, on the one hand, that the learning is wired more firmly in our brain, and on the other, that the insights are created from multiple perspectives [6]. More insights generated is strong evidence that learners have internalized the learning and able to demonstrate better educational performance.

The quality of insights is another focus. To learn something new is to make new connections in our brain. Metaphorically speaking, making a new connection is like jumping between cliffs, and the human brain is a great machine which tends to choose the easiest path [7]. That is why we always tend to pick the shortest distance. It also explains why many insights are ‘superficial’, picked from the shortest learning distance in our brain without them being fully internalized. For example, “I will be more confident in the next job interview” is something that can be easily retrieved from our brain, whereas the insight “I noticed that I were very nervous last time, and I will sit confidently by leaning back a little bit and holding my head still in the next job interview” is more elaborative. The ability of generating high quality insights suggests that the learners have developed the ability for continued learning and problem solving (Schön, 1987) [3].

There are actually two ways of measuring the educational performance of the learners in the course: (1) By evaluating the insights generated by students, which has been explained above, and (2) by collecting personal feedback in a more detailed manner through interviewing 10 learners in a focus group setting. Details of the two methods will be discussed below:

Evaluating Insights Generated by Students

The following rubric is used to measure the quality of insights:-

Criteria	Very in-depth (9-10 points)	Sufficient (6-8points)	Minimal (3-5 points)	Unacceptable (0-2 points)
Quality of Reflection ____/10	Response demonstrates an in-depth reflection on the learning. Viewpoints are very detailed and personalized with multiple perspectives. Appropriate examples are given. More than one descriptions on how to improve next time are insightful and clearly stated.	Response demonstrates a general reflection on the learning. Viewpoints are detailed and personalized. Appropriate examples are given. One description on how to improve next time is stated.	Response demonstrates a minimal reflection on the learning. Viewpoints are general with minimal support by examples. Unable to describe how to improve next time.	Response demonstrates a lack of reflection on the learning. Viewpoints are missing and unsupported. Unable to describe how to improve next time.

Collecting personal feedback through interviews

No two brains are alike. How a learner thinks can be completely different from the way another learner thinks. Is it actually easier for a learner to create new wiring in the brain by co-creating? Is it easier for learners to dig deeper and generate new insights by reading others'?

In order to examine further learners' experiences of using 'paper and pen' and 'Padlet', a comparison question was asked at the focus group interviews: *"By co-creating insights by Padlet, are you more inspired than doing silent brain-storming using pen and paper on your own? Why?"* ('More inspired' means a learner can generate the first insight faster, generate more insights, and able to think more deeply about that learning experience and create higher quality insights). The second question focused on how user-friendly Padlet was to young learners, namely, *"Do you find Padlet easy to use? In what sense?"*.

Findings and Discussion

This part reports the results of the investigation among different student groups.

Evaluating Insights Generated by Students

Table 1
Science Students

Term	Spring term 2016	Fall term 2016	Spring term 2017
Total number of students	32	19	28
Total number of insights	29	21	84
Average number of insights per learner	0.9	1.1	3
Average quality of insights (scale of 1-10, 10 max)	5.5	5.5	8.5

Table 2:
Non-Science Students

Term	Spring term 2016	Fall term 2016	Spring term 2017
Total number of students	71	70	53
Total number of insights	85	91	127
Average number of insights per learner	1.2	1.3	2.4
Average quality of insights (scale of 1-10, 10 max)	6	6	7.5

Compared with writing reflections using paper and pen, Padlet generated more insights within the same time limit. The result is more significant among Science students (number of insights increased by 200% from 1 to 3). Science students, by and large thinkers, are generally more detail-oriented. They need more time to organize and/or come up with a structure before speaking up. They prefer to learn by reading and analyzing instead of listening and responding promptly. Therefore, a fun yet interactive environment in which all insights are written can stimulate young Science learners to think from multiple perspectives.

In terms of the quality of insights, Padlet can help learners to generate higher quality insights instantly. By reading others' reflections, it is easier for learners to practice critical thinking within a short time: to decode a statement, agree or disagree with another learner

with a particular viewpoint, and/or to view the same situation from a new angle. Results of the current study suggest that Science students demonstrated understanding of the learning in the mock interviews through more detailed explanations and deeper analyses. Their high quality reflective statements were very rarely seen in previous terms (score increased by 64% from 5.5 to 8.5 out of 10).

Collecting Personal Feedback through Interviews

Group 1 - Science Students All Science students in the study found Padlet a very impressive tool. They suggested that they might not have enough time to listen to all comments in class had they used paper and pen. Also, sometimes they might not be able to express their thoughts clearly in oral conversations. They preferred to take time and go through all ideas, and be inspired by each other by writing on Padlet. A learner also suggested that it was challenging to reflect on his own. However, he was able to add to others' insights. This group of learners also found it easy to categorize and rearrange insights on Padlet, making them more organized. Padlet definitely added value to class, for it would have been rather hard to read the insights one by one otherwise.

One of the factors contributing to more and deeper insights is that learners could contribute in an anonymous manner. This is an advantage especially for Asian students who are not used to speaking up openly. In this case study, learners found it far safer since they were not put in the spotlight. The option to write anonymously effectively eased learners' concern of being criticized. This sense of security enhanced more positive thoughts and more freedom in writing. Learners tended to generate more ideas and to elaborate more on their viewpoints. As a result, a positive cycle was formed – more and deeper insights were being captured on a Padlet page with minimal repetition.

Group 2 – Non-Science Students Most learners welcomed the idea of co-creating insights using Padlet. They found it an efficient and fun way to exchange ideas. Moreover, learners preferred to brainstorm anonymously and at the same time be able to see in real time what exactly the other teammates were thinking about. This particular group of students suggested that Padlet was a smart way of sharing insights especially for reflecting on the mock interviews, for some of them did not perform well but still wanted to share the harsh comments they had received. The learners were also more comfortable in expressing their viewpoints without having to put their hands up. Nevertheless, it is worth noting that one learner preferred using paper and pen as it seemed easier for him to write down instead of typing his thoughts.

In terms of technical practicality, the implementation of Padlet was smooth. Learners were able to scan the QR code within 10 seconds on average. Compared with having learners take a sticky note from the whiteboard for writing down insights, the class time consumed was almost the same. In terms of class atmosphere, Padlet raised the energy and boosted team-workmanship dramatically. Learners were excited about this new technology and the instant results they co-created.

Conclusion and Future Work

Padlet is an effective way for capturing more insights. It is an energizer that boosts class energy. Having said that, there are also downsides of using Padlet. For example, allowing learners to voice comments anonymously may hinder the development of their abilities to speak up openly in a structured manner. Having the courage to articulate one's mind is a very important survival instinct. Over-protection may undermine learners' confidence and assertiveness. It is important for program designers to balance between anonymous and named comments in class, both of which are possible on Padlet.

As mentioned, one learner in this case study preferred the traditional way of using paper and pen. Using paper and pen to scribble something is definitely a proven way of learning. Different learners may have different preferences. Some of them may feel more comfortable using old-school ways of note-taking. However, it may take up more class time if students are invited to read or hear everybody's written opinions, and to add their own after a few more minutes of reflection again.

For teaching programs that are continuous, program designers may consider multiple approaches to capturing insights, such as using drawings, writing on paper (e.g. sticky notes), answering a question on an online forum and so on, apart from deploying Padlet.

References

- Costa, A. L., & Kallick, Bena. (2008). Learning and Leading with Habits of Mind. *Association for Supervision and Curriculum Development*
- Fritz, R. (1989). The Path of Least Resistance: Learning to Become the Creative Force of Your Own Life. *Ballantine Books*
- How to use Padlet. (n.d.) Retrieved 5 July 2017 from http://www.wvadulted.org/uploads/4/2/4/9/42499625/padlet_for_beginners.pdf
- Jaebi, I. (2017) Disadvantages of Traditional Classroom Training. Retrieved 1 July 2017 from <http://classroom.synonym.com/disadvantages-traditional-classroom-training-7866705.htm>
- Ringleb, al H., & Rock, D. (2008). The emerging field of NeuroLeadership. *NeuroLeadership Journal*, I, 3-19.
- Rock, D. (2007). Quiet Leadership – Six Steps of Transforming Performance at Work, *HarperCollins, New York*
- Schön, D. A. (1987). Educating the reflective practitioner: Toward a new design for teaching and learning in the professions, *Jossey-Bass Publishers*, xvii, 355