

## Checklist 1 – Designing for Meaningful Learning With Technologies

Isa Jahnke

Adopted from: Isa Jahnke (2016). Digital Didactical Designs. Teaching and Learning in CrossActionSpaces. New York: Routledge.

Teaching is the profession that *designs for learning*; teaching and learning can be seen as a process (in which teachers design a learning process for students. To accomplish deep meaningful learning for students, teachers may use the DDD scheme in Table 1, pp. 3-4 (adopted from: Jahnke et al., 2017). The DDD scheme can be used in two ways, first as teacher self-evaluation tool or as a peer feedback tool of current classroom practices, and second, as a preparation tool to *designing* for meaningful learning.

The following questions are created to guide educators' individual classroom projects (e.g., ISLT9440 course, LU-5 module) in which the educator or the teacher designs for meaningful learning *with* web-based technologies. Make sure that you use this as **checklist 1** for your design to support meaningful learning:

### Teaching goals

- Are teaching goals visible (e.g., whiteboard or even better online available, so that students can read any time they want to)?
- Are the teaching goals described as competences or skills, for example, 'After the coursework, students are able to do Z, X, Y.'
- Do students understand the teaching goals? Can students describe the goals (expected outcomes) and demonstrate why this is relevant to learn?
- Can students even add some of their own learning goals (co-goals, student learning goals)?

### Learning activities

- Are student learning activities (with the web-based technology) aligned with the teaching goals (or are the tasks somehow not connected to the goals)?
- Has the educator or the teacher created student learning activities in such a way that the activities are *useful* to accomplish teaching goals (and to develop competencies/skills)?
- Can students 'see' the connection of teaching goals and learning activities?
- Are the learning activities more than just text book reading? If text book reading is relevant, does the teacher connect the readings (or other 'consuming' information actions e.g., video watching) with a meaningful activity afterwards?
- Do learning activities focus on meaningful learning? Which means are the activities designed toward active, collaborative, authentic, intentional, and constructive/reflective *actions*?  
For example, students produce something, student actions are connected to the students' world and include a real-world problem (e.g., everyday experience) or even a real audience. Can students critically reflect on what they produce (e.g., actions of evaluating/creating/making)? Do students relate existing knowledge to their new knowledge?
- Are students engaged in teams, producing something together, using the Internet, or other sources beyond the physical school/college wall to connect to the real world?

- Meaningful learning (Howland, et al., 2012) embraces following five elements or characteristics. Have the teacher created (designed for) student learning activities with web-based technologies that embraces all of the five following elements?
  - Student learning activities are *active*.  
Has the educator or the teacher designed a student learning activity where students do not only read, they are not only passive consumers but observe or manipulate something in order to do something with it? For example, students do not only read about a poem, they revise it; they do not only read about science, they do experiments and use the web-based technology to do the experiments or record the process of doing the experiment and use the recording to discuss about the quality of the result and how to improve the experiment.
  - Student learning activities are *constructive/reflective*.  
Has the educator or the teacher designed a student learning activity, in which students can articulate what they have accomplished and reflect about it using for example screencasting tools or Edpuzzle or other tools to showcase their products?
  - Student learning activities are *intentional/goal-directed*.  
Has the educator or the teacher designed a student learning activity, that shows clear and visible teaching goals, helps student understand to fulfil the goal and the goal supports them to conduct the learning task? Teaching goals can be on the whiteboard but even better students can access it online in the learning management system or online (e.g. Schoology) so that students can read them whenever they want to read them.
  - Student learning activities are *authentic*.  
Has the educator or the teacher designed a student learning activity, in which learning topics are not separated from a real-world problem rather connected to the real world? Meaningful learning embraces authentic tasks for students (not for teachers). Real-world tasks are, for example, to write a poem connected to the student life, or students learn about energy transformation by picking an energy form from their daily life (taking photos), understanding math by making a choice what cell phone contract is the best under specific credit conditions a student has available at home.
  - Student learning activities are *cooperative/collaborative*.  
Has the educator or the teacher designed a student learning activity, in which students make use of web-based technology to create something together (cooperation), or collaborate by using Google Slides, Explain Everything or ShowMe or other apps?

### **Process-based assessment**

- Does the educator or teacher and educator support the student learning progress with process-based assessment forms (and does not only give feedback at the end)?
- Has the educator or the teacher a plan when and how to give feedback and feed-forward for learner's development?
- Is there a range of forms such as student self-assessment, peer-assessment and feedback by the teacher?

- Are there clear entry points when to give and receive feedback, for example in the beginning, middle and end? For example, students document learning electronically, with a mind map app and students can only proceed when they received the feedback at each stage or gave feedback to others at each stage, and improved the product based on the feedback.
- Are the rubrics for assessing learning *visible* for students from the beginning?
- Do students know the rubrics and refer to them when conducting the learning activity?
- Does the educator or the teacher use web-based technologies for process-based assessment, e.g., Go Formative, Schoology, Nearpod, or the web-based technology app gives feedback e.g., NoRedInk?

### **Social roles, interaction and communication**

- Does the educator or teacher play different roles and clarify the roles? For example, they are experts but also process mentors for students, learning-companions, coach? Do teachers and educators communicate the different roles during the process?
- Does the educator or the teacher communicate with students to be in many roles and foster students to be in different roles such as producers, collaborators, critical reflectors?
- Do educators or teachers see themselves as learners too, or example, does she or he ask her students for help when technical problems occur?
- Does the educator or the teacher go beyond the traditional IRE style (Initiate-Response-Evaluate)?
- Does she or he create group tasks (and supports team contracts)?
- Does the teacher or educator engage students and activates students to change roles?
- Does the educator or teacher support students to develop new roles?

### **Web-based technologies**

- Does the educator or teacher utilize web-based technologies in a way that it can become a student device (and does not stay as a teacher device only)?  
*A teacher device* means that the teacher use the technology for distributing information. *A student device* however means that student use the technology to create, make or produce something with technologies.  
 For example, students collect information, create a presentation in an specific app (Bookcreator, Booktrailers, Educreation, iMovies, ExplainsEverything, and so forth), students present new gained knowledge, inquiry certain topics with the technology and explore new topics.
- Is the web-based technology used for student creation and not for teacher information distribution only? A student learning activity *with* technology shows indicators of multimodality. Multimodality is a combination of several modes such as writing and recording, for example, writing texts, use of the camera app, digital sketching, using apps for collaborative creation. Students use the technology to construct, create, and share/publish their knowledge. They may present their created products to a real audience, e.g., community or parents. Students use the web-based technology to search for online resources and select topics beyond the limitations of even the best school library. There are signs of cross-action learning, i.e., student use the online world to solve a learning activity.

- Meaningful learning activities with web-based technology (Howland et al., 2012) are for example
  - Inquiring with web-based technologies – information gathering and literacy
  - Experimenting with web-based technologies – predicting outcomes
  - Creating knowledge construction with the web-based technology
  - Communication with the web-based technology – meaningful discourse, peer reflection or student discussion with the web-based technology
  - Community building and collaborating with web-based technologies – social interactions
  - Writing with web-based technologies – creating concept maps
  - Modeling with web-based technologies – building models
  - Visualizing with web-based technologies – construction visual representations