**Title: Engaging students in a critical style of reflective practice through formative assessment**

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## Introduction

Higher education teaching and learning employ different approaches and techniques to empower students' learning experiences. The critical style of reflective practice in higher education is significant in preparing students for professional development, research competencies and deep learning (Glass, 2015). The word reflection has diverse meanings, described as the continuous and active engagement towards any form of knowledge resources with the employment of critical thinking (Dewey, 1983). Schön (1983) emphasised reflection activity as a method of re-evaluating experiences in different forms comprising individual comprehension of self and others. The critical style of reflective practice requires continuous efforts, attempts, and complex thought processing of unstructured ideas from various resources (Moon, 1999). Reflection also includes experiences and the development of insights, which enable the active functioning of cognitive and affective elements (Boud et al.,1985). Therefore, the growth of reflective practice needs active engagement and thinking to arouse individual performance in reflection (Boud, Keogh & Walker, 1996).

Critical reflection impacts self-development, social interaction and careful processing of information from the environment (Rymes,2015). Reflective engagement requires individuals to constantly search for new perspectives and relearn the wisdom behind the situations and actions (Osterman, 1990; Ng.e t al, 2020). Bruno and Gilardi (2014) highlighted that critical reflective

practice occurs when the writer considers a mental state is limited and inadequate and tries to get a new perspective. In reflective writing, there are explicit references to the evolution of ideas, beliefs, emotions, and the reasons for this transformation (Hickson, 2011). The reflective essay allows the instructors to observe students' ability to confess knowledge and assess cognitive growth in constructing new and deeper understanding (Kellog, 2008), which cannot assess through multiple-choice tests (Bennion, Cannon, Hill, Nelson, & Ricks,2020).

The quality of reflective practice can be monitored with professional supervision by the course instructors, which can be done in the form of written formative feedback (Bakar et al., 2020b). The contents of feedback may include the instructor's personal opinions based on professional justifications, as well as constructive comments for reflective writing (Wald & Weiss, 2018). The students also learn from the feedback and consider them by putting deep thought.

## Problem Statement

Reflective practice can be conducted through summative and formative assessments (Taras, 2005). Generally, the first part of any assessment procedure always applies summative assessment, which uses a single evaluation based on specific criteria (Scriven, 1967). The main difference between formative and summative assessments is due to feedback. In contrast, the formative assessment approach adds continuous feedback and follow-up procedure to give chances to the students to achieve the standard criteria (Sadler 1989; Taras, 2005; Taras, 2009). Therefore, to empower the growth of the reflective practice, it has to be conducted as a formative assessment, provided with frequent attempts and personalised feedback (Bruno, & Dell'Aversana, 2016; Bakar et al.,2020a; Bakar et al.,2020b). The shift from the traditional approach to learning to the formative assessment requires the active engagement of students in reflective writing. At the same time, the teachers engage in providing personalised feedback to each student based on the written reflection. Therefore, the design of this study also supports the collaborative interaction between the instructor and the students in the learning-oriented assessment (Hernández,2012).

A recent study on the growth of the reflective practice in higher education (Bakar et al., 2020a) indicated that only 19.6% (27 /138 entries) of the students' reflective writing were able to achieve the highest level of reflective practice style (critical reflective practice) due to high numbers of

continuous attempts, and personalised feedbacks received from the course instructors. The percentage performance of the critical reflective practice was considered lower than the performances of the interpretative and descriptive style of reflective practice. Some students showed low responses in reflective writing and only produced a low level of reflective style (such as descriptive style) regardless of the personalised feedback received. In Bakar et al.(2020a) study, the implementation of reflective practice was voluntary and did not contribute to the assessment marks. Therefore, the present study addressed the limitation of Bakar et al. (2020a) 's study by implementing the reflective practice as part of the continuous assessment, which carries the weightage of 60% towards the final marks for the course. In this study, the students had the opportunity to empower their critical style of reflective practice during the trial stages before performing the actual reflective practice assignments. In addition, they were allowed to self-evaluate their reflective essays based on the provided rubric.

Therefore, this study aimed to describe the performance of reflective practice between trial stages and assignments based on the evaluation rubric criteria.

## Methodology

This study involved 26 students taking the Social Psychology course offered in Semester 2 (2020/2021). All participants participated in this study because all the assessments (excluding the reflective practice trials) counted as formative assessment marks. This study employed a mixed-method design (quantitative and qualitative).

At the beginning of the first online meeting, the instructors (researchers) gave a briefing explaining the research purposes and procedures involved throughout the study. The instructor shared with the participants a few examples of the critical style of reflective writing as references. The students were invited to provide six(6) trials of reflective essays based on the topics learned in the course. They have to complete an assignment after every two trials. Towards the end, they completed six (6) reflective writing trials and three (3) assignments with a weightage of 60%. All reflective writings were uploaded to the e-learning platform (Eleap).

To initiate the reflective practice, the instructor provided clear instruction guidelines on the learning unit involved for each trial and assignment. For example, suppose they chose a few terms for their reflective writing trials and cannot use the same terms anymore for the assignment preparation. Students had to refer to the reflection rubric as a guideline to perform each trial and assignment. They were encouraged to develop peer interactions to learn from each other.

The quality of the students' reflective writings were evaluated by the respective course instructor (for all trials and assignments), other researchers (for assignments 1 and 2), and their peers (for trials 3-6 and assignments 2 and 3). All entries from the trial stage and formative assessments were analysed based on the following rubric (adapted from Kember et al. 2008).

| Criterion/Level | Critical Reflection 18%-20% | Reflection 17%-15% | Understanding 14%-12% | Non-Reflection 11%-1% |
|---|---|---|---|---|
| **Reflection on existing knowledge** | Critically reviews existing knowledge, questions assumptions, and articulates new perspectives as a result of experience | Active and careful consideration of existing knowledge and articulates new understanding of knowledge as a result of experience | Makes use of existing knowledge without an attempt to evaluate/appraise knowledge; demonstrates understanding but does not relate to other experiences or personal reaction | Automatic/superficial responses with little conscious/deliberate thought or reference to existing knowledge; responses are offered without attempting to understand them |
| **Connection to academic concepts** | Demonstrates superior connection between experience and class content (concepts/theories) and literature; evidence of application of theory and reconstruction of perspective | Demonstrates clear connections between experience and class content (concepts/theories); evidence of application of theory | Connects experience with class content (concepts/theories) but remains superficial or abstract | Connections are not drawn between experience and class content (concepts/theories) or literature |
| **Evidence of development** | Articulates transformation of their perspective of themselves or about a particular issue/concept/ problem as a result of experience | Articulates new understanding/insights about self or particular issue/concept/ problem as a result of experience | Limited/superficial insight about self or particular issue/concept/ problem as a result of experience | No evidence of insights about self or particular issue/concept/ problem as a result of experience |
| **Attending to emotions** | Recognition, exploration, attention to emotions, and gain of emotional insight | Recognition, exploration, and attention to emotions | Recognition but no exploration or attention to emotions | Little or no recognition or attention to emotions |

| Analysis and meaning-making | Comprehensive analysis and meaning-making | Some analysis and meaning-making | Little or unclear analysis or meaning-making | No analysis or meaning-making |
|---|---|---|---|---|

## Result & Discussion

The findings of this study describe that there is positive growth in reflective practice activity among students. Table 1 shows that most students gave their best attempts for the reflection and critical reflection level. The performance between trials and assignments also indicated the differences. Some participants scored consistently for all trials and assignments, and some scored differently between trials and assignments.

The findings also showed that the participants tried their best to achieve the critical style of reflective practice. Although not all students achieved the critical style for each trial (except for trial 5) and assignment, they still demonstrated a writing quality, at least in the form of reflection. The continuous attempts and personalised feedback allowed the students to empower the quality of reflective practice writing up to the highest level, which is critical style.

**Table 1**: Overall performance for all trials and assignments

| Trial-Assignment /Level | Non-reflection level | Understanding level | Reflection level | Critical reflection level |
|---|---|---|---|---|
| Trial 1 | 1 (3.8%) | - | 12 (46.2%) | 13 (50%) |
| Trial 2 | - | 2 (7.7%) | 3 (11.5%) | 21 (80.8%) |
| Assignment 1 | - | - | 16 (61.5%) | **10 (38.5%)** |
| Trial 3 | 1(3.8%) | - | 11(42.3%) | 14(53.8%) |
| Trial 4 | - | - | 7(26.9%) | 19(73.1%) |
| Assignment 2 | - | 1(3.8%) | 9(34.6%) | **16(61.5%)** |
| Trial 5 | - | - | - | 26(100%) |
| Trial 6 | - | - | 5(19.2%) | 21(80.8%) |
| Assignment 3 | - | - | 15(57.7%) | **11(42.3%)** |

Overall, findings from this study provide additional evidence that formative assessment allows students to see their growth in learning a subject matter. Students' engagement in this teaching and learning activity enhances their cognitive capacity to think critically. Using a standardised rubric allows the students to clearly understand what is needed to achieve the critical style of reflective practice. The outcomes of this study support the findings and suggestions of previous studies that addressed the need for continuous assessments, personalised feedback, and promoting the critical style of reflective practice (Bruno, & Dell'Aversana, 2016; Bakar et al.,2020a; Bakar et al.,2020b) Ng.e t al, 2020; Moon, 1999), and usage of the standardised rubric (Kember et al. 2008).

## Conclusion

Implementing reflective practice as a method of assessment brings new perspectives that students have various resources that can be reflected, analysed and integrated with the course contents. The matter is how we, as educators, bring them to empower their resources in the form of constructive and meaningful ways.

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## Keywords

Critical reflection, reflective practice, personalised feedback, formative assessment

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