



IO2-T2: Comments, suggestions, additions and changes on IO2-T1

Prepared by ThinkUP & AAU

**ENGINEERING and INDUSTRY
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(ENGINEITE)**

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Task 2: Comments, suggestions, additions and changes

Once the first draft of O2 was ready, it was sent to AAU for comments, additions and changes. In particular, this first draft included the ENGINITE participants reflections about the PBL pedagogy, as these were presented in the previous section.

Example action learning templates filled in by participants

Action learning template – ENGINITE pre-training 2018
<p><u>1. Goal or purpose: What pedagogical results do I want to accomplish through my PBL project? – What makes it interesting or worthwhile – and for whom?</u> “Give my year 1 statics class the opportunity to create and let their peers tackle a difficult problem of statics. By creating the problem and also determine the model solution, they will have mastered many of the techniques outlined in the learning outcomes.”</p>
<p><u>2. Social involvement: Who shall be directly engaged as my co-actors? – Will others have to be informed?</u> “My co-actors will be my year 1 students, as well as my CUT colleague with whom I will discuss his progress.”</p>
<p><u>3. Actions required: What must I do – and do differently from what I normally do? – When, where and how shall I do it?</u> “I will need to give them a brief outlining the above instead of the usual questions I give them, that they have to solve. This will act as a small piece of coursework.”</p>
<p><u>4. Collecting evidence: How may I know if my goal has been accomplished, my pedagogical intentions fulfilled? (e.g. through observations then and there – or asking questions then and there or later – what are the success criteria?)</u> “I will collect both the problem formulations and model answers. I will select some of them and ask students to go through them in class.”</p>
<p><u>5. Personal-professional challenges: Do I see the project as fairly easy – fairly difficult? – In what way(s)? – What do I see as the learning to be gained from the project?</u> “I would say the problem is neither easy nor difficult. Maybe have 50 individual problems, become a bit more difficult, so I might ask them to do the exercise in pairs.”</p>
<p><u>6. Evidence collected (post hoc): Give details about data and its import.</u> (Not completed)</p>
<p><u>7. Unintended learning effects: Did the project make me wiser in unexpected ways?</u> (Not completed)</p>
<p><u>8. Adjustment of plans: Did local circumstances make you act contrary to your original intentions? – If yes, how and why?</u> (Not completed)</p>

Prof. Søren Willert, representing the AAU, acted as a facilitator and provided his feedback and suggestions to the ENGINITE participants for re-structuring this first draft. What follows below are some examples of the feedback provided.

Feedback from facilitators to participants on their reflective diaries

Note the informal style of this correspondence. There is no need to dress the feedback up in formal language or structure. The two of us as facilitators shared our thoughts with each other, and then passed these thoughts on to the participants. This sort of informal correspondence can help to emphasize that the facilitator and the participants are working together. Training takes place through co-construction.

Dear Andri, Christina, Yannis, Stelios

You are the four brave souls among ENGINITE partners who took up the pre-training challenge already during the first scheduled week. For that we are grateful. Hopefully you, yourselves, get some benefit from the training exercise; and so, it definitely seems from your descriptions!! We get inspiration which, hopefully, can support us in setting up an adequate training framework for the London workshop.

Below you'll find a copied Søren-Oliver mail exchange serving the double purpose of (1) allowing us to draw learning and inspiration from your reports; (2) giving you some feedback on your efforts so far.

We look forward to your next instalments - Søren

24.2.2018

Dear Oliver

I write you this mail based on three pre-training reports: From Christina, GrantXpert – from Andri, CUT – from Yannis, CUT. I send the text to you as a first step in an exchange between us which will end up in our first feedback on pre-training to project partners.

Yannis' report is the one nearest to 'classical' i.e. classroom-situated PBL, and therefore also the easiest one to comment on. The report simply states that Yannis will experiment with giving a PBL twist to his teaching in one particular class. He focuses on 3rd year students, i.e. students who have most probably become well habituated to what Yannis, himself, describes as his standard teaching method, namely lecture with inbuilt student-teacher exchanges. In the report, Yannis doesn't give concrete details about his intended PBL twist. Such details will come later. I'll look forward to that. Such details can have inspirational value for the two of us in our planning of the training seminar.

Both Christina's and Andri's reports deal with non-classroom activities. Reading them makes me delighted. As I see it, their capacity to illustrate what PBL is all about seems even to get heightened, exactly BECAUSE the case material is NOT having a 'classical' PBL-shape but is based on TRANSLATIONS of PBL into a knowledge production workplace domain. This is wonderful!

Expressed in my professional lingo, Christina's report expresses an effort to move from a habitual practice of each-employee-minding-his/her-own-business, towards a system where individual task responsibility is

supplemented by mutual peer supervision / knowledge sharing / joint reflection among colleagues. This move may be seen as one step in the direction towards full-blown team-based work style. Christina's way of presenting HER OWN learning project is definitely PBL-based. She realizes, i.e. sees as a PROBLEM, that existing practices based on individual task responsibility risk leading to sub-optimal use and sharing of resources. Her project, as described in the stylesheet, represents her initial thoughts about how she and her workmates may bring about a collective solution to that problem, while at the same time becoming wiser, i.e. learning about workplace affairs along the way. The way she describes her 'teaching' approach to her colleagues, however, seems less than full-blown PBL. She doesn't invite her colleagues into an open-ended problem field, but rather asks them to do experiments with the kind of problem-solution (Eisenhower matrix) which she, herself, has chosen and brings along. In this particular project component Christina leads the way rather than leaving it to her colleagues to lead themselves. It'll be interesting to see if the project will take a course towards more shared leadership. If this happens, its methodological mould might be described as Action Learning with Christina in a combined member-cum-facilitator role.

Methodologically speaking Andri's project in many ways resembles Christina's. The set-up is one of mutual peer learning in a given task area. It can be seen as a two-layered PBL project. Andri and Yannis are, each on their own terms, experimenting with / learning about application writing. At the same time, they are experimenting with an un-usual way of doing knowledge transfer. Given that Andri has the position of 'more experienced colleague', her 'usual', i.e. habitual way of training, would be to transmit to Yannis her thoughts and suggestions about the subject matter. Instead she sets up two mutually supportive learning-by-doing processes, running in parallel. In this way she may hopefully expand, not only Yannis', but also her own theoretical as well as practical understanding of application writing. This seems to me a very nice design.

Write me back when you're ready - Søren

27.2.2018

Dear Søren,

I just had a very pleasant lunch re-reading all the initial submissions and cross-referencing with your comments. It started snowing while I was eating – a rare thing in London.

I basically agree with what you have said here, but I wouldn't have been able to have expressed it in such analytical terms as you have, which is one of the great things I am learning about from this collaboration.

With regards to Yannis's report, one thing I would add is that his evidence of success is a good final output from the students. I am interested to see if he will identify any need to get evidence about their process in order to see if he is meeting his pedagogical aims of stimulating interest and critical thinking. Andri has a similar focus on looking to final outputs as evidence of success rather than looking at process parameters.

Stelios has also submitted a report (he is partnering with Yiannis) and his is similar to his partner's idea, although he has provided more structure about how he is going to deliver it. To my mind, Stelios is probably closest to delivering PBL in the way the bid authors originally imagined it.

You make a really good point that the people doing this PBL training in their workplaces are really of great interest to ENGINITE because this is the environment that ENGINITE is training people for. I think this is a good point to raise to everyone – it will give the non-academic people a boost to realize the importance of their contribution in this pre-training phase.

Finally, I have found it very useful to see how you have characterized the different ways in which PBL methods are happening. I think during the training you should share some of this analysis because it will help the participants understand different ways in which PBL can be done.

Concluding remarks on the reflective pre-work

The basic idea, or even ideology, lying behind our design work was that we must find a way of **Walking our talk**. Putting ourselves, and not our (co-)learners in charge of the learning process would be an abrogation of the very PBL principles we wanted our learners to grasp.

The pre-training phase instructions exemplify how Walking our talk was then put into action. On the one hand we tried to be very clear and, in fact, directive as far as process and structural scaffolding were concerned; thereby hopefully securing a shared-contents focus and allowing for comparisons to be made across learning units. At the same time, we gave learners lots of freedom and self-determination when it came to choose their challenges and reflecting on their own experiences. Through this we hoped to bring about a sense of personal ownership. When learners felt stuck we made an effort to 'un-stick' them, yet without giving them precise recipes.
