

DEVELOPMENT, SELECTION AND CONTEXTUAL VALIDATION OF
SELF-REFLECTION ASSESSMENT AS A SUPPORTIVE FORMATIVE
ASSESSMENT PRACTICE FOR PROSPECTIVE TEACHERS

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Abstract

Self-reflection is a known way for students to check what they understand see where they have issues and plan how to get better. Putting a known method into a bigger plan for evaluating students' needs careful thinking about why it is useful how it fits and if it can be used easily. This study explains how they picked, made, adjusted and checked Self-Reflection (SR) questions as a way to evaluate students in a plan that includes four methods for improving instruction for future teachers. The model has two parts in one pair of practices, Scenario-Based Assessment (SBA) and Justification-Based Assessment (JBA) are primary and two helper parts are supportive, Self-Reflection (SR) and Peer Assessment (PA) grouped with them to make separate pairs. SR was placed with SBA so that SBA gave the way to use what was learned and SR gave a chance for students to look back, reflect and plan to get better. The questions were made through a process that included looking at what others have written checking the Research Methods in Education course making the questions matching them with the course getting experts to check them and making changes. Three experts rated the questions on whether they're good if they fit and if they can be used in educational intervention. The ratings were between .73 and .76; .74 and .75; .75 and .76 for thirty-five prompts at three criteria. These ratings showed that the final questions/prompts fit the setting well. The study shows a repeatable way to make a known technique fit into a bigger plan for evaluating students.

Introduction

Formative assessment is now seen as something that helps students keep learning by using what they know to help them learn more. Black and Wiliam (2009) say that formative assessment is about getting information about what students re-learning and using that to help them get better. This idea can bring together ways of evaluating students. In this picture different ways of evaluating students have different roles. Some ask students to use what they know explain why or solve problems while others help students think about what they have learned.

Self-Reflection is a part of the second group. Reflection helps students look at their learning see where they have problems think about what they understand and plan how to improve in a course (Boud, Keogh, & Walker 1985). To identify students' needs of learning and ability to acquire competencies and adapt change self-assessment is an effective strategy (Andrade & Valtcheva 2009). Another important element of self-assessment is feedback. During self-reflections and assessments students receive and give feedback from peers that help them to improve their learning and competencies (Boekaerts, 1991; 1996; 1997; 1999; 2002).

In a broader research study use of self-reflection specifically in B.Ed. classroom has a purpose of assessing students' own learning/self-assessment after responding to a scenario-based assessment (SBA). When evaluating pair B (SBA+SR) are put into an educational intervention plan each participant needs a role that works with own engagement and critical thinking. The process of choosing prompts should think about the class setting, the course, the students, the order of the tests or assessment and what the self-reflection practice is meant to do.

This is very important in teacher training that future teachers need to learn more than course content and enhance their professional competencies demanded for twenty-first century education. They also need to look at their learning, self-assess and find ways to get better. In a Research Methods in Education class students meet ideas that need to be understood through scenarios and self-reflections. That way the research topics used not just remember content but also use in real classroom situations. Self-reflection practice is a way of evaluating students during a course instruction, designed for a broader research intervention setting or needs.

The study is part of making an Improved Formative Assessment Practices (IFAPs) structure or plan that has four strategies to use for specific purpose of intervention for specific period of four to six weeks (a semester). The pairs of practices in that model include Scenario-Based Assessment (SBA) Justification-Based Assessment (JBA) Peer Assessment (PA) and Self-Reflection (SR). The four practices were grouped into two pairs based on what they do. Pair A had JBA and PA while Pair B had SBA and SR. In this structure SBA and JBA were the primary ways to evaluate students' own feedback through self-reflection while PA and SR helped as supportive practices.

The article focuses on Self-Reflection as the supportive part in Pair B. It's not about the self-assessment and reflections only but also investigates whether SR makes students more engaged in classroom learning and think deeply about research topics. The study presents the process how SR was chosen for the model, how the questions/prompts were made and adjusted and how experts checked those prompts if they

fit well with intervention, research course and two competencies simultaneously. The main point is that the article describes a way to pick and adapt a known method of self-assessment into something reflective that fits a B.Ed. class setting for use during educational intervention.

Problem Statement

The value of thinking about own learning and improving is well known in educational settings, however just because an assessment method is supported by theory does not mean that a set of questions/prompts works for any research setting. General reflection questions may not get answers if they are not connected to the task, the class or the goal of the evaluation and align well with desired outcomes. The misalignment does not provide desired outcomes for an assessment method or practice. There is a need to align those assessment practices with research objectives before the implementation or use in classrooms before final selection. The selected practice self-reflection also needs all the issues to be resolved before its use in an educational research intervention for a broader study.

Another problem comes when combining ways of evaluating students into a model or educational plan. It is significant to understand that which B.Ed. course required which kind of assessment methods or strategies to enhance learning outcomes. And to use one strategy along with those strategies for the course that can actively engage students in improving their higher-order thinking. The methods, strategy or practice should work together with not repeat each other. And one should complement, support and scaffold other strategy to attain same outcomes for the course. A method like Self-Reflection needs to be placed in a way that works with the SBA scenario task in an efficient way. In the IFAPs plan Scenario-Based Assessment was selected as the way for Pair B because of its relevance and effectiveness to promote learning engagement and deep thinking. In literature the use of scenarios with self-reflective practices is not a new combination (Iqbal & Every, 2005; Hilton, 2003).

Third issue is lack of practical tasks in practice or activity-based subjects such as research methods in education. There is a need to implement or experience learned knowledge

from the course that future teachers should use in real or practicum situations. Self-Reflection was then used as a supportive practice that gives a chance to think about what was learned to use in hypothetical scenarios in an intervention study. The problem this study looked at was how to make Self-Reflection questions that are based on theory fit the class work with SBA and are useful for prospective teachers' learning engagement and deep-thinking purposes.

Study Purpose

The purpose of conducting that study was to develop, select and validate those prompts or questions that collected reflections of participants to evaluate their learning engagement and critical thinking along with content understanding in a B.Ed. Honors Research Methods in Education course. The study specifically explores the reflections on the responses of students on a scenario-based assessment that included seven topics of research methods in education course. The agenda of conducting such study is:

- Create and explain rules for choosing Self-Reflection as a practice to evaluate students and demonstrate the role it has in relation to SBA in Pair B
- Make Self-Reflection questions/prompts that fit the class and are based on what people have written, the class and the experiences from SBA on the course topics
- Match the questions/prompts with the topics in the Research Methods in Education class
- Get experts to check if the questions/prompts are good if they fit and if they can be used to get reflections of participants
- Make the questions/prompts ready for use in class.

Research Questions

The study asked the following questions:

RQ1. What rules help choose Self-Reflection as a formative assessment practice to evaluate students' self-reflections. What role does it have in relation to SBA in the IFAPs plan?

RQ2. How can Self-Reflection questions/prompts be adjusted for research

purpose and prospective teachers studying Research Methods in Education course?

RQ3. How much do experts think the Self-Reflection questions/prompts are good, fit and can be used in educational intervention?

RQ4. How can expert comments help make the Self-Reflection questions/prompts better for use in educational intervention

Literature Review

Self-Reflection as a Formative Assessment Practice

The idea of thinking about learning and what happened has been around for a time in education. Dewey (1933) saw thinking as a way to look at what people believe. Defining reflection as practice in educational setting means give life to self-learning theory in classrooms. Various educationist believe that self-assessment and reflective writings have potential to improve learning and skills among students in a remarkable way (Rodgers, 2002; Glassman, 2001; Riga, 2020) The ideas that come from them different from just thinking without thinking. Schön (1983) added to this for training people to do jobs saying that people get better at their jobs by thinking about what they do. Boud, Keogh and Walker (1985; 2013); Boud and Walker (1998) said reflection is a way for students to go back to something they did pay attention to how they felt and think about it in ways that help them learn more. There are various reflection models and theories for guidance in research studies John Dewey and Donald Schön's models (Hébert, 2015) are examples of reflective practice in education.

In evaluation formative assessment helps students understand what they know and what to do next to improve and attain their degree outcomes (Black & Wiliam 2009; Andrade and Valtcheva, 2009). Self-assessment as formative practice works on checking students' progress in a course, continuous monitoring and helps them see where they need to get better. In this study Self-Reflection was not seen as a way to check what students know but as a way for them

to look at their learning experience of what they reflect after a main assessment of SBA.

The Role of Reflection in Teacher Education

Thinking about learning is especially important in training teachers because future teachers are learning how to check on teaching and learning. Structured chances to think can help students link what they learn to their experiences and think about how to get better. Reflective practice has been used in tests for training teachers (Cornish & Jenkins 2012).

For this study thinking was not meant to be a program for teachers. It was seen as a structured way to check what students know in class connected to specific topics in Research Methods in Education. With the help of literature (Rodgers, 2002; Glassman, 2001; Riga, 2020; Schön, 1983; Boud, Keogh and Walker, 1985; 2013; Boud and Walker, 1998; Hébert, 2015) reflection prompts for self-reflection practice were developed, selected and validated to attain broader research purposes.

From General Thinking to Questions That Fit the Situation

A main thing when making questions//prompts was that the practice stays connected to the

content and the activity where learning happens. So, the questions were made around experiences instead of using general questions like “What did you learn?”

The questions were made to do six things:

- see what was learned
- look at what was understood or confident, about
- find what was hard
- examination of reasons for difficulty
- interpretation of learning in relation to practice
- identification of future improvement strategies

This structure provided a basis for developing prompts that could generate meaningful written reflection while remaining feasible within routine classroom assessment.

Conceptual Position of Self-Reflection within the IFAPs Model

The broader IFAPs model was designed around four formative assessment practices organized into two functionally distinct pairs (Table 1).

Table 1: Structure of the IFAPs Model

Pair	Primary Practice	Supportive Practice	Functional Sequence
Pair A	Justification-Based Assessment	Peer-Assessment	Justify → Evaluate
	Scenario-Based Assessment	Self-Reflection	Apply/Interpret → Reflect → Improve

The distinction between supportive practices was intentional. The primary practices constituted the formative learning activity while the supportive practices strengthened the learning process generated through that activity. Within Pair B, SBA engaged learners with educational scenarios and SR followed this activity providing an opportunity for students to examine their own learning experience. The conceptual sequence of Pair B is: Scenario-Based Assessment → Self-Reflection → Recognition of Learning Needs → Future Improvement in research course learning and two competencies. Self-Reflection was consequently not designed as an outcome measure. It was designed as a

process through which learners could examine and respond to the learning evidence generated during the preceding activity.

Criteria for Selecting Self-Reflection

The selection of SR was based on six predefined considerations.

Formative relevance

SR needed to support the formative purpose of helping learners identify their current understanding and areas for improvement.

Functional complementarity

The practice needed to perform a function from that of SBA. Because SBA was primarily concerned with application and interpretation of research concepts under practicum-based scenarios. While SR practice could provide a subsequent opportunity for self-examination and reflection.

Relevance to teachers

The practice needed to be appropriate for learners preparing for teaching careers and developing their capacity to examine their learning. All the research topics are aligned well with their end of semesters' teaching practice experiences.

Alignment with the course

The practice needed to be adaptable to the content of Research Methods in Education than functioning as a content-free reflective exercise.

Connection with engagement and critical thinking

The prompts were designed to generate written evidence relevant to aspects of engagement and critical thinking, particularly behavioral, emotional-cognitive and social engagement; self-examination/regulation, analysis/evaluation, interpretation/comprehension, explanation/justification and inference/reasoning where appropriate. This alignment did not mean that individual SR prompts were treated as measures of these constructs; rather the prompts were designed to generate classroom evidence that could later contribute to qualitative interpretation within the broader intervention.

Practical feasibility

The practice needed to be manageable within the existing classroom schedule require additional resources and permit repeated implementation across selected course topics.

Methodology

Research Design

The study employed a design and development research approach (Richey & Klein 2007; 2014; 2019) the product-and-tool type, in which the object of inquiry is the systematic development

and formative evaluation of an educational product here the Self-Reflection prompt set. The process consisted of the stages:

Stages of Self-Reflection Practice

1. Identification of need
2. Selection of SR
3. Definition of its role
4. Development of initial prompts
5. Contextual alignment
6. Expert validation
7. Revision
8. Finalization

The present study concluded with the finalization of the SR materials/prompts. The subsequent intervention was treated as a stage of the broader doctoral study and was not used as evidence of prompt validity in this article.

Expert Panel

Three experts approached from two universities reviewed the developed prompts. The experts possessed expertise in educational research, English language and educational assessment at the teacher education level were independent of the course delivery and had no prior involvement in the development of the prompts.

Validation Instrument and Criterion

There were three criteria for validation content validity with research course, relevance with study and contextual feasibility/usability in broader research study at doctoral level. Participation of three local experts was voluntary. Their individual ratings on CVI, Relevance and Feasibility/Usability were treated confidentially and are reported in aggregate form following predefined criterion 0.75.

Research Context

The study was conducted within the B.Ed. Honors program of a public sector university in Pakistan. The target course was Research Methods in Education offered to teachers. The course was selected because its content requires students to engage with research concepts, methodological decisions, interpretation and application to contexts characteristics that provide an appropriate setting for integrating SBA with subsequent Self-Reflection.

Development Procedure

Stage 1: Identification of the Need for a Supportive Practice

The development process began with an examination of the intended functions of the broader IFAPs model. SBA was identified as a practice capable of engaging students in contextual application of research-method concepts. Application alone however did not provide an opportunity for students to examine their own learning experience following the task. A supportive practice was therefore required to extend the sequence beyond application and Self-Reflection was considered appropriate because it could enable learners to examine what they learned identify challenges and consider future improvement.

Stage 2: Selection of Self-Reflection

SR was selected on the basis of its relationship with formative assessment and its functional compatibility with SBA. The selection was not intended to establish SR as superior to possible formative practices; rather SR was selected because its reflective function complemented the application-oriented function of SBA within Pair B.

Stage 3: Development of the Initial Prompt Pool

The initial prompts were selected from five sources that are: literature on reflection and self-assessment, intended functions of SR, content of the Research Methods in Education course,

learning experiences hypothetically generated from SBA, and engagement and critical-thinking framework of the overall intervention. All prompts in the pool have been contextually validated by relevance, clarity, contextual appropriateness, distinctive and feasibility/usability.

Stage 4: Contextualization

The prompts were contextualized for teachers within the Pakistani teacher education setting. Wording was kept clear for routine classroom use while preserving the reflective purpose of each prompt. Then inviting general comments about a lesson, the prompts directed attention toward students' actual learning experience and future improvement.

Stage 5: Topic Alignment

The SR prompts were linked to the seven selected Research Methods in Education topics used in the intervention. The final structure comprised seven topics with five prompts per topic resulting in 35 Self-Reflection prompts. This topic-specific structure allowed the same reflective functions to be maintained across topics while ensuring that the content of each prompt remained relevant to the research-method topic.

Example of the Real Self-Reflection Prompts

For the topic Data Collection and Data Analysis Methods in Educational Research the final Self-Reflection section comprised five prompts:

Table 2: Example of Reflective Prompt/Questions

What did I learn about using data collection methods, such as questionnaires, observation and interviews?	How confident am I in applying both quantitative and qualitative analysis techniques?	Which analysis step did I find most challenging and why?	What did I learn about combining qualitative findings to understand a classroom problem more clearly?	How can I strengthen my skills for classroom-based research projects?
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These prompts illustrate the progression built into the SR design: learning recognition → confidence/self-examination → identification of challenge → interpretation/integration → improvement.

Expert Validation

The developed SR prompts were submitted to the three experts described in Section "development of prompts" who evaluated them on content validity (CVI) relevance and

contextual feasibility/usability. The ratings are presented in Table 2.

Table 3: Expert Validation Ratings of the Self-Reflection Prompts Set

Criterion	No. of Prompts	Expert 1	Expert 2	Expert 3	Mean	Range
Content validity	35	0.74	0.73	0.76	0.74	0.73–0.76
Relevance	35	0.75	0.74	0.75	0.75	0.74–0.75
Contextual feasibility/usability	35	0.76	0.75	0.75	0.75	0.75–0.76

The mean CVI of 0.74. The mean relevance and contextual feasibility/usability ratings approximated, the study's predetermined acceptance criterion of 0.75. These values are reported transparently as approaching than exceeding, the a priori benchmark. Where experts identified issues of wording, clarity, contextual appropriateness or prompt focus the relevant prompts were revised before finalization.

Prompts Finalization

Following expert review each prompt was examined against both the ratings and the qualitative expert feedback. The revision process focused on improving clarity of wording maintaining language for prospective teachers ensuring alignment with the relevant course topic avoiding overlap between prompts preserving the reflective rather than evaluative character of the activity and ensuring that each prompt contributed a distinct reflective function.

After revision the final Self-Reflection prompt set comprised 35 prompts across seven topics. The finalized prompts were prepared for implementation as the supportive formative assessment practice in Pair B of the IFAPs model.

Analysis

At the same time, the quantitative ratings and qualitative comments were systematically analyzed to look into specific areas that needed to be changed. Comments were clustered into the common themes of suggested revisions. These were categorized as: wording/clarity, topic alignment, conciseness and accuracy, contextual appropriateness, and reflective depth. The quantitative judgments and qualitative

recommendations were then taken together to further refine the self-reflection prompts.

The pattern of judgments by the experts was generally similar in the three criteria. The content validity was rated at 0.74, and ranged from 0.73 to 0.76 among experts. Relevance had an aggregate rating of 0.75 (range 0.74-0.75), and contextual feasibility/usability an aggregate rating of 0.75 (range 0.75-0.76). The experts also came up with five key areas that need to be improved, along with the quantitative ratings. Five prompts were reworded and clarified, ten were reworded to better clarify the focus of the prompt, five were reworded to make it more concise and accurate, and ten were reworded to make them more contextually appropriate and/or more reflective. The revisions were designed to make sure that the prompts at the end are clear, contextually relevant, accurate in relation to the prompt topics, and are sufficiently able to evoke more self-reflection and examination from prospective teachers.

Findings

The developmental process demonstrates that Self-Reflection was selected through a functional than purely descriptive approach. The practice was positioned within the IFAPs model because its primary function, examination of learning and consideration of future improvement complemented the contextual application provided by SBA.

The expert validation reported in Table 2 provided evidence regarding the suitability of the developed prompts. The consistency of ratings across the three experts supported retaining the developed structure while using expert feedback to guide refinement. These validation findings relate to the quality and contextual suitability of the prompts not to the

effectiveness of Self-Reflection in changing student outcomes.

The final product of the development process was a topic-structured Self-Reflection component capable of consistent implementation following SBA within Pair B of the IFAPs model.

Three experts reviewed the thirty-five self-reflection prompts and calculated ratings for each. The overall content-validity score was 0.74; relevance was 0.75; Contextual feasibility/usability was also 0.75. The experts' rating ranges were: content validity, 0.73 to 0.76;

relevance, 0.74 to 0.75; contextual feasibility/usability, 0.75 to 0.76. These numbers were combined with the feedback from the experts. Prompts that needed work, on wording, clarity, contextual fit and focus were revised before the final educational intervention was completed.

Qualitative Feedback Summary

The summary of expert recommendations and revisions to Self-Reflection Prompts is presented in below table:

Table 3: Summary Of Expert Recommendations and Revisions to Self-Reflection Prompts

Identified problem	Expert consensus	No. of prompts affected	Revision decision
Wording/clarity	All three experts identified a need to improve wording or clarify prompt meaning	5	Five prompts were reworded for greater clarity and comprehensibility
Topic alignment	All three experts recommended strengthening alignment between prompts and the intended topic/content	10	Ten prompts were modified to improve topic alignment
Conciseness and accuracy	All three experts recommended eliminating redundant wording and improving precision	5	Five prompts were revised to make them more concise and accurate
Contextual appropriateness	All three experts recommended adapting examples and wording to the prospective-teacher context	5	Five prompts were revised/adapted for contextual appropriateness
Reflective depth	All three experts recommended strengthening the reflective nature of the prompts	10	Ten prompts were revised to encourage deeper reflection

To develop and validate self-reflection prompts. Seven topics were identified and thirty-five prompts were created to help with the Self-Reflection component of the IFAP intervention. The draft prompts were presented to three subject experts to check the content validity, relevance, and contextual feasibility/usability. Qualitative comments were also made by experts on topics, duplication, focus of reflection, wording, and contextual appropriateness. Quantitative ratings were added up for each criterion and qualitative comments were reviewed for suggestions of revision. A set of prompts was identified as problematic and

revised prior to the final set being prepared for implementation.

The final set of 35 self-reflection prompts was determined after an expert review and revision process and is used in the intervention. The revision process was carried out both on the basis of the numerical rating of the experts and on the substantial recommendations of the experts. This allowed the researcher to address both the overall acceptability of the prompts, and specific weaknesses identified at the prompt level. That's why the final prompts were deemed

appropriate to be used in the Self-Reflection part of the formative assessment intervention.

Discussion

The present study demonstrates that the selection of Self-Reflection for an assessment intervention can be approached as a systematic design decision rather than, as the incidental inclusion of a familiar technique.

The first thing to think about was how the different parts of the model would work together. The IFAPs model was built around learning functions a cyclic process of formative assessment. In Pair B the SBA provides an opportunity to students how to use and understand research methods and concepts in real-life situations. Furthermore, SR gave them a chance to assess and critically think about what they learned in scenario-based assessment. This practice makes them actively engaged and critical thinker. The difference between traditional assessment and modern intervention gradually make self-reflection an effective formative assessment practice. SR has a major role in the model and avoided repeating the same prompts in assessments make it more effective.

The second thing to think about was fitting the model to the situation. Even though reflection is a teaching method it needs to match the students and what they are learning. The questions made in this study were about Research Methods in Education and written for teachers so they were seen research topics as specific tools for learning instead of asking general reflection questions.

The third thing to think about was making sure the model worked. The experts who looked at the questions agreed on the points, which shows that the questions fit the situation. However expert approval only shows that the questions work in this situation not that they prove to be effective in the run. The results will present after final data analysis of broader study.

The study also explains that choosing a practice is different from making the questions. Choosing SR as a method is one step in making the program. Creating questions that fit the class is another step. This needs to think about the subject, students, when the questions come what

is expected as answers and if it is possible to use them.

Contributions Of Study

Methodological Contribution

The main thing this study adds is a way to choose and prepare Self-Reflection as part of a larger plan. To find the learning function needed for an assessment practice in a research intervention requires a systematic process of development, selection and validation. The requirement was fulfilled by current study to decide what is not covered by thirty-five reflective questions in a research course and what sit well with the way of assessing twenty-first century learning and competencies.

Picking self-reflection as a matching practice with scenario-based assessment needs literature support and contextual evidence to use in a broader study. Current article provides both processes in separate studies. The relevance and effectiveness of SBA with SR presented in a study (Ahsan, 2026) and the process of SR is presenting here in existing study. The process of selecting an assessment practice in a pair helps avoid repeating what is already there and what need to add that complement and guide researcher to attain research objectives.

The selection of reflective prompts provides a set of practical ways where it fits in the research plan that can be useful for future researchers. The actual use of that pair in broader study elaborated how and when practice happens in intervention and how it connects to the two competencies.

Make questions for the situation is another concern of this study. Creating questions using what is known the class content, what the students like and what the learning goal is considered. Study makes sure the questions match the topics, keep reflection linked to what the students actually learning, get approval, check if the questions are valid, important and easy to use in the setting, use the numbers and comments from the experts to get the set of questions.

This study gives a set of rules and a path to add Self-Reflection to learning checks without treating it like a simple or general classroom activity. By considering SR as an effective

formative assessment practice that helps to attain targeted objectives for research studies.

Implications for Future Study

The questions that were tested are the base for using them in the broader doctoral level research (IFAPs) project. Later studies could look at how students respond to the questions over time during intervention. What participants responded, wrote, shows specific behaviors things like being involved thinking deeply or managing their own learning are not the concern for current article. The results from actual broader study are not part of this study, which only shows how the questions were chosen, made, fit and checked before being used. People who want to use the Self-Reflection part in classes or places should look at the situation again and check the questions again instead of thinking they work everywhere.

Limitations

First the questions were made for a type of teaching and a class about research methods they might need changes for other classes or student groups. Second three experts looked at the questions the results should be seen as expert opinion for this situation not as proof of general validity. The small groups of experts don't give measurements and the numbers don't consider if people agreed by chance. Third the study only checked the questions, not how they affected students' interest, thinking or results. Fourth the study looked at Self-Reflection as part of Pair B its purpose and role should be seen in the picture of the IFAPs model not as a separate plan.

This study explained how Self-Reflection was carefully designed, made for broader study, adapted and checked for prospective teachers. SR was designed because its thinking and learning-focused way worked with the real-life learning from Scenario-Based Assessment in Pair B of intervention plan. The making process went through finding the needed learning part choosing the method placing it making the questions matching them to the topics getting check changing them and finishing. Three experts checked the questions on how good they were how relevant they were and how easy they were to use, with scores of 0.74, 0.75 and 0.75.

The results give expert support that the questioners ready, for use in a broader study. The main thing this study adds is a strategy as practice, it shows how a known way of assessing learning can be carefully selected, adapted and validated and contextually checked before being used in a doctoral research thesis or projects. The study doesn't say that Self-Reflection itself makes students more interested or think more rather it gives a written base for reflective thinking and using it in research intervention. current article provides a way for others to make good learning checks while planning their research projects at higher education levels.

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