The Prompts for Interns' Reflections (PIR): A Pilot Study Investigating its Face Validity and Feasibility

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Abstract
This study investigates the face validity of an instrument developed to help elevate critical thinking among interns. The instrument consists of a set of questions to guide interns' reflections called *Prompts for Interns' Reflections* (PIR). The items were checked for their comprehensiveness which is one of the validity criteria of the Description of Response Form proposed by (Rubio et al., 2003). Undergraduate students (n=9) who were undergoing internship participated in this study. The interns were asked to write their reflections on their internship experience based on the PIR and completed a survey. The findings from the survey indicated that the majority of the interns provided positive feedback on the PIR. The analysis of the written reflections also shows that the interns could write according to what was required by the questions. Generally, the prompts are feasible and valid in terms of its face validity particularly its comprehensiveness.
Keywords: Validity, Critical Thinking, Reflections, Prompts for Reflections, Pilot Study

Introduction
A pilot study (PS) is an important element in a study although always went 'under-discussed, underused and underreported' (Prescott & Soeken, 1989). A PS is a small-scale research study that is conducted before the final actual full-scale study (Ismail et al., 2017; Polit & Hungler, 2003, as cited in Connelly, 2008). Researchers did PS prior to their actual studies for a number of reasons. One of them is that data from PS is used as guidance for researchers to make adjustments as well as refine their research methodology prior to the final study (Ismail et al., 2017). Other reasons include to pre-test a certain research instrument (Baker, 1994 as cited in Ismail et al., 2017), to assist researchers in making estimations for the required time as well as the funding involved for the project (Crossman, 2007 as cited in Ismail et al., 2017; Becker, 2008 as cited in Connelly, 2008) and to inform researchers to whether their actual study will be feasible or not which includes discussing potential hurdles in the main study or during the data collection stage (Baker, 1994 as cited in Ismail et al., 2017; Jairath et al., 2000; Prescott & Soeken, 1989; Teijlingen & Hundley, 2001).

Prior to this PS, an instrument called the *Prompts for Interns' Reflections* (PIR) was developed to assist interns in producing highly critical reflections. This instrument has gone through rigorous content, construct and criterion validity check through literature reviews and subject matter experts (SME) evaluation. This pilot study is the last validity check before the PIR is considered ready for its intended use. With the use of the PIR, it is hoped that it can help elevate critical thinking skills among interns before they embark on their working journey.

The data collected from the PS will give an indication as to whether the prompts; i) have enough and relevant questions that will help interns to reflect on their internship experience, (ii) are clear and can be understood by the interns to guide their reflections and iii) are presented in an appropriate format. Once these objectives are achieved, the instrument can be safely said to be ready for use in the main study.

Literature Review

For about 100 years now, the subject of critical thinking has been researched on and researchers have been trying to find the variety of ways to teach critical thinking. (Fisher, 2001). The idea of critical thinking was established by Socrates and his followers; Plato and Aristotle. Critical thinking has been defined differently by different experts. John Dewey, the 'father' of modern critical thinking tradition, defines critical thinking as "active, persistent, and careful consideration of a belief or supposed form of knowledge in the light of the grounds which support it and the further conclusions to which it tends." (Dewey, 1909, p. 9). According to Paul (1992), critical thinking can best be defined as the scaffolding of the mind in which he mentioned in many of his works claiming that critical thinking is thinking about your thinking to make your thinking better. Regardless of how critical thinking is defined, it is believed that the end result of critical thinking is for one to make improvement in the way they think.

Paul (2005) also states that a critical thinker can develop critical thinking by frequently studying and critiquing it. Thus, it indicates that the process of critical thinking is a conscious one that can be practiced by anyone to possess the highly needed skills. Additionally, Dunne (2015) and Facione (1990) claimed that one of the most crucial outcomes of higher education courses is critical thinking. Thus, this is where education plays an important role in producing students with critical thinking skills.

Incorporating tasks and activities that require critical thinking skills in class is something that is common for educators to assist students to develop critical thinking skills. Among the many methods available, one of it that has a strong relationship with critical thinking is the writing of reflections (Xhaferi & Xhaferi, 2017). Reflection can be perceived as a vital aspect in writing journals which helps the writer "to stand outside the experience, to see it more objectively, and to become detached from the emotional outcomes" (Pavlovich, 2007, p. 284).

Paul (2005) agrees that the connection that exists between critical thinking and skilled reading and writing is natural because in order for one to acquire critical thinking skills, one should first learn to read thoroughly and write meaningfully. The latter is the main issue that needs to be addressed here as Poldner et al. (2014) claimed that many students wrote reflections that were merely descriptive. Due to this, some researchers (Clarke, 2004; Han, Li, Sin, & Sin, 2011; Klimova, 2014; Daud, 2012; Moussa-Inaty, 2015) decided to provide students with some kind of scaffolding, such as questions and prompts, to help them understand better of what is expected of them when it comes to reflective writing.

Some investigations were done in order to find out the tools used to encourage critical reflective writing. In 2017, Xhaferi & Xhaferi assisted the students in writing their journals by

asking them to write down their learning difficulties, learning strategies, and new things that they've learnt. They found positive outcomes from this practice where students' critical thinking skills were reported to improve. In the same year, Adel & Ramezanzadeh did a similar study by developing a tool named Professional Planning Development (PPD) which consisted of prompts to help the students in writing their reflections. The tool aided them to document the evidences and writing activities for their reflections and discovered that this kind of scaffolding might be a strategy that is effective to be used by students in producing their reflections. In a recent study by Febriani (2019), prompts were also provided to the students to help them respond to two short stories and a novel for their portfolios. Positive results were also obtained from this research as the prompts were said to be able to give them ideas on what to write. Based on these studies, we can summarize that providing some kind of scaffolding tool for students to assist them in writing critical reflections is beneficial for them.

In order to investigate the relationship between guided reflective writing critical thinking, an instrument or a tool needs to be developed to assist students to write highly critical reflections and finally promote critical thinking among them. Although this method is common for healthcare practitioners, it is uncommon for a generalist degree (Chamberlain, 2012). Thus, there is a need for a specific instrument to be developed to help students in the social science group in writing their critical reflections.

Methodology

A survey method was used to investigate the face validity and feasibility of this instrument. The participants were given a set of questionnaire that consisted of nine questions for them to complete via Google Form. Eight of the questions were represented by a 4-point Likert scale ranging from Strongly Disagree to Strongly Agree and the ninth question was an open-ended type that required the respondents to provide comments and suggestions if they have any. All eight items in the survey were developed based on one of the criteria of the Description of Response Form proposed by (Rubio et al., 2003). This response form consists of four criteria that were meant to be used when conducting a validity study involving subject matter experts (SME). The four criteria are i) representativeness of the content domain, ii) clarity of the item, iii) factor structure and iv) comprehensiveness. These criteria were used to determine the kind of questions to ask the SMEs after the PIR was developed prior to this PS. Particularly for this study, only criterion 4, which is comprehensiveness was seen suitable to be used in the questionnaire. The items in the questionnaire were adapted from the survey form sent to subject matter expert (SME) for content validity purpose. The eight questions that represent the four criteria are:

i)   Item 1: The instruction is clear.
ii)   Item 2: The number of questions is about right.
iii)   Item 3: The questions can be clearly understood.
iv)   Item 4: The structure and format of the questions are well presented.
v)   Item 5: The questions allow you to relate to your personal development.
vi)   Item 6: The questions allow you to relate to your professional development.
vii)   Item 7: The questions do not omit any important issues relating to your working experiences.
viii)   Item 8: You did not have any difficulties using the questions as a guide to your reflections.

This pilot study involved nine undergraduate students from the Bachelor of Applied Language Studies (Hons.) English for Professional Communication, Academy of Language Studies, UiTM Shah Alam. Nine participants are deemed enough for this pilot study based on the justification provided by Hertzog (2008) that is, in assessing the "clarity of instructions or item wording, acceptability of formatting, or ease of administration, a sample of 10 or even fewer may suffice" (p. 182). He adds that the decision to the number of samples finally depends on the cost and time constraints as well as by size and variability of the population. Hence, for this study, the number of participants obtained was considered acceptable.

The data obtained from this study was analysed using quantitative descriptive analysis. Mean scores for the responses on the questionnaires were calculated. As for Item 9, since it was an open-ended question eliciting comments and suggestions, each response was analysed manually for any significant feedback to further improve the prompts.

The feasibility of the prompts was also investigated by analysing the written reflections produced by the interns. Since the rubric was still in the development stage and had not been finalized, the reflections were assessed based on the length, respondents' comprehension on the prompts as well as their ability to provide answers as required by the questions. It is important that the length of the reflections are given attention to because the PIR was initially created without any instructions specifically on the length of the reflections as Moon (2006) emphasized that the quality of a reflection is not measured by its length. However, after going through the validity process with subject matter experts, they suggested that the instructions should include the length of the reflections as guidance for the students. Therefore, this pilot study would help in confirming that 500 words for the reflections is adequate for the students to provide highly critical reflections by using the PIR as guidance.

Results and Discussions

To check on the face validity and feasibility of the PIR, the mean score of each survey item was calculated. Table 1 below presents the means scores of the survey items.

Table 1
Mean Scores of Individual Survey Item

Item No.	Item Statement	Mean Score	Standard Deviation
1	The instruction is clear.	3.11	0.60
2	The number of questions is about right.	3.22	0.67
3	The questions can be clearly understood.	3.11	0.60
4	The structure and format of the questions are well presented.	3.11	0.78
5	The questions allow you to relate to your personal development.	3.33	0.5
6	The questions allow you to relate to your professional development.	3.44	0.53
7	The questions do not omit any important issues relating to your working experiences.	2.89	0.60
8	You did not have any difficulties using the questions as a guide to your reflections.	3.56	0.53
	Overall Mean Scores	**3.22**	**0.21**

As displayed in Table 1, the PIR generally gained positive comments for its face validity and feasibility as shown by the overall mean scores of all the eight items which was 3.22, an inclination towards strongly agree response. Item 8 (*You did not have any difficulties using the questions as a guide to your reflections.*) especially had the highest level of agreement with a mean score of 3.56, indicating that the questions/prompts were easy to use as a guide to their reflections. This is followed by Item 6 (*The questions allow you to relate to your professional development.*) which had a mean score of 3.44 and closely followed by item 5 (*The questions allow you to relate to your personal development.*) and item 2 (*The number of questions is about right.*) with mean scores of 3.33 and 3.22 respectively, indicating that all of them were leaning towards strongly agree response. Items 1 (*The instruction is clear.*), 3 (*The questions can be clearly understood.*), 4 (*The structure and format of the questions are well presented.*) received had the same mean scores of 3.11 and the lowest was item 7 (*The questions do not omit any important issues relating to your working experiences.*) ($\bar{x}$ = 2.89). Nonetheless, generally along the scale of agree and strongly agree, the interns' responded that the PIR is comprehensive contributing to the face validity and feasibility of the PIR.

Question 9 is an open-ended question that required the students to state any comments or suggestions that they might have for the improvement of the PIR. Out of all the respondents, 5 respondents gave comments and suggestions regarding the PIR.

Respondent 8: *The instruction would be better if the question on "solutions to the problem" is provided.*
This suggestion was accepted and it was added in the instruction in order to ensure that students have a clearer idea on the reflections that they have to write before they even start writing. Furthermore, the inclusion of finding solutions to the challenges that they are facing is crucial in the PIR, which comes under the sixth prompt, is as stated by Paul (1992) as where the reasoning starts in this whole writing process and it should not be taken lightly. Reasoning is a crucial element in encouraging critical thinking because one will only think critically if he or she understands not only what but also why they are learning (Paul & Elder, 2007)

Respondent 2: *I think the examples need to be in line with the question subjects rather than having different aspects in the examples. I think examples should be further explaining the questions.*
Respondent 6: *The questions can be more clearer [sic] and elaborated more such as the ideas/experiences part.*
These respondents (2 and 6) were referring to two questions in the PIR. The questions are as follows:

Question 4: How did I organize the readily available information to assist me in finding the solution? Could I categorize the info that I had into different categories? e.g. irrelevant vs relevant, most important vs least important. If I needed more information, where and how did I get it?

Question 6: What were the consequences of my actions and was I satisfied with the outcome? What is my future plan? e.g. vary methods, improve communication skills with colleagues, do more research on the problem.

For these questions mentioned by the respondents, it was decided that they were kept as they are. As can be seen, both questions are quite lengthy. If explanations were added further for the examples, each question will become longer and might confuse the interns even further. That is why in the process of constructing the PIR, the questions were simplified and written in short questions. This is also done so that students will not be overwhelmed by the total number of questions in the PIR.

Respondent 3: *I'm quite confused with the instruction in the PIR. My suggestion is to use more graphics or bullet points. Thank you.*
This suggestion was accepted and the instructions were put in bullet points so that the students do not miss out on any of the instructions when going through with the writing process.

The respondents also gave some positive and encouraging comments:
Respondent 6: *But overall it was clearly understood*

Respondent 1: *Overall, I find the research to be very interesting. You have given clear and vivid instructions for all your participants. All the best.*

Analysis of the reflections written by the interns based on the PIR shows that the responses were satisfying. Since the rubric for guiding the assessment of the reflections has not been finalized, the reflections were assessed based on the length of the reflections, students' understanding on the prompts and their capability in answering the prompts.

In terms of the length, 3 out of 9 reflections were below 500 words (between 300 and 498 words). The significant difference that was found between reflections that were written below 500 words and above 500 words is that the latter managed to answer all the questions in the PIR compared to the former. The 3 respondents whose reflections were below 500 words omitted 1, 2, and 4 questions each. This has helped in approving that the instruction to write within 500 words is indeed appropriate in order to ensure that students answer all the questions in the PIR.

The other aspect needed to be examined is the reflections themselves. Fortunately, reading the reflections by the respondents gave an assurance that not only the respondents understood their tasks, but the prompts were also suitable to be used as guidance for interns to write their reflections as the majority of them achieved in explaining clearly their experiences during internship based on the PIR.

In view of the fact that the pilot study received mainly positive responses from the respondents, some adjustments and improvements were made to the PIR to make it clearer and more understandable by interns and they can finally write critical reflections and not merely descriptions of their working experiences.

It is hoped that with the improved version of the PIR, the process of collecting data in the actual study will be smooth and the interns' reflections using the PIR as guidance can eventually assist then in elevating their critical thinking skills, which is the main objective of the main study to be conducted.

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