Assessment methods for experiential learning in virtual mobility

Team based learning

Peer assessment (in VM)

Skill test – AR/VR

Report

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Team based learning

What?

Team based learning (TBL) is a specific teaching and learning method in which students learn individually and discuss afterwards in groups. In addition to this, students will also work on real life problems in these groups and peer assess their group members. The learning activity needs to be strictly coordinated, with clear instructions on what is expected of the individual student as well as the group. Below you find 3 sources on how team based learning works:

- Video of Team Based Learning
- Website to Team Based Learning
- Pdf on Team based learning in an online context

Grading scheme:

The grading scheme depends on what you find important in your peer review. What do you want your students to score when looking at each other's work? Starting from these elements you can build a rubric to focus on the quality criteria of reliability.

Suited in virtual mobility format: applicable in all virtual mobility formats.

Appropriate for assessing: collaboration – reflection

The strongest point of assessment for TBL is collaboration and reflection. TBL offers the opportunity to write appeals on the group assignments. Meaning that if the group landed on a different outcome than the instructor presents, the group can reflect on this in their assignment. If they collectively stick to their point, they can write an appeal explaining their point of view, and why they think they are right. This is a very advanced way of reflecting.

In addition, the peer evaluation you ask of your students can assess collaboration. More about this in peer assessment.

Who assesses?

Students assess their team members and the team is collectively responsible for the end product. The instructor gives feedback to the students on the peer assessment, so during the academic year students get an idea of where they are doing well, and where they are functioning less.

Time investment:

There are 2 main time investments you have to consider:

1. Making of the groups. The groups last for the whole duration of the course. Students don't switch. Therefore, well balanced and diverse groups need to be made. This takes time. In most cases an individual test (like MCQ) is done to see the level of your students. In addition, students with different backgrounds (master, bachelor, major, minor, ...) are also combined. Keeping all this into account leads to a significant time investment to create groups.

2. Creating assignments. The assignments students need to make in their groups in the later phase need to be significant and realistic to capture the attention of the students. Additionally, a specific choice needs to be made in the assignment. Creating these types of assignments is not easy and will take some time.

Peer assessment (in VM)

What?

- With peer assessment, the assessment activity itself becomes a **learning activity**: by assessing, students learn to translate the assessment criteria into norms of performance and to apply them to their own work, they learn to formulate feedback and deal with criticism, and they are encouraged to critically reflect on their own learning process.

- The **criteria** can be formulated only by the teaching staff, or **in consultation with the students**, giving them more insight into the assessment process and the expected quality.

- In group work, self-assessment/peer assessment makes the **mutual dependency and responsibility** clearer.

- With self-assessment/peer assessment, (large groups of) students **receive more feedback quicker** than if the assessment depends solely on the teaching staff member or the teaching team.

- Self-assessment/peer assessment is an excellent way to have your students reflect on their learning process, to give them insight into the learning content and learning objectives, and to teach them to communicate and take responsibility. Therefore, it is also a very suitable assessment method for assessing **personal development objectives** (like communication, teamwork, reflection and critical assessment).

Suited in virtual mobility format: mostly applicable in online exchange courses, blended mobility programmes and Joint International Formats.

Appropriate for assessing: mostly appropriate to assess collaborationn

Who assesses?

The students assess other students (or themselves). The instructor can double check the feedback students give each other. Outliers are always interesting to double check.

Grading scheme:

A rubric is the qualitative way to create a transparent grading system. In that way, for peers it is clear on which categories they will be assessed. Example of group participation rubric

Other grading schemes are those of scale rating in which student have to assess each other on a scale for specified competences.

Time investment:

Create good and clear instructions, so your students know how to assess and what to assess. Also, the follow up after the assessment can ask a considerable time investment, depending on how students assessed their peers and if there are many outliers. That is why peer assessment often is linked to a certain level of maturity from your students and is applied in higher bachelor or master years.

Skill test – AR/VR

What?

Students demonstrate to which extent they possess certain required skills. These skill tests are typically organised throughout the semester based on an assignment/action the student has to perform in a real or simulated practice environment, using real equipment (e.g., a massage table or certain software) where applicable. Students can also demonstrate or explain how they would act in a certain context and which considerations they would make without actually performing the actions on the spot.

Organising skill tests online is not easy. If the skill requires a specific practical situation, in very exceptional cases, you can use simulation software. If the student has access to the necessary equipment and/or people, you can ask them to record themselves as they practice their skills and submit video footage via the Learning Management System.

The complexity in skills testing with technology is that there is a need for a good, nuanced and layered description of skills, which may not always be available. Technologies as AR/VR can be valuable but are time consuming in development. The use of audio and video (recordings), or/and videoconferencing creates possibilities in capturing skill training for virtual mobility.

Inspiration:

- AR/VR can be used in an adaptive way ([see COSMO video from IMEC](#)). The instructions students get, and the steps they need to take, can be adapted by the AR-VR-programme. A new student can receive more instructions than a more experienced student to work on certain tasks or skills. This way, the knowledge and skills are first built up virtually, before the student goes into the real-life-situation

- [Wekit ECS – holographic training](#)

Suited in virtual mobility format: mostly applicable in online exchange courses, blended/virtual internships

Appropriate for assessing: authenticity – collaboration – reflection

Who assesses?

The assessment is done by the computer programme. It captures the mistakes students make and can deliver a report to the instructor.

Grading scheme:

Video rubrics can be used for skill training: [Viewbrics](#) – mirroring and mastering complex generic skills with video-enhanced rubrics.

Time investment:

The set-up of the AR/VR environment is extremely labour-intensive. However, it takes a lot of work out of the hands of the instructor when it comes to actually instructing students and assessing them. [A video of the COSMO research between KULAK and IMEC](#) demonstrates the preparation work that went into creating AR/VR classes and shows the time investment.

Report

What?

Reports are particularly suited for assessing learning objectives aimed at reflecting. Learning objectives more closely linked to knowledge of the learning content can also be assessed with reports. If the report is related to a specific experience in an authentic setting, or if external parties are involved in the student's project, these external parties can play a role in the assessment. In this case, it is important that the weight of the external parties' assessment in the final assessment is the same for all students.

Some components can be omitted depending on the goal of the report and the extent of the experience the report is based on.

- For group work, you can consider asking students to add a **personal component** to the group report, so you can capture each student's learning process.
- If you want to **teach students how to write reports**, it is important that, over the course of the programme, the format and content of the reports align with the way professionals and/or researchers have to write reports in the field. Ideally, this process is initiated at the start of the programme to allow students to improve their report writing skills. Check with your programme director and/or colleagues who expects what and who supports what in the report writing process. You have to avoid that students have to write too many reports within one programme. As an alternative, you can consider using a poster, presentation, website, blog, …
- **Reflection** starts from the personal experience and focuses on questioning the personal assumptions. Reflection is an activity that needs to be taught and you certainly cannot expect students to master it from the start of the programme. In order to support and assess reflection, you have to know why you use reflection and what you want to achieve with it. Different levels of reflection can be distinguished (Ash & Clayton, 2009; Ash, Clayton, & Atkinson, 2005; Bain, Ballantyne, Mills, & Lester, 2002).
- Reports that aim for reflection are only useful if the student is aware that attention is paid to the reflections and feedback is being provided. For many programmes, reflection is one of the personal development objectives, so students developing negative feelings towards reflection or students reflecting in an artificial or calculated way has to be avoided.

Who assesses?

Reports can be assessed by the teaching team, but also by the student (self-assessment) or peers (peer assessment). If the report is related to a specific experience in an authentic setting, or if external parties are involved in the student's project, these external parties can play a role in the assessment

Grading scheme:

Here you can find an example of a rubric you can use as a grading scheme for yourself, or to share with students when the report is peer assessed

Time investment:

The correcting of the report requires extensive work. Often a report consists of many different components like literature research, methods, results, conclusions, ….. These all need to be assessed. That is why it can be interesting to divide the work with external parties (if applicable), or to let students do a peer review. In all assessments, the use of a rubric will help you.

Suited in virtual mobility format: applicable in all virtual mobility formats

Appropriate for assessing: authenticity – reflection

A report is appropriate to assess reflection. These reflections can be based on the report of an authentic task and therefore serve both learning approaches.