



B- LAND

Promote and Strengthen Business Development Skills in Rural Communities

Module 6
Computer and Internet (including social media) skills
CASE STUDIES

Developed by the Danmar Computers, Rzeszow, Poland



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Case Study 1: The self-organizing computer course

Shimon Schocken gives an example of a computer science course he has co-created, the free online course “From Nand to Tetrakis (aka The Elements of Computing Systems)”, which is considered to be the first MOOC, Massive Open Online Course. The aim was to escape the computer-complex steps with multi-layer installation procedures and suggest modules in the form of OERs, Open Educational Resources, which could be individually used. He explains that the huge part of education is about failing. With the possibility to co-create own resources, one learns on their own mistakes. **With learning by doing and sharing experience, the process of learning is far more effective, as he remarks.**

Schocken also remarks on a mobile app developed by his colleague Shmulik London for facilitating children's' understanding of Math through gamification. He presents how geometry can be easy with the use of a hands-on mobile app. Schocken shows that with this tool teachers can create own Math activities without programming skills. He also shares the idea of matching different learners with different activities based on their learning styles.

Shimon Schocken recommends self-study and self-empowerment.



Source of case study description: https://www.ted.com/talks/shimon_schocken_the_self_organizing_computer_course#t-484392;
Shimon Schocken, TEDGlobal 2012.



Case Study 1: The self-organizing computer course

Lesson learnt

The presented case creates awareness on the types of digital tools for the benefit of low-skilled individuals to guarantee their personal or professional growth. This means that the techniques of gamification and learning by doing, as well as through mobile learning, knowledge, skills and competences can be passed on to enrich T&L. Regardless of the age group, but already in 2012 proven on the sample of children, hands-on experiencing allows for addressing different learning styles.

Follow-up activity

Imagine you are in the phase of introducing a new product or service, but do not have previous experience in this aspect, what will you do to be successful with introducing your idea to the market?

First order the following recommendations and add 3 more:

- Search online for similar experiences of others.
- Apply solutions to learn from mistakes and success.
- Use social media to investigate the trends and needs.
- Attend an online course to learn more about the process.

After you have considered the above, make a list of pros and cons to each of the recommendations.





Case Study 2: Digital agriculture

Since digitalization is transforming lives, it is also impacting agriculture and farmers' work - or can impact the future of farming. Undisputable is the fact that technology is connected with investment, but some solutions that simplify and assist in farming are not at high cost. Let's take the example presented by Michael Robertson who remarks on how a simple digital device, called the chameleon, equipped with sensors has been designed to improve irrigation and crop growth. The sensors measure the soil moisture. Another device called the full stop has been invented to catch moisture as it goes into the soil. With the use of this plastic device a farmer can sample water to know how much nutrition is in the soil. Based on the information gathered from the two quick tests, a farmer can come to the decision on how long the crops have to grow.

Michael Robertson recommends making **use of technology**, but not only for supporting current activities at the job, but also to **overcome conflicts and create new opportunities for the development of rural areas.**



Source of case study description: <https://www.youtube.com/watch?v=MQaRqZpkQxk>;
Michael Robertson, TEDxUWA 2018.



Case Studies 2: Digital agriculture

Lesson learnt

The presented case creates awareness on how introducing change, for example with the use of digital tools, not only simplifies life but also improves accuracy of data, moreover, can contribute to market recognition (in the case of farming not only for securing family living conditions, but also for entrepreneurship).

Follow-up activity

Put yourself in the shoes of a farmer that is not using any technology at all.

Prepare 3 lists:

- of digital tools you know about and would like to introduce if you were not restricted by finances (e.g. drones, AI);
- of difficulties you are facing in farming and that available new technologies could already solve if you only had them (e.g. Wi-Fi, sensors);
- of ideas for new future improvements.

At the end choose one example from each list and think what you can do introduce change to your business.





Case Study 3: Mobile First

"Mobile first in everything. Mobile first in terms of applications. Mobile first in terms of the way people use things." –Eric Schmidt, as Google CEO, on their Mobile First philosophy.

In 2009 Microsoft updated its operating system to keep pace with the technological development moving towards going mobile. The solution was that the user interface supports traditional desktops and tablets (later all mobile devices). What was first a constraint (cursors and touch screens do not mean the same kind of interaction, user-friendliness is questioned with much content on a small screen, etc.), now is an advantage, since mobile devices simplify connectivity and support data search, storage and sharing. However, it cannot be decided which digital solution is more advantageous over the other, a PC or smartphone. Some may say that smaller (compact) solutions are better, while others would choose a PC with more storage space.

The Mobile First Philosophy was introduced after the desktop computer was popular and implies the relationship between the desktop and mobile devices. Since today mobile devices are used for daily activities, users are looking for mobile friendly solutions. Yet, depending on the function of the solution, the design of digital solutions will be either Mobile First or Desktop First.



Source of case study description: <https://blog.prototypr.io/mobile-first-desktop-worst-f900909ae9e2>;
Oliwer Brooks, 2017.



Case Studies 3: Mobile First



Lesson learnt

The presented case creates awareness on how the roles and functions of digital devices (on the example of a personal computer and smartphone) change. People want to stay connected and the smartphone make it easier. There are however such activities like preparing a business plan, writing a formal email or creating a presentation, that will be much easier on a desktop computer. You need to know the aim of the task in order to decide which digital device will help you do it more efficiently.

Follow-up activity

Compare the following activities and *decide if you will do them on your desktop or smartphone*. Justify your decision.

- Placing an order for supplies online.
- Preparing a list of seasonal parameters applicable to your business.
- Sending invitations via email.
- Sharing a product presentation with another farmer.

After you have completed the above activity, consider what programmes and applications you use on your digital devices (and do you need them all).



Module 6: Practical training activities

To practice what you have learned in Module 6, compare each set of pictures and answer the questions.

Activity 1

Step 1: Which picture would you classify as correct? Why?

Step 2: What are some dangers of the Internet? How can you protect yourself while online?





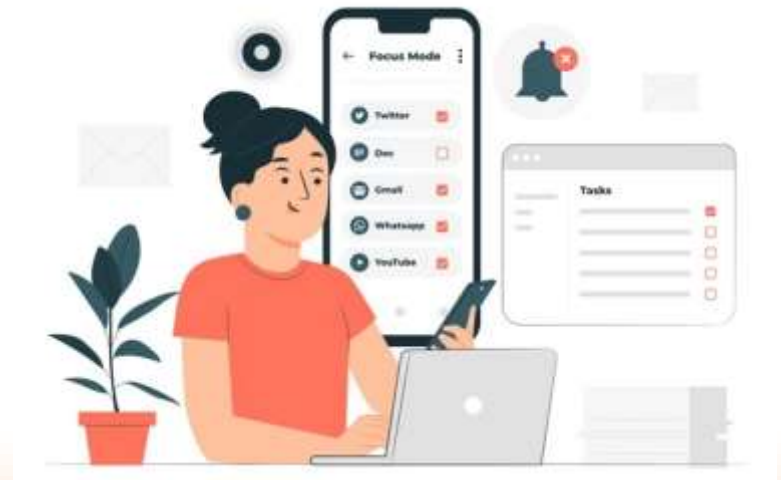
Module 6: Practical training activities - continued

To practice what you have learned in Module 6, compare each set of pictures and answer the questions.

Activity 2

Step 1: What kind of digital activities can you do with the tools you see in the pictures?

Step 2: What programmes that you can use for digital communication, content creation & presentation, problem-solving, assessment, sharing, storing or management?





Module 6: Practical training activities - continued

To practice what you have learned in Module 6, compare each set of pictures and answer the questions.

Activity 3

Step 1: What common features do the two pictures share in the context of work-based-learning and work-life balance?

Step 2: What motivates you to learn and take action? Do you prefer experimental learning over peer support?

Do digital tools make learning more enjoyable for you?





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Supplementary material

[DARE Practical Guide for Inclusion](#)

[Tools and Resources for Trainers on Computers Basics](#)

[Internet Basics Online Tutorials with Exercises](#)

[Microsoft Excel - Basic & Advanced Overview](#)

[Information about Freedcamp, Trello and Google Drive for productivity and effective collaboration](#)

[Open digital educational tools for interactive online teaching and learning](#)

[Lesson plan to introduce concepts that underpin artificial intelligence](#)

Videos:

[How data-driven farming could transform agriculture | Ranveer Chandra | TEDxUniversityofRochester on YouTube](#)

[YouTube video: 10 High Demand Computer Tech Skills You Should Learn Today](#)



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