

LEARNING DIARY STUDENT OUTCOMES ASSESSMENT: EXPERIMENTAL RESEARCH IN EDUCATION

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ABSTRACT

Assessment in higher education has become increasingly important to help our students learn and achieve our teaching goals. Learning diary is an assessment where our students write an entry regarding our subject that they learned about on a specific teaching occasion. This study employs a learning diary student outcomes assessment for “International Economic Cooperation and ASEAN Trade Negotiation” classes, which is developed over a period of semester 1 in 2019, at Rajamangala University of Technology Phra Nakhon (RMUTP). The assessment in this paper has three stages: 1) defining the most important goals for our students in this subject to achieve as a result of participating in our course experience (outcomes), 2) evaluating how well our students are actually achieving those goals (assessment), and 3) using the results to improve our course experiences (closing the loop). The tool employed in this qualitative research study is a focus group interview to enable learning outcome analysis from the desired sample of 78 subjects. They are fourth-year students in the Department of Finance, Faculty of Business Administration at RMUTP. The results indicate that this assessment can show the students’ point of view from the classes for both hard and soft skills by way of their learning diary, including external sources, for example, information or materials that our students independently found on their own, and are interested in. These display the understanding and the extent of how much the students have widened their scope of knowledge and soft skills beyond that learned in the classes. We can, then, use the results of learning diary to improve our course experiences to make sure that we (students and lecturers) can achieve the subject goals.

KEYWORDS

learning diary, student, outcomes, experimental research, Thailand, learning assessment, Standard: 11, 12

INTRODUCTION

Generation Z (Gen Z) were born roughly between 1995 and 2010, although not everyone agrees on that specific date range. Barnes & Noble College (2015) reported that Gen Z students bring their own set of new attributes and experiences to higher education. The students thrive in any learning environment where they can flex their talent for self-reliance and their ability to self-educate. They are prepared to make their own decisions based on that

research rather than rely more heavily on friends and family. Although Gen Z are very independent and technologically savvy, they value face-to-face interaction and collaboration, and also make no distinction between devices or online territories. We can see that Gen Z's learning is one continuous, multi-faceted, completely integrated experience – connecting social, academic and professional interests. In 2020, Gen Z are almost all of our university students, so it is required of us as educators to understand how their thinking is different from our own, and what the implications of this are in the quest for the fruitful teaching of them.

If, as lecturers, we would like to exert maximum leverage over change in higher education, we must confront the ways in which assessment tends to undermine our students' learning. Boud and Falchikov (2007) explained that assessment can affect people's lives. The effects of poor assessment practice are far more potent than they are for any other aspect of our teaching. 'Students can, with difficulty, escape from the effects of poor teaching. They cannot (by definition if they want to graduate) escape the effects of poor assessment' (Boud, 1995 cited in Boud, 1998). Therefore, assessment design can have as big an influence on what our students learn as our teaching.

Assessment is an important element in curriculum design, because it is the critical link between learning outcomes, content and learning and teaching activities. We can see that our students cannot avoid assessment activities and their impact if they want to pass a topic or course. As a result, teaching assessment not only measures what our Gen Z students have learned from our class, but it shapes how many students approach learning goals/outcomes. This is the reason why assessment is the first thing to be considered by many students in planning their engagement in our class.

According to the University of Kent (2019) Model, there are six steps of our assessment design.

1. Define what we want our students to learn.
2. Design appropriate learning outcomes.
3. Decide how our students can best show they have achieved these learning outcomes.
4. Choose the most appropriate assessment method.
5. Design assessment criteria and feedback format based on the learning outcomes and task.
6. Engage in a dialogue with students about feedback and what you want students to learn.

Following the six steps, we arranged to employ learning diary to be one of the assessments in our classes. Learning diary can be a task where our students write an entry regarding a particular subject that they learned about from the class. Learning diary is more than just a note taken in the class while listening to the lecture or joining in class activities; it is the reflection that our students provide as the basis of his or her point of view (Finland University, 2019).

This 'Learning Diary Student Outcomes Assessment' study is developed for our students during which time the author attend Assessment for Academic Learning (AfAL, 5 ECTS) course of the University of Eastern, Finland. This student outcomes assessment was employed for (03413301) International Economic Cooperation and ASEAN Trade Negotiation¹ classes at

¹ The subject area: Controls and regulations of international trade; bilateral and multilateral trade agreements; regionalism and trade blocs; roles of ASEAN international organizations; international disputes in trade of goods

Rajamangala University of Technology Phra Nakhon (RMUTP). Our data include learning diaries written by 78 students from three classes and focus group interviews during semester 1 in 2019 for every week through 15 weeks (July to October). The aim of this learning diary assessment is to learn from our students how they experience the classes. This assessment allows our students to put their point of view from the classes for both hard and soft skills into their learning diary, including external sources, for example, information or materials that our students independently found on their own, and are interested in. These display the understanding and the extent of how much our students have widened their scope of knowledge and soft skills beyond that learned in the class. We can, then, use the results of learning diary to improve our course experiences to make sure that we can achieve the subject goals.

THEORETICAL BACKGROUND

As we know that one of the best ways of learning is from experiences, learning diary is an instrument of our students' learning, as well as professional and personal growth. In addition, learning diary can help our students to become more conscious of their learning experiences during the intensive/optional course (Tuomi, 2014). Clipa et al. (2011) confirmed that this learning tool has great influence on the development of metacognitive strategies during students' lives, in general, and in university academic space, especially. They further explained that learning diary promotes students' ability of learning and reflection, while helping students to think about new ideas, about practical activities that they carried out, and about the way of their studying. There are many papers that focus on this student outcomes assessment, emphasizing the importance of training of the "reflexive teachers" (Schon, 1987), the "analysis of professional practice" (Castincaud, 2003) and using learners' diaries to investigate the influence of students' proficiency on peer assessment (Zhao, 2011).

Alonso (2011) reported that learning diary can be helpful to students when it comes to giving reasons in support of their views when they have to evaluate their partner's work and their experiences. In addition, students who wrote learning diaries performed better in the evaluation of the process and they also felt more autonomous than those who did not use them. Moreover, it seems that this learning tool allows students with learning difficulties to reflect about what they think on their learning process, which can help a lecturer to understand them. Reflective Journal (2019) explained that writing a learning diary is a useful method of analyzing and evaluating our students' experiences by focusing on the method of learning as well as the subject matter. Keeping a reflective diary can force our students to think more deeply and helps them to provide a better understanding of a practice-based learning experience and see the relationship between practice and theory more clearly (see Figure 1).

and services; trade-related investment measures; negotiations relevant to developing countries; principles of trade regulations; case studies of trade regulations in practice.

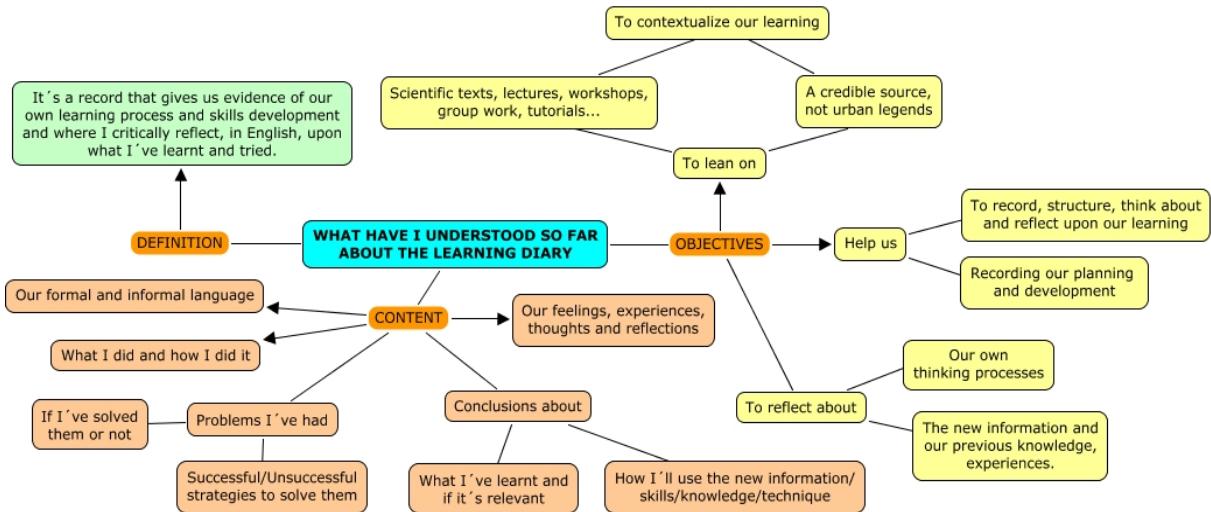


Figure 1: A Learning Diary Mind Map

Source image: IHMC CmapTool (2019)²

The literature reviews show that assessment in higher education has become increasingly important in helping our students learn and achieve our teaching goals. Learning diary is an assessment where our students write an entry regarding our subject that they learned about on a specific teaching occasion. Therefore, this assessment is more than just a note they take in the class while listening to the lecture. It records the reflections that our students provide on his or her point of view from the class. It is important to note that lecturers are teaching what they think they are teaching; however, our students are learning what they write they are learning (in their diaries), which might be something different.

METHODS

The research was conducted within a four-month International Economic Cooperation and ASEAN Trade Negotiation course of subjects for three classes, which was developed over a period of semester 1 in 2019, at Rajamangala University of Technology Phra Nakhon (RMUTP). The tool employed in this qualitative research study is a focus group interview to enable learning outcome analysis from the desired sample of 78 subjects from the three classes made up of fourth-year students in the Department of Finance, Faculty of Business Administration at RMUTP. There are three goals of the subject: 1) students understand controls and regulations of international trade, bilateral and multilateral trade agreements, regionalism and trade blocs, and roles of ASEAN international organizations, 2) students understand international disputes in trade of goods and services, and trade-related investment measures in ASEAN, and 3) students understand and analyse impacts of negotiations relevant to developing countries, principles of trade regulations, and trade regulations in practice in ASEAN.

The learning diary student outcomes assessment adopted by the author is one of recording and storing observations based on the narrative system defined by Reflective Journal (2019) and IHMC CmapTool (2019). To reach the subject goals, the learning diary student outcomes

² https://cursa.ihmc.us/rid=1351243389281_1640272519_282/Learning%20Diary.cmap

assessment in this paper has three stages: 1) defining the most important goals for our students in this subject to achieve as a result of participating in our course experience (outcomes), 2) evaluating how well our students are actually achieving those goals (assessment), and 3) using the results to improve our course experiences (closing the loop).

The students knew how to write learning diary when the lecturer mentioned both knowledge, hard skills and soft skills (for example, communication skills, professionalism, teamwork and personal development) from Google Classroom instruction, VDO and the lecturer's explanation in the classes. They have to write their own diary every week in Microsoft PowerPoint. However, because the students had never written a learning diary before, the lecturer gave them an explanation of the basic four guidelines for writing a learning diary below and the learning diary template sample (see Figure 2).

- Description of the experience/event
 - Describe what happened in the class
 - Describe who and/or what was involved
- Interpretation of the experience/event
 - - What aspect of the experience/event was the most important?
- What was the most interesting?
- What was the most useful?
 - How can it be explained?
 - How is it similar to or different from others?
- Outcome of the experience/event
 - What have I learned from this experience?
 - What would I like to learn more about?
 - How can what I learned be applied to my daily life or in the future?

Figure 2: The Learning Diary Template Sample

1. Need the experience to reflect on: although the purpose of learning diary is to reflect, the students must have been involved in an activity or experience and need to write their observations including what was done, what was the objective and what was the outcome.

2. Be selective: it isn't necessary to write about every little detail - focus on key points and ideas that interest our students.

3. Include mistakes as well as successes: mistakes happen and it is fine, because we can learn from our mistakes. Compassionate acceptance of our students' mistakes enhances their enthusiasm and determination to move forward toward their goals.

4. Reflectively review the diary regularly: to use learning diary to its fullest advantage, review older entries from time to time. Reflect further on what students wrote previously to determine if new knowledge and experiences alter previous thoughts and feelings.

RESULTS AND DISCUSSION

Students Achieve the Goals

Even though the goals of this course are about understanding controls and regulations of international trade and roles of ASEAN international organizations, including negotiations relevant to developing countries, and trade regulations in practice in ASEAN, in order to help the students become successfully independent, the lecturer had to teach more about how to apply these theories and soft skills in their daily lives. This includes adaptability, attitude, communication, creative thinking, work ethic, teamwork, networking, decision making, positivity, time management, motivation, flexibility, problem-solving, critical thinking, and conflict resolution.

In addition, even though students' soft skills depend on personal behavior and their background, lecturers should promote student understanding of society's shared and agreed values. From the three classes, we found that the students' learning diaries could help them to recognize the importance of theories and ethical principles in the conduct of this subject. In addition, this assessment could help the students in planning, conducting and reporting; and assume responsibility for and apply these hard skills and soft skills to their future work.

Students' Misconceptions

Student misconceptions were an obstacle in this course and unless remediated may continue causing difficulties in learning as students advance in their studies. For the first time, however, some students misunderstood about learning diary assessment because the students would most likely be unfamiliar with it. They thought this assessment was just a note they take in the class while listening to the lecture. They did not record the reflections that they provided on his or her point of view from the class. As the result, the lecturer had to explain more that this writing-to-learn assignment (learning diary) is characterized by their ability to promote in-depth conceptual learning by allowing the students to explore their understanding of topics and to find, on their own, information or materials which they are interested in for their future.

Students' Experience in Using Learning Diary

Students particularly appreciated lecturers who made an effort to be approachable and friendly by letting students learn from their mistakes, and breaking down the barrier between students and lecturers. When the lecturer understood the students more from this learning diary assessment, this increased students' engagement in terms of the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or doing activities, extending to the level of motivation required to successfully move forward with their education.

In addition, the students gave the lecturer information about their achievements and problems in this course, for example

1. What problems did the students have in the class or at home when learning by themselves?
2. How did they deal with these problems?
3. How well did these solutions work for them?
4. As the students approach a task, what did they do before, during, and after to completing the task?
5. Describe how the students felt as they worked on the assignment and in the class?

Students' Next Step (Zone of Proximal Development: ZPD)

We, both the students and the lecturer, found that learning diary is one of the instruments of the reflection of learning. The students could see that learning diary assessment is very useful for their learning and, as a result, they would like to do it more for their future studies and maybe more for their future work. However, for the students' next step, after understanding the students' feelings, the lecturer can increase their engagement and motivation by asking them more about

1. What did the students do about those feelings?
2. Did the teaching activities work? If not, can the students suggest something else that might work for them?

Learning diary assessment helped the lecturer refresh the curriculum with the students' opinions and suggestions. This is because the students could provide individual feedback to the lecturer and the student's progress was tracked to improve performance. Therefore, there was a lot of good feedback for the learning diary assessment, and both students and lecturer really liked it!

Improve the Course Experience

To improve our students' learning, our university (RMUTP) invests in digital learning materials and the various interactive elements being incorporated into these digital resources. Therefore, the lecturer is hoping to create an engaging learning environment and improve student learning outcomes through this opportunity. Our students are generation Z, and they have used digital technology since a young age and are comfortable with the internet and social media. Therefore, the lecturer can improve our students' learning experiences not only by promoting collaboration, but also by using the internet and social media. Currently, the lecturer employs Google Classroom and Google Education for our classes. Moreover, in the future, the lecturer plans to use learning diary online from Fourteenfish.com. Although creating memorable learning experiences takes time, it is well worth the investment for lifelong learning.³ However, it is important to remember there are many ways to structure learning diary. For students keeping a learning diary that will be submitted as an assignment, it is best to give the students a chance to select which method they prefer. We believe that there is no one correct way for how to write a learning diary.

³ The Commission of the European Communities (2001) defined that a lifelong learning is "all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective." (Commission of the European Communities, 2001).

Student's Learning Diary Sample

WEEK 2
01-07-19

Learning & Present

10 วิธีการแต่งรูปแบบ PowerPoint ให้ดูมี Style

learning
สร้างกราฟใน PowerPoint

brainstorm
วางแผนและคิดอย่างมีประสิทธิภาพ และ สร้างสรรค์

Creative
ออกแบบกราฟิกที่น่าสนใจ

Presentation
นำเสนอและสื่อสารอย่างมีประสิทธิภาพ

WEEK 3
08-07-19

Learning
Presentation
Asean

ในวันเดียวได้เรียนรู้เรื่องราวของอาเซียนและการเมือง
และเศรษฐกิจ ที่ไม่ได้เรียนรู้ในห้องเรียน เช่นเดิม
เชิญชวนศึกษาเรื่องนี้ต่อไป

WEEK 8
12.08-19

วันแม่แห่งชาติ

12 ธันวาคม พระราชทานวันชาติไทย

CONCLUSION

The aim of this learning diary student outcomes assessment is to lead the students to more conscious self-regulation through metacognitive experience and reflection, which can guide questions encouraging students to analyse their learning process and reflect on their thoughts about their development in this subject. We found that successful classroom management depends not only on the lecturer's understanding and preparation, but also on the students' understanding and participation. Because lecturer understanding can create student engagement, increased use of learning diary is related to a number of aspects of students' engagement. After it was made sure that the students wrote a specific task, and did not state what the lecturer usually did, the student's learning diaries could help the lecturer to find the class problems and also the ways to fix them. This formative assessment which takes place during a course can help our students do better with summative assessment in the final evaluation at the course's end. Therefore, the lecturer's understanding from learning diaries is the most important key to making our students successful and happy in our classes.

However, for the first time, some students misunderstood about learning diary assessment because our students from both subjects would most likely be unfamiliar with it. They thought this assessment was just a note they take in the class while listening to the lecture, and they missed some important points, such as their thoughts and their feelings in the class. As a result, the lecturer had to explain further that this writing-to-learn assignment (learning diary) is characterized by their ability to promote in-depth conceptual learning by allowing the students to explore their understanding of topics and to find, on their own, information or materials which they are interested in for their future. Finally, the students could understand and realise that using learning diary could help them practice self-reflection. In addition, using learning diary helps the lecturer understand our students more, and this increased students' engagement in terms of the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or doing activities, extending to the level of motivation required to successfully move forward with their education.

“Teaching is learning”,
hence we can learn to improve our teaching
from our students' learning diaries.

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BIOGRAPHICAL INFORMATION

Kwanruetai Boonyasana is a lecturer at Rajamangala University of Technology Phra Nakhon (RMUTP). Her major research fields are energy economics, educational economics and international trade. She was offered a scholarship from the Thai government to study at the University of Leicester in the United Kingdom where she completed a PhD in Economics in 2013. While there, she received the Best Presentation Award from the Graduate Research Festival in 2011, and scholarships from the International Association for Energy Economics for international conferences in 2010-2013. In 2013, she returned to Thailand and was granted the Distinguished Award for 2016 by the National Research Council of Thailand for her PhD thesis "World Electricity Co-operation". In 2019, she received the Best Practice Award for Excellence in Research Teaching from the nine-universities system of Rajamangala University of Technology in Thailand. In addition, she received the Best Researcher Award and the Excellence in Knowledge Management Award in 2017 and 2020 respectively from RMUTP.

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