e+i ICT4VET online CoP Kick-off "Our response to COVID-19"

Questions, answers and examples

In our kick-off webinars "Distance learning response to COVID-19" with the SDC e+i focal point on May 7th and 8th, the participants have shared the following questions and examples.

Many thanks to all who have contributed!

Urs Gröhbiel and Christoph Pimmer of the Swiss Educational Innovation Network (SNBI) have compiled answers and comments in this document.

This document adheres to the initial structure of the **working document**, which will be continuously further developed by the **Community of Practice**.

May 21st, 2020

Content

1 Planning Process

1.1 Analysis

Ottiger Nadia EDA OTN: What is the interest of teachers and students/learners for such innovative approaches?

- **SNBI:** In our experience most students appreciate digital interactive learning/teaching settings, as well as increased attention of their teachers. They usually love to use devices and multimedia learning content in the beginning, but this effect decreases after some time. With teachers we usually observe a 20-60-20 pattern: Roughly 20% are very keen on trying out new things and learning. They are willing to invest a considerable time for this. 60% are quite willing to try out something new that the "first" 20% have tested and approved and invest some time for this. About 20% are reluctant to invest any time in innovative approaches. We encourage projects to identify the "first" 20% to launch new activities (s. planning process, piloting). In up-scaling phase we focus mainly on the needs of the 60%, expecting that some of the "last" 20% will slowly adapt in the long run.

Bruno Essig: I totally agree that a thorough analysis and involvement of stakeholders are important. But how can these steps be shortened during a crisis like Covid-19?

- **SNBI:** We do not believe that there are any "shortcuts" to this process, but, depending on the solution, some of the steps will not have the same relevance (e.g. schools individually using available software such as WhatsApp or Google worksheets with existing devices, might not require us to think strongly about partners, setting up infrastructure or up-scaling).

1.2 Partnerships

How do we get private sector involved more and how can we make these more sustainable without donor funding?

- **SNBI:** There are many ways to involve local businesses and international companies, contributing expertise, teaching material, sponsoring activities and infrastructure. However, this takes a lot of time, identifying potential partners, building up relationships and trust, identifying benefits and convincing people etc. (s. "implementation" working paper, chapter communication). The S4J project in Albania has gained a lot of valuable experience in this field.

2 Designing key learning activities and tools

2.1 Learning in practice

Lukas: De-Theorizing vocational education by introducing a work-based-learning approach. Learning-by-doing component of vocational education (i.e. electrician, plumber, barber, etc.) is hardly overcome with digital tools - how do we overcome this? Digitizing non-digitizable learning-experiences? => This question pertains particularly to Corona-related short-term solutions, as well as long-term non-Corona-related education provision.
→ You can support the learning process, but what if schools/internship are closed during Corona?

- Answer of Katharina: For me this is also the big question. Of course, it depends on the profession.
- Answer of Sidita: virtualisation tools are a solution; critical analysis of different practices (e.g analyse a video of a work practice)

Examples on ZUMPad from participants of kick-off (7.5.2020)

Documenting plumbing experience with text and pictures (Sidra, Dev4D, Pakistan)

- Learning activity: plumbing apprentices reflecting practice experience
- Media function: documentation and sharing of text and pictures
- Tool: we have used the moodle portfolio app

Documenting experience with video (Sidita Dibra, Skills for Jobs, SDC project, Swisscontact, Albania)

- Learning activity: learning and documenting experiences for VET students
- Media function: students and teachers create video materials
- Tool: obsproject.com; openshot.org

Practice coding (Orland Qesteri, Skills for Jobs, SDC project, Swisscontact AL)

- Learning activity: Practice Coding (Python etc.)
- Media function: Embedded Sandbox for learners
- Tool: OPENEDG

Training and sharing on practice (Sonja Hofstetter, SDP Cambodia)

- Learning activity: Online cooking training for low-skilled hospitality workers (cook helpers)
- Media function: online training, interaction between trainers and learners, discussion of problems encountered when practicing at home (cooking)
- Tool: Skype

Comment Christoph: very interesting, how large are these Skype calls? How many participants? → Around 15 participants. We are considering switching to Zoom.

2.2   Participatory learning

Sandra Rothboeck: Shifting from top down instruction to facilitation is in many of our projects a priority in non-digital situations. My experience in the digital space during the last 2 months has been

that in **virtual spaces**, this seems even more problematic. How would you work with teachers/instructors during a pilot to reach out digitally to learners so that learning goes beyond instruction and knowledge transfer towards experience and application?

> ▪ **SNBI:** This is a change of practice which takes usually a bit longer to establish. What can be done is to make this stepwise. Connecting short instructional exercises with more open tasks, and, as a teacher, always provide feedback and scaffold the learners, closely at the beginning, and loosening this later.

Erika**:** How to motivate the youth that are taking virtual classes, we are getting high dropouts. Should psychological (emotional) support be included? Any experience?

- Answer of Sven: Question is why the dropout. Maybe also up to the teacher. However, if I remember right there is also some evidence that online classes can have a negative impact on students, due to additional sources of distraction (access to additional entertainment usage online for example instead).
- Anica – comment: Let's be honest, there are no tools to completely replace the student's social interaction with company employees, the student's feeling of being part of a new environment in which there are other rules of the "game", the "smell" of the working place

> ▪ **SNBI:** We suggest exploring approaches in three areas to avoid and identify problems in this area: 1.) Training trainers in pedagogical and media skills, e.g. on how to create clear and meaningful assignments as well as effective questions and assessment. 2.) Training trainers on school/"classroom" organisation, learning how to clearly communicate expectations. And 3.) Exploring different forms of analysis of student activities and performance constantly.
> We see the main strength of digital media in supporting, enriching and fostering the interaction among students as well between students, trainers and company coaches. They should never aim to replace or reduce this essential part of training.

Examples on ZUMPad from participants of kick-off (7.5.2020)

Virtual classes / e-conferencing (Ermira Shyti, RisiAlbania project, SDC project Helvetas Albania)

- Learning activity: Support Private Training providers to develop Virtual classes in ICT
- Media function: students are attending training in real time, and exchange with the teacher
- Tool: Webinar, teamviewer.

Non-formal learning (Boris, Education for Employment, Helvetas, North Macedonia)

- Learning activity: non-formal learning for the people with disabilities during Corona crisis
- Media function: direction, showcases, personal approach through media platforms
- Tool: Skype, Teams, Viber

Curriculum-aligned content on platform (Sidita Dibra, Skills for Jobs, SDC project, Swisscontact, AL)

- Learning activity: create an online lesson as per curricula learning outcomes and methodology
- Media function: publish learning objectives and content materials
- Tool: create class, edit course, add etiquette, upload (different types of documents), register students, create groups, insert vocabulary, assignment, in Moodle (www.mesovet.al)

Industry training (Orland Qesteri, Skills for Jobs, SDC project, Swisscontact, Albania)

- Learning activity: Industry training for ICT in VET

- Media function: Students follow and are certified in online courses corresponding to curricula learning outcomes
- Tool: Cisco NetAcad

French content on platform (Bouchra, Swiss Ambassy, Morocco)
(No e-learning solutions for VET for the moment but based on basic education experience of the Ministry of Education)

- Learning activity: e-learning platform with login access
- Media function: virtual classes, access to content in french, video capsules created by teachers
- Tool: TV channels, e-learning platform on Smartphones, tablets or computers...

Videos on hospitality (Ermira Shyti, RisisAlbania Project, Helvetas, Albania)

- Learning activity: online training on hospitality courses
- Media function: students learn through recorded videos 70% of the curricula.
- Tool: online platform. The students that are registered for the course start to attend the lessons through platform.

Online discussions (Orland Qesteri, Skills for Jobs, SDC project, Swisscontact AL)

- Learning activity: Students and teacher discussion
- Media function: online instant communication
- Tool: Forum in Moodle (mesovet.al)

2.3 Assessment

Rwagitare Claude Rukwavu EDA RWC: one of the challenges I see is monitoring on the trainee's level. How do we ensure that trainees actually follow and are not distracted by their surroundings?

- **SNBI:** see comment under chapter 2.2. Depending on the tool or platform you use, you can draw on a variety of simple or sophisticated monitoring and assessment functions.

2.4 Digital tools

Bouchra: Do you have some tools and platforms in French for our VET partners in Morocco?

- **SNBI:** Il-y-a des différentes plateformes en français, come moodle, claroline ou Dokeos (voir une sur-vue des outils et plateformes source ouverte)

WhatsApp use for Zimbabwean apprentices in practical learning
- Katharina Walker: What was the timespan to come up with this solution? I'm asking because we all now have to come up with solutions on quite a short notice because of Covid-19?

- **SNBI:** We have set this up in a short time of a few weeks only, as the technology was readily available and the concept was simple. However, issues of equity need to be considered here (see also next answer).

- Butscher Stefan EDA BHS: Was there any financial support provided to the teachers and students e.g. for the data package?

- **SNBI:** For this pilot study, no financial support was needed because instant messaging communication, if restricted to text and a few images, consumes little data and the project was for a limited time span. However, if this is to be implemented longer and more broadly, students as well as teachers would need to receive some financial compensation. In other studies, with students in Nigeria, we offered them data bundles to compensate for the cost. Ideally, longer-term solutions would involve cooperation with State organisations and private telecommunication providers to cover the costs.

- Monika Soddemann: how to handle data security? was this a topic?

- **SNBI:** Data security is a big issue of social messengers and social media in general. The first consideration is a technical one in that some solutions are better than others. For example, in comparison to Facebook Messenger, WhatsApp communication is encrypted. And then there are other apps that focus particularly on privacy, such as Threema. (A nice overview can be found here: Technical specifications of applications).

- However, the best technical solution requires users' media and digital literacy, as any message can be easily forwarded from one user/space to another. This demands the development of learners' media literacy in general and the agreement on rules, do's don'ts etc in particular. In our projects with health students and professionals this was a particularly relevant point. Prior to the start of the use of the instant messaging groups we made all users aware of potential problems and let them agree on ground rules how to use the group. Particularly relevant was not to reveal any private data of clients, neither directly nor indirectly. This is of general importance in many education programmes in applies particularly with respect to the systematic use of mobile and social media.

3 Selecting and customizing tools
3.1 Selection

- Daniela**:** How can we collect **feedback** from apprentices in agriculture via **SMS/simple phones** to check on their understanding of plant diseases? Who has experience with this?
- How to deal with agricultural VET is a big challenge, what is the practice the developed countries started to use during COVID.

- **SNBI:** There are many reports on solutions like this, but we do not have much expertise in this field. It would be interesting indeed to share experiences and searching for examples, studies and solutions in our community of practice (access 19.5.2020).

- Nadia Afrin Shams: what kind digital tool is best for countries that has **low internet connectivity** and speed?
- Rwagitare Claude Rukwavu EDA RWC: My question is: how do you select a solution in an environment where basic infrastructure is lacking (no internet connectivity, no electricity, no IT basic gadgets like computers, etc)?
- Nyein Nyein Ei: Target groups are migrant workers who do not mostly have mobile smart phones and others facilities. Internet is not widely accessible here especially to this particular target.

- **SNBI:** In these contexts, a combination of print, radio, TV, SMS and sometimes WhatsApp is usually deployed, using some of these technologies to reach different target groups (e.g. print for schools, radio for pupils, SMS for parents, WhatsApp for teachers). In the analysis phase the access to these different types of media has to be carefully analysed to aim for a maximum of equality and interactivity in the learning offers.

- Sangay Wangdi: Among the tools (**Google Classroom, YouTube, Television and radio**) which would be the best for vocational training delivery? In Bhutan, we in collaboration are planning to deliver training content through combination of the above tools to our 1st batch of dual VET trainees who are currently undergoing in-company training.

- **SNBI:** This depends on the learning activities you want to support (see working paper, overview of key learning activities). While Google Classroom provides you with a wide range of features to manage and support classes and students, the other media channels are easily accessible, but cannot support interactive distance learning.

- Is there any project using moodle for VET?

- **SNBI:** There are many examples in Finland, Australia, Switzerland. It would be interesting to identify SDC-related projects that also use Moodle.

Example of Africanus Chalamila: In Tanzania Helvetas/YES Project we have conducted f2f trainings in small groups for the production of hand sanitizers and liquid soap. We are now considering making short **videos** and **bit-sized learning of the content** to share through a **chatbot through Whats App.**

3.2 Customizing

- **Ivana**: When more teachers use different tools each with a same student - how burdening it is for the student to use all that variety of tools? What are the experiences in consolidating this problem - e.g. limited short list of tools proposed by the school?
  Answer of Sidita: depends on the moment when you are with introducing new ways of learning. At the beginning it helps to try different tools so one can chose the best/most suitable one. But then, it helps to have a close list of tools, nevertheless, there will be differences - for example, at S4J ICT teachers and students choose other more specialised tools/systems (netacad, MIA, sololearn etc) while the rest is fine with Moodle (mesovet.al) - Thanks!

4 Communicating with stakeholders
Sandra Rothboeck: How does the project coordinate between Students, enterprise-based instructors and schoolteachers? Where do you see the challenges of alignments of teacher initiatives and enterprise-based instruction?

- **SNBI:** We have seen different solutions in this area, depending on the use of devices and communication habits of the stakeholders, e.g. phone calls, e-mail, WhatsApp, project management tools, e-portfolios or learning management systems. In the analysis phase it's good to have in mind such options to clarify the ability and willingness of the stakeholders to use these communication channels.

Example Sandra Rothboeck: Important is to start opening collaboration platforms (Zoom, Skype etc.) to familiarise teachers with online learning.... capacity building step by step. This has been very effective in our work (Swisscontact)

5 Managing Access to Learning Content
Daniela Lilja: Does anybody have experience with offering **free access to certain online contents**, pages, apps e.g. through collaboration with **network providers**? In some countries Facebook can be

accessed for free included in a bundle, this could also be applied to other contents

Sangay Wangdi: Alternative for 'high data' charges? Affordability?

- **Feedback** Inglin Andrea EDA INA: … my colleagues from Honduras … "transferred" their VSD courses to a platform called **classroom**; and with respect to financial support: they made a **deal with a phone company** providing them with "credit" for data if they participated in the course and did their homework.
- **Example** Butscher Stefan EDA BHS: In Moldova we started to engage dVET students in **WhatsApp** groups first just to communicate with them and keep them engaged, now rolling out assignments, Q&A, quiz and so on. Data package we are negotiating with a mobile provider to provide free data package. Still early hours.

6   Training and Support

- Nadia Afrin Shams: How do we solve the problems of the capacity of the teachers and students who is not familiar with such method even we can get over the logistical and infrastructural barrier?
- Kurt Wüthrich: how to bridge the gap between students (digital natives) and manly older teaching staff that face big challenges to apply digital tools?
- Pfeifer, Franziska: As you cannot do anything in face-to-face at the moment, do you think starting digital i.e. with digital introduction of digital tools, works as well? Do you have any recommendations for how to introduce a digital tool without physical presence in the beginning?

- **SNBI:** To improve teaching skills and media literacy of teachers is a major issue in most projects we know and deserves a lot of attention (= time and money). We see the introduction of ICT as an opportunity to reinforce existing continuous education in both areas and teacher development in general. Depending on the media literacy of the teachers, the quality of training material, and internet access with tools such as WhatsApp, Skype, it is possible to start the introduction of digital tools and other training online. In general, we try/recommend to use the tools that we plan to use with students also for training the teachers, but this really depends on the tool.

Creating interactive learning material (Sidita Dibra, Skills for Jobs, SDC project, Swisscontact, AL)

- Learning activity: explain new concepts/functions to VET students in system level
- Media function: collaboratively creating interactive learning materials
- Tool: H5P (dialog cards, drag and drop, accordion, image hotspot, crossword etc) by different teachers in Moodle (www.mesovet.al)

Comment by Christoph: very interesting, does the collaborative creation also involve students?
→ Teachers only can edit content in a course, but it is possible to create a special course for collaborative learning or create a new role for students with editing

Examples on ZUMPad from participants of kick-off (7.5.2020)

Online professional development (Sidita Dibra, Skills for Jobs, SDC project, Swisscontact, Albania)

- Learning activity: teachers CPD for blended and distant learning
- Media function: teachers share good practice and upgrade their skills in distant learning
- Tool: zoom for webinars, moodle (mesovet.al) for a teachers online course

Teachers training (Amparo Ergueta Vocational education and training projects Bolivia)

- Learning activity: Teachers training platform, with digital resources and communities of practice
- Media function: Allows to carry out teachers training by organizing training classes for them, promote exchange in the communities of practice, allows to store documents and educational resources
- Tool: Moodle (updated every 2 years)

7   Managing Quality

Amparo: How can the teachers' good use of digital tools be evaluated? A frequent problem is that students get bored in digital classrooms because teachers do not have the skills to use the tools

- **SNBI:** This is a very important issue, which depends heavily on the culture of evaluation, monitoring and collaboration in a school. Just an example: In Zimbabwe we use different forms of peer-evaluation (supervision in the classroom, commenting on reflected practice in WhatsApp chat on a continuous basis. Every 1-2 years we evaluate teaching and learning with external evaluators.

Nadia Afrin Shams: how do we monitor any of these initiative for knowledge management purpose and understand what has worked in certain situation and did not work in another situation?

- **SNBI:** An excellent example in this area on project level are the communities of practice that have been launched in the S4J project in Albania. We hope that our ICT4VET-community of practice will also support this kind of knowledge exchange.

Example Erka Caro: It is important to take informed decisions and improvements to make the learning experience better. At Skills for Jobs we apply action research as a feedback mechanism which has resulted in increased participation and customer satisfaction.

8   Cross-cutting issues

Erka Caro: Do you see how this solution will affect the future of education? Or is a short term one to mitigate the actual emergency?

- **SNBI:** We believe that it is very difficult to anticipate to which extent VET will be affected by the development in the context of COVID and related measures. We see the momentary situation as an opportunity to strengthen existing efforts to improve access to education in disadvantaged situations, increase the quality of teaching, learning content and a mix of face-to-face and online learning activities.

Sandra Rothboeck: Would you think it is possible that one looks at short term responses (addressing COVID19) and mid-term, more strategic and in-depth solutions, leading to an overhaul of teaching and learning in training providers? We are currently trying to address digitisation in Swisscontact that way.

Butscher Stefan EDA BHS: Once the COVID crisis is over are we going back as before or do we try to sustain and may be further develop such digital solutions and perhaps use it again in the classroom and workshop?

- **SNBI:** We definitely need to have the strategic long-term perspective in the back of our heads when implementing short-term solutions; and also dedicate some of our resources to long-term solutions, as suggested by Björn Hassler of the EdTechHub.

9   Further questions: Join our Community of Practice!

Several of the questions above we could only deal with superficially. Other important questions have not been asked yet … we invite you to **discuss these and further questions in the Community of Practice**. (LINK zu CoP-ShareWeb Seite)

e+i offers you the opportunity to discuss your specific needs with an ICT4VET expert in an individual one-hour session (Contact: urs.groehbiel@snbi.ch).