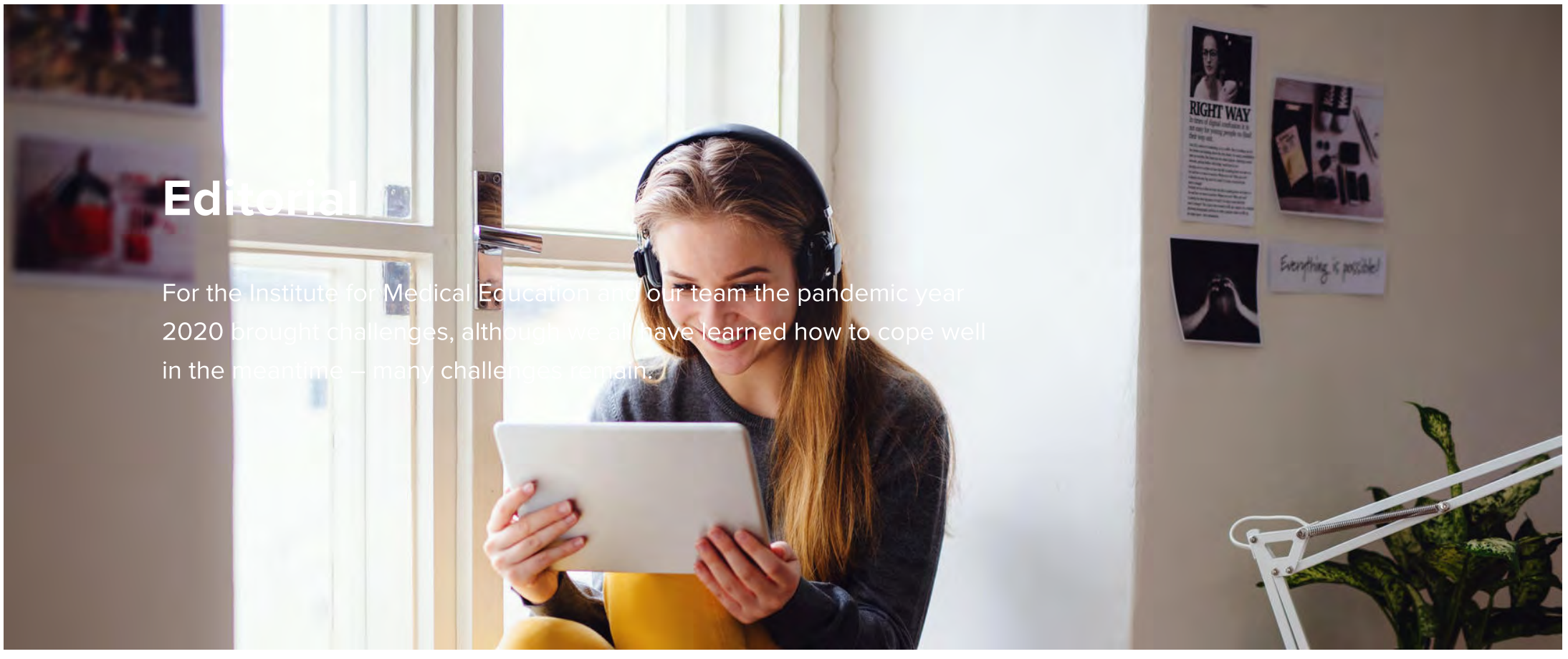

Editorial

For the Institute for Medical Education and our team the pandemic year 2020 brought challenges, although we all have learned how to cope well in the meantime – many challenges remain.

Text: Prof. Dr. phil. Sissel Guttormsen Schär, 10.05.2021

2020

For the Institute for Medical Education and our team the pandemic year 2020 brought many challenges. Although we all have learned how to cope well in the meantime – many challenges remain. Sending our team to home-office and equip everybody for working efficiently from remote – all within a week – was incredible. Thanks to committed support from IT-staff and the whole team, the transition was possible. 2020 has also been challenging for those who were newly employed. It is hard to acquaint to our working culture and get to know the team, when you mostly only see your team on screen. So much spontaneous communication and exchange on work-matters get lost when you have to arrange a zoom meeting or to send a mail to ask your virtual office mate about his or her opinion.

The new demands and needs for support and online learning and teaching opportunities also affected our daily work. New priorities were set, many ad hoc solutions were implemented (Article *VSH/AEU Bulletin)*. Immediate needs of our students, faculty and others were partly met by accessing existing online learning materials and initiatives (IML eLearning). Still, a broad range of online learning material and online learning opportunities will have to be produced for the future. The IML pursues research (recent SNF-projects: DLT and BBN) which aims at establishing evidence-based principles for digitally supported medical education.

Also in the area of assessment, the pandemic kept us busy. The need for adaptation was enormous. Customised solutions were developed within a very short time so that all exams requested by partners and clients could and did take place. For a broad range of quite different exams, we clarified legal questions, ensured safety and adapted exam formats (Story assessment). Particularly, with our web-based software, an extension to the already implemented Tablet-exam tools, we can now offer online exam at home with students' private computers. Many partners preferred that solution, while others preferred onsite exams with special hygiene concepts. Also, the medical faculty in Bern still run all written exams in BernExpo, with enough distance between each student. Practical exams are run onsite, with special precautions.

Before the pandemic, medical teaching was deeply rooted in traditional face to face teaching. As long as the major experience of lecturers is related to traditional teaching, it is hard to change, in this way the pandemic caused a disruptive development. This is a chance because it brings new experiences, insight in what works and what needs to be improved. Now, we need to take action, in order to facilitate that the new normal continues to develop, instead of reverting to traditional teaching when the pandemic would allow for it.

The good news is, useful conceptual frameworks and means for online teaching and learning have been described and are existing since decades: «Flipped Classroom» or «Inverted Classroom» are well known approaches among educationalists, (i.e. a combination of online and onsite teaching and learning, easy description is found here. A more general concept is «Blended Learning» (i.e. a combination of on-line and onsite learning and teaching, an easy description is found here. In addition to the conceptual frameworks, we need new tools. The new educational «books» are digital, they are dynamic, multimedial and interactive. Learning material is always available, continues to be developed, improved, extended and updated. This is yet a new challenge, but a very interesting one!

Sissel Guttormsen, April 2021

Prof. Dr. phil. Sissel Guttormsen Schär
Director IML

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Main Highlights

The most important highlights that occupied us in 2020.

04.05.2021

2020

Highlights

EU-Project: «Developing, implementing and disseminating an adaptive clinical reasoning curriculum for healthcare students and educators», Project coordinator: University of Augsburg, Project head: PD Dr. Inga Hege. Project partner IML: Prof. Sören Huwendiek, MME, Dr. Felicitas Wagner

ERS (European Respiratory Society)/PhD-Grant: «How to improve continuing professional development to foster physician's competencies and patient treatment». PhD Advisor: Prof. S. Huwendiek, MME, Sai Sreenidhi Ram (PhD)

NFP 74, Smarter HealthCare «Spiritual Care in Chronic Pain»: The significance of the spiritual dimension in medical treatment/nursing will be investigated in chronic pain patients and an appropriate surveying tool as well as an e-learning tool will be developed to improve the communication. Project head: Prof. S. Peng Keller, Theological Faculty, University of Zürich, Co-PIs: Prof. S. Guttormsen, Institute for Medical Education (Lead project C)

Swiss Cancer League: «Communication with cancer patients and their families about approaching death: Scaffolding conceptual and practical learning for health professionals». Project head: Prof. Sissel Guttormsen. Project partner: Prof. Steffen Eychmüller, University Centre for Palliative Care, Inselspital, University Hospital Bern

Health 2030: «Precision Medicine for FRONTLINERS», a multi-support learning platform for the daily practice of frontline care professionals. Project head: Idris Guessous HUG/UNIGE. Co-PIs: Profs. S. Guttormsen. J. Cornuz, Unisanté/UNIL, G. Waeber, CHUV/UNIL

Förderung innovativer Lehre (Promotion of innovative education) project «Aus Fehlern lernen - Verbesserung kommunikativer Fähigkeiten» («Learning from erroneous examples – Improving communication skills»). Project head: Prof. S. Guttormsen. Project coordinator: Dr. med. U. Woermann, MME. Project partner IML: Dr. med. N. Lüthi, MME. Other Partners: Prof. N. Egloff, University of Bern, cand. med. C. Ueltschi, Dr. med. R. Ott.

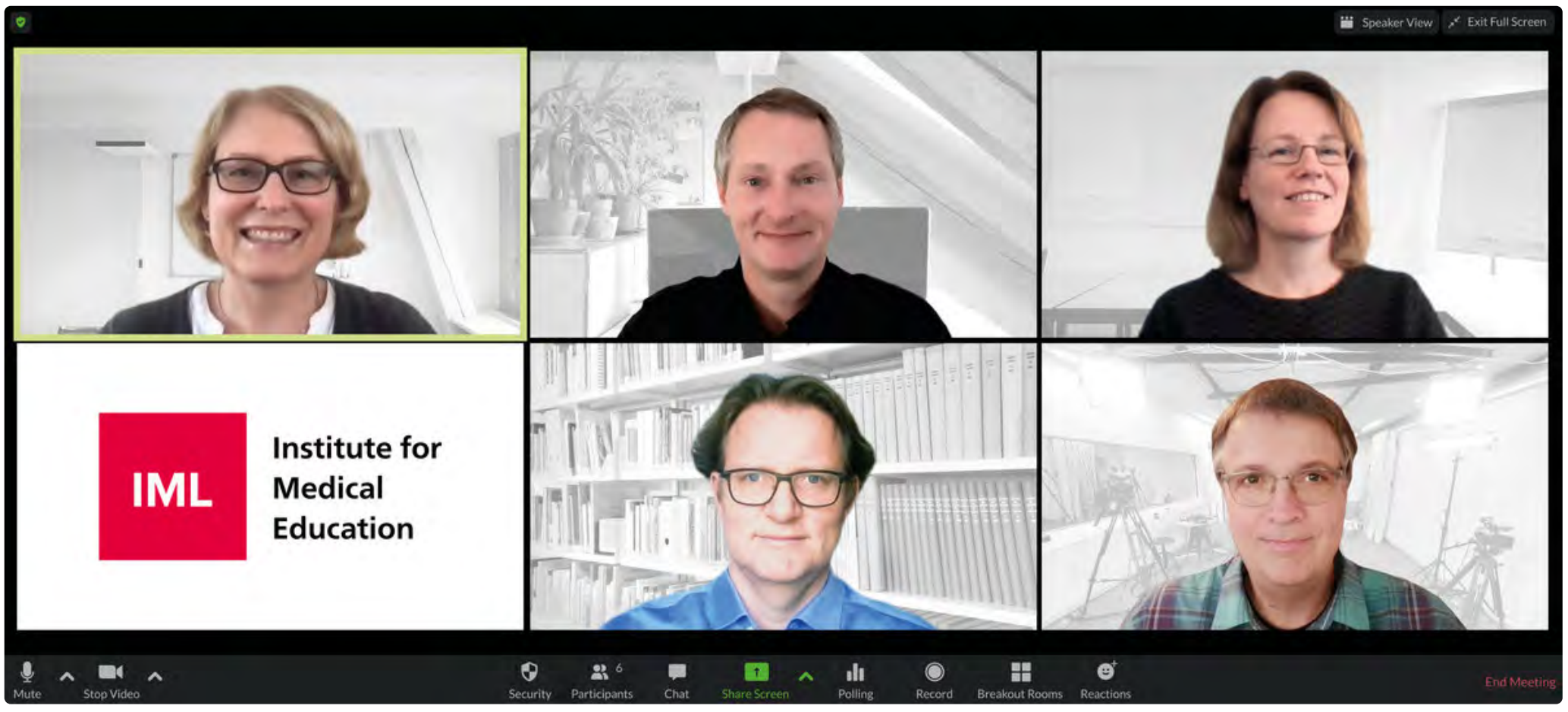
Venia Docendi in Medical Education

In 2020, Christoph Berendonk received the venia docendi in medical education. His research focus is the assessment of medical competence in under- and postgraduate education, with a special interest in individual faculty making subjective judgments about medical trainee performance. Additionally, he has contributed significantly to the introduction of workplace-based assessment both at the University of Bern and on a national level. He was also instrumental in the implementation and development of the Clinical Skills part of the Swiss Federal Licensing Examination.

Master of Medical Education in Corona times

Running the MME study program with international teachers and health professionals as participants was a big challenge during Corona pandemic. Still, we successfully managed to organize 2 modules onsite in Bern (Setting the Stage and Learning Environment) and 3,5 modules online via Zoom (Communication, Project Management, Assessment and Scholarship).

Videoconference - our «new normality»

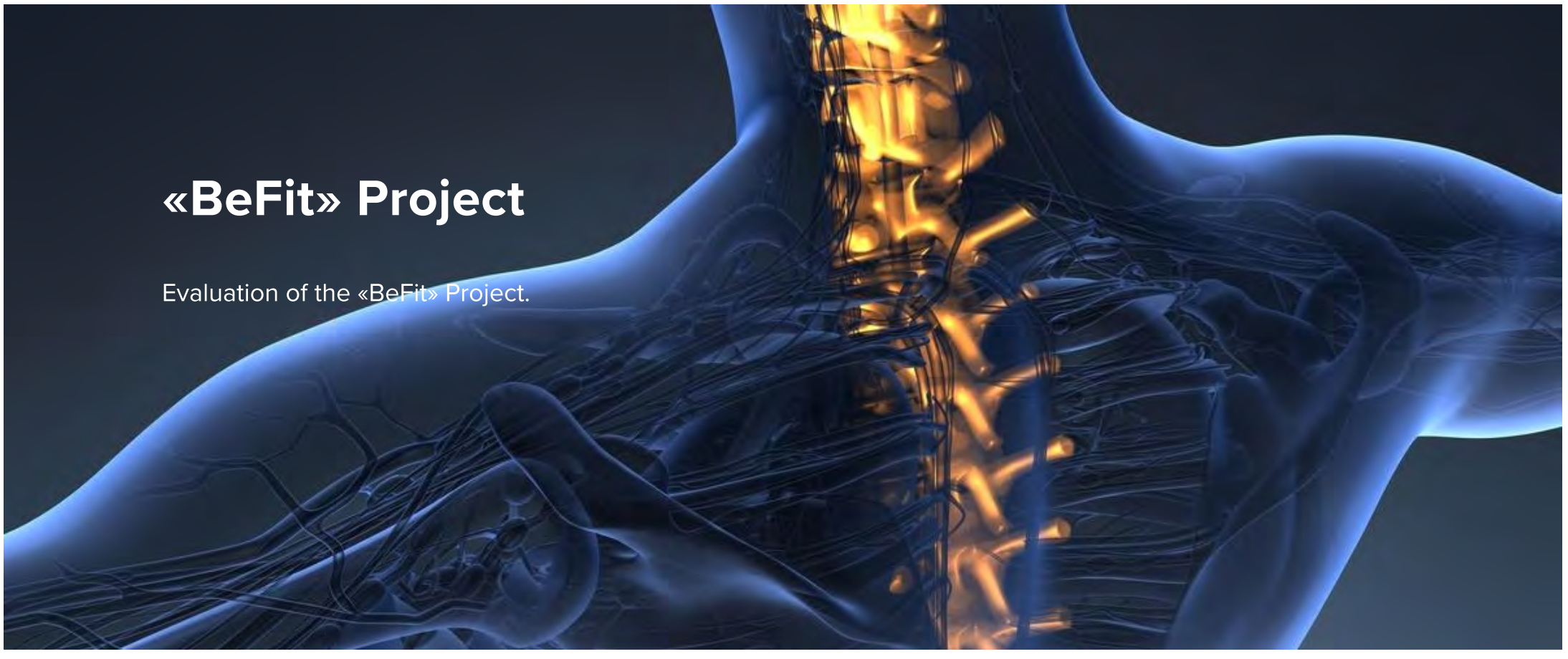


Top row: Prof. Sissel Guttormsen, Director IML; Dr. Philippe Zimmermann, Department Head ASCII; Dr. Sandra Trachsel, Department Head MME

Lower row: Prof. Sören Huwendiek, Department Head AAE; Dr. Kai Schnabel, Department Head AUM

Annual Report 2020 of the Medical Faculty Bern

Read online (IML p. 140 - 141)



«BeFit» Project

Evaluation of the «BeFit» Project.

2020 2021 2022 Service

The «BeFit» project aims to improve the physical activity of ankylosing spondylitis sufferers via the promotion of a specific training concept, thereby improving their quality of life. It also seeks to implement this concept throughout Switzerland.

Aims

The aim of the evaluation is to follow the BeFit project throughout its entire duration and to assess its results and effects.

Client

Health Promotion Switzerland (GFCH)

Co-workers

Felicitas Wagner, Barbara Zurbuchen, Corinne Dreifuss, Sören Huwendiek

Project information

Running time: 02/2020 - 04/2024

Dr. phil. Felicitas Lony Wagner
Scientific collaborator

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Assessment in Cardiopulmonary Resuscitation Training

PhD regarding “Assessment in Cardiopulmonary Resuscitation Training”.

2017 2018 2019 2020 Assessment Research Further training

The goal of this project (PhD theses) is to improve cardiopulmonary resuscitation training with a special focus on outcome assessment.

This PhD project consists of three studies:

1. The primary aim of the first study is to clarify the maximum number of participants an instructor can oversee without missing serious errors of a single participant.

2. The primary aim of the second study is to find out which variant of summative assessment is better to test the participants’ knowledge and skills of a Life support course.

3. The primary aim of the third study is to find out which variant of summative assessment is perceived by course participants as testing their leadership competency best, immediately after the comparison as well as 1 year later to identify any long-term effects on the students.

Aims

The goal of this PhD is to better understand relevant assessment issues regarding undergraduate cardiopulmonary resuscitation training.

Team

Sabine Nabecker, MD (PhD-Student)
Prof. Dr. R. Greif (Thesis Advisor)
Prof. Dr. Dr. med S. Huwendiek, MME (Co-Referee)
PD Dr. med. Lorenz Theiler (additional advisor)

Associate partners

Graduate School for Health Sciences

Project Information

Project period: 10/2017 - 10/2020

Prof. Dr. Dr. med. et MME Sören Huwendiek
Head of AAE Department

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BiSS recognised as a «Certified Skills Lab» according to the APF standard

The Association for Medical Education GMA (Committee for Practical Skills APF) awards the Bern Interprofessional Skills and Simulation Personnel Center (BiSS), including its simulation person program, accreditation as a certified skills lab.

Text: Dr. med. et MME Daniel Bauer, 04.05.2021

2020 Service Teaching Further training

As one of the first skills labs in a German-speaking country and the first in Switzerland, the BiSS has been awarded the quality-mark of a certified skills lab. This confirms the high value placed on practical training for medical students in Bern and also recognises the high-quality work of the BiSS team.

The certification process

The certification process included a detailed report in which structural data on capacity utilisation, equipment and budget analysis was presented. For example, how the work of the BiSS is tailored to meet the needs of the medical students in Bern. In addition, the activities and qualifications of the scientific, technical-administrative employees and student assistants working in the BiSS was presented, as well as how the work in the BiSS is both science-led and also how the BiSS team actively contributes to teaching-learning research.

During a one-day site visit, the two appraisers mandated by the APF were able to generate their own impression and talk to representatives of various BiSS stakeholders. In this way faculty management and employees, as well as the teaching staff, simulation persons (SP) and, last but not least, the learning, instructed and examined students also had a voice and were able to provide their perspectives on infrastructure, programs and concepts.

The final reviewer report concluded that the «varied fields of activity of the BiSS in teaching (design of lessons, revision sessions) and formative and summative exams in the two-stage training courses [and the] high-stakes-federal examinations and as a teaching research institution - the BiSS is very professional, often in an exemplary manner at an international level» The SP-based communication training, development and use of modern medical models, the professional SP program and the interdisciplinarity of the BiSS are mentioned as positive examples. The efforts of the faculty over recent years are paying off here, efforts that also made possible the move of the BiSS from the Insekareal to the building in the former Zieglerspital in the first place. This made observations such as... *«the teaching spaces and equipment infrastructure [...] is well developed in accordance with the content profile and is currently appropriately staffed. The move to the UniZiegler location created excellent conditions for the OSCEs (be it university or final exams)»* possible.

The appraisal team also made helpful and specific recommendations to the BiSS, which the relevant staff and teams will address so that a re-certification of the facility and the program in seven years can be looked forward to with confidence. Certification without conditions is always pleasing. We would like to take this opportunity to thank all those involved. Including the BiSS team, the AUM, those who were available for discussions on the day of the inspection and the appraisers themselves.

Documents

Certification of the Skills Labs by the Practical Skills Committee (in DE)

BiSS Certificate (in DE)

Dr. med. et MME Daniel Bauer
Scientific collaborator

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Communication courses for Sanacare group practices

Communication courses for the medical staff of the 13 Sanacare group practices. Including role play among themselves and with simulated staff.

2020 2021 2022 Service Development

Communication courses on the following topics:

- Motivational Interviewing
- Giving feedback
- Breaking bad news
- Shared decision making
- Blended learning concept with pre-course preparation using DocCom.Deutsch

This is envisaged as a pilot course.

Objective

- Development of 4 half-day courses on the above topics
- Presentation of all courses (52 dates)
- Standardisation of courses for use by other interested parties.

Ordering customer

Sanacare

Financing

Sanacare

Team IML

Ulrich Woermann, Kai Schnabel, Beate Brem, Daniel Bauer, Adrian Michel

Project information

Running time: 01/2020 – 12/2023

Dr. med. et MME Ulrich Woermann-Walthert
Scientific collaborator, Head of Group learning media

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Communication is a key competence

Communication with cancer patients and their families about approaching death: schaffolding conceptual and practical learning for health professionals

2019 2020 2021 Service Development Research

Despite extraordinary scientific breakthroughs, cancer remains the top two causes of death in Switzerland. This makes ‘communication about approaching death’ a main communication task for oncology health professionals. Our project aims at supporting oncology health professionals in performing these conversations with confidence and positive impact for all involved. Evidence shows that communication skills can be learned and that they have the potential to influence how people die, how families adjust to bereavement, and how health professionals cope with death in their work.

Objective

Based on state of the art of research, we will develop a new learning module on the DocCom.Deutsch learning platform, addressing the issue of communicating approaching death. We will deliver a state-of-the art communication guide for oncology health professionals through an eLearning blended approach, and test the efficiency of learning and employing this approach through research.

Project team

Prof. Sissel Guttormsen, IML, medical faculty, University of Bern (Main applicant)
Prof. Steffen Eychmüller, Universitäres zentrum für Palliative Care, Inselspital Bern (Co-applicant)
Dr. Sofia Zambrano Universitäres Zentrum für Palliative Care, Inselspital Bern (Co-applicant)
Dr. Kai Schnabel, IML, medical faculty, University of Bern (Co-applicant)

Financing

Krebsliga Schweiz

Team IML

Sissel Guttormsen, Kai Schnabel, Felix Schmitz, Beate Brehm

Project information

Running time: 04.2019 – 31.03.2022

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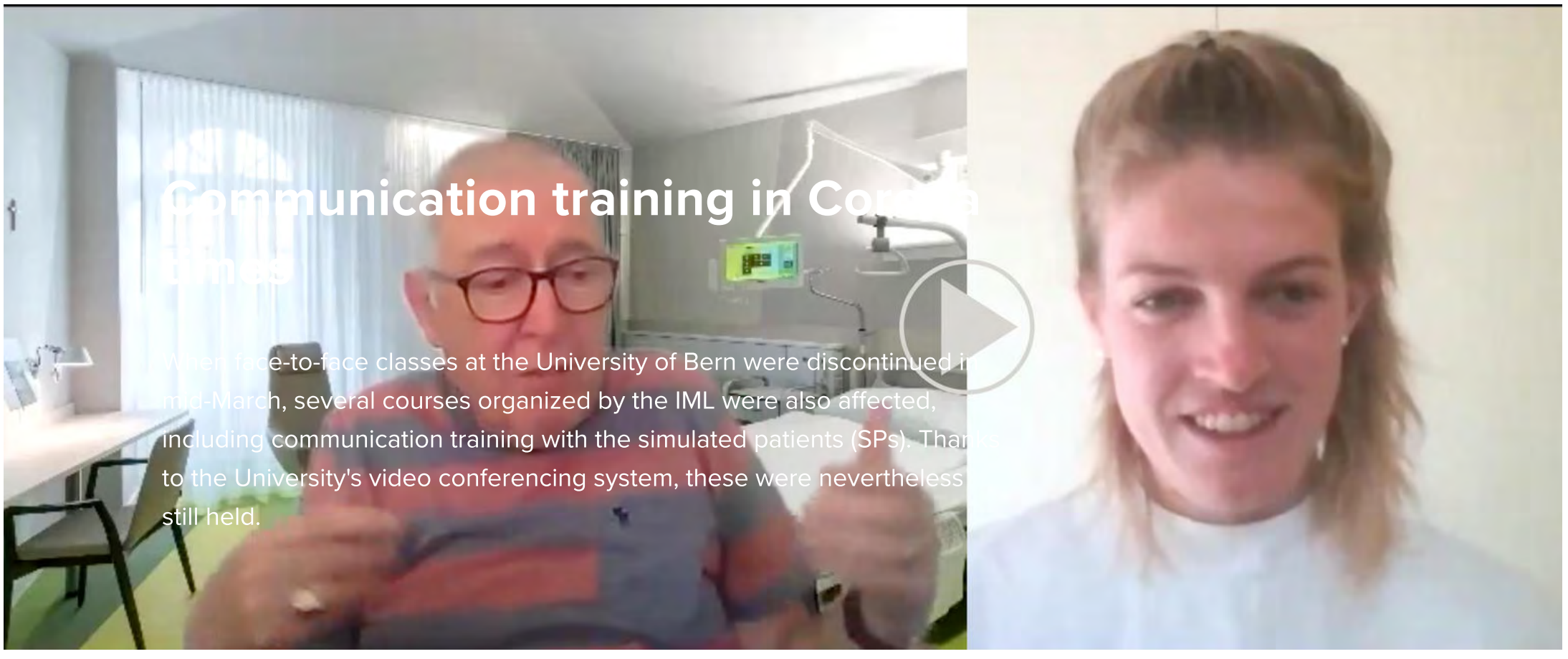

Text: Dr. med. et MME Ulrich Woermann-Walthert, 04.05.2021

2020 Teaching

Exactly to the day that communication training with SPs was due to begin for 6th year students, all face-to-face events at the University of Bern were cancelled due to the pandemic. In the short term, we had to cancel all SP appointments. The IML staff switched to home working. It was the hour of video conferencing. Conferences and meetings were held online.

The idea of carrying out communication training via video conference quickly came up. The idea was to offer existing teaching concepts as an online event without significant didactic amendments.

Discussing this with the SPs indicated that they were generally positive about trying to do the training online. In repeated online sessions, the use of the video conference system and its use was tested with each of the individual SPs in their home environment.

At the same time, a survey among the students showed that around a quarter (more than 60) of the 240 sixth year students were interested in completing the communication training online and on a voluntary basis. The communication training could not be declared mandatory as not an insignificant number of the students were already working in hospitals at this time. After the SPs had been instructed and technically equipped, a Doodle poll was set up to find an appointment. The students were able to use the Doodle poll to book the dates that suited them. At the selected time, the students sent a video conference invitation together with the weblink to the SPs.

In total, more than 140 online calls were conducted. A subsequent online survey of both the SPs and the students showed that everyone was pleasantly surprised at how well the communication training worked, even though they were not in the same room. Alongside negative points such as the reduced perception of non-verbal cues, positive reports regarding the greater flexibility in terms of time or the clearer focus on the conversation was reported.

The communication training, as well as the closing sessions for the internships "Interprofessional learning with nursing and medical students" for the 1st and 2nd year students and the EKG course in the 6th year of study were similarly affected by the cessation of classroom instruction. These too were successfully switched to University video conference system (Zoom) with largely unchanged didactic approaches.

As the corona pandemic will continue probably for a while, it cannot be ruled out that these courses will also have to be conducted online in the autumn/fall semester. If this happens, we will benefit from the experience gained in the spring semester.

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Competencies of Attendings in GIM Departments in Swiss Hospitals

In Switzerland, the competencies for attending physicians in General Internal Medicine (GIM) are not sufficiently defined, and additional non-medical tasks to successfully practice hospital medicine are not addressed.

2019 2020 Assessment Service Development

Due to this shortcoming, the transition from resident to attending physician in hospitals is often burdensome and stressful.

Objective

The objective of this project is to define the competencies of a Swiss GIM attending and to identify gaps in these competencies as a basis for the creation of a targeted training program.

Partner

Department of General Internal Medicine, Inselspital, University Hospital Bern, University of Bern

Financing

SGAIM Foundation

Team

Christine Roten, MD, MME, Department of General Internal Medicine, Inselspital, University Hospital Bern, University of Bern

Christoph Berendonk, MD, MME, Institute for Medical Education, University of Bern

Christine Baumgartner, MD, MAS, Department of General Internal Medicine, Inselspital, University Hospital Bern, University of Bern

Stefanie Mosimann, MD, Department of General Internal Medicine, Inselspital, University Hospital Bern, University of Bern

Jacques Donzé, MD, MSc, Division of Medicine, Hôpital Neuchâtelois, Neuchâtel

Felix Nohl, MD, MME, Department of General Internal Medicine, Regionalspital Emmental, Burgdorf

Simone Krähenmann, MD, MME, Division of General Internal Medicine, Kantonsspital St. Gallen, St. Gallen

Matteo Monti, MD, MME, Division of Internal Medicine, Centre Hospitalier Universitaire Vaudois, Lausanne

Martin Perrig, MD, MME, Department of General Internal Medicine, Inselspital, University Hospital Bern, University of Bern

Project information

Running time: 2/2019 - 12/2020

PD Dr. med. et MME Christoph Berendonk
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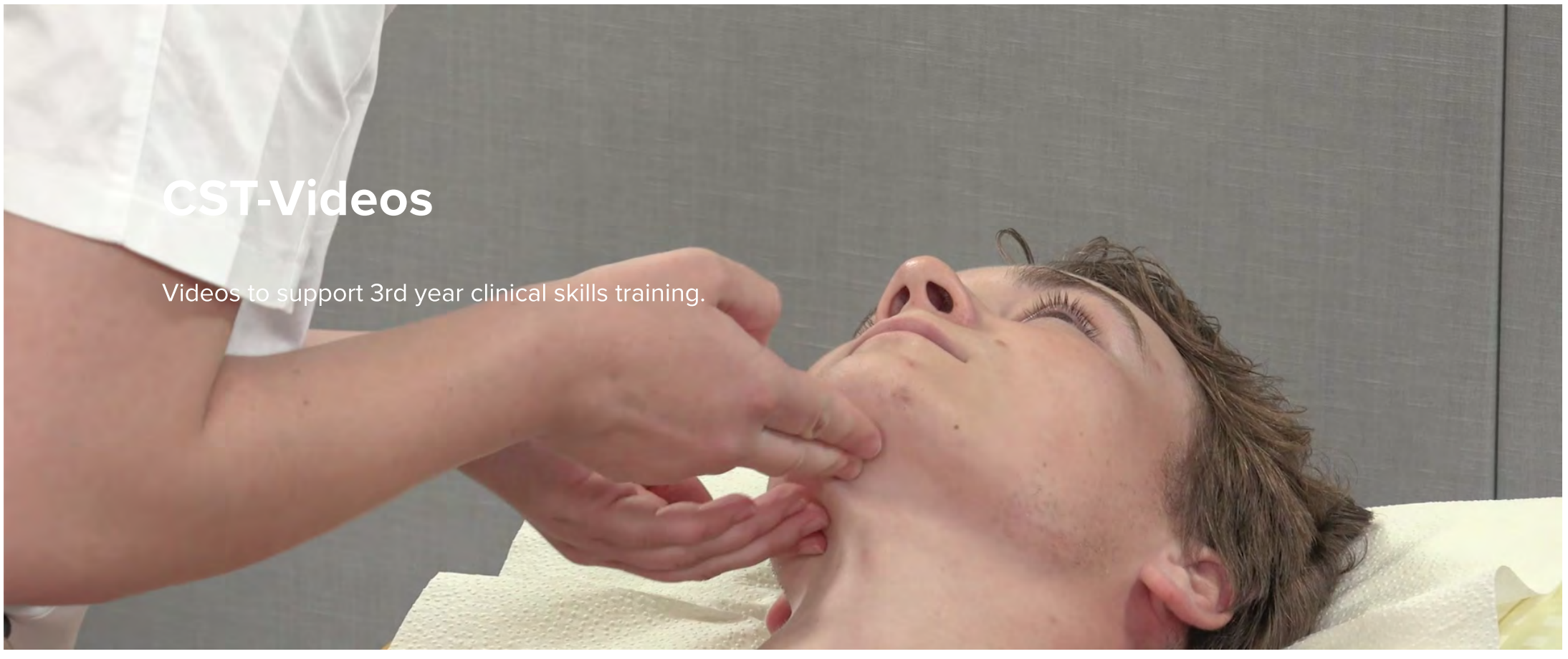

CST-Videos

Videos to support 3rd year clinical skills training.

2019 2020 Service Teaching

Demonstration of the examination process and examination techniques. Provision of the videos on ILIAS. Blended learning concept. Videos are used to prepare for CST classes and OSCE exams.

Topics are:

- Examination of the abdomen, groin, male genitalia and rectum
- Examination of the cardiovascular system and lymph nodes
- Examination of the lungs and thyroid
- Examination of the eyes
- Examination of the musculoskeletal system
- Neurological examination
- ENT examination
- Gynaecological examination and examination of the female breast

Mostly created as part of an MSc theses.

Objective

Optimisation of CST teaching

Ordering customer

Faculty of Medicine

Partner

Various University clinics

Team IML

Ulrich Woermann, Nick Lüthi, Giovanni Ferrieri, Michael Flury, Marcel von Gunten, Lernende

Target group

Medical students

Project information

Running time: 01/2019-12/2020

Dr. med. et MME Ulrich Woermann-Walthert
Scientific collaborator, Head of Group learning media

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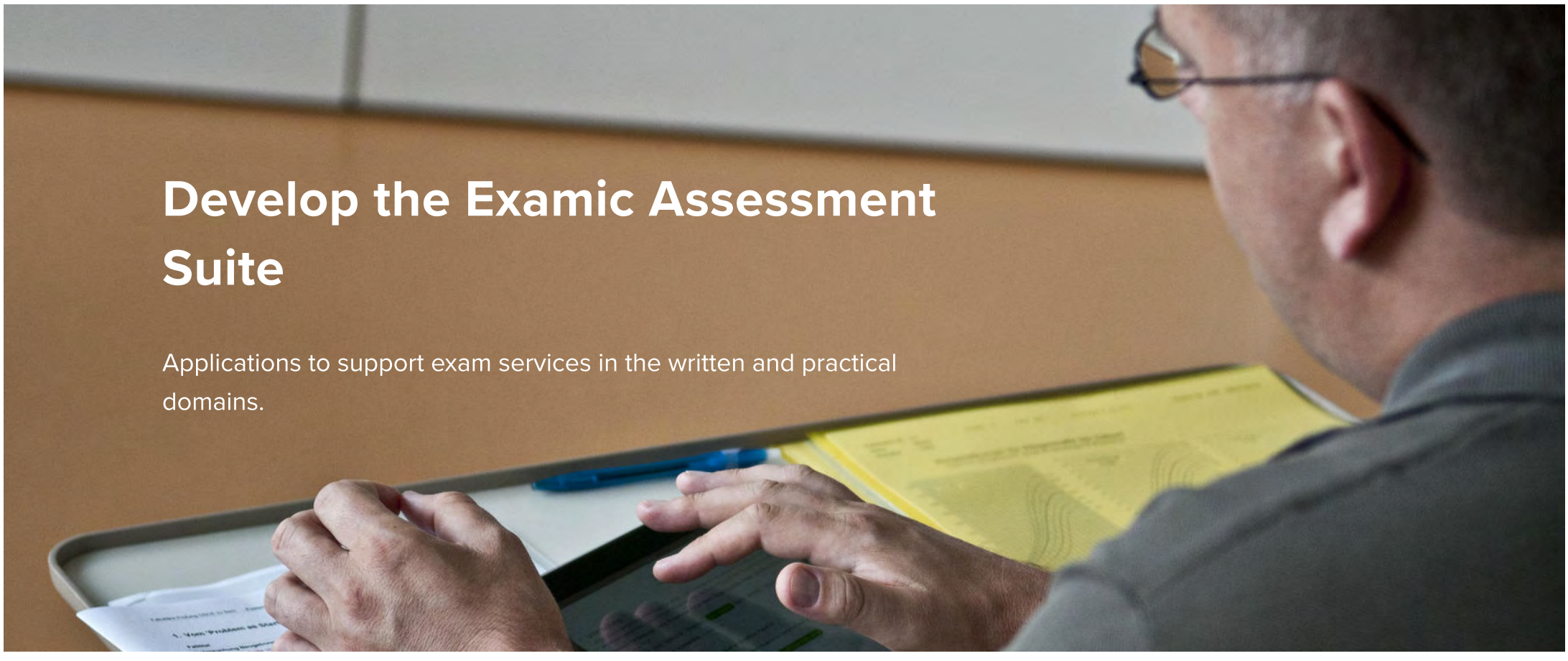

Develop the Examic Assessment Suite

Applications to support exam services in the written and practical domains.

2017 2018 2019 2020 2021 Assessment Service Development Examic Usability

Develop and maintain various applications to support exam services in the written and practical domains. The software package is also used for the Federal Licensing Exams and is implemented in various other exams.

Objective

Support the whole assessment cycle for written (Measured®) and practical (*E*OSCE®) exams through user-friendly applications.

Ordering customer

Federal Office of Public Health
Faculty of Medicine, University of Bern
Institute for Medical Education
Various other partners

Team

Axel Hahn, Daniela Schmid, Daniel Schüler, Florian Goll, Hansmartin Geiser, Jonathan Duss, Kai Gerszewski, lic. phil. Lukas Rieder, Martin Gasser, Michael Stämpfli, Neil Docherty, Rafael Beck, Raphael Laubscher, Roger Meier, Samuel Tonini, Stefan Tanner, Stephan Schallenberger (MAS in HCID), Pavlyukov Vladimir Vladimirovich, Dr. sc. ETH Markus Dahinden, Dr. sc. ETH Philippe Zimmermann

Project information

Running time: since 2012

Read more

Project-Website Examic® Assessment Suite

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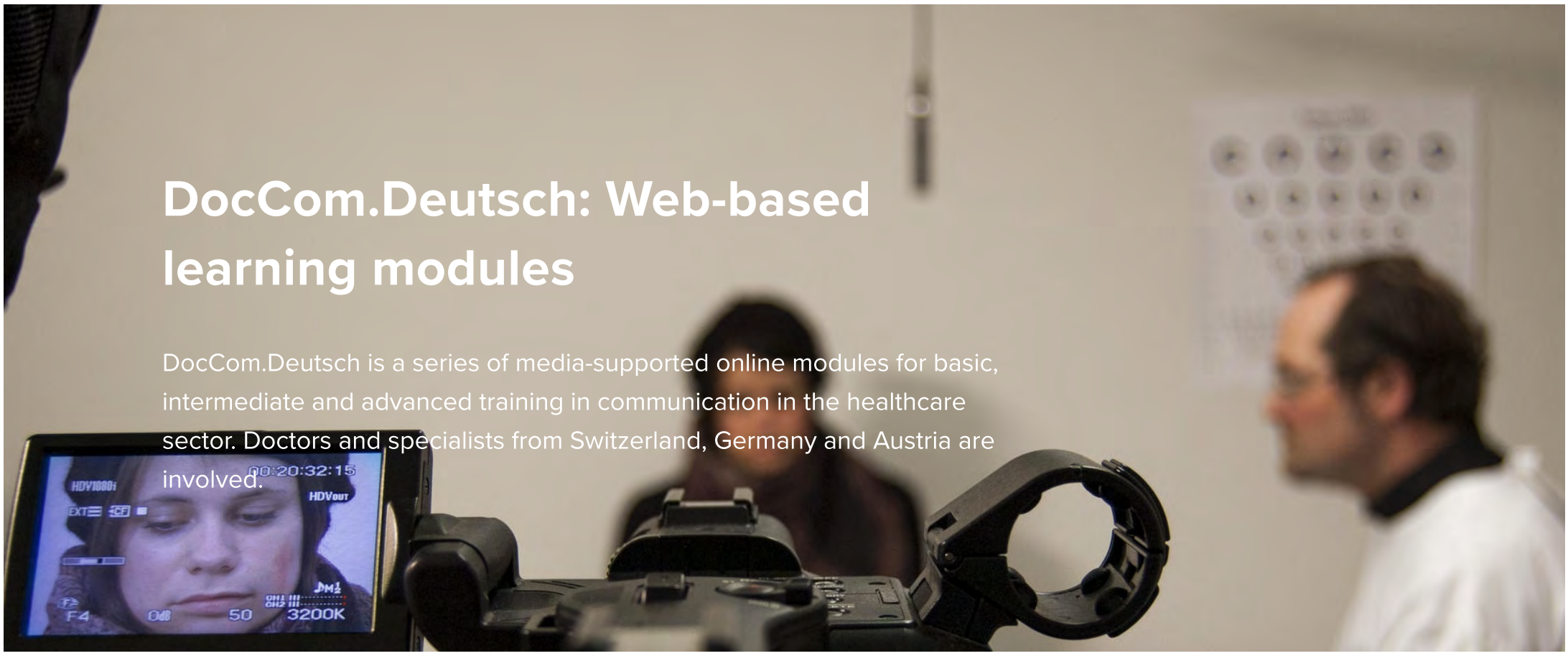

DocCom.Deutsch: Web-based learning modules

DocCom.Deutsch is a series of media-supported online modules for basic, intermediate and advanced training in communication in the healthcare sector. Doctors and specialists from Switzerland, Germany and Austria are involved.

2016 2017 2018 2019 2020 2021 Service Teaching Usability

Objective

The modules convey theory and practical examples that represent preparation for hands-on communication training.

Target group

Healthcare professional and specialist trainees

Team IML

Sissel Guttormsen, Kai Schnabel, Daniel Bauer, Adrian Michel, Axel Hahn

Partners, who are already using the learning platform

Publications

Brem, B.G., Plüer, J., Schnabel, K.P., Peng-Keller, S., Guttormsen Schär, S., Schmitz, F.M.Fokusgruppenstudie zur Validierung eines “spiritual-care” Gesprächsmodells. In: Jahrestagung der Gesellschaft für Medizinische Ausbildung (GMA). Zürich, 09.-12.09.2020. Düsseldorf: German Medical Science GMS Publishing House; 2020. DocV-040. https://dx.doi.org/10.3205/20gma059

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Project information

Running time:

Phase I: 2011 – 2014

Since 2014: continuous support and development

Financing:

Phase I / Donation through Novartis Foundation for People and the Environment

Link

Website DocCom.Deutsch (in DE)

EU project «did-act» on clinical decision-making

An adaptive curriculum for clinical reasoning for students and instructors is to be developed, implemented and disseminated in order to better prepare future doctors and to avoid mistakes.

2019 2020 2021 Assessment Research

Clinical decision making (also referred to as clincial reasoning) is a skill that healthcare students must learn during their studies and then further develop in clinical practice. This process involves the use of clinical knowledge to gather and integrate information from various sources to ultimately lead to a diagnosis and a management plan for patients.

Objective

- design, develop, evaluate and disseminate a curriculum for clinical decision-making
- develop a train-the-trainer course for lecturers.
- Optimal learning should be achieved through a combination of online and classroom teaching. In order to facilitate the dissemination and use of the new curriculum, it can be adapted to existing curricula, which should make it easier for both curriculum planners and lecturers to gradually integrate it.

Financing

Co-financed by the EU

Project Team

Project team IML:
Sören Huwendiek & Felicitas Wagner

Project coordinator: University of Augsburg, Project manager: PD, Dr. med. Inga Hege.

Project partners:

- Jagiellonian University, Krakow:
  Andrzej A. Kononowicz, PhD; Małgorzata Sudacka, MD; Magdalena Szopa, PhD
- University of Bern:
  Sören Huwendiek, Assoc. prof., MD, PhD, MME; Felicitas Wagner, PhD; Isabelle Steiner, MD
- Faculty of Medicine, University of Maribor in Slovenia:
  Monika Sobocan, MD, Prof. Zalika Klemenc-Ketis, MD, Prof. Sebastjan Bevc, MD, PhD; Prof. Breda Pecovnik Balon, MD, PhD; Prof. Breda Pecovnik Balon, MD, PhD

- Instruct (www.instruct.eu):
  Martin Adler is CEO; Carina Pfeifer
- Örebro University:
  Associate profs: Samuel Edelbring; Kristin Ewins; Wiegleb Edström; Elisabet Welin, Prof.
- Digital Education Holdings Ltd., Malta:
  Nils Thiessen, MD; Jasmin Düsterhöft, MD; Federico Arevalo, MD

Project information

Running time: 2019 - 2021

Links

"did-act" website

Evaluation to accompany the “Steigbügel” project

Supporting professional reintegration following parental leave.

2017 2018 2019 2020 2021 2022 Service Evaluation Further training

The project aims to support the professional reintegration of physicians who have been away from their profession for a longer period of time for family reasons. Over 12 months, the participants complete a residency program and are supported by various offers (e.g. coaching).

Objective

The purpose of the accompanying evaluation is to check the success of the project and to identify factors for success.

Ordering customer

medical women Switzerland (mws)

Team

Dr. phil. Felicitas Wagner
lic. phil. Barbara Zurbuchen
Prof. Dr. phil. Sissel Guttormsen
Prof. Dr. Dr. med. Sören Huwendiek, MME

Project information

Running time: 5/2017 – 2/2022

Dr. phil. Felicitas Lony Wagner
Scientific collaborator

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Gender gap phenomenon

Gender differences in the career motivations of health professionals.

2020 2021 Research

Despite numerous attempts to promote equality between women and men, there are still significantly more men in top positions in Switzerland. This gender gap phenomenon is not only found in companies, but is also visible in socially-oriented professions such as medicine and psychology.

Aims

This project seeks to investigate whether there is a gender difference in career motivation among students of medicine and psychology. It will also examine whether career motivations change in a gender-specific manner over the course of the degree, and which of the influencing factors that are already known are most influential.

Partners

IML: Prof. Sissel Guttormsen, Dr. Felix Schmitz
Institute of Psychology: Prof. Achim Elfering, Ellen Surdel (Student)

Publications

Planned

Project information

Running time: 2020 - 2021

Prof. Dr. phil. Sissel Guttormsen Schär
Director IML

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HemoSurf development

HemoSurf is educational software teaching morphological haematology that is known and used worldwide.

2019 2020 2021 Service Development

The extensive figures are from a time in which digital photography was not as advanced as it is today. The pictures were taken with a video camera and a frame grabber and are rather small and low-resolution. The figures are to be replaced by new images. In addition, HemoSurf will also be translated into Spanish.

Since the sale of HemoSurf on CD-ROM is no longer viable, in the medium term, an online version with online payment is planned.

Objective

- New figures
- Spanish version of HemoSurf
- Online licencing

Partner

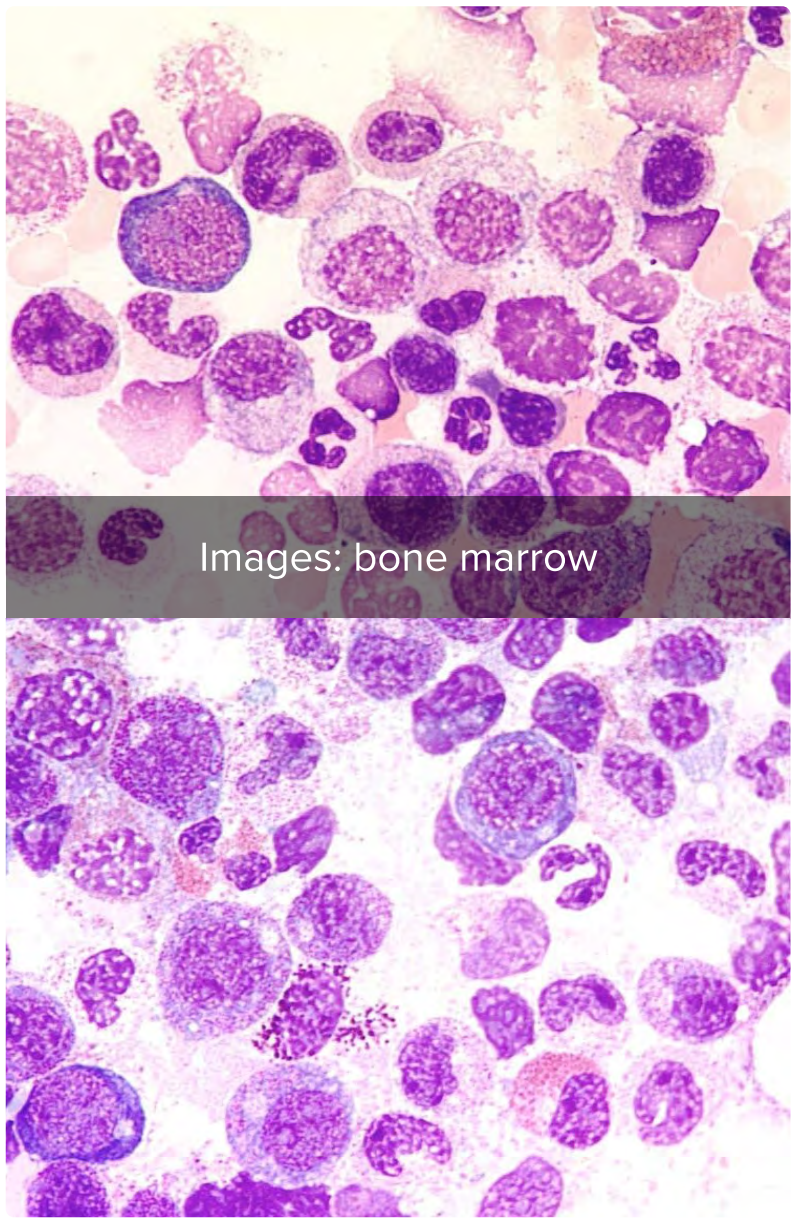
Prof. Dr. med. Vera Ulrike Bacher, Universitätsklinik für Hämatologie und Hämatologisches Zentrallabor

Team IML

Ulrich Woermann, Adrian Michel, Andrea Leonardo Abgottspon

Project information

Running time: 01/2019 – 12/2021



Images: bone marrow

Dr. med. et MME Ulrich Woermann-Walthert
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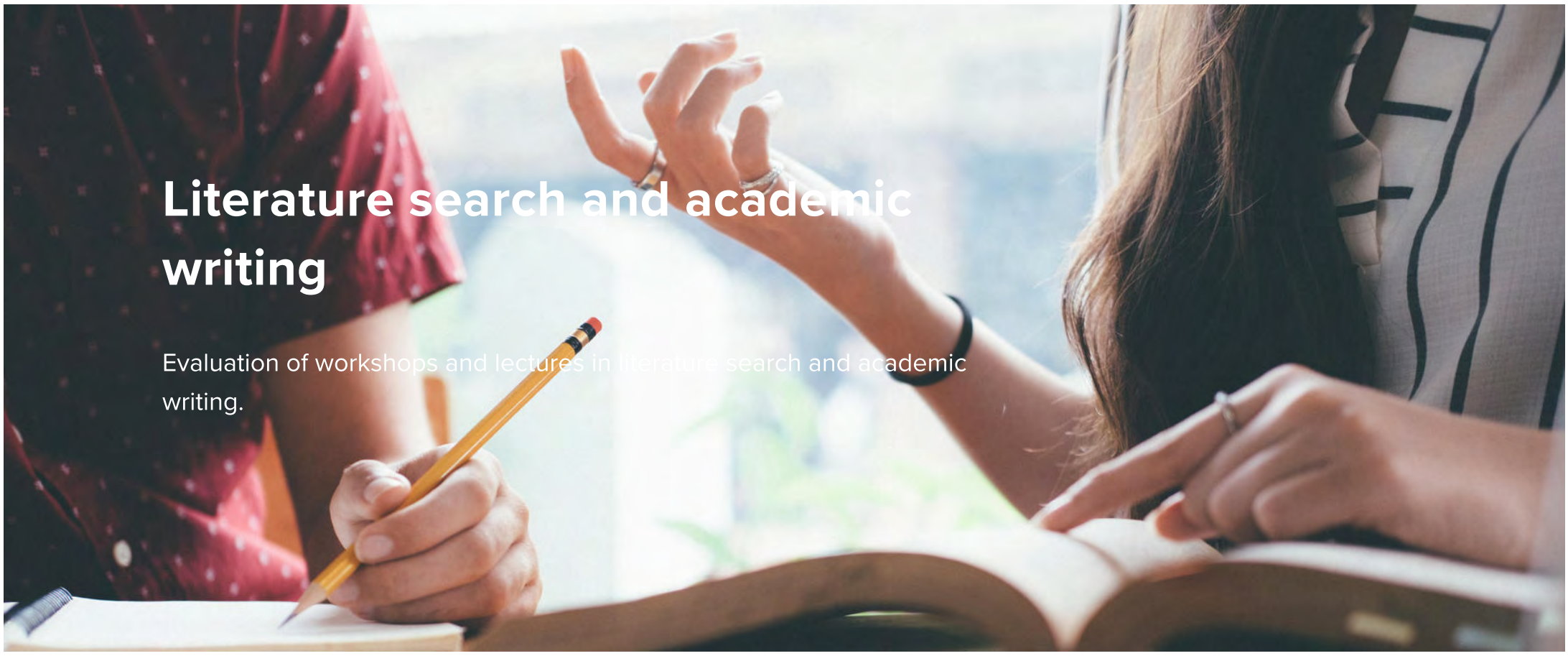

Literature search and academic writing

Evaluation of workshops and lectures in literature search and academic writing.

2019 2020 2021 Service

The University Library of Bern (UB) is offering new lectures and workshops in systematic literature search and academic writing for students of human medicine. As part of the first implementation, systematic evaluations are planned.

Aims

The goal of the evaluation is to provide the UB with useful data to arrive at conclusions regarding the quality of the new lectures and workshops and potential for improvement.

Team

IML: Felicitas Wagner, Corinne Dreifuss, Sissel Guttormsen

Project information

Running time: 11/2019 – 07/2021

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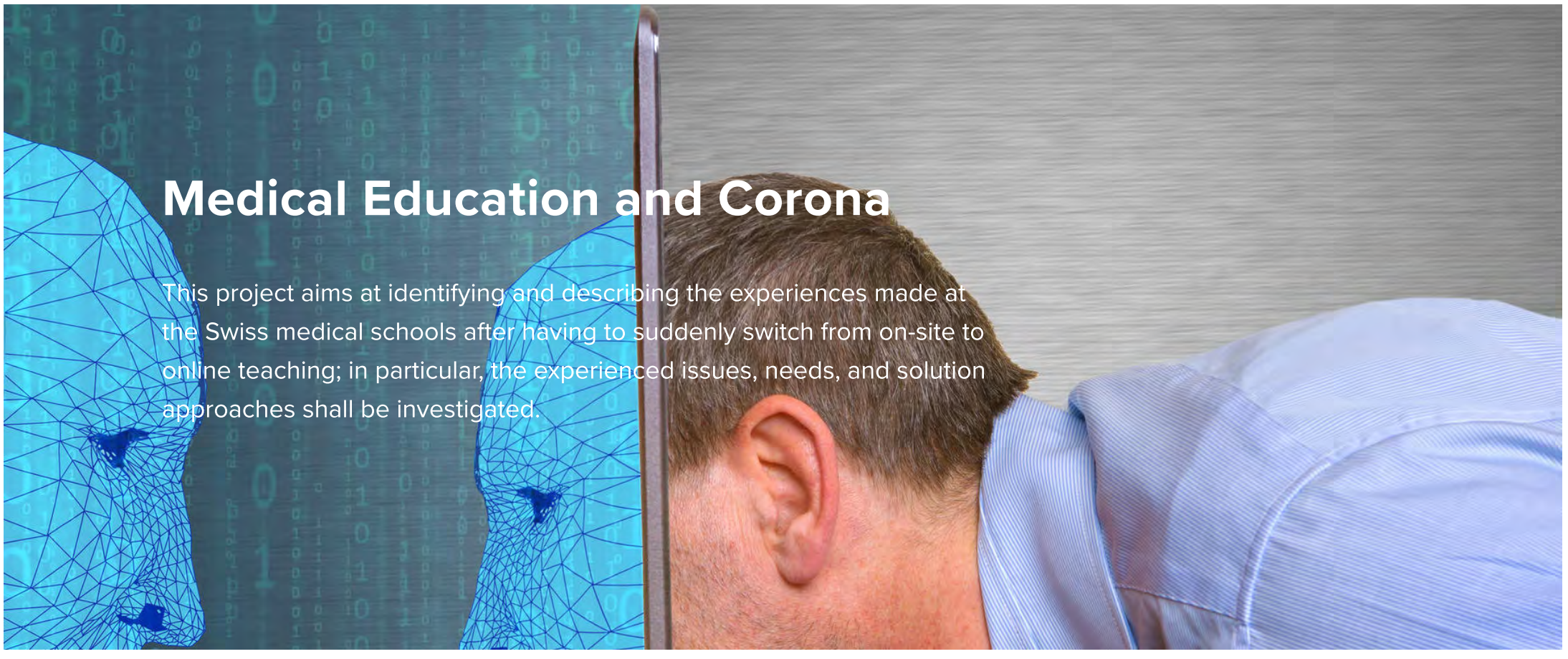

Medical Education and Corona

This project aims at identifying and describing the experiences made at the Swiss medical schools after having to suddenly switch from on-site to online teaching; in particular, the experienced issues, needs, and solution approaches shall be investigated.

2020 2021 Research

It is important to monitor this process carefully, and learn from the experiences. A structured interview guide was developed based on factors identified in the literature.

Aims

The responsible curriculum leaders at the Swiss medical faculties participated in a series of structured interviews during the Spring 2020. This project will deliver a better understanding of the actual transition from on-site to on-line teaching including barriers and problems encountered, solutions or innovative ideas for facilitating this transition.

Partners

IML: Prof. Sissel Guttormsen, Dr. med. Artemisa Gogollari

Related publications

Guttormsen, S. (in print). Die Bedeutung von Präsenz in der medizinischen Lehre: Erfahrung und Forschung Hand in Hand. In Stanisavljevic, Marija & Tremp, Peter: (Digitale) Präsenz. (Invited paper)

Bauer D. Brem B, Guttormsen S, Woermann U, Schnabel K (2020). How COVID-19 accelerated the digitization of teaching in the medical program at the university of Bern. VSH / AEU Bulletin, Vereinigung der Schweizerischen Hochschulen, 46, 3/4, ISSN 166- 9898

Project information

Running time: 2020 - 2021

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Related IML stories

- Examinations during the Covid-19 pandemic
- Communication training in Corona times
- Training of Contact Tracers

MedSurf

Numerous online learning programs like MorphoMed, RadioSurf or CliniSurf, which were developed at the Department for Education and Media AUM at the IML in conjunction with specialist representatives from the Faculty of Medicine, need to be updated.

2016 2017 2018 2019 2020 2021 2022 Service Development Usability Further training

To enable continued use of these very popular learning programs in the future, a transition from both a technological and creative perspective is essential.

Objective

Our online learning programs need to comply with the latest standards and need to be seamlessly usable with the whole range of modern devices. New features like a comprehensive search function or deep linking improve the user experience.

Through the development of an author system for learning content also the creation of complex didactic scenarios is supported.

The following learning modules were realized with MedSurf:

- MorphoMed for Anatomy, Histology and Pathology
- RadioSurf for radiology of the chest, the skeleton and the head
- ChiroSurf for surgery
- DentoSurf for dental medicine

More learning modules are in preparation. A list of all our online learning programs can be found here.

Ordering customer

Faculty of Medicine, Bern

Team

Institute of Anatomy, University of Bern
PD Dr. med. Gudrun Herrmann

IML
Dr. med. Ulrich Woermann, MME
Dr. med. Nick Lüthi, MME
Samuel Heinzmann

Andrea Gottsponer
Thomas Guthruf
Daniela Schmid

Project information

Running time: 2016 - 2022

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Scientific collaborator, Head of Group learning media

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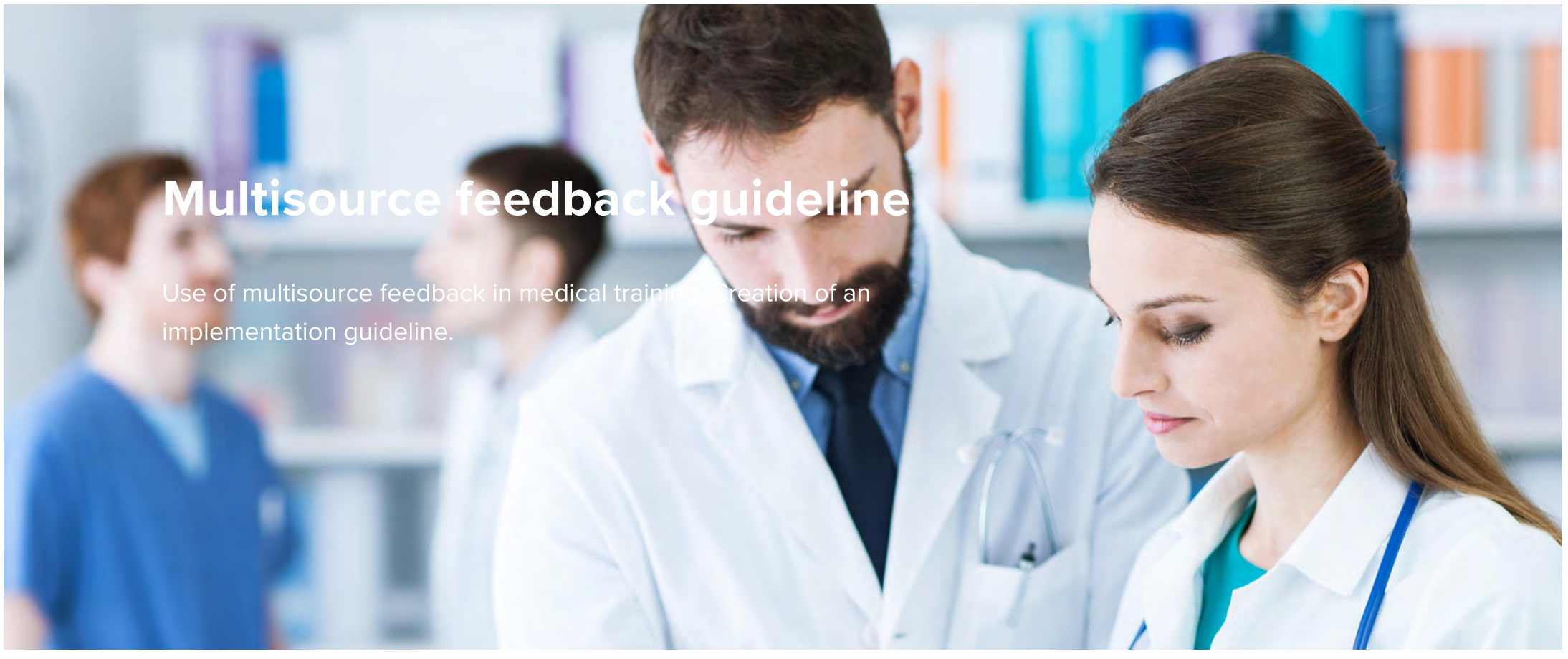

Multisource feedback guideline

Use of multisource feedback in medical training: creation of an implementation guideline.

2019 2020 Assessment Research Teaching

The implementation and performance of multisource feedback in medical training in Switzerland is being investigated at two pilot sites. Concrete recommendations, taking into account the international literature, will be derived from the collated positive and negative factors.

Objective

The aim of this project is to create a guideline that should help Swiss training institutions to implement and perform multisource feedback.

Ordering customer

SIWF-project funding 2019

Partner

Dr. Kathrin Neuhaus, Universitäts-Kinderspital Zürich; Dr. Barbara Fiedel, Kantonsspital Winterthur

Financing

SIWF-project funding 2019 (in DE)

Team IML

Eva Hennel (PhD student)
Prof. Dr. Dr. med. et MME Sören Huwendiek (thesis supervisor)

Project information

Running time: 07/2019 - 03/2020

Links

PhD-Thesis «Multisource Feedback»

Prof. Dr. Dr. med. et MME Sören Huwendiek
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PhD Entrustable Professional Activities in Old Age Psychiatry

PhD regarding improving residency training with Entrustable Professional Activities (EPA's) in Old Age Psychiatry.

2020 2021 2022 Assessment Research Teaching

PhD-Title: «Identifying and Implementing Entrustable Professional Activities to improve Old Age Psychiatry Residency Training»

The purpose of this research project is to investigate needs and requirements for an EPA-based curriculum in Old Age Psychiatry in Switzerland, to identify a set of EPAs specifically for old age psychiatry and to develop assessment methods of some of the identified EPAs. With the proposed studies, we expect to have a foundation to further develop a competency-based curriculum for residency training in old age psychiatry in terms of residents' achievement of learning outcomes, improving patient safety and patient care quality.

Aims

The overarching aim of this PhD is to investigate the residents needs in Old Age psychiatry, to develop EPAs for a competency-based curriculum in Old Age psychiatry and to implement assessment and teaching methods for the identified EPAs.

Team

PhD student: Seraina Lerch (IML)
PhD Supervisor: Prof. Dr. Dr. med et MME Sören Huwendiek (IML)
Co-Supervisor: Prof. Dr. med. Stefan Klöppel
Co-Referee: Prof. Mathieu Nendaz
Further Supervisor: Dr. med. Severin Pinilla, M. Ed. (IML)

Partners

University Hospital of Old Age Psychiatry and Psychotherapy Bern, Graduate School for Health Sciences Bern

Project information

Running time: 2020 – 2023

Prof. Dr. Dr. med. et MME Sören Huwendiek
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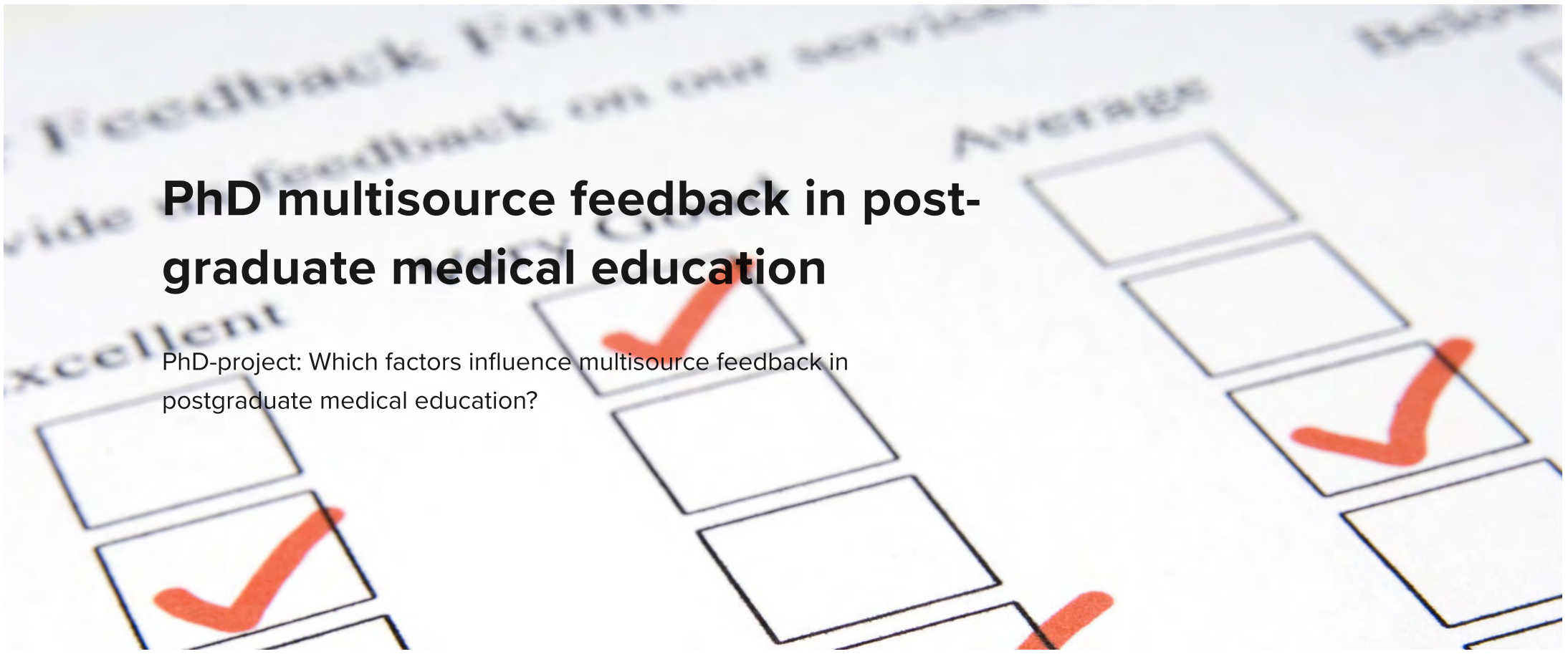

PhD multisource feedback in post-graduate medical education

PhD-project: Which factors influence multisource feedback in postgraduate medical education?

2016 2017 2018 2019 2020 2021 Assessment Research

Within this PhD work, we aim to demonstrate which factors influence the effects of multisource feedback (MSF) on postgraduate medical education.

Multisource-Feedback (MSF) is an approved form of formative assessment for medical training. Typically, MSF consists of feedback given to a doctor in training by several raters via structured questionnaires. Raters can come from the groups of peers, supervisors, medical and non-medical co-workers. Their written feedback is summed up in a conversation. Here, learner and supervisor formulate individual learning goals, which can help to guide further training.

Objective

By addressing this question, we seek to discover which influencing factors are present and how postgraduate education can be supported with the help of multisource feedback.

Partner

Graduate School for Health Sciences

Team

Eva Hennel (PhD student)
Prof. Dr. Dr. med. Sören Huwendiek, MME (thesis supervisor)
and further employees of the IML

Project information

Running time: 9/2014 – 2/2021

Dr. med. Eva Kathrin Hennel
Scientific collaborator

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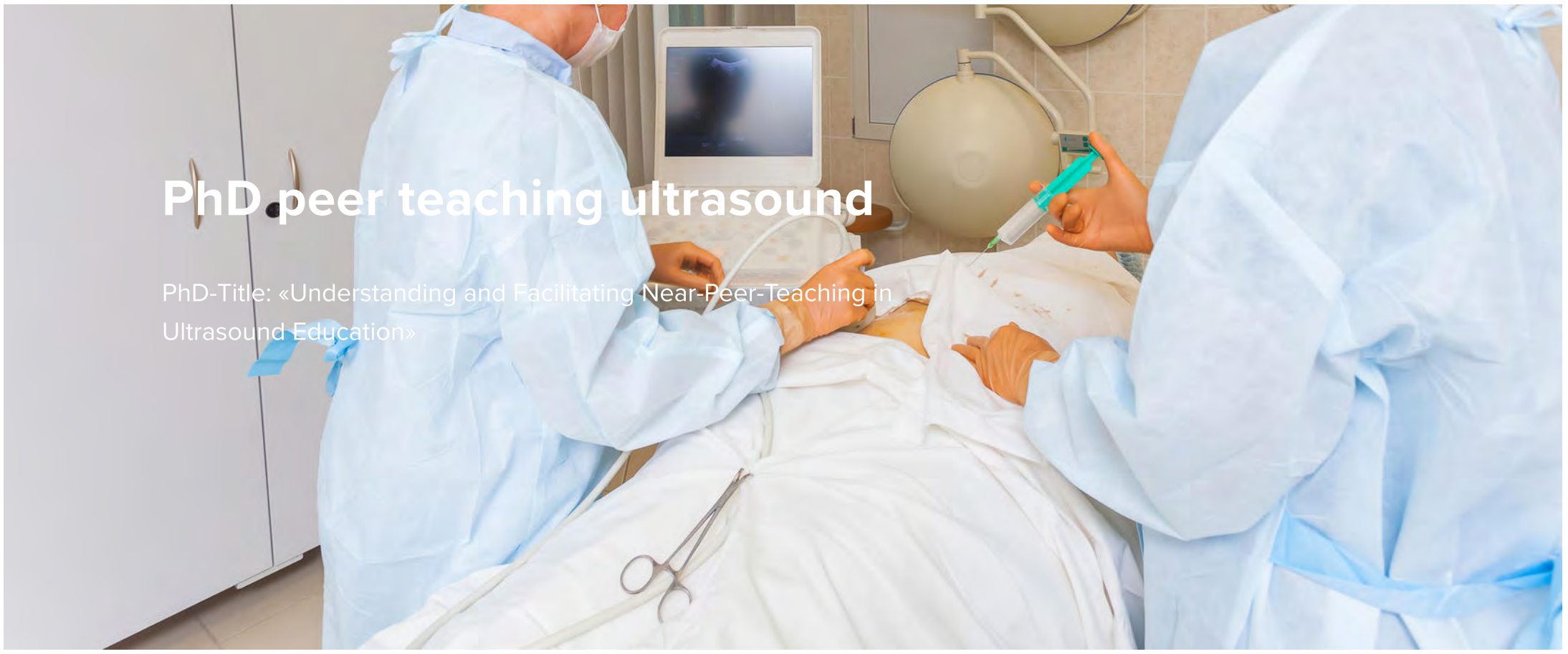

PhD peer teaching ultrasound

PhD-Title: «Understanding and Facilitating Near-Peer-Teaching in Ultrasound Education»

2020 2021 2022 Assessment Research Teaching

Young doctors nowadays need to perform simple ultrasound investigations early on in their clinical career and ultrasound education is thus shifting to undergraduate medical education. Performing ultrasound scans is a complex skill with procedural and pattern recognition aspects best taught in small groups with just-in time feedback and verbalisation of cognitive processes. Near-peer teaching is increasingly used by medical schools to alleviate ultrasound teaching responsibility for faculty. Near-peer teaching is defined as an educational strategy in which one student teaches one or more fellow students whereas the teaching student is more advanced in the same curriculum. Little is known about near-peer teaching in the context of ultrasound education.

Aims

The overarching aim of this PhD is to investigate how near-peers support fellow students in learning practical ultrasound skills.

Team

PhD student: PD Dr. med. Roman Hari, MME (BIHAM)
Local PhD supervisor: Prof. Dr. Dr. med et MME Sören Huwendiek (IML)
Supervisor: Prof. Dr. Diana Dolmans (Maastricht)
Daily supervisor: Ass. Prof. Rene Stalmijer (Maastricht)

Partners

BIHAM, School of Health Profession Education Maastricht

Project information

Running time: 2020 – 2024

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PhD regarding Continuing Professional Development conferences

PhD thesis: ”Improving the outcome of conferences on Continuing Professional Development (CPD) for healthcare professionals”

2019 2020 2021 Assessment Research Teaching

There are four prominent challenges encountered during conferences for CPD which include:

Firstly, the success of conferences is often evaluated with traditional metrics e.g. participant satisfaction indicators. Secondly, conference attendees are often seen as a homogenous group. Thirdly, it is often dismissed that novice members attend conferences as a way of integrating into the community of practice. Lastly, visiting a conference is an established way of disseminating information, however, taking the knowledge from conferences and translating it into practice is difficult.

Objective

The overarching aim of this PhD is to investigate how to evaluate and improve large-scale health professional conferences, in order to support learning and induce physician practice change.

Project team

PhD supervisor: Prof. Dr. Dr. med et MME Sören Huwendiek, PhD student: Sai Sreenidhi Ram
Second supervisor: Prof. Dr. Kevin Eva, Centre for Health Education Scholarship, Vancouver Canada
Further Supervisor: Prof. Dr. Daiana Stolz, Universitätsspital Basel

Financing

European Respiratory Society (ERS)

Team IML

Sören Huwendiek, Sai Sreenidhi Ram

Project information

Running time: since 2019

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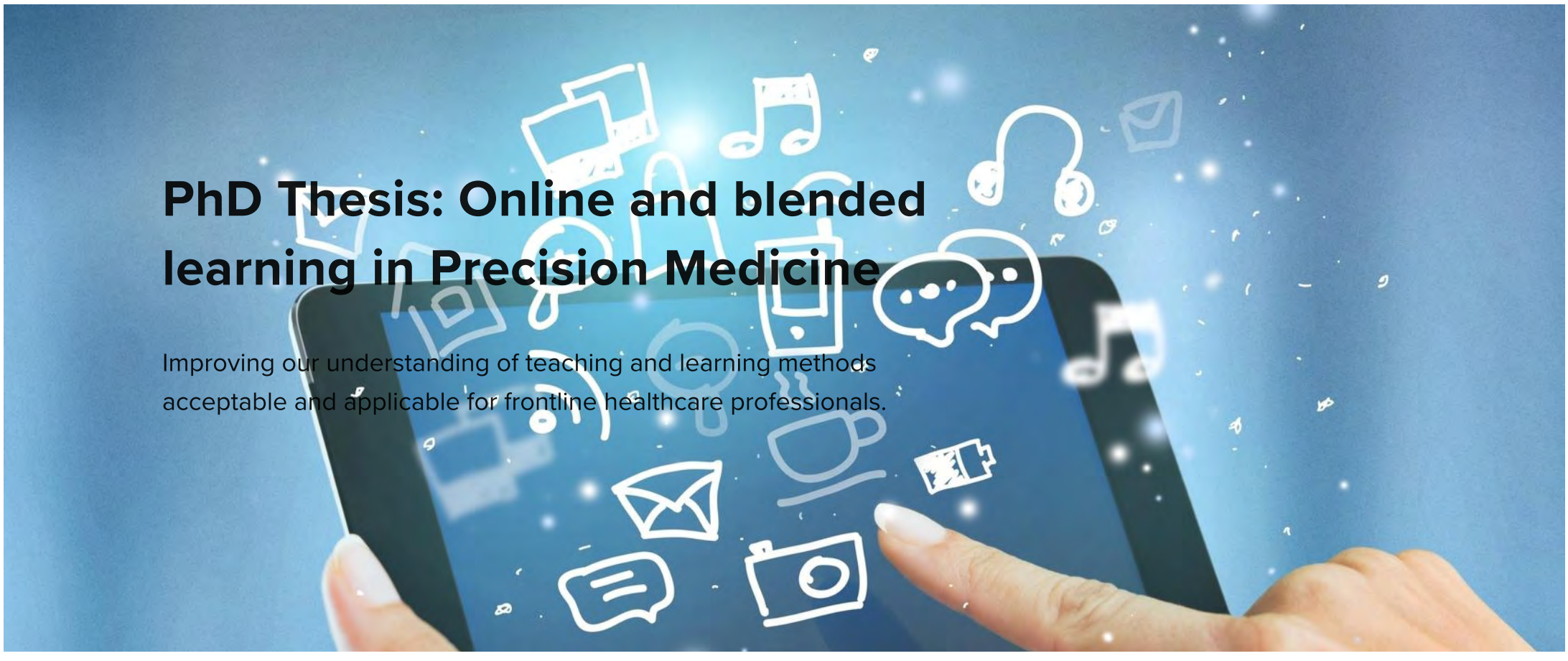

PhD Thesis: Online and blended learning in Precision Medicine

Improving our understanding of teaching and learning methods acceptable and applicable for frontline healthcare professionals.

2020 2021 2022 Research

Healthcare professionals are required to complete CPD (continuing professional development) but this too often becomes a tick box exercise. Education offerings for active healthcare professionals must be practical to individual needs and offer different teaching methods, whereby learning becomes a fluent, adaptable and continually moving entity tied to the needs of each individual health professional. This project will apply empirical methods to develop a best practice approach for education needs assessment to design, plan and implement a blended learning training programme to deliver a new topic, Precision Medicine, to frontline healthcare professionals.

Aims

PhD Thesis: Implementing evidence based education to design and implement online and blended learning in Precision Medicine in the context of continuing professional development (CPD)

The results of this research will inform the design, planning and implementation of a national online and blended training programme in Precision Medicine across Switzerland.

Financing

This research is part of the FRONTLINERS project in Precision Medicine funded by Health2030.

This PhD Project is a part of the Frontliners project, described here.

Project Team

Ms. Sharon Mitchell M.Sc, IML, PhD Candidate, University of Bern

Dr. Felix Schmitz, IML, Head of Group Research, University of Bern

Dr Evrim Jaccard, Clinical Physician, Department of Medicine, University Hospital CHUV, Lausanne

Prof. Idris Guessous, Division and Department of Primary Care Medicine, Geneva University Hospitals and Faculty of Medicine, Geneva

Prof. Gerard Weber, Department of Medicine, University Hospital CHUV, Lausanne

Prof. Jaques Cornuz, Unisanté, Faculty of biology and medicine, University of Lausanne, Rue du Bugnon 44, 1011 Lausanne

Prof. Sissel Guttormsen, IML, medical faculty, University of Bern

Project information

Running time: 2020 - 2022

Sharon Mitchell
PhD

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Precision Medicine for FRONTLINERS

Is a multi-support learning platform on Precision Medicine for the daily practice of frontline care professionals.

2019 2020 2021 Development Research Teaching

Nowadays, the majority of primary care professionals are not prepared to deal with issues related to precision medicine.

Frontliners is a training program that offers basic and advanced training opportunities to primary care professionals (PCPs) including physicians, pharmacists and nurses to support them in delivering high-value information, advice and care in precision medicine (PM) to their patients.

Objective

- Offer an online platform with practical ready to use content
- Provide onsite learning and networking opportunities
- Present quality resources and information on PM
- Bringing together the best experts as teachers and mentors

Project team

Prof. Idris Guessos, Geneva University Hospitals, UNIGE (Project head)
Prof. Jacques Cornuz, Unisanté/UNIL (Co-Applicant)
Prof. Gérard Waeber, CHUV/UNIL (Co-Applicant)
Prof. Sissel Guttormsen, IML, medical faculty, University of Bern (Co-Applicant)

Financing

health2030

Team IML

Sissel Guttormsen, Felix Schmitz, Sharon Mitchell, Daniela Schmid, Philippe Zimmermann

Recent publication

Mitchell, S., Jaccard, E., Cardineaux, R., Collombet, P., Cornuz, J., Waeber, G., Guessous, I., Guttormsen, S. (2020), *Implementing an Online Training Programme in Precision Medicine for Primary Care Professionals: a Multi-Method Approach.* Short paper in the Proceedings of 17th IADIS international conference on Cognition and

Exploratory Learning in Digital Age (CELDA), 18. – 20.11.2020, Lisbon, Portugal.

Project information

Running time: since 2019

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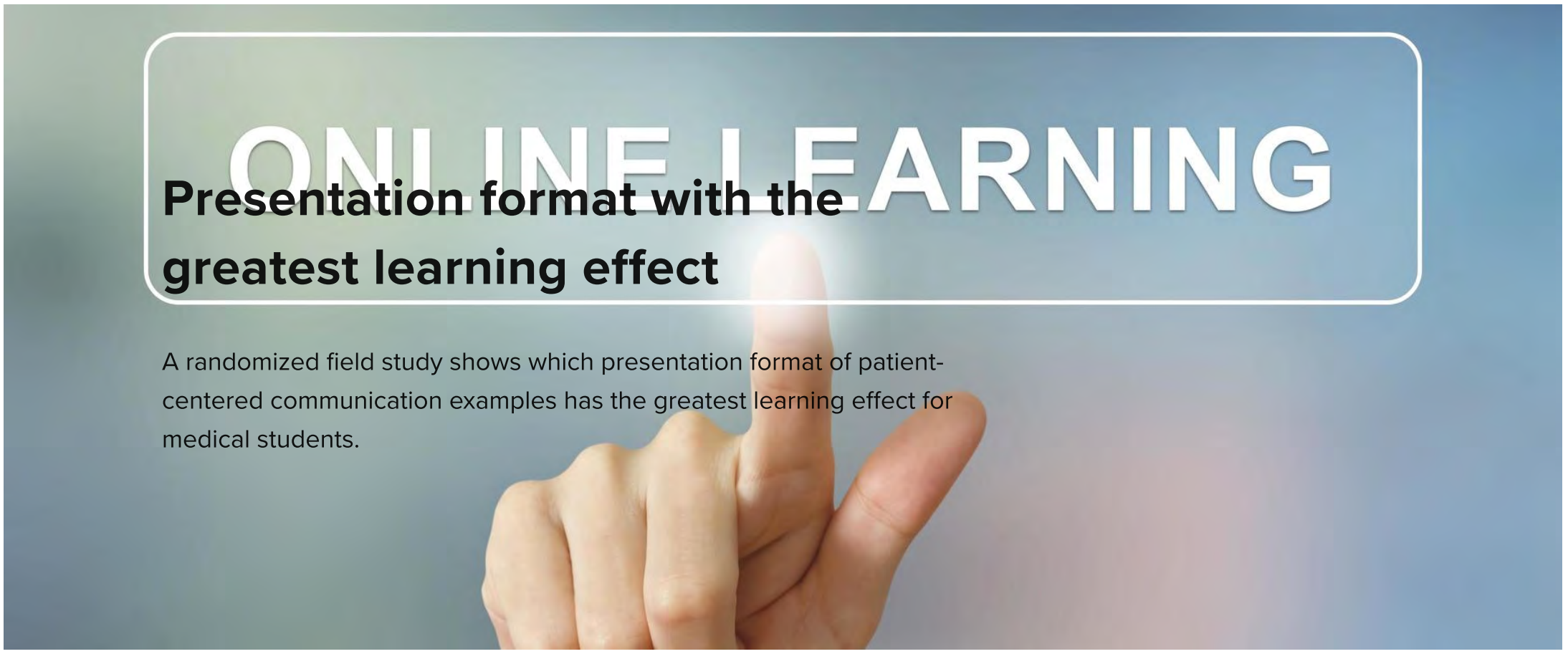

Presentation format with the greatest learning effect

A randomized field study shows which presentation format of patient-centered communication examples has the greatest learning effect for medical students.

2016 2017 2018 2019 2020 Research Teaching

High-quality communication examples were integrated into a web-based learning tool. Medical students used this tool (DocCom.Deutsch) to prepare for their on-sole communication training. The presentation format of the examples varied – the students were presented either with text examples, video examples, or video examples with brief hints. Students' performance during the training with simulated patients was assessed.

Objective

It was examined which presentation format of communication examples is optimal for effective preparation.

The following question was addressed: Which of the presentation formats of communication examples is the most effective for students' preparation for the practical training with simulated patients?

Results and Outlook

It was found that video-based examples – compared with the much cheaper to produce text examples – only lead to a significantly greater learning effect if the videos are enriched with hints on the central elements in the video (see publication).

To clarify whether text examples with corresponding hints trigger a comparable learning effect to their video-based equivalents, a follow-up study was launched. First data from this study are currently being analyzed.

Team

Felix Schmitz (PhD student)
Dr. med. Kai Schnabel, MME
Dr. med. Cadja Bachmann
Dr. med. Daniel Bauer, MME
Dr. med. Ulrich Woermann, MME
Prof. Dr. phil. Sissel Guttormsen (thesis supervisor)

Project information

Running time:

Spring 2016 – Spring 2020

Dr. phil. Felix Michael Schmitz
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Self-Directed Learning (SDL) in Clinical Work-Life

How can specialists be supported in highly individualized learning processes with the help of modern tools?

2018 2019 2020 2021 Research Teaching

To guarantee high-quality services, health professionals are required to successfully maintain their extensive knowledge base. Health professionals are forced to consistently stay up-to-date in their field in which new knowledge is evolving continuously. There is a strong need for effective support during their lifelong self-directed, learning processes.

Objective

We investigate the SDL processes from different perspectives:

i) Elements of the learning process,
ii) the view of work and organisation psychology (models and effects on individuals and systems),
iii) needs and expereinces of health professionsl in their daily lifes,
iv) elaborating technical tools supporting the learning process, and needed features and functionalities.

Partners

Prof. Andreas Raabe, Dr. Jodie Freeman both University clinic for neurosurgery, Insel-Hospital Bern
Prof. Achim Elfering, and Linda Christa, both Institute of Psychology, department of work and organisation psychology, University of Bern

Team IML

Prof. Dr. phil. Sissel Guttormsen
Dr. phil. Felix Schmitz
Dr. sc. ETH Philippe Zimmermann

Project information

Running time: 2018 to present

Prof. Dr. phil. Sissel Guttormsen Schär
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SOREL – maintain and redesign

SOREL is an online learning program funded by all five medical faculties in Switzerland and the Swiss Society of Otorhinolaryngology, Head and Neck Surgery.

2016 2017 2018 2019 2020 Service Further training

The Department for Education and Media (AUM) has been maintaining the SOREL program since 2011. The system needs an update, therefore, it is now being redesigned to meet the latest Internet standards. This will make the learning program more attractive for users and make the contents easier to edit for authors. Moreover, in the future, all five university ENT departments (University Clinics for Ear, Nose and Throat Medicine) should be able to install SOREL on their own servers. The revised learning program will provisionally be available from Autumn 2018.

Objective

- Compatibility with HTML 5
- Modern design
- Optimized for touch screens
- WYSIWYG authoring

Partners

All five university ENT departments in Switzerland plus the Swiss Society of Otorhinolaryngology, Head and Neck Surgery. The partners are funding the project.

Team

Adrian Michel
Dr. med. Ulrich Woermann, MME

Project information

Running time: 10/2014 to end of 2021

Funding: by the partners

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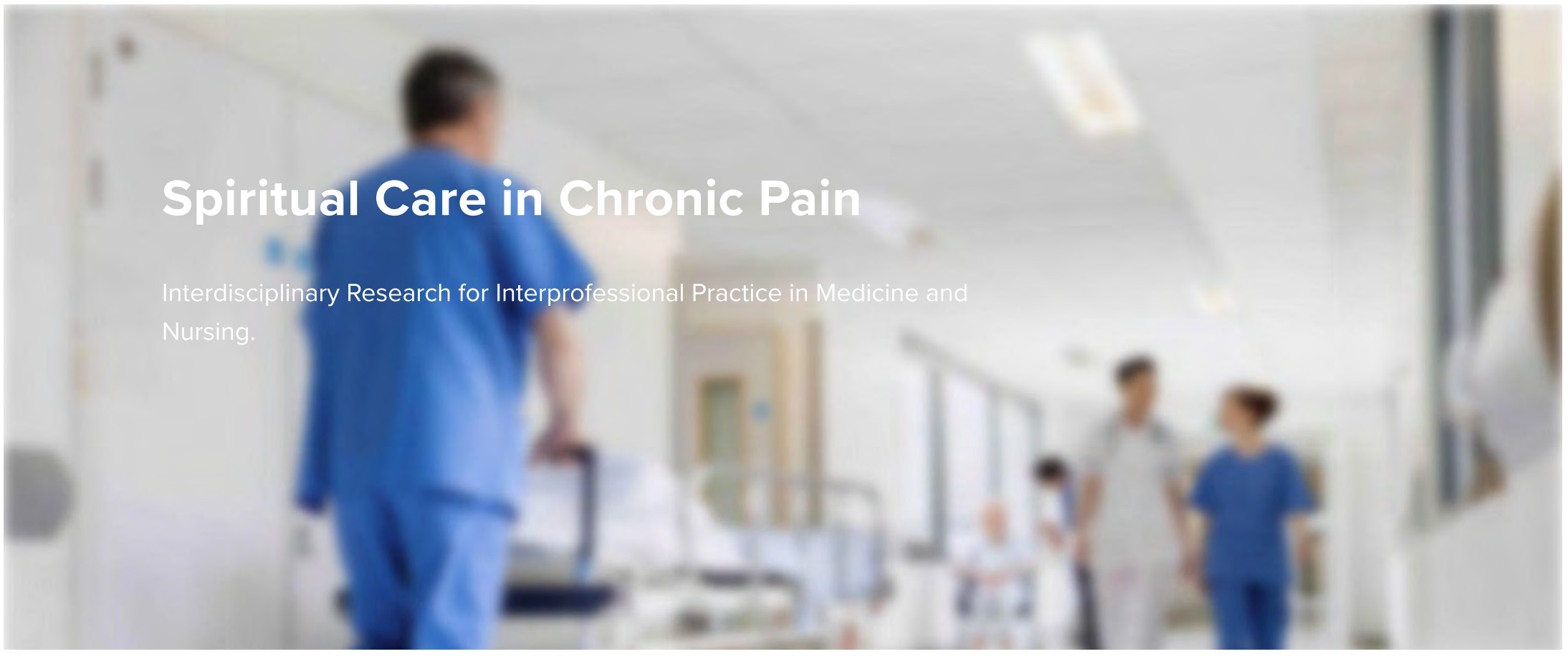

Spiritual Care in Chronic Pain

Interdisciplinary Research for Interprofessional Practice in Medicine and Nursing.

2017 2018 2019 2020 2021 Research Teaching

The significance of spiritual aspects in the management of chronic pain will be described (Part A), and a screening tool will be developed (Part B). An e-learning tool focusing on pain and spirituality will be developed for communication training purposes between healthcare professionals and patients (Part C). The efficacy of the tool will be evaluated with respect to both initial and more advanced training with the participation of various training institutes.

Aims

The study has two goals. Firstly, the significance of the spiritual dimension in medical treatment and nursing will be investigated in chronic pain patients and an appropriate surveying tool will be developed. Secondly, an e-learning tool will be developed for communication between healthcare professionals and patients, and its efficacy assessed.

Lead

Prof. S. Peng Keller, Theological Faculty, University of Zürich

Co-applicants:

- Prof. M. Rufer, Psychiatrische Poliklinik Universitätsspital Zürich;
- Prof. N. Biller-Andorno, Institut für Biomedizinische Ethik und Medizingeschichte;
- Dr. A. Bischoff, Haute école de santé Fribourg
- Prof. R. Spirig, Abteilung Klinische Pflegewissenschaft, Universitätspital Zürich.
- Prof. S. Guttormsen, Institute for Medical Education (Lead project C)

Target group

Health professionals, pre- and post graduates.

Team IML

Prof. Dr. phil. Sissel Guttormsen (Lead Part C)

Dr. med. Daniel Bauer, MME

Dr. med. Beate Brem, MME

Felix Schmitz (PhD student)

Dr. med. Kai Schnabel, MME

Project Information

Project period: 2017 - 2021

Funding: NFP / SNF

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Swiss interprofessional evaluation instrument SIPEI

Application and, if necessary, optimization of the Swiss interprofessional evaluation instrument SIPEI.

2019 2020 2021 Service

The Swiss Inter-professionality Evaluation Instrument (SIPEI), developed by the IML, will be tested in practice for the first time in this project.

Aims

The suitability of the instruments will be evaluated and any optimization possibilities determined.

Client

Federal Department of Health (BAG)

Team

IML: Felicitas Wagner, Daniel Stricker, Sören Huwendiek

Project information

Running time: 05/2019 – 05/2020

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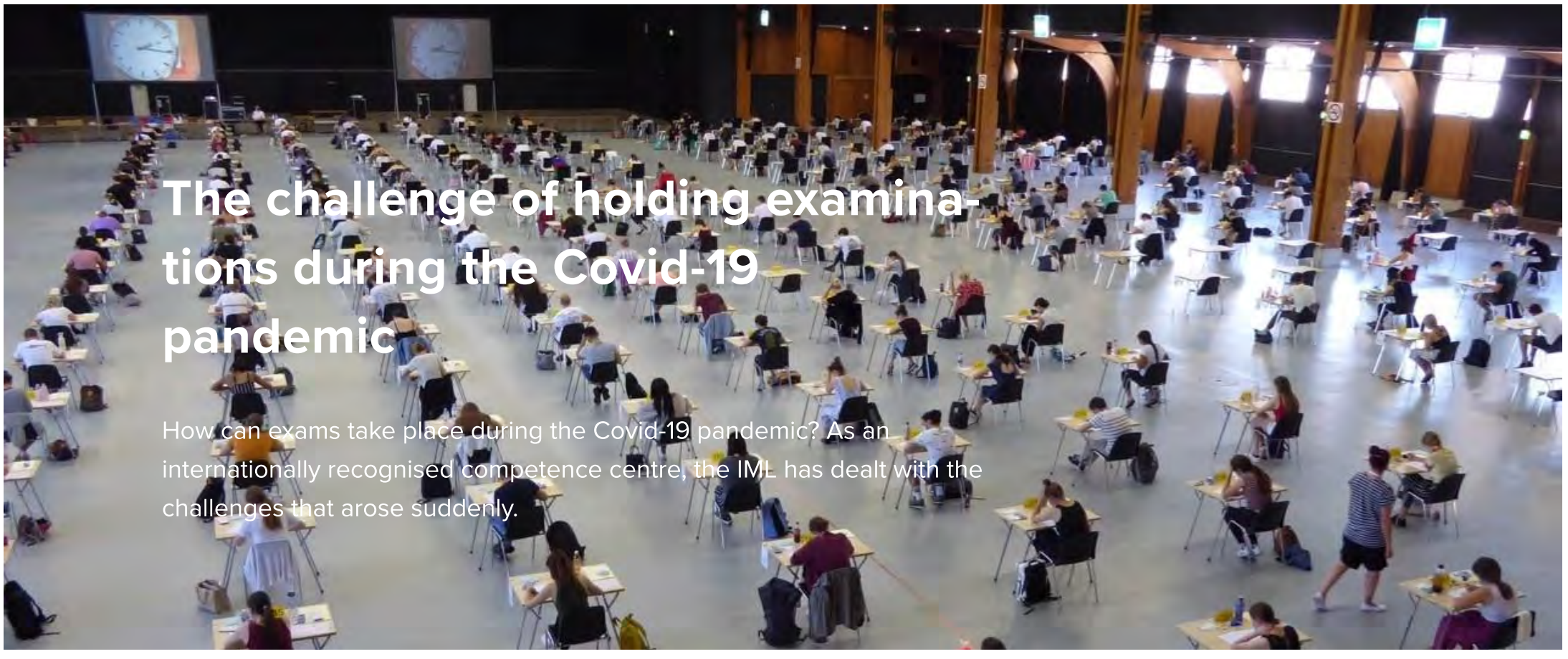


The challenge of holding examinations during the Covid-19 pandemic

How can exams take place during the Covid-19 pandemic? As an internationally recognised competence centre, the IML has dealt with the challenges that arose suddenly.

04.05.2021

2020 Assessment Service

Authors: AAE team

Customised solutions were developed within a very short time so that all tests requested by partners and clients could and did take place. For a broad range of quite different exams, the IML clarified legal questions, ensured safety and adapted exam formats. A few examples:

Written exams

In the run-up to exams, their compilation and quality assurance, the IML created a new approach as a result of the pandemic. Multi-participant workshops, which would normally have been held as a face-to-face event, to create multiple-choice questions for exams in the medical field were successfully held online using video conferencing software.

The written exams themselves were in part relocated to large exhibition halls so that all test candidates could sit sufficiently distanced for safety. Masks were made available at the entrances and the routes to the exam seats were planned to maintain adequate distance. During the exams it was compulsory to wear a mask and for the second half of the exam time the candidates were given a new mask. These protective measures have been worthwhile and were generally well accepted. In the exams held to date during the Covid 19 pandemic, the candidates have all been very disciplined and complied with the rules. Some even expressed their thanks for the health protection measures put in place. The IML employees have also benefited from the Covid-19 measures. The step count involved in preparing and clearing the examination materials in the large halls (table numbers, examination documents, writing utensils and protective masks) has added up - a real fitness program.

Other written exams were carried out using web-based software developed at IML (MEASURED web extension). The candidates were able to take the exam at home on their private computer. In a third variant, written exams were carried out using tablet computers, but currently only with a small number of candidates in order to guarantee the necessary quarantine times for the devices until their next use. The sensitive touch screens of the tablets cannot easily be disinfected. Since paper documents can also not be so readily disinfected, all examination documents were first quarantined to protect employees until they could be processed.

Oral exams

During **oral exams**, there is naturally a lot of discussion, which increases the risk of transmission of SARS-CoV-2. Before the start of the exam, the candidates were divided into groups and these groups were then examined with a time delay, which meant that larger gatherings of candidates in the reception area could be reduced. Here, too, masks were distributed for all those present and disinfectant was provided. In addition, the number of people in the examination rooms was reduced. In normal times, there are three people in the room for an oral exam: the candidate, examiner and co-examiner. Now, under Covid-19, the examiner appeared via Zoom and conducted the exam via on-line video. Oral exams in Bern were designed as a "post run", with 8 minutes of examination time allowed per post. When changing between posts, the doors of the examination rooms were opened for the candidates by the employees. This helped the candidates ‘keep time’ and saved them from having to disinfect their hands after using the door handles, which would have slowed them down. So that the candidates did not get too close to each other, markings with spacing and directions were placed on all floors. The planning and preparation necessary for these measures were extremely time-consuming, but also enabled the test to be carried out successfully and safely for everyone involved.

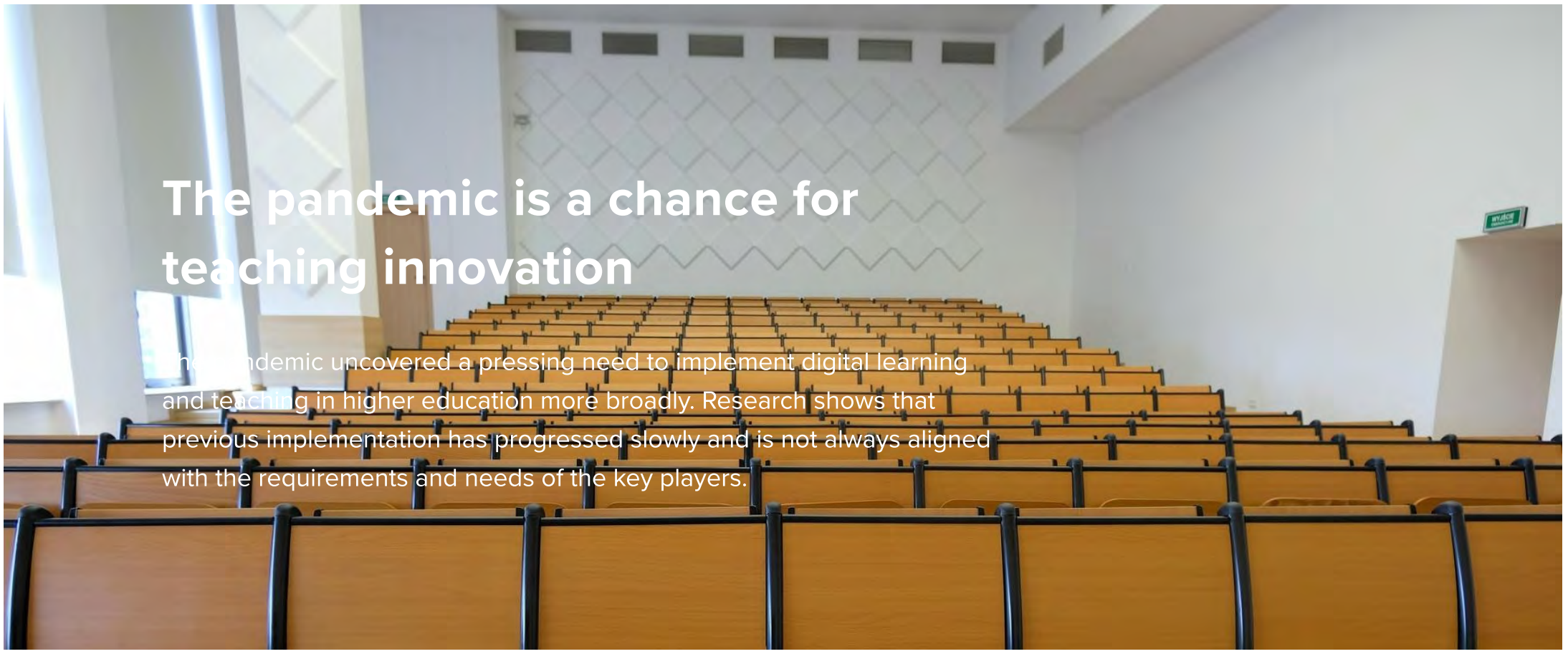
Clinical practical exams

Practical clinical tests were also adapted to the pandemic situation. After ensuring the health protection of all involved, the second most important goal was to maintain the direct interaction of the candidates with the simulation patients (SP), so that it was still possible to assess the ability of the candidates, e.g. a doctor-patient consultation was carried out in a patient-friendly manner, in a given time and that critical aspects were addressed. Specifically, the candidates had to demonstrate how they would take an anamnesis focused on the patient's suffering and the diseases most likely behind it, make a diagnosis and explain how to proceed to the patient. Only the assessment of physical examination techniques, which is an essential part of the medical work, had to be compromised during the exams. While some physical examinations could be carried out and assessed with adapted protective and hygiene measures, others had to be replaced by special simulation techniques such as the use of body models (which were disinfected after each use) or pathological findings were indicated as soon as the candidate indicated they wished to conduct a certain investigation. Health protection measures for practical examinations were achieved in a similar way to the oral examinations, namely through logistical approaches to avoid large flows of people by dividing the candidates into smaller examination groups and preventing large gatherings before the start of the examination.

Conclusion

It is a great success that the IML, together with its partners and clients, has succeeded in delivering all the required exams while ensuring the health and needs of the candidates, simulation patients and examiners, as well as safely accommodating the various exam formats under the difficult conditions of the Covid-19 pandemic.

© Picture Dean’s Office of student’s affairs Bern, Peter Frey



The pandemic is a chance for teaching innovation

The pandemic uncovered a pressing need to implement digital learning and teaching in higher education more broadly. Research shows that previous implementation has progressed slowly and is not always aligned with the requirements and needs of the key players.

Text: Prof. Dr. phil. Sissel Guttormsen Schär, 04.05.2021

2020 Research Teaching

Recent developments show a pressing need to implement «digital learning and teaching» (DLT) in higher education. Research shows that DLT implementation has progressed slowly and current solutions are not well aligned with the requirements and needs of the key players [1].

Many **teachers** were thrown in at the deep end at the start of the pandemic with the sudden shift to online teaching activities. Everybody, regardless of attitude and previous experience had to adopt to on-line teaching in one form or another. To feel the pulse and to capture early experiences with teaching in the pandemic, we conducted interviews at the Swiss medical faculties [2]. The first reported experiences were interesting and also encouraging, as also new insights came to the surface:

«I mean, for years we have been talking about digital teaching, now we had to do it. So, it was not a bad thing..., and I hope that something remains.»

Actually, being forced into a new role imposes new insights:

«It's not about online. It's about what's your role as a teacher is. What's the role of a student? And how can you make a student learn? You need everything, you need presence, you need exchange, you need discussion. Now, we had to discuss online and offline. I don't care as long as the discussion is useful.»

Experiencing a new perspective opens up for didactic reflections, beyond that of on-line teaching.

«The role of the teacher is sometimes well off what it should be. I think the quality of teaching is actually often too low. It's not about online or not - it is about Interaction. It's not about being interactive on-line only, you have to be more interactive with the students anyway.»

Students want more flexibility, more learner control [e.g. 3]. They want to flexibly manage their learning time. For that they need access to on-line learning materiels. Students gained more learner control during the pandemic, but they also lost something very important: Social interaction with peers as well as with their teachers. The literature reports students feeling left alone with the problems they face [4]. The limited contact to peers and teachers hinders exchange in free learning groups, it also hinders spontaneous exchange with lecturers and

clinical teachers. On-line forums, rapid communication channels, chats, and video-conferencing offer a good bridge, but these means do not replace direct interaction. Besides those channels being very helpful, we have all gathered experiences that show the limits of electronic communication.

Teaching has already evolved from the onset of the pandemic until the end of 2020. Most of all, the initial interrupted clinical teaching (e.g. bedside teaching, communication trainings, clinical skills training) has mostly been resumed. The experience with on-line teaching formats grew rapidly, today much clinical teaching can take place in a hybrid format (e.g. clinical skills training in which students prepare with on-line demonstration videos before practicing onsite), some even completely online (many communication trainings at the medical faculty in Bern are completely organised with Zoom), or remained completely traditional (e.g. the clinical internship rotations in Bern, that run over a year with mostly 4-week blocks of trainings in various clinics and disciplines).

For those institutions who already had existing on-line learning materials and initiatives, some gaps in teaching were bridged immediately with established on-line learning material [5, see also links below]. However, a broad range of online learning material and online learning opportunities will have to be produced for the future. The IML pursues research which aims at establishing evidence-based principles for digitally supported medical education (see links below).

Existing frameworks: The good news is, the theoretical frameworks and the methods for online teaching and learning have been described and are existing since decades: «Flipped Classroom» or «Inverted Classroom» are well known approaches among educationalists, (i.e. a combination of online and onsite teaching and learning, easy description is found here. A more general concept is “Blended Learning” (i.e. a combination of on-line and onsite learning and teaching, an easy description is found here.

Before the pandemic medical teaching was deeply rooted in traditional teaching. As long as the major experience of lecturers is related to traditional teaching, it is hard to change, in this way the pandemic was and still is a chance because it forced changes and new experiences. Now we need to take action, in order to facilitate that the new normal continues to develop, instead of reverting to traditional teaching when the pandemic would allow for it.

We promote a moderate approach in which excellent learning materials supporting individual learning is offered online. Onsite teaching and learning serve consolidation and deepening of knowledge and training of skills. Finally, the real patient can never be substituted by training and learning completely supported by models and simulations. However, practical interaction and skills when interacting with patients can be enhanced when properly supported with on-line material [6].

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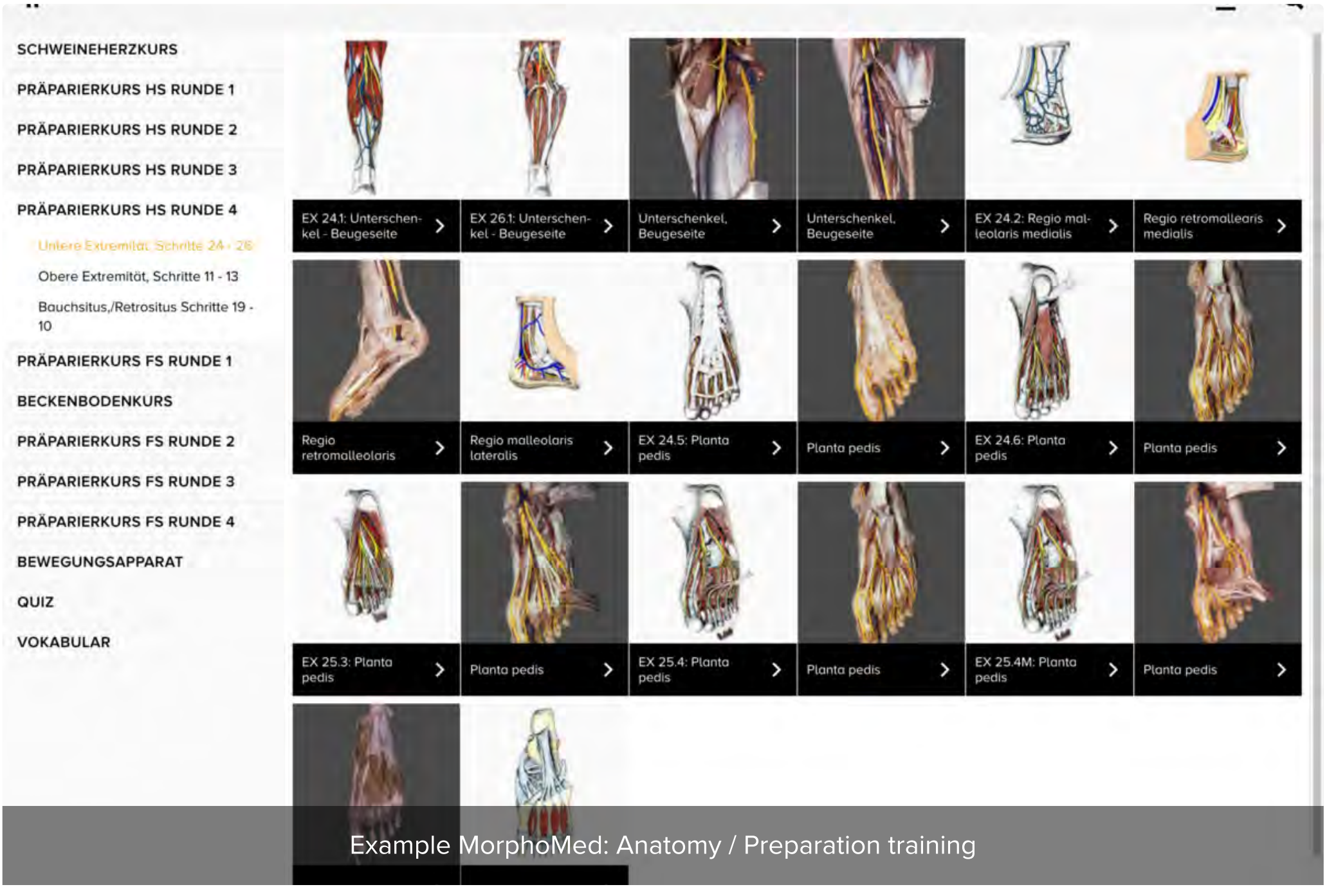
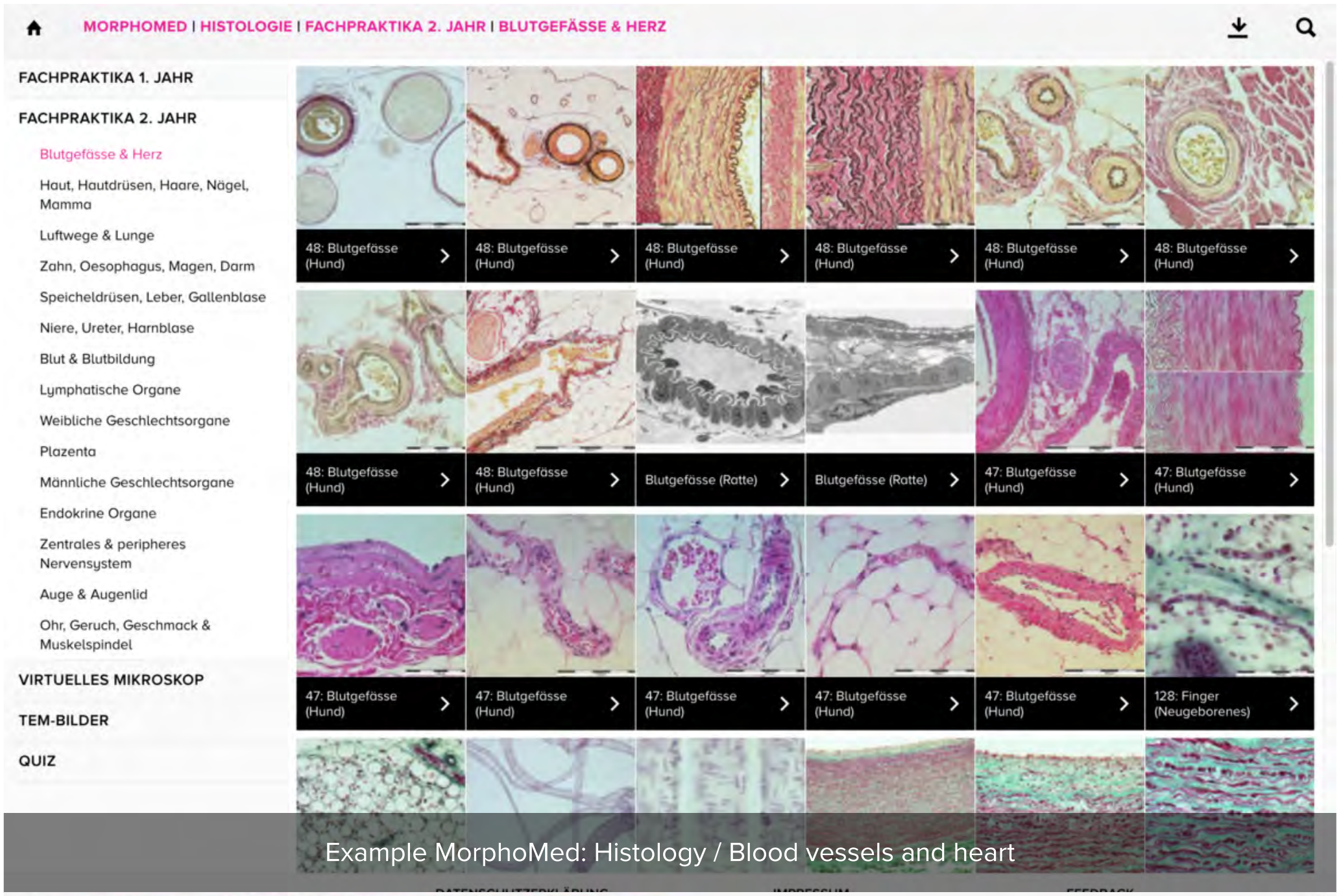
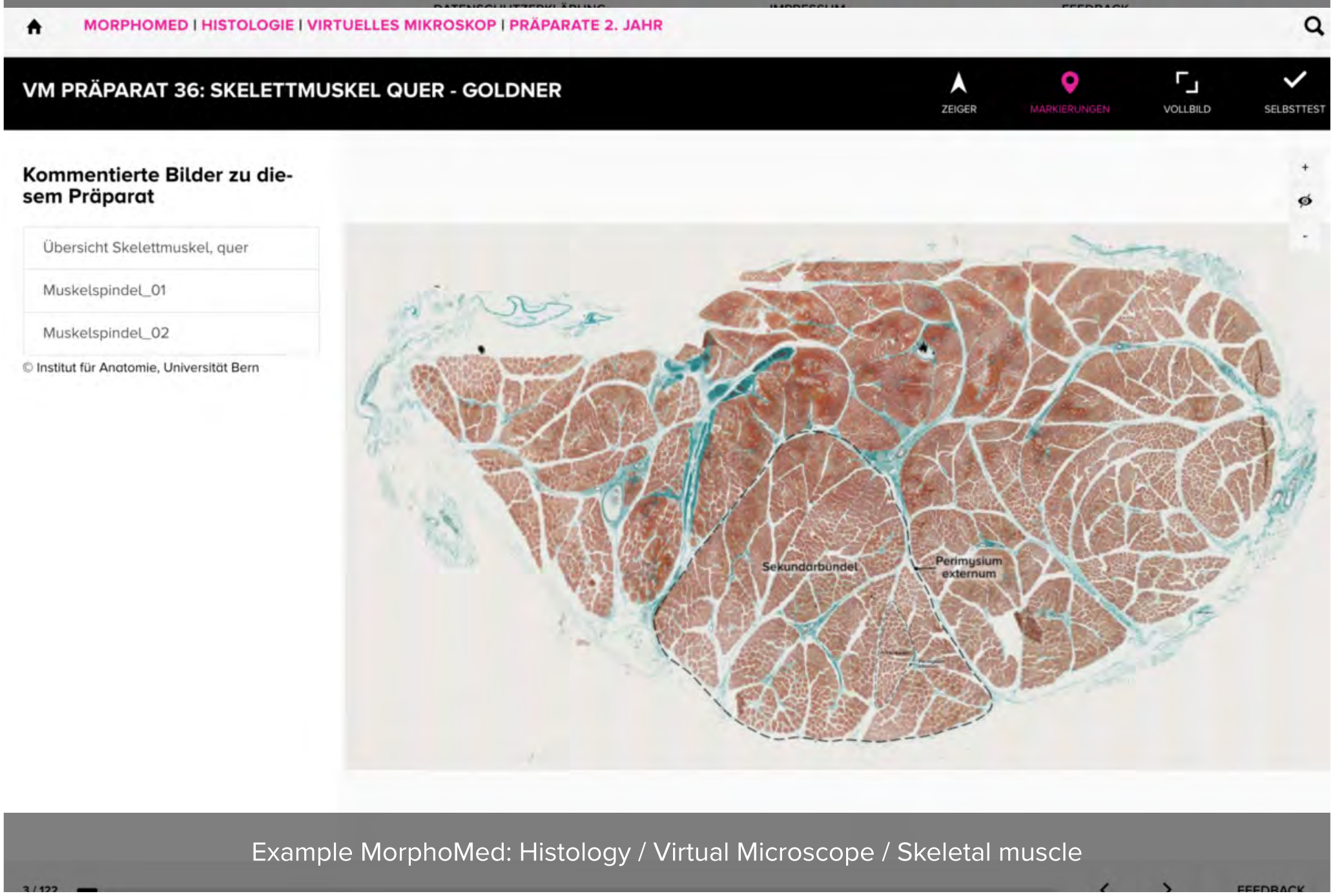


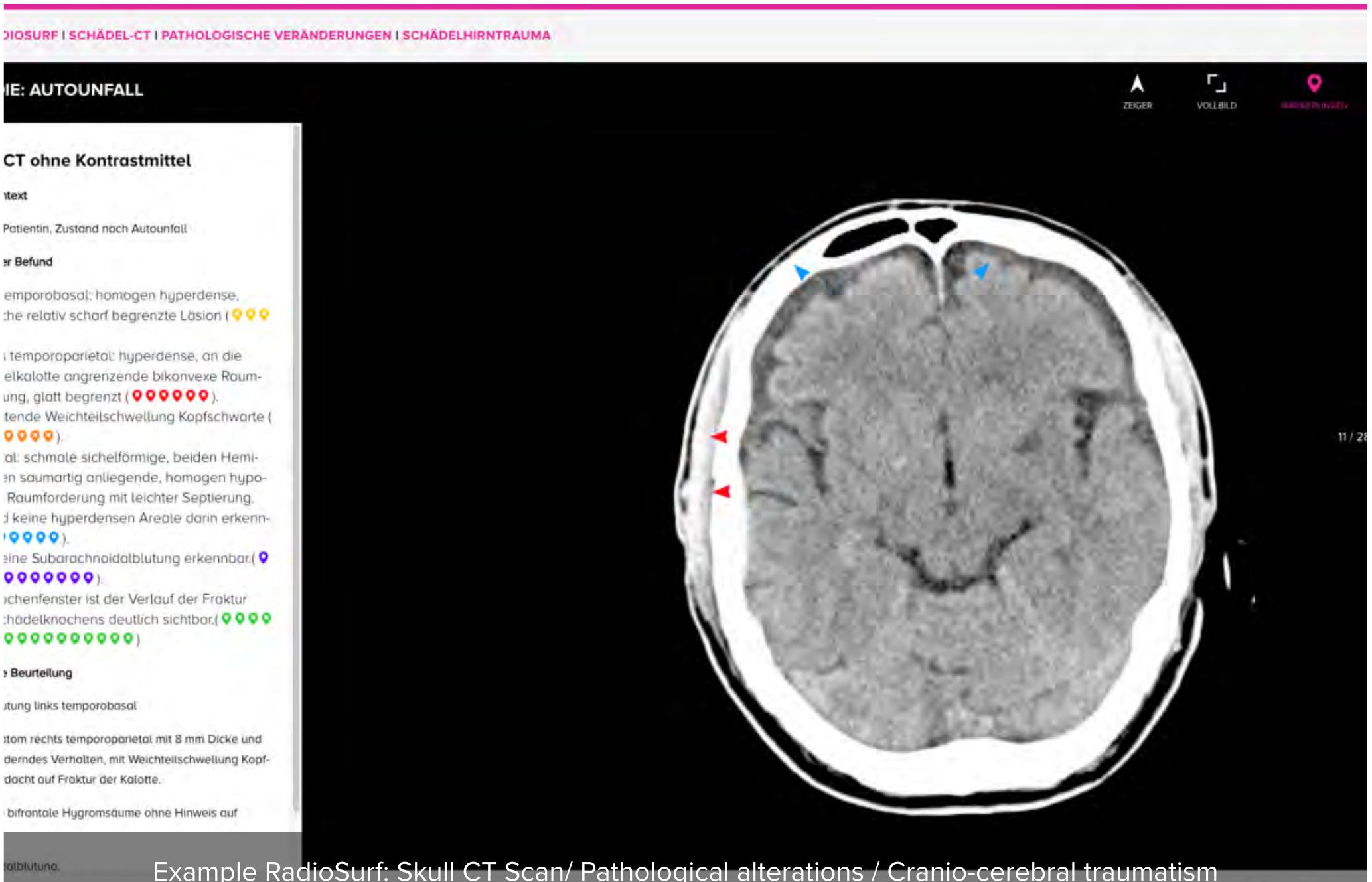
Example MorphoMed: Anatomy / Preparation training



Example MorphoMed: Histology / Blood vessels and heart

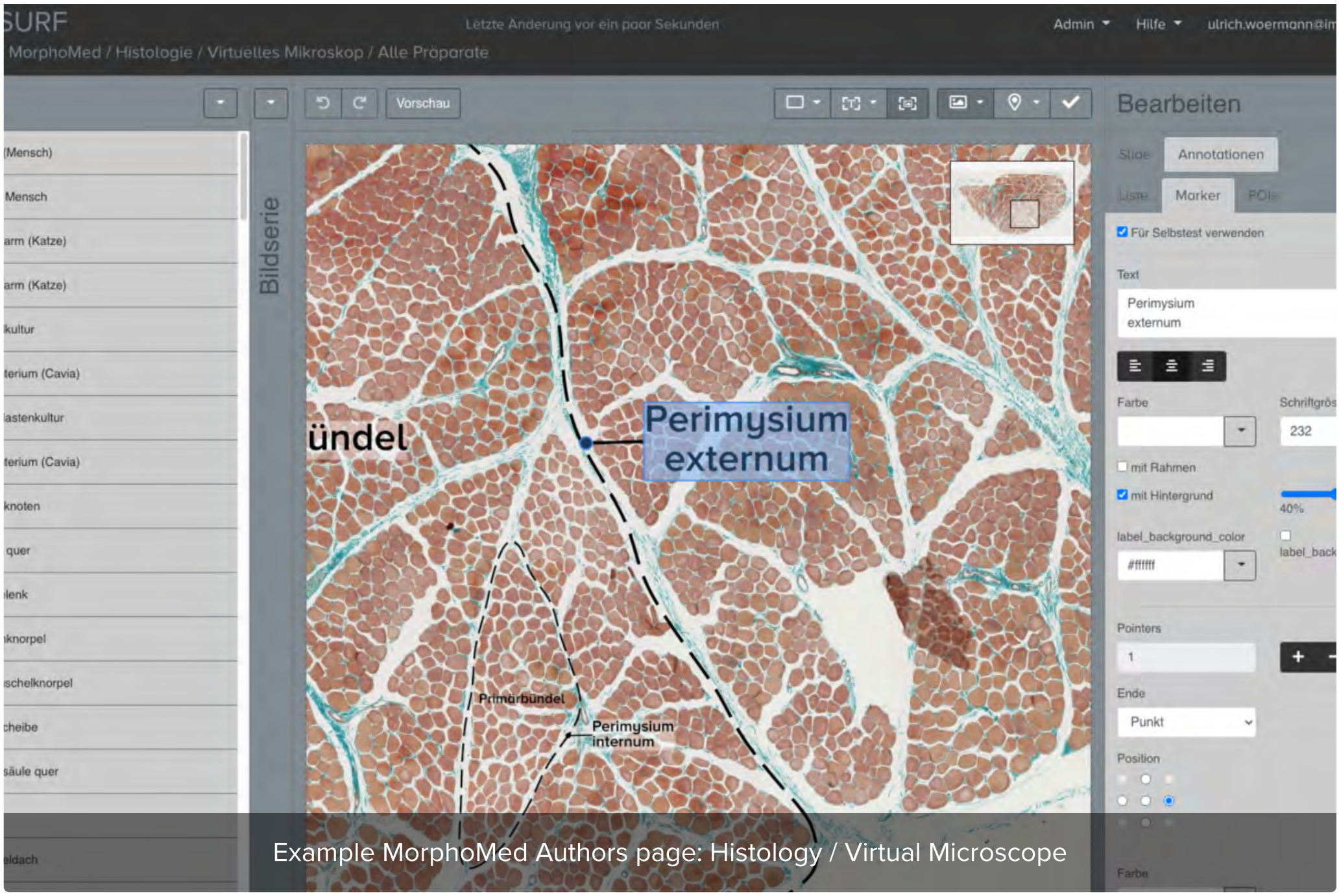


Example MorphoMed: Histology / Virtual Microscope / Skeletal muscle



Example RadioSurf: Skull CT Scan/ Pathological alterations / Cranio-cerebral traumatism

Example RadioSurf: Skeletal radiography / Knee joint and lower leg



Example MorphoMed Authors page: Histology / Virtual Microscope

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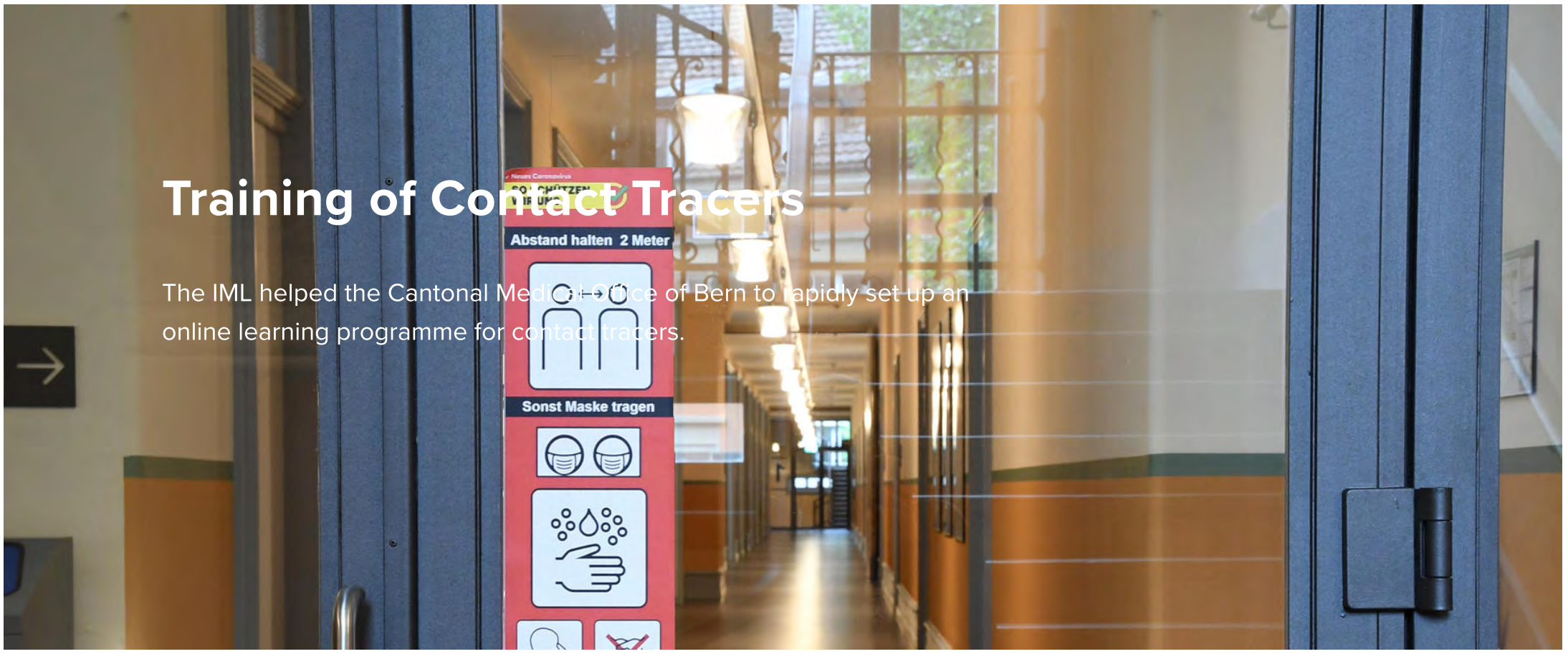
Links to online learning material from IML

- Medizinische Lernmedien (ILIAS Universität Bern)
- DocCom.Deutsch (in DE)

Running research projects related to optimised digitally supported medical education

- Spiritual Care in Chronic Pain
- Precision Medicine for FRONTLINERS
- Communication is a key competence
- Fostering communication skills in health profession students
- PhD regarding Continuing Professional Development conferences



Training of Contact Tracers

The IML helped the Cantonal Medical Office of Bern to rapidly set up an online learning programme for contact tracers.

Text: Dr. med. et MME Ulrich Woermann-Walthert, 04.05.2021

2020 Service

Contact management is the approach to fight the COVID-19 pandemic after the lockdown. When implementing this principle, the so-called Contact Tracers are of central importance because they are responsible for tracing the corona cases. In practice, it works like this: As soon as a person has a positive test for COVID-19, the contact tracers connect with that person. Together they reconstruct the probable or possible time and place of infection and all more significant personal interactions over the preceding few days where other people could have been infected. The contact tracer then also contacts these people to inform them that they must quarantine for 10 days.

What sounds so simple is actually a demanding task and requires in-depth knowledge of the epidemiological objectives of contact tracing and aspects such as data protection. Since contact tracing has not been used in Switzerland outside of cantonal medical services, hospitals and [the charity] Lung League, the professionals had to be trained first. The time to achieve this by the end of April 2020 was very short. Within two weeks, an online course was created together with the Cantonal Medical Office in Bern, which in addition to the learning materials included a test and a final certificate. The course was implemented within the ILIAS Learning Management System at the University of Bern. This online learning offer is not publically available.

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