SNBI

Schweizerisches Netzwerk für Bildungsinnovation
Swiss Educational Innovation Network

ICT4VET | Online CoP
Our response to COVID-19

Interactive online/blended learning

How can we establish and maintain engaging and interactive online and blended learning?

Findings of the ICT4VET Community of Practice (CoP).

Urs Gröhbiel, 30.6.2020

With contributions of Erka Caro, Franz Kehl, Kurt Wüthrich, Ivana Georgievska, Lukas Brück, Sidita Dibra, Stefan Butscher (in alphabetical order)

Version history

If you make changes to this document, please describe them in a few words here. Thank you!

Version	Date	Author	Comment
0.1	16.6.20	Urs Gröhbiel	Draft to collect questions and inputs
0.2	22.6.20	All	Adding questions and experience
0.3	24.6.20	Urs	Draft of minutes of meeting
	29.6.20	All	Review of draft. Revision.
1.0	30.6.20	Urs, Marina	Finalize the document, upload to the public CoP-page

1   CoP session on Tue, 23.6.

10.00-11.00 a.m., Zoom meeting

1. Welcome, up-date since last meeting
2. Addressing our questions: Brain-writing & discussion
3. Collect open questions, feedback
4. Next steps:
   a. Draft of results by Urs, review/sign-off until coming Monday
   b. Next meeting on June 30th 10 a.m. Topic: Measuring learner's progress
   c. Further CoP-meetings: Tuesdays 10 a.m.
      (**14. 7.** ToT, 21.7. evaluation, 28.7. partners, **4.8.** financing)

2   Discussion

We have discussed selected aspects of how to establish and maintain engaging and interactive online and blended learning, as documented in the 5 sub-chapters below.

2.1   Teacher centred online learning?

Is it true that in many cases online learning is in fact a traditional teacher centred methodology? (Sidita)

We often observe this, but we know also of good practice. Different driving forces have an influence and can be influenced in projects:

- **Influence of the technology**. Tools support interaction to different extent. YouTube, Websites with text/picture, animations etc. focus on presentation, and not on interaction, and therefore rather support teacher-centred methods. Other tools, such as WIKIs, online mind-maps, forums, project management software or e-portfolios support student-centred methods much better. Other tools support man-machine interaction, for example quiz-tools with different types of questions, simulations or online games. Most of these tools are costly to develop and maintain.
- **Influence of teacher habits.** Example of VET teachers in Moldova: After the lock-down, some teachers have started "just" sending learning material via WhatsApp to the students. But company trainers also used social media and e-conferencing to interact with their apprentices (s. appendix) (Stefan)

- **Influence of teaching skills.** Examples of Swiss schools: if teachers have learned to create meaningful assignments and questions beforehand, they managed better to create a meaningful online learning experience during the lock-down.
- Influence of **teacher's media skills**: Moderating interactive online-/blended learning of individuals and groups of different sizes is a challenge and needs to be trained.
- **Influence of students' learning requirements.** If students are used to learn self-dependently in class, they find interactive online and blended learning easier. If they lack the needed skills, a project has a "double challenge", as "self-guided" or "self-paced" learning has to be learned as well as how to learn with digital tools.
- **Influence of managing online class.** The organization of student-centred online learning (instead of teacher-centred methods) requires different planning, e.g. group management, time planning for student creating deliverables, discussion and feedback. A better/new ratio between online and offline (synchronous - asynchronous) T&L is needed. When online, the "hour" and "time table" are relative and flexible but need more time in terms of prep work.

2.2 Student motivation and digital tools

Does the use of digital tools (e.g. using a tablet instead of a book) have a positive / negative influence on the **motivation of students to learn**? (Kurt)

We have identified several factors that influence motivation of students:

- **Evaluations in Albania** showed that students performed better learning online. Improved teaching materials (short, visualisation) and higher flexibility contributed to motivation and learning results. But learning via mobile phones over a long time was reported to be tiring and burdensome and therefore had a negative effect on motivation. (Erka)
- An **evaluation of the Liechtenstein Entwicklung Dienst (LED)** with **VET students** about their experience with online training indicates to several factors that influence learning and student motivation relating to access (quality of learning materials, learning space, platforms, devices) and support of the learning process (overload of assignments, old teaching methods, guidance and support). (Stefan)
- **Swiss examples** (professional school for commercial clerks): only a minority of students are motivated to online material in addition to print material in professions that spend already the majority of their working and learning time at businesses in front of screens. (Franz)
- Swiss example II (gymnasium): Parents do not like their children to register for BYOD classes, as they do not want them to spend even more time in front of a screen. (Franz)
- If access to motivating and well-adapted online learning material is quite restricted, students generally prefer to use real books instead of scanned books.
- Example of tablets: motivation decreases quickly (best-practice example in German: https://www.alemannenschule-wutoeschingen.de/lernen-3-0/)
- Gamification approaches tested in some contexts – but very limited to some change maker-teachers (Franz)
- Influencing factors on student motivation has been widely researched in the context of ICT and learning, namely in the context of educational games, virtual reality, collaborative learning, different forms of learning support or e-portfolios, socio-emotional learning. (Urs)

2.3 Negative feedback on social media?

Is the topic of VET something that students share on social media or may this even create negative feedbacks from peers (e.g. What ... you are not studying at a University)? (Kurt)

We are aware that using tools to support interaction of online and blended learning can have negative effects. However, in our projects we have not come across such problems.

- No visible negative impacts in project in Albania (Sidita)
- In contrary: Schools and businesses have used social media to change the negative perception of VET in Albania, presenting positive aspects and impacts of apprenticeship (Erka)

When using social media, students should be made aware of privacy issues when using social media for interaction (example of recommendations for nurses that Christoph has developed together with the Zambian nurse council).

2.4 Daily screen time of students

Is there a recommended optimal daily screen time for learning for teenage students (14-18)? (Ivana)

- Evaluations in Albania show that using mobile devices for a long time can be burdensome (Erka) Information overflow can be a problem for students (Erka as parent)
- Also teachers spend much more time in front of screens – and do not like it always! ☺ (Franz)
- It is important to manage the "uninterrupted time" per subject. Shorter sessions with breaks and combined with other activities work best. Research shows that digital attention is lower than F2F (Sidita)
- What is allowed at all? For future take-aways from the covid situation one has also to clarify whether you are allowed to do schooling over distance. (Franz)

2.5 Managing limited IT infrastructure

Currently S4J supported schools are planning for September 2020. We advised to plan for a blended learning scenario pointing out in the plan what topic and how ICT and online learning can help. In a school level it becomes very difficult to manage and allocate the limited IT infrastructure, especially when the requests from the teachers are different in different weeks. Any tips? (Sidita)

- **Example from Macedonia**: private sector initiative for buying devices for students from difficult socio-economic contexts, and response from schools – lending used laptops owned by the school for temporary use (Ivana)
- Kurt: private-public partnerships can be a source to provide students with hardware.
- Swiss approach: not necessarily use online / digital approaches but do a half-class approach with changes on a daily basis. The day you are home you have quite traditional homework. That reduces the need for IT infrastructure as long as schooling is not fully home-based (Franz)

3 Further "Food for thought"

The following examples can help to further reflect on how to foster interactive learning in this context. (Urs)

Interactivity can be fostered in **different phases of an online/blended learning activity**:

- Introduction of the topic: students share and discuss previous knowledge via WIKI, online pad, online mind-map etc.
- Elaboration of the topic: individual and group assignments to research different aspects and present the results via WhatsApp, learning management system (LMS); assignments using simulations, online games and animations (observing, manipulating); drill&practice apps; closed "quiz"-questions after presentation with individual evaluation and hints, sharing answers to open questions after presentation on an online pad (synchronously), LMS, WIKI (asynchronously) commenting peer contributions
  coaching of individuals and groups during longer online learning phases
- Conceptualization: Summarizing main findings and relating them to previous knowledge, documented in text, mind-map, video
- Assessment: s. different question types under « elaboration »

The design and supervision of interactive learning activities can be trained and supported in **different phases of a project**:

- Analysis: Identify good practice in class and online (e.g. talking with committed teachers about how they support participatory learning, visits in class, view documented online interaction)
- Training: practicing interactive online learning/teaching activities in training of trainers, with man-machine interaction (quizzes etc.), student-teacher interaction (online coaching, mentoring via WhatsApp etc.) and different forms of peer-/groupwork.
- Support of teachers: On-site and online meetings/forums to discuss good practice and lessons learned related to the design and support of interactive learning of apprentices (workshops, communities of practice, individual support line etc.)
- Support of students: Developing good practice of supporting interactive learning of apprentices (Guides, examples)

4 Experience of CoP members

Do you have experience or expertise in the field of "**interactive online/blended learning**" that you are willing to share in the CoP?

Area of expertise	Name	Contact, if you are willing to respond in addition to the CoP activities.
Evaluation of learning of online-/blended learning in Albania	Erka Caro	erka.caro@swisscontact.org
Project management of online-/blended learning in Albania	Sidita Dibra	sidita.dibra@swisscontact.org
dVET expertise to start initiatives in Moldova	Stefan Butscher	

5   Appendix: Practical examples via e-conference and online assignments

Example of dual VET online by company instructor from Moldova

Stefan Butscher

In Moldova there was limited ad-hoc online training provided by teachers of the VET schools. Sometimes it was running well, sometimes not at all, I think nobody had an overview. When asking the Ministry what support they wanted, they sent a list for an order of 1'500 laptop with the reply nothing else is needed. Of course we diplomatically declined it! Later it was decided that the school year is over and no examination will take place and all students will pass. With that the "steam" was gone and almost all online training stopped.

But the project and almost all involved companies did not give up. The online exercise is mainly running under the coordination of the Chamber of Commerce (CCI). Since the GIZ project envisages to have a sustainable approach and not just a one-off initiative, we advised and supported CCI to initiate and set up such initiatives, discuss and select the contents and agree on the platforms, tailored for each company according to their needs. Also we contributed with the PR measures (messages from companies to the apprentices), via a running contract with a specialised agency.

Online dual Training Modules
The company's instructors organise online training courses for the students of the dual VET programme. During the isolation and cessation of the traditional educational process, distance learning is the only solution to go through the modules of the training plan. It is very important that the students being at home do not lose the motivation and desire to continue studying.

Of course, such online training can cover only certain topics, mainly theoretical ones, but it is also possible to **provide practical training** by making diagrams, drawings and technical documentation.

Also, the instructor has the possibility to transmit the knowledge by carrying out the work process on his own example directly to the machine. After returning to the factory, the students will practically carry out these activities on the machine. Each company instructor has made an hourly planning of the training modules, the realisation of which is possible remotely. The chosen platform is Cisco Webex and the **duration of the training modules will be 1 - 2 weeks**. The completion of a topic consists of **two online conference sessions**; in the first the instructor transmits the information, after which the students have the opportunity to complete the tasks. The verification of the results is performed during the second online session.