

E-Tutor Qualification 2021



Co-funded by the
Erasmus+ Programme
of the European Union

Agenda

1. Welcome note Prof. Schoop
2. Introduction of course supervisors
3. Introduction of VCL concept
4. Introduction of task forces
5. Overview of Qualification Topics & schedule
6. Explanation of working environment on the virtual platform
7. The first task for self-paced learning (E-Tutors)
8. Pilot VCL targets & organization for academic staff and administrative staff
9. Q&A Session



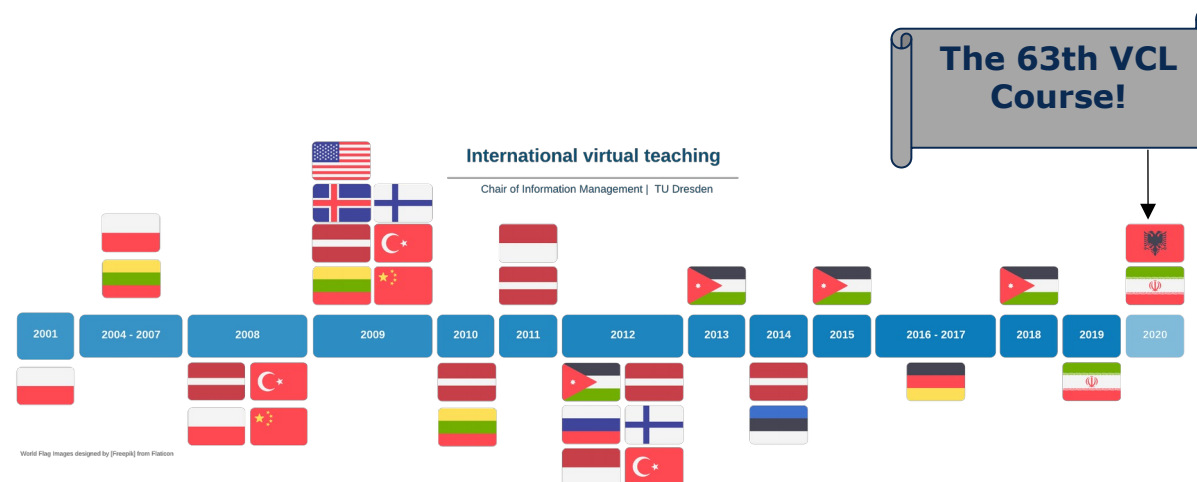
Agenda

1. Virtual Collaborative Learning (VCL)
2. Virtual Mobility & Virtual Exchange
3. VCL Design Dimensions



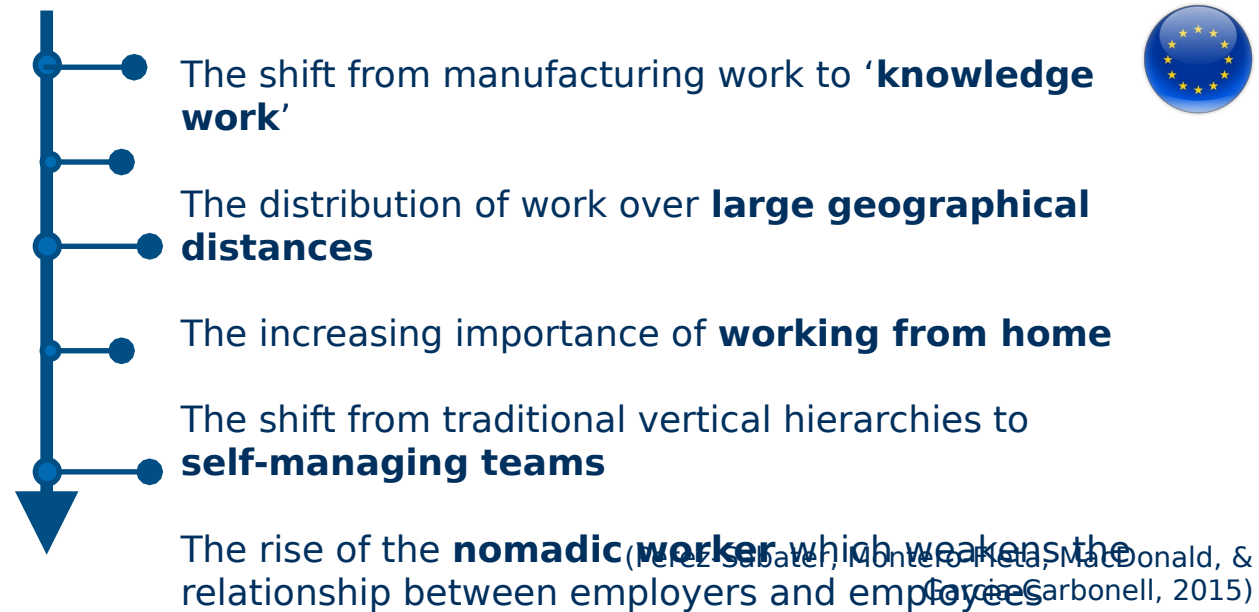
1. Virtual Collaborative Learning (VCL)

- **Virtual** = Online, using new communication channels
- **Collaborative** = In groups, benefitting from each other's experiences
- **Learning** = Gaining new knowledge and experiences



1. Virtual Collaborative Learning (VCL)

“Universities: think about what jobs your students can get if they follow your courses.” (Coyne, 2008)



1. Virtual Collaborative Learning (VCL)

- Modern ICT enables more flexible, interactive, attractive and user-friendly collaborative virtual exchange settings
- Allows to bring local students together with students abroad at an affordable price using virtual devices
- Social media allows active participation in virtual group learning processes, which significantly increases learning success compared to passive reception (Davies and Merchant, 2009).



1. Virtual Collaborative Learning (VCL)

- WIIM applies VCL-projects in addition to the „classic“ face to face courses since 2001
- VCL = learning in groups in the virtual classroom (Balázs, 2005; Rietze, 2019; Tawileh, 2016)

Characteristics of a VCL-project

- A case study is solved in a small group (5 members)
- Project restrictions: common goal, time (4-5 weeks), limited resources
- Within the groups: high level of self organisation and responsibility for the results, learners take over roles and stick to them
- Supported by e-tutors
- Communication and documentation with social software (e.g. forum, chat, wiki) (Balázs, 2005; Rietze, 2019; Tawileh, 2016; Clauss, Lenk, & Schoop, 2019)



1. Virtual Collaborative Learning (VCL)

- VCL is a formal learning setting
- General learning objectives are:
 - Professional competencies in performing case studies
 - Self-competencies in organising individual and collaborative learning processes
 - Social competencies like collaborative skills through international teamwork with social software
- Formative assessment of group- and individual achievements
- Successful participation is graded with
 - 5 “ECTS Credits” equal 150 hours of individual work load
 - Credits and grades can be used in the respective local study programs/module, based on the respective local examination regulations



2. Virtual Mobility & Virtual Exchange

Collaborative online learning settings using affordable, flexible technologies...

- Enable students to take part in an intercultural exchange which is integrated into their regular studies without having to invest additional time or money (Tawileh, 2016)
- Opening new opportunities for students who are economically or socially excluded from physical mobility, which is traditionally necessary to gain international and intercultural experience (Otto, 2018)

Virtual Mobility

"The use of information and communication technologies (ICT) to obtain the same benefits as one would have with physical mobility but without the need to travel" (van Schaik, 2019)

→ Focus on cooperation between higher education institutions and the recognition of achievements

Virtual Exchange

- Focus on interaction and communication geographically separated participant
→ exchange, competence building and interaction in small groups are in the foreground



2. Virtual Mobility & Virtual Exchange

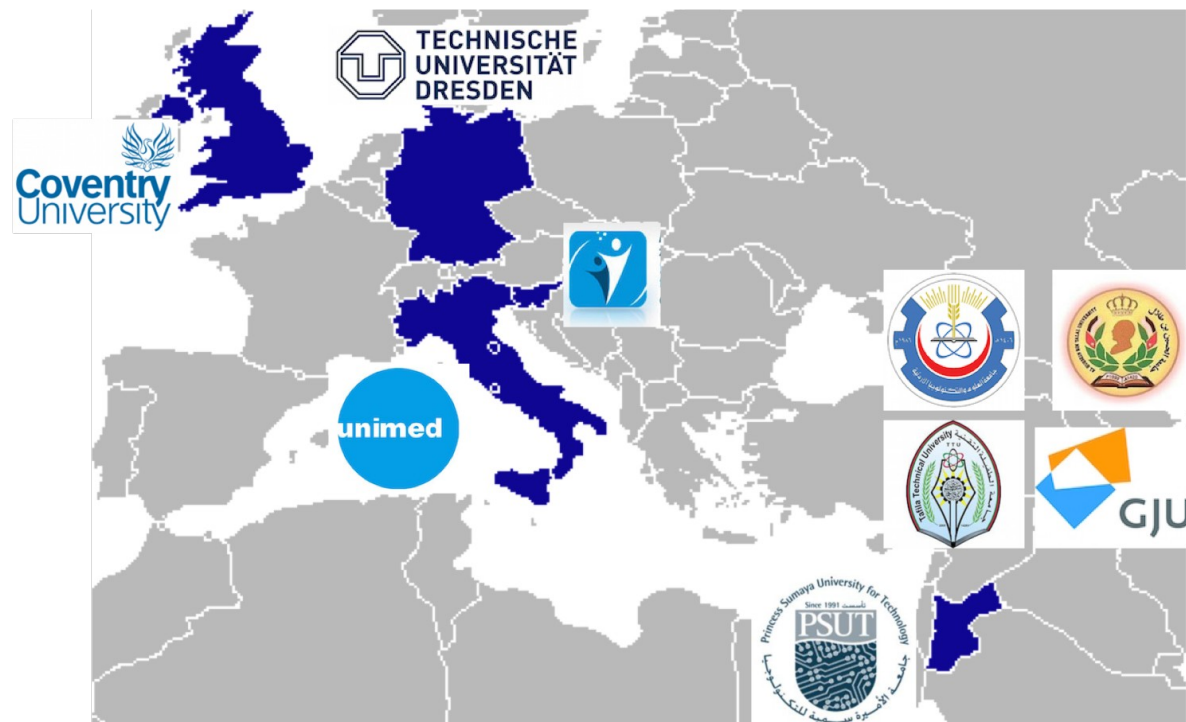
M	O	V	E	-	I	T
Mobility preparation	Obligatory feedback	Virtual collaboration platform	Encouragement and support		Intercultural exchange	Teaching transfer

- **Mobility preparation**: Intensive organisational preparation is essential; Ensuring ECTS recognition is crucial, otherwise the motivation will vary → increased potential for conflicts
- **Obligatory feedback**: Especially at the beginning feedback for students is crucial; Multi-perspective feedback should be encouraged (teachers, e-tutors, practical recommendations by industry experts); Peer-feedback within the groups should be encouraged; Peer reviews between the groups are advised
- **Virtual collaboration platform**: Enable synchronous, asynchronous, transparent communication & document editing; Mobile access is recommended; As user-friendly as possible; Industry-standard tools may help to gain media competences
- **Encouragement & support**: Accompanied –but not guided– by e-tutors & experts; Qualification program recommended; Constant contact between teachers, e-tutors & experts
- **Intercultural exchange**: As heterogeneous groups as possible; Language skills are necessary; include additional time for informal & intercultural exchange
- **Teaching transfer**: Potential to transfer knowledge & didactic concepts between participating institutions; Realistic design of the case studies allows students to transfer experiences into future professional practice

(Clauss, Altmann, & Schoop, 2020)

2. Virtual Mobility & Virtual Exchange

Jordan Opportunity for Virtual Innovative Teaching And Learning
(JOVITAL - Erasmus+ CBHE)



2. Virtual Mobility & Virtual Exchange

**Project Kick-Off 2019
Dresden Shiraz University**



2. Virtual Mobility & Virtual Exchange

On-site Workshops at TU-Dresden 30.06.2019 – 09.07.2019

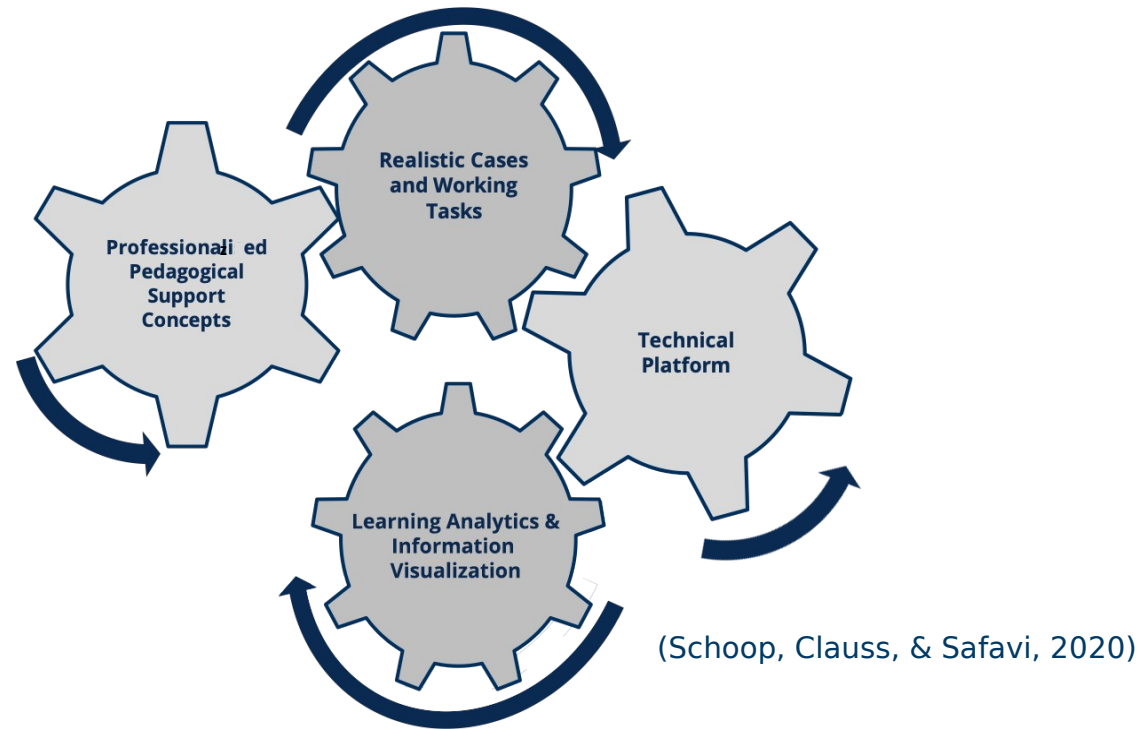
- funded by DAAD “Collaborative educational modules to promote virtual student mobility” as Study Internships for Groups of Foreign Students in Germany



For additional information and updates see:
<https://lswiim.wordpress.com/>

3. VCL Design Dimensions

Four main design dimensions, as “pivotal points” to ensure quality in our VCL settings



3. VCL Design Dimensions

Professionalized Pedagogical Support Concepts

„Collaborative learning per se is not successful without adequate support. [...]After a half-century of advocacy associated with instruction using minimal guidance, it appears that there is no body of research supporting the technique.“ (Kirschner, Sweller & Clark, 2006, p. 83)

„The survey shows that tutor support is very important for learners in general - regardless their other preferences: Between 74,4% and 97,7% of learners in the different preference groups value tutor support in general as 'important' or 'very important'.“ (Ehlers, 2004, p. 3)



3. VCL Design Dimensions

Professionalized Pedagogical Support Concepts

„Development of the e-tutor concept

- For many years there has been the use of student e-tutors as accompanying persons for virtually supported courses
- Extensive VCL projects required enhanced professionalization and the transfer of responsibility to the e-tutors
- Consequence: systematic qualification offer since winter semester of 2011/12



3. VCL Design Dimensions

Professionalized Pedagogical Support Concepts

E-tutors

- Main function is to support learners through functional, personal and group ordered, technical, and organizational assistance as well as to observe their learning progress
- Assist learners to achieve an effective and reflected solution for an upcoming problem and helps them to develop competencies for decision-making and responsibility
- Support the organisation of learning processes in small groups
- Are qualified in a one semester masters program

(Jödicke et al., 2012)



3. VCL Design Dimensions

Professionalized Pedagogical Support Concepts

Qualification program (Jödicke, 2014)

Specialized Support

- Clarification of content issues
- Assistance with comprehension problems, ambiguities, misunderstandings
- References to literature and tips for working techniques and methods
- Guidance for learning tasks, hints for processing learning tasks
- Feedback on learning tasks and on the method)

Personal and Group-Related Support

- (Support in the) organization of learning activities
- Feedback on the learning behavior of the individual/group
- Support in conflicts
- Support in case of learning problems of the individual/group

Technical Support

- Support in dealing with collaboration tools (functionality, selection, technical problems)

Organizational Support

- Supervision of the timely processing of the task

Evaluation

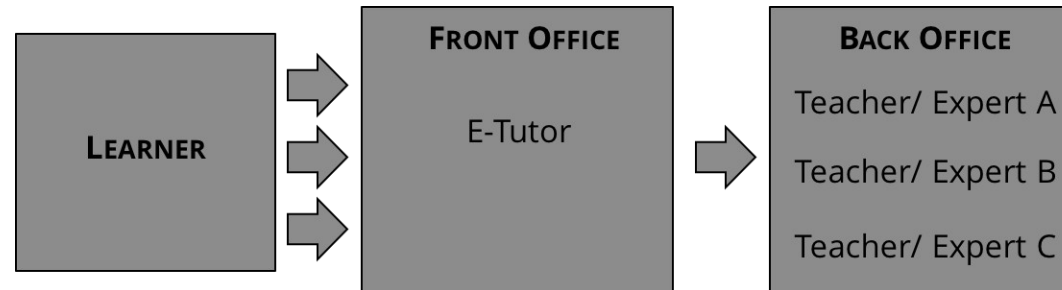
- Support of the evaluation while using an evaluation instrument



3. VCL Design Dimensions

Professionalized Pedagogical Support Concepts

Organisational support

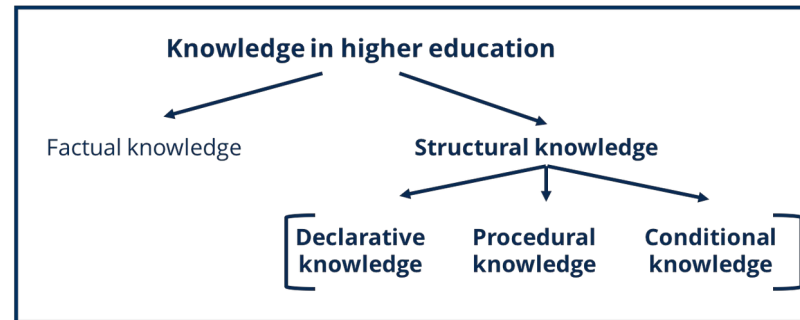


Two-level support: filter and cluster function

(Ojstersek, 2007)

3. VCL Design Dimensions

Realistic cases and working tasks



Knowledge in higher education. Adapted from (Dubs, 1995)

- Learning objectives - the participants learn...
 - to analyze the complex setting of tasks
 - to divide partial tasks among individual group members
 - to identify and/or investigate relevant information for the development of a solution
 - to compile different possible solutions in the team
 - to make a common decision in the group for solutions
 - to present and defend the chosen solutions



3. VCL Design Dimensions

Realistic cases and working tasks

Necessary characteristics of cases and working tasks

Realistic	• Provide vocation-oriented knowledge • Close connection to possible corporate problems as well as future job tasks • Characterized by open solutions that need in-depth explanation, tasks should focus on gaining new practical usable knowledge through discussion and exchange
Collaborative	• Tasks have to be solved in groups and need a multi-perspective input • Learners learn from each other • Active virtual communication is a must
Self-organized	• Self- determined scheduling and distribution of roles and tasks • Learning supporters accompany learners instead of leading them

(Schoop et al, 2020)



3. VCL Design Dimensions

Technical platform

Requirements for group work

- Communication:
 - *Asynchronous tools*: Offering structured and documented group discussions
 - *Synchronous tools*: Enabling real-time discussions and virtual group meetings, which are required for instant communication, ad-hoc agreements and urgent decisions, realized by text and voice/video chat and conferencing tools
- Work on tasks and deliverables:
 - *Groupware*: Giving the opportunity to work collaboratively on a document or structured web page, which allow to document the history of changes
 - *Shared file storage*: Offering a shared platform to host, organize and access files, which can be accessed location-independent by all group members
- Coordination:
 - *Personal coordination tools*: Allowing users to build personal networks with group members and display personal skills, professional experiences and study background as well as more informal details like hobbies
 - *Task coordination tools*: Offering possibilities to plan, assign and display assignments as well as their progress



3. VCL Design Dimensions

Technical platform

Requirements for analytics

Gateways to facilitate e-tutorial support through Social Learning Analytics (SLA)

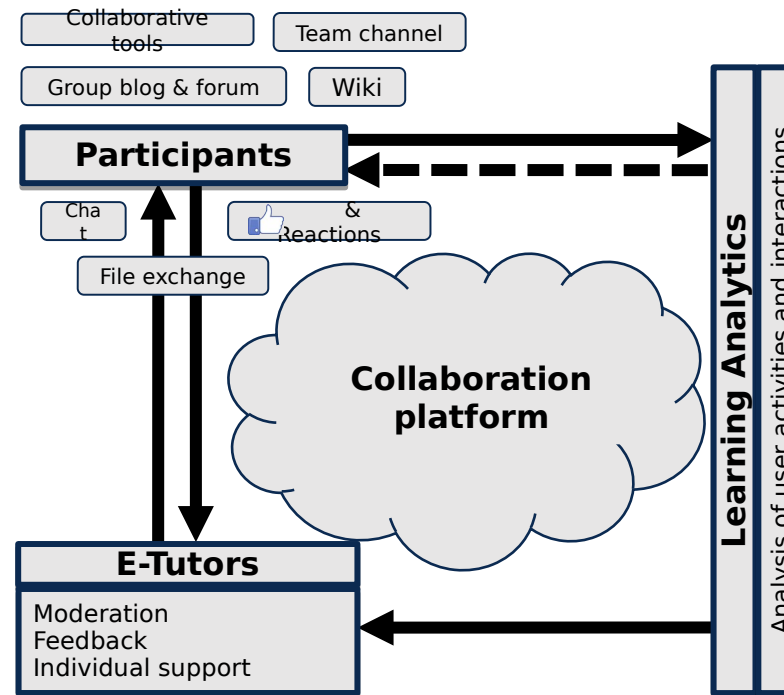
- Focus on the semi-automated analysis of social behaviour and recurring interaction patterns that characterize effective learning and collaboration processes, by systematically measuring data output and learners' traces (Shum and Ferguson, 2012)
- Need multiple and continuous insights into learning processes to enable personalized learning support and direct feedback on learners' progress
- Include data of direct interactions - especially dialogues and indirect interactions when learners leave traces of their online activity
- User-generated data traces, which are relevant to learning objectives, must be identified, recorded, aggregated and visualized (Lenk, 2018)



3. VCL Design Dimensions

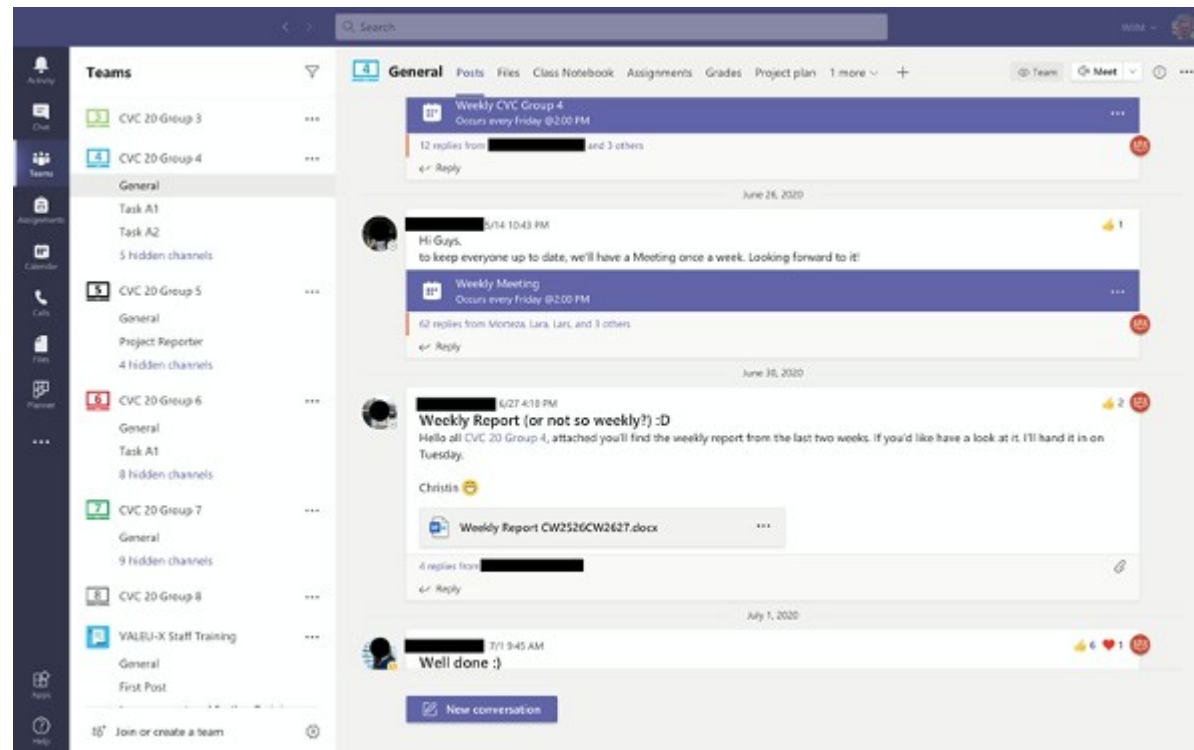
Technical platform

Implementation



3. VCL Design Dimensions

Screenshot MS Teams – International teamwork in the group channel



3. VCL Design Dimensions

Technical platform



THE PROBLEM
Why Decentralised Energy?

- HIGH COST BARRIERS TO EXTENSION OF CENTRAL GRID**
Difficult geography and low population density make extension of the national grid difficult for both developing and OECD countries.
 - many communities left without access to reliable, affordable, clean electricity
- RISE OF INTERMITTENT RENEWABLES**
More localized production and distribution of electricity due to rise of intermittent renewables, creating...
 - need for a secondary market for electricity
 - more complex/flexible local distribution systems
 - and mounting data management challenges



Screenshot MS Teams -Impressions from the final students presentation

3. VCL Design Dimensions

Technical platform

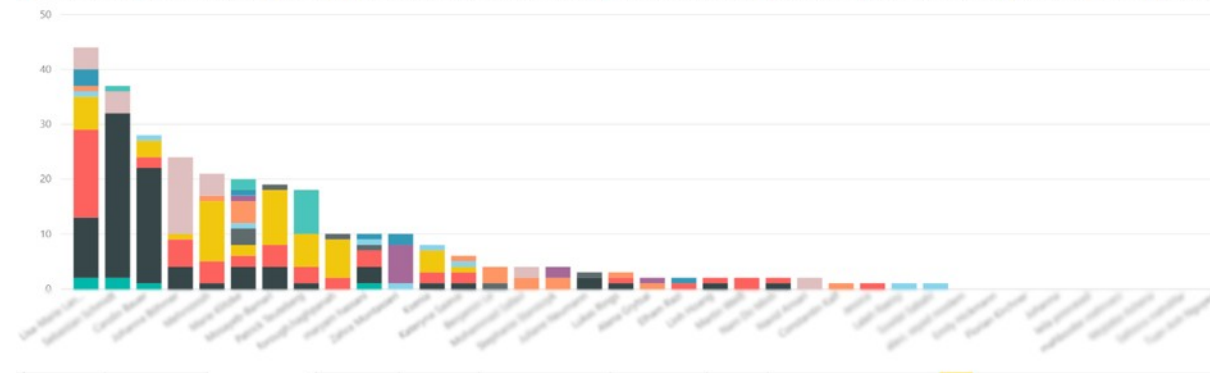
Dashboard for communication



Communication:

Name	Communication index	Published blog entries	Comments for blog	Comments	Answers to comments	Published discussion themes	Comments to discussion	Discussion posts	Chat messages	Messages	Comments to tasks
UCLM - UCLM - UCLM	4.83	2	11	16	6	0	1	1	3	4	0
UCLM - UCLM	2.91	0	4	2	2	3	1	4	1	0	2
UCLM - UCLM	1.55	1	3	3	0	1	1	0	1	0	0
UCLM - UCLM	1.47	0	4	5	1	0	0	0	0	14	0
UCLM - UCLM	1.43	2	30	0	0	0	0	0	0	4	1
UCLM - UCLM	1.34	0	1	4	11	0	0	1	0	4	0
UCLM - UCLM	1.34	0	4	4	10	1	0	0	0	0	0
UCLM - UCLM	1.30	0	0	0	0	1	0	3	0	0	0
UCLM - UCLM	1.15	1	21	2	3	0	1	0	0	0	0
UCLM - UCLM	0.97	0	0	2	7	1	0	0	0	0	0
Total	0.31	9	9	9	9	0	0	0	0	0	0

Published blog entries Comments for blog entries Comments Answers to comments Published discussion themes Comments to discussion themes Discussion posts Answers to discussion posts Chat messages Messages Answers to tasks



Tutor dashboard for communication screenshot

3. VCL Design Dimensions

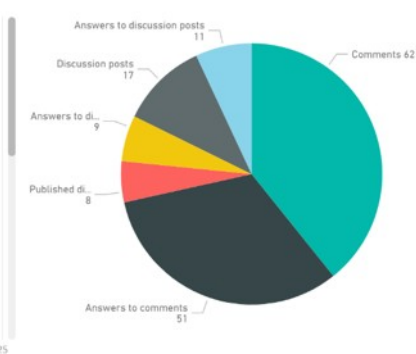
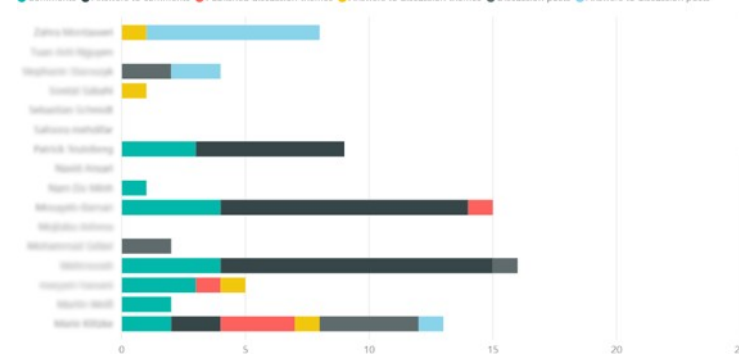
Technical platform

Dashboard for discussion

Discussion and comments:

Name	Communication index	Comments	Answers to comments	Published discussion themes	Comments to discussion themes	Discussion posts	Comments to discussion posts
Delia Winkler	4.83	16	6	0	1	1	0
Marceline	2.91	2	2	3	1	4	1
Thomas Hubert	1.55	3	0	1	1	0	0
Thomas Hubert	1.47	5	1	0	0	0	0
Thomas Hubert	1.43	0	0	0	0	0	0
Thomas Hubert	1.34	4	11	0	0	1	0
Thomas Hubert	1.34	4	10	1	0	0	0
Thomas Hubert	1.30	0	0	1	0	3	0
Thomas Hubert	1.15	2	3	0	1	0	0
Thomas Hubert	0.87	2	7	1	0	0	0
Total	0.75	3	6	0	0	0	0

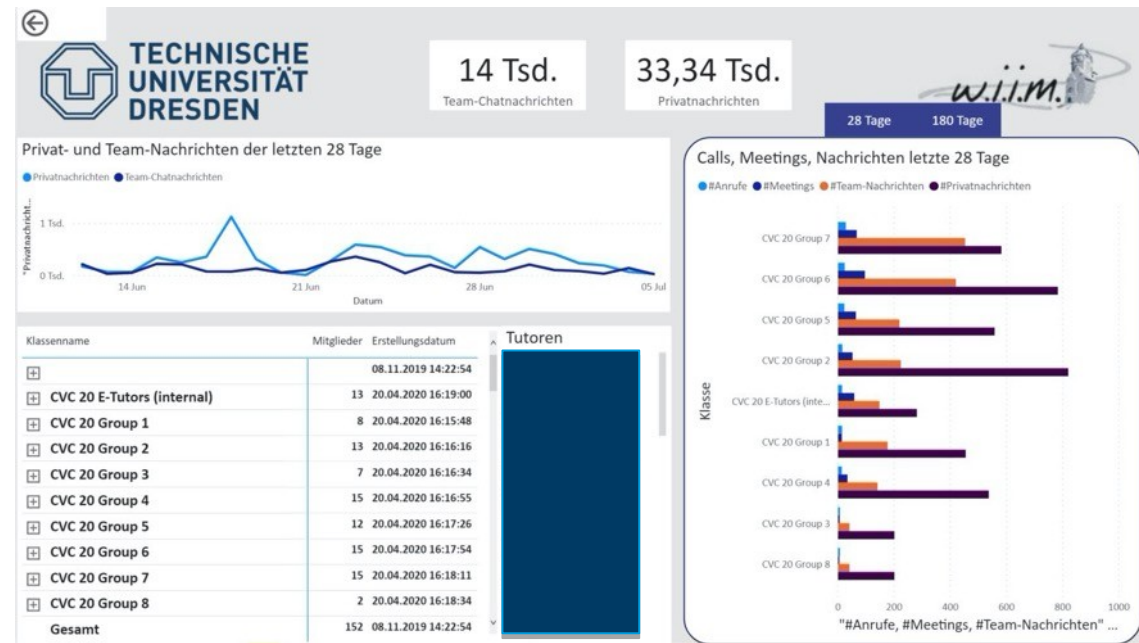
● Comments ● Answers to comments ● Published discussion themes ● Answers to discussion themes ● Discussion posts ● Answers to discussion posts



Tutor dashboard for discussions screenshot

3. VCL Design Dimensions

Technical platform



User activity in MS Teams

3. VCL Design Dimensions

Technical platform



Adaptive chatbots to analyze requests

Virtual Tutor Chatbot in MS Teams

Sources

- Balázs, I. E. (2005). Konzeption von Virtual Collaborative Learning Projekten: Ein Vorgehen zur systematischen Entscheidungsfindung. TU Dresden.
- Clauss, A., Altmann, M., & Schoop, E. (2020). International Teamwork as Everyday Teaching Practice Despite Covid19. In ICERI 2020 Proceedings of the 13th annual International Conference of Education, Research and Innovation (S. 7092-7098).
- Clauss, A., Lenk, F., & Schoop, E. (2019). Digitalisation and Internationalisation of Learning Processes in Higher Education: A best practices report. In Proceedings of the 13th Iranian and 7th International Conference on e-Learning and e-Teaching (ICeLeT 2018). Teheran, Iran.
- Coyne, D. (2008). Employability: The Employers' Perspective and its Implications Bologna Process Employability. Abgerufen 15. Dezember 2017, von http://www.aic.lv/bolona/2007_09/sem07_09/Luxemb_employ/Plenary1_DavidCoyne.pdf
- Davies, J. A., & Merchant, G. (2009). Web 2.0 for schools: Learning and social participation (Bd. 33). Peter Lang.
- Dubs, R. (1995). Lehrerverhalten. Ein Beitrag zur Interaktion zwischen Lehrenden und Lernenden im Unterricht. Zurich: SKV.
- Ehlers, U.-D. (2004). Quality in e-Learning from a Learner's Perspective. European Journal for Distance and Open Learning, 7(1), 1-8.
- Jödicke, C. (2014). Seminar zu Qualifizierung von E-Tutoren. Dresden.
- Jödicke, C., Schoop, E., Rudzok, R., Sonntag, R. R., Jung, M., Kruse, P., ... Sonntag, R. R. (2012). E-Tuqual: Qualifizierung von E-Tutoren zur Lernprozessbegleitung im virtuellen Klassenzimmer. In J. Kawalek, K. Hering, & E. Schuster (Hrsg.), Tagungsband zum 10. Workshop on e-Learning 2012 (S. 27-35). Görlitz: Hochschule Zittau/Görlitz.
- Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why Minimal Guidance During Instruction Does Not Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential, and Inquiry-Based Teaching. Educational Psychologist, 41(2), 75-86.
- Lenk, F. (2018). Virtual Social Learning Environments – a Cybernetic System? Towards a Decision Support System. In 2018 17th International Conference on Information Technology Based Higher Education and Training (ITHET) (S. 1-5). <https://doi.org/10.1109/ITHET.2018.8424763>
- Ojstersek, N. (2007). Organisation tutorieller Betreuung beim E-Learning. DeLFI 2007: 5. e-Learning Fachtagung Informatik.
- Otto, D. (2018). The challenge of virtual mobility: pedagogical models and good practices. In International Technology, Education and Development Conference (S. 3368-3376). ESP.
- Perez-Sabater, C., Montero-Fleta, B., MacDonald, P., & Garcia-Carbonell, A. (2015). Modernizing Education: The challenge of the European project CoMoViWo. Procedia - Social and Behavioral Sciences, 197(February), 1647-1652. <https://doi.org/10.1016/j.sbspro.2015.07.214>
- Rietze, M. (2019). eCollaboration in der Hochschullehre – Bewertung mittels Learning Analytics. TU Dresden.



Sources

- Schoop, E., Clauss, A., & Safavi, A. A. (2020). A Framework to Boost Virtual Exchange through International Virtual Collaborative Learning: The German-Iranian Example. In *Virtual Exchange Borderless Mobility between the European Higher Education Area and Regions Beyond Selection of Conference Papers Presented on December 11, 2019* (S. 19–29). Erasmus+ National Agency for EU Higher Education Cooperation DAAD – Deutscher Akademischer Austauschdienst.
- Shum, S. B., & Ferguson, R. (2012). Social learning analytics. *Proceedings of the 2nd International Conference on Learning Analytics and Knowledge - LAK '12*, 15, 23.
- Tawileh, W. (2016a). Preparing Business Students for The Enterprise 2.0–A Case Study From Germany. *New Challenges of Economic and Business Development-2016*, 817–830.
- Tawileh, W. (2016b). *Virtual Mobility for Arab University Students: Design Principles for International Virtual Collaborative Learning Environments Based on Cases from Jordan and Palestine*. TU Dresden.
- van Schaik, F. (2019). Virtual mobility in vocational education. In *Alkmaar: EMEU Engineering Mobility in Europe*.



Thanks a lot for your
attention.

More information about the project:

www.valeu-x.eu

More information about the Chair of Information
Mangement:

https://tu-dresden.de/bu/wirtschaft/winf/wiim?set_language=en

