

Research Design for Peer Feedback

Focus of the specific research design: Investigation of the facility of peer feedback to serve as an effective method for formative assessment and exploration of the potential of a specific tool to enhance it.

Specific Research Questions associated with the research design:

To what extent does the implementation of peer feedback, scaffolded by specific templates,

- help students to offer productive feedback on their peers' artifacts ?
- engage students (as peer-asseesees) in the process of using the feedback they received to revise their artifacts?

What challenges become relevant to the implementation of peer feedback as an assessment method?

Corresponding project research goals

What systemic support measures and what tools do teachers need in order to integrate formative assessment of student learning in their classroom practice? (1.2)

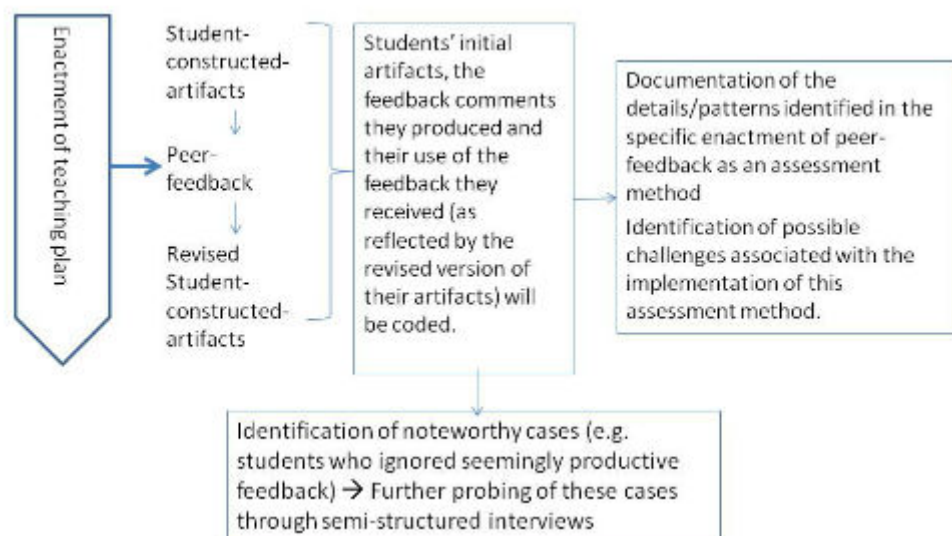


Illustration of the Research Design

Rationale: At a specific point of the teaching sequence, students engage in the process of peer feedback in a structured manner: each student exchanges an artifact ((see indicative list of possible types of artefacts at the end of this document)). Students will be scaffolded to structure their comments using specified criteria (these will depend on the specific competence/sub-competences under emphasis). Upon receiving comments from a peer, each student undertakes to revise his/her initial argument, accordingly. The researchers use the data from the students' peer feedback (initial artifact, feedback

comments and revised artifact) to evaluate the extent to which this assessment was implemented in a productive manner and identify and document possible challenges or intricacies.

The analysis will focus on the following *analytical questions*:

1. To what extent are assessors/assessees engaged productively with the peer-feedback process?
 - a. To what extent did students provide relevant, productive feedback to their peers? What is the correspondence between the feedback provided by the students and the feedback that would be provided by a teacher or expert with expertise about the competence/sub-competence under emphasis?
 - b. What are the various ways in which students responded to the feedback they received from their peers?
 - c. To what extent did they actually draw on the feedback comments for revising the initial version of their artifacts?
 - d. What are the possible interpretations for noteworthy behaviors exhibited by students when acting either as peer-assessors or peer-assessees? One instance of such noteworthy behavior refers to the students who were provided with seemingly productive feedback, though failed to use it while revising the initial version of the artifact they had produced. Another instance, relates to the peer-assessors who were demonstrably in a position to provide relevant, useful feedback though refrained from doing so. A case in point will be the students who produced artifacts that reflected attainment of an aspect of the relevant competence/sub-competence(s) – hence, they were in a position to offer useful feedback, though provided instead very poor or irrelevant feedback to their peers.
2. What challenges emerge in attempts to engage students in the process of peer-feedback? What obstacles seem to impede the productive enactment of the roles of the peer-assessor and peer-assessees and what are possible ways of addressing them?

Scope of the research design/Constraints to be satisfied:

This research design assumes the implementation of the peer assessment method (cf. [D4.7](#), p. 23-5). This means that the method that is implemented meets five minimal criteria:

1. There needs to be a specific learning objective (and an associated progression of levels of attainment) that clearly corresponds to the competence in question.
2. As part of the activity sequence students produce certain artifacts associated with the competence promoted through the teaching intervention (see the list of possible types of artefacts associated with various competences emphasized by AssistMe at the end of this document). Each partner will be asked to describe the artifacts that will be constructed and to demonstrate how that is linked to the relevant competence.

3. The implementation of the peer-feedback method will be focused on these artifacts. Students provide written feedback about the relevant artifacts to other students. Partners will need to provide a translated version of the specific procedures that will be followed during the implementation of the peer-feedback.
4. The process of exchanging peer-feedback will be supported through specially designed templates, which will encompass criteria for assessing the specific artifacts. These tools will be developed by the LWGs.
5. Before the implementation of the assessment method the students should be introduced to the roles of the peer-assessor and the peer-assessee. During the implementation students alternate between the two roles (peer-assessor and peer assessee).
6. Upon receiving feedback from his/her peers, each student should be asked to revise the relevant artifact, taking into account the feedback s/he received. In addition to just revising the artifact, s/he will be also explicitly asked to briefly respond, in writing, to the feedback comments they received.

Notes: You will be asked to describe how you will fulfill these criteria in the teaching scheme. WP5 has provided examples meeting the minimal criteria for the competences of argumentation and modeling.

This research design also assumes the development and use of certain assessment tools, as follows.

1. The template that will be used by the students to present the initial version of their artifact. This will be what peer-assessors will focus on or providing their feedback comments. The teacher should be collecting this information (students' initial artifacts).
2. A template that will be used by the students (peer-assessors) to provide comments to their peers. For instance, this could specify the criteria that should be used by the students for assessing their peers' artifacts.
3. A template that will be used by the students (assesseees) to respond to the comments they received from their peers.
4. A template that will be used by the students to present/describe the revised version of their artifact, after receiving feedback comments by their peers.

These assessment tools will have to be developed by the individual LWGs (where applicable, partners are encouraged to adapt from the examples provided by WP5 – see last section of this document - and collaborate with each other)). Partners will be asked to provide a translated version of the assessments tool they will use.

Additionally this research design assumes that the following criteria are met:

1. The researchers in the LWG will conduct semi-structured follow-up interviews with students who exhibited a noteworthy behavior while enacting either the role of the peer-assessor or the peer-assessee.

2. The LWG is responsible for ensuring that the teacher's implementation is consistent with the plans of the LWG.
3. The LWG is responsible for supporting the process of collecting the required research data during and after the implementation.
4. The responsibility for the research data collection resides with the researchers of the LWG who are also anticipated to safeguard the inter-rater reliability of the data analysis.

Anticipated output of this research design

At the local level this research design will lead to case studies that will focus on the implementation of peer feedback (as an assessment method) in a specific situation. This could be focused on documenting intricacies/patterns identified in that situation (e.g., how students responded in the cases in which they were provided with productive feedback?)

Provided that this research design will be implemented by more than one partners it will be possible to also address questions associated with the challenges encountered in different contexts.