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UNIVERSITY TEACHING AND LEARNING

ABSTRACTS

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University Teaching And Learning

"Terminologia medica" vs "Terminologia Anatomica": quo vadis?

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Objectives

The aim of this paper is to examine the development of grammar gender representation in Latin terms of Greek origin. The most comprehensive Latin-Latvian medical dictionary for the Latvian-speaking audience is "Terminologia medica" (TM) by Kristaps Rudzītis. This book is in its third edition; therefore, it elucidates its role and importance in medical research and education. The international English-speaking audience has access to "Terminologia Anatomica" (TA) – an international standard of human anatomy developed by the Federative Committee on Anatomical Terminology and the International Federation of Associations of Anatomists. Although Rudzītis mentions TA as one of the sources of TM, the two dictionaries demonstrate differences in the representation of grammatical gender of Latin terms of Greek origin.

Materials and Methods

The paper presents an analysis of Latin terms of Greek origin included in the curricula of first-year medical students at RSU, namely "Medical Terminology in Latin" and "Medicīnas terminoloģija latīņu valodā". The paper employs statistical, comparative, and descriptive methods to analyze the representation of the terms in the TM and the TA.

Results

The results of the analysis will explain the differences in representation of grammatical gender of Latin terms of Greek origin and their effect on the use of anatomical terminology.

Conclusions

Although terminology should be precise and permanent, it changes through time as any other aspect of language. This is a challenge not only in the field of linguistics but also medicine to observe and evaluate such changes as terminology is an object of research in both fields.

Advantages and disadvantages of distance-learning process in Rīga Stradiņš University medical chemistry course

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Objectives

The described research analyses the experience gained after one semester in the medical chemistry course (study program "Medicine") when working with first-year students.

Materials and Methods

The choice of appropriate course materials is very important in distance learning since it is necessary to consider student experience, learning pace and ability to transition to a self-guided study process. Electronic medical chemistry course materials include an exhaustive factual material, video lectures and laboratory work visualizations with commentaries as well as knowledge and skill tests for self-examination which were highly regarded by students. Online lessons were carried out in the following manner: presentation of the material, independent work, analysis of the results.

Results

When evaluating distance learning as an advantage or a disadvantage, student answers split into two equal parts. Students which considered it as an advantage mentioned the ability to better plan their studies, comfort as well as savings (both financial and time-wise) that were related to not needing to attend classes in person. Students which considered it as a disadvantage mentioned the inability to participate in laboratory works although available experiment videos and use of interactive whiteboard was highly regarded. Also noted was the lack of communication between students and the lack of motivation for regular work.

Although a significant effort was made to create online lessons and create a flexible and student-oriented study environment, there were students who weren't interested in active engagement and interaction. Given that it already is difficult to engage a passive student during lessons in person, it becomes even more so with distance learning.

Conclusions

Given that the current solution is considered as temporary, the effectiveness of distance learning shouldn't be evaluated based on student study results in the medical chemistry course albeit the gained experience will definitely change the future study process.

Authentic language vs. adapted teaching materials in Russian language study courses for adult beginners

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Objectives

Russian Language courses for beginners are offered at the Riga Stradiņš University (RSU) both to local and foreign students. Keeping in mind the adult learners' need for context authenticity, the objective of the present research is to find out how elements of non-adapted language can be introduced in a beginner course. It is crucial for the study process productivity to make study materials manageable, enjoyable, and sufficiently challenging at the same time. While adapted language provides a safe learning environment which ensures learners' confidence, it should be noted that adults are experienced language learners who have gone through the language learning process more than once. Therefore, they do need some kind of digression from the beaten track of predictable question-answer routines and grammar drills.

Materials and Methods

The research has been carried out by developing study materials and teaching methods based on authentic language, introducing those in Russian Language courses, observing and analyzing study processes, as well as collecting students' feedback through a post-course questionnaire (83 participants).

Results

Throughout the course of the research, some methods to deal with most prominent difficulties that are typical of Russian language beginner learners have been worked out and introduced. The teaching materials are based on a well-balanced variety of adapted and non-adapted language. The non-adapted language that has been used comes from such authentic linguistic sources as tongue twisters, proverbs, rhymes, songs, cartoons and films. The validity of the approaches has been confirmed by positive feedback from the students.

Conclusions

Authentic language that comes from elements of Russian culture is a rich source of ideas to experiment with both for the course developer and for learners who become active collaborators in the study process.

Digital virtual patient simulation as an innovative learning solution in pathology education

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Objectives

Rīga Stradiņš university (RSU) develops interactive digital simulations (virtual patients) that provide learners with a safe simulated environment for practicing professional decision making in real-life scenarios. The goal of this research is to investigate how students perceive virtual patients (VPs) as a learning tool.

Materials and Methods

Two VPs in the field of Pathology were developed and published to the RSU e-studies environment. Both scenarios featured a branched decision-making tree requiring learners to gather patient information, choose a preliminary diagnosis, gather patient data and establish the final diagnosis. Thirty-two volunteer undergraduate students of the study programme "Medicine" completed the scenarios and filled-in an anonymous post-activity survey evaluating their learning experience.

Results

In the result, 31 of the 32 participants completed both scenarios with a success rate of 90.6% on Scenario 1 and 22.6% success rate on Scenario 2.

Students evaluated the activities as a valuable learning experience (30.8% agreed; 67.3% fully agreed). Self-evaluation of preparedness to confirm a diagnosis and exclude differential diagnoses in a real-life patient was high (42.3% agreed and 30.8% fully agreed). Students noted high engagement in gathering the information to characterize the VP's problem (30.7% agreed; 55.7% fully agreed).

Majority of students evaluated Scenario 1 as being at the appropriate level of difficulty for their level of training (20.7% agreed; 48.3% fully agreed). Scenario 2 was considered as being more difficult (26.1% agreed; 39.1% fully agreed).

Conclusions

Students find VPs to be a valuable and engaging learning activity that improves their confidence in facing similar problems in real life situations. Students note that larger exposure to VPs could better prepare them for solving similar problems in future.

Integration of virtual patient scenarios into Pathology course for medical students has potential to improve student engagement, satisfaction and self-evaluation of professional preparedness.

Distance learning during COVID-19 pandemic among healthcare students

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Objectives

Distance learning has become a mandatory component of all educational institutions, such as schools, colleges and universities, around the world due to the pandemic crisis of COVID-19. This study aims to explore the situation of distance learning among the healthcare students of The Red Cross Medical College of RSU.

Materials and Methods

This study is based on primary data. The sample size, or n, in this scenario is 176. The online questionnaire through *Google Forms* has been prepared for data collection. The period of study was March 2020.

Results

58,5% (n=103) of the students have successfully integrated into the implementation of the distance learning process of the college and managed it. In its turn, 32,5% (n=57) from the surveyed students indicated, that they partially integrated into the implementation of the distance learning study process. Research showed that 42% (n=74) from the respondents, answering the question about the effectiveness of the distance learning, indicated that it is not possible for them to study as successfully as in lecture-rooms or laboratories, whereas 31,2% (n=55) from the respondents answered that they do not see special difference between traditional and distance learning, and 14,85% (n=26) of the surveyed responded that their distance studies are more productive than the ones happening in lecture-rooms. A major challenge for the students appeared to be an increase of the amount of individual work and compliance with tasks' submission deadlines.

Conclusions

The College has managed to adapt to a distance learning process within a short period of time appealing to various e-solutions. Lecturers have been actively involved in the process of an application of digital tools even prior COVID-19, which has promoted successful initiation of distance learning process. The research results show that the students integrated into the distant learning process and digital transformation has given a possibility to preserve the continuity of a study process.

How does remote learning affect the acquisition of the Latvian language?

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1. Rīga Stradiņš University

Objectives

To ascertain which approaches and methods are the most effective in language acquisition by distance learning, and to identify tools which enhance the learning process.

Materials and Methods

SSNMF students participating in the courses "Latvian Language in Medicine" and "Medical Terminology in the Latvian Language" (115 people).

The following methods were used in the research:

- analysis of the scientific literature,
- surveys,
- empirical observations,
- data processed by using mathematically statistical research methods.

Results

A review of relevant literature, practical research, and process assessment revealed that whilst remote learning affects the language acquisition process, this affect can be successfully ameliorated through the use of digital tools, technologies and carefully planned tasks.

Conclusions

To sum up the results gained it can be concluded that

- The majority of students prefer zoom classes, however there is a considerable number of respondents who prefer a combined learning approach which incorporates online classes with independent tasks.
- Online classes, self-assessment tests in e-studies, submission of independent tasks, and interactive tools are regarded as the most efficient tools in language learning.
- Whilst cooperation with a teacher facilitates language acquisition, the majority of students prefer to discuss homework during online classes rather than submit it in e-studies.
- Students identified a range of benefits of learning Latvian by distance learning such as the easy use of technologies, a variety of digital tools available and simultaneous use of varied sources of information, self-paced learning, and a decrease in stress levels leading to increased psycho-emotional comfort.

How medical practitioners define their continuous professional development: implications for simulation-based teaching and learning

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Objectives

In order to explore possibilities of introducing simulation-based teaching and learning specifically in continuous professional development for medical practitioners, a qualitative study was initiated by researcher of Medical Education Technology Centre of Rīga Stradiņš University in cooperation with education science researcher from University of Latvia.

Objectives of the study are: 1) to explore understanding of 'professional development' within random sample of medical practitioners in Latvia; 2) to explore content of their professional development activities respectively; 3) to draw conclusions on how these findings may shape further introduction of simulation-based teaching and learning in continuous professional development for medical practitioners.

Materials and Methods

An electronic survey consisting of central open-ended questions and additional questions regarding socio-demographic information was developed. The language of the survey is Latvian. It was widely disseminated using social media possibilities and aimed two professional fields: medicine and pedagogy, as those are fields of interest of authors of the survey.

Respondents were encouraged to give broad answers to the open-ended questions regarding their understanding of the "professional development" concept and their actual professional development practice .

In addition, respondents were asked to mention their profession (position), gender, age, total duration of work experience in the field, number of jobs, and geographic region of their main employer. The survey deliberately was made concise in order to improve response rate.

Results

Survey respondents from medical field only are included in this study.

65 medical professionals from Latvia participated in the survey (89% women; mean age: 39; SD: 10,32; mean work experience years: 15; SD: 10,92).

Content analysis is still ongoing, and results will be presented in RW2021.

Conclusions

To develop simulation-based teaching and learning for medical professionals in Latvia, their perception and actual practice of continuous professional development should be taken into account.

Specific implications for simulation-based teaching and learning will be presented in RW2021.

Introducing team based learning webinars in pathological anatomy is motivating the students to study continuously during semester

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Objectives

The traditional lectures and practical classes don't motivate undergraduate medical students to actively learn or deeply understand the new pathology topics from the beginning. Instead, facts were mostly learned by heart shortly before the tests. To promote continuous learning during the semester, we introduced and assessed the TBL asynchronous webinars based on the Moodle platform, making Individual Readiness Assurance Test (RAT) on each new topic compulsory to be completed prior start of each webinar.

Materials and Methods

168 students were randomly divided into 27 teams by Moodle at the beginning of the semester. It was possible to design the RAT-s by using Moodle Tests and to program their opening in a timely sequence. For posting the case studies, appeals, and team member feedback after the webinar, the designated team mode forums were created under each topic. The Moodle course also contained two separate types of Big Blue Button (BBB) webinar rooms: a common webinar room for general discussions, and the rooms in the team mode, along with the team forums, which the instructors could visit. The case studies the teams had to post to the designated team mode forum, followed by individual feedback posts for each team from the instructor.

Results

The majority of students (up to 88%) reported TBL was motivating them to learn the new topics from the beginning; and that the discussions and feedbacks were helping to gain a deeper understanding, easing thus the preparation for the tests. The BBB option to post immediate questions was extensively used by the students and they received immediate feedback, resulting in open and interesting live discussions.

Conclusions

Moodle platform was suitable for a structured TBL asynchronous webinar. Our very first experience of TBL appeared to be a welcome change by the students, motivating them to study continuously during the semester.

Latin language in public health: experience of Rīga Stradiņš University

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Objectives

Meet the needs of the Public health students and modernize the studying process according to the present situation.

"Basics in Latin" has been an obligatory study course for the Public health students in Riga Stradiņš University (Latvia) since the year 2015. The current research work is based on the students' feed-back after the study course. Students' motivation, their recommendations as well as the professor's observations in the classroom were taken into consideration. Approximately 115 students have undergone and passed the study course "Basics in Latin" during these years (2015-2019). However, only 40% of them (46 students) filled in the questionnaire after completing the course and participated in the research. We have modernized the course and introduced e-tests. The teachers have other ideas for its further modernization. We started with writing a new textbook with e-assignments and reviewed practical class and Independent tasks in the e studies.

Materials and Methods

Students' feedback after the course, textbooks for Anatomy and Latin classes. Direct observation during the classes, analyses of the questionnaires, which the students fill in after the course "Basics in Latin" (5-year time period: 2014/2015 – 2020/2021).

Results

A new revised textbook, new materials in the e studies, modernized study process.

Conclusions

Latin is also significant for the Public health students. The study course "Basics in Latin" should be modernized on the basis of the new approach to the e-studies and using e-resources.

Level of technophobia among students

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Objectives

The use of Information and Communication Technology (ICT) has become prevalent in this recent decade and especially in the last year. The aim of the study is to determine technophobia level among students.

Materials and Methods

200 undergraduate students in the Riga Stradiņš university participated in the study.

Technophobia was assessed using Rosen and Weil's Measuring Technophobia Instruments which determine anxiety, cognitions and attitudes towards computer technology. In the study descriptive statistical method is used.

Results

The results of the study showed that the respondents had a moderate level of computer anxiety but approximately less than a third of the students show moderate to high levels of technophobia.

Conclusions

This study concluded that computer anxiety is a feeling commonly experienced by many students. It is recommended to train and equip adult university students with sufficient computer skills prior to conducting any e-Learning programmes.

Reshaping the faculty professional competence: from face to face teaching to remote learning

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Objectives

The spread of the Covid-19 virus initiated an explosion of change, which immediately addressed HEI a demand to rearrange their faculty and students to an unprecedented model of remote learning (RL). The objective is to evaluate the experience of HEI faculty in the improvement of their competence in the implementation of RL.

Materials and Methods

The analysis of literature and educational development guidelines (30 units).

Empirical data: 346 faculty questionnaires, 2 focus groups of faculty and students from 14 HEIs.

Results

As a result of continuing education activities and self-paced training, the level of digital skills of faculty increased by +0.55 Likert points (scale 1-5), currently reaching 4.09 points.

Faculty have gained extensive experience in RL delivering on various platforms and tools, digitalisation of study materials, as evidenced by the fact that 69% of faculty often use study materials designed by themselves. However the summative approach is more frequent in the assessment of study results and one-sided feedback on the performance is more common, although the examinations in the digital environment have become more diverse.

The study identified different pedagogical risks in implementing RL as more significant than social, technical and physical or medical risks.

Despite the fact that HEIs have provided a large number of capacity building activities to faculty, 24% of the HEIs surveyed still have insufficient provision.

Conclusions

The technical, pedagogical and psychological competence of faculty should be assessed and improved as a whole, conceptualizing it as pedagogical digital competence.

The main challenge faculty faced during RL was the provision of active learning and teaching, which is why future training should focus on pedagogical reasoning and quality aspects of the study process.

Faculty signify translocality as the main benefit of the experience of organizing RL, which enables flexibility, but still indicate the challenges in competence development and pedagogical evidence.

The challenge of time management for 1st year students of the Faculty of Medicine

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Objectives

Beginning of studies at Rīga Stradiņš university Faculty of Medicine, students have to change several aspects of studies compare to high school: much deeper study content, scope of studies, more emphasis on full-time work, types examinations and their regularity, new organizational culture, must learn new concepts. Some students do not set priorities in time and end up lacking time, do not fulfill their goals, are not satisfied with their study results. Time planning, selection of appropriate study strategies, setting priorities is a challenge for 1st year students and lecturers to make a pedagogical contribution to help students successfully move forward in the study process.

Materials and Methods

The aim of the research is to find out the student's opinion about time management, the set goals and their implementation. In a study using the method of obtaining quantitative data: questionnaire. A total of 194 students of the 1st year medical faculty were surveyed.

Results

51% of respondents rate their time management skills as average, at the same time a similar number of respondents - 52% indicate that time management is not taught in secondary school. The majority of students 67% emphasize that should time management be taught at the university, because according to 91% of the respondents, time management at the university is different from school. 8% of students have set a goal to study medicine in childhood, 27% in primary school, 43% in secondary school, 12% recently before starting their studies. Overall, 90% of students say that setting a clear goal better disciplined and motivated them in their studies.

Conclusions

Focusing on the set goal, recognizing time thieves, choosing learning and time planning strategies, self-discipline, decisions and their implementation are new challenges for 1st year students. A support system for lecturers, study year members, organizations and families are recommended and desirable.

The influence of different approaches to remote learning on student learning outcomes at Rīga Stradiņš University

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Objectives

The aim of the study is to determine how different approaches taken to adapt for remote learning and teaching in Covid-19 conditions have affected assessments and learning outcomes.

Materials and Methods

Within the framework of the research, selected study courses were analysed, using the changes in the average grade in comparison to the previous years, when the studies took place on campus, as the selection criterion. In order to obtain a complete picture of the selected study courses a combination of qualitative and quantitative methods was used, including the following elements: (1) changes in the students' evaluation of these courses and their comments on the post-course surveys, comparing the last two years; (2) changes in the quantity of learning materials available on the Learning Management System and the structure of e-courses, comparing the situation before and during the remote learning; (3) the records related to these courses in the two-wave student questionnaire, conducted by RSU in the spring of 2020; (4) in-depth interviews with the lecturers and students of these courses.

Results

The analysis allowed classifying study courses by two basic criteria. First, how significantly they changed during adaptation to remote learning. Secondly, whether these changes were rapid or gradual when everyone involved realized step by step that the studies would also have to be completed remotely.

Conclusions

In general, courses that actively adapted more to distance learning have higher assessments than those that tried to maintain the standards they had during on-campus studies. Also, higher grades are in courses where change was more gradual, adapting to the situation step by step. However, there is a risk that these higher grades often do not reflect what has actually been learned and are not comparable with the grades that students have received in these courses on-campus.

The use of visualization techniques in human anatomy online teaching

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Objectives

This study was designed to better understand the visualization techniques used by tutors for Human Anatomy teaching in online classes.

Materials and Methods

In 2020 (spring-autumn) ten tutors were interviewed at Department of Morphology. The interview questions were designed to find differences and/or similarities by comparing the answers of the tutors about use of visualization techniques in online classes. Part of the anatomic information has been conveyed through information, live drawing pictures and illustrations in slideshow presentations that have been presented to students through online class. Computer-assisted and 3D printing technologies were used to complement or replace traditional anatomy teaching in online classes. Different images of visualization techniques such as radiological computer tomography (CT) and magnetic resonance imaging (MRI) from several anatomical web links and from virtual 3D dissection table "Anatmage" were used to explain anatomical structures in human cadaveric bodies. Pre-recorded or live videos, anatomical digital atlases ("Acland's Video Atlas", "Complete Anatomy" from "3D4Medical") offered a realistic visual experience of anatomy during online classes.

Results

Majority of the tutors preferred PowerPoint visualization technique in the teaching of Human Anatomy and use of plastic and/or prepared printed 3D models that played an important role to teach the students content of particular topics. These models made online classes even more interactive, especially for the purposes of giving presentations. Visual images were useful adjunct to anatomical learning in a clinical context. Tutors found useful 3D atlases in teaching about the body systems such as the muscular system, the circulatory system and respectively followed by the nervous system. Most of the tutors responded that these techniques were helpful in understanding of the more complicated anatomical structures and convenient to use.

Conclusions

Most tutors preferred multiple techniques, but the integration of advanced technological teaching techniques motivated some tutors to move from their preferred classical tools to using modern.

Transformation of the anatomy class: two modern applications for use

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Objectives

This study examines whether two anatomy applications (apps), "Complete Anatomy" (CA) by "3D4 Medical" and "Anatomy Next" (AN), when used in study process, can allow for support, strengthening of teaching and learning quality at the Department of Morphology from autumn 2020.

Materials and Methods

To understand what are possibilities of both apps, we started with implementation of CA as a supplement to online lectures, practical classes and independent work for students with following attention to the use of AN. Both apps were reviewed by several anatomy tutors and students who have already tested them firsthand. After the registration the majority of the users were medical and dentistry students from the 1st or 2nd study year.

Results

In both apps are included 3D interactive atlas possibilities with provided systemical classification and descriptions of the anatomical structures. Visualization of the bones, muscles and their attachments, organs, blood vessels, nerves with course and branching allows the users to study course content. In CA and AN are available different manipulations and 360 navigation with high quality interactive, detailed 3D models. Both apps have a user-friendly interface. CA supports a lot of Latin terms and rich content for clinical courses. Registered users can get the access to more than 1500 video, cadavers dissections, microscopic models and courses from tutors. AN allows the users to practice and improve their knowledge and performance in rich materials of the head, neck and neuroanatomy, including bones of the skull, muscles of the facial expressions and topography. Students and tutors who used these apps more frequently indicated that they had learned or taught the material more comprehensively.

Conclusions

Every app has some similar or different unique features which offer its own set of possibilities. CA and AN can serve as powerful digital supplements to transformation of the Anatomy class at the Department of Morphology.

Using social presence indicators for enhancing classroom environment when teaching online

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Objectives

Although being difficult to achieve in an online classroom environment, social presence remains vital for a successful learning experience. The present research focuses on teaching a combined group of *English for Psychology*, *Legal English*, and *Business English* students applying the selected social presence indicators. The main objective of the case study is to evaluate if the usage of the selected social presence indicators expedites and facilitates the development of a positive classroom atmosphere when teaching online.

Materials and Methods

Both qualitative and quantitative research methods are employed, such as student questionnaires (21 participants) and classroom observation.

Results

According to the results obtained from the student questionnaire, the students evaluated the classroom atmosphere positively. Additionally, all the participants emphasized the role of specific aspects for enhancing social presence, such as the use of cameras, the group size (3-4 people), the absence of impersonal attitude, etc. playing an important role in creating a positive studying environment. These aspects might be considered as practical implications to be used by the academic staff as a complement to the teaching presence indicators especially when teaching online. The observations of the teacher suggest that students do not have to be additionally encouraged to converse or to participate in collaborative-learning if the SP indicators are successfully employed.

Conclusions

It is concluded that despite the challenges, such as the lack of familiarity with the peers and the lecturer, as well as the time constraints and the communication channel (Zoom platform), the use of social presence elements creates a sense of community. The majority of the students admitted that the classroom atmosphere influences their perception of the study process. Therefore, using a combination of affective, cohesive, and interactive social presence indicators significantly facilitates the creation of a comfortable classroom atmosphere, which plays a vital role in a learner-centered approach.

Teaching and Learning Medical Humanities

Biophilosophical approach to future challenges in medical humanities

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Objectives

- To acknowledge the importance of humanities for medicine and life sciences.
- Humanities is in crisis due to inability to cope with the most urgent issues posed by scientific and technological advance. It is inevitable that humanities have to change to remain relevant.
- Example of change within the humanities is biohilosophy. Biophilosophy is interdisciplinary approach that combines several theories in humanities to focus on one particular issue - the problem of life. It is different from already existing approaches.
- To demonstrate the possible contribution of this view to medical humanities.

Materials and Methods

Contemporary biophilosophies (Deleuze & Guattari, G. Agamben, G. Bianco, M. de Bestegui et al.)
Methods of historical epistemology, historical ontology etc.

Results

Understanding of life implies not only biological, but social, political, ethical aspects.
Biological explanation of life is often inseparable from aspects mentioned above.
COVID-19 outbreak as perfect example.

Conclusions

Natural sciences fail to grasp several essential aspects of the problem of life.
Biophilosophical approach could find its place in teaching and learning of medical humanities.

Comparative evaluation of the digital study environment

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Objectives

The last year's pandemic has posed a huge challenge to higher education: distance learning has become an alternative mode that had to be accepted. The traditional study environment was replaced by digital. In the conditions of changing social interaction, the possibilities of the digital study environment have been formed in the study process. The aim of the study was to find out the opinions of resident and non-resident students about the advantages and disadvantages of digital studies in the context of the pandemic.

Materials and Methods

The study was conducted in the end of 2020. It included medical students – 71 resident (2nd academic year) and 39 non-resident (1st academic year). The students were asked to provide an open answer to what the advantages and disadvantages of the digital study environment are. Responses were submitted anonymously. A quantitative content analysis was used to process the data with NVivo 12.

Results

Following the coding and code merging procedure, the comparative views of the two student groups on digital learning were as follows: advantages (resident students) – maintaining the same study quality (39%), time saving for studies (31%), a freer atmosphere in the study environment (17%); (non-resident students) – any convenient place for studying (37%), time saving for studies (20%), self-directed learning (20%); disadvantages (resident students) – communication difficulties (30%), lack of social contact (24%), internet connection problems (22%), difficulty concentrating (9%); (non-resident students) – internet connection problems (30%), lack of social contact (17%), communication difficulties (13%).

Conclusions

In the digital study environment, maintaining the study quality is more important for resident students, but non-resident students value study opportunities from anywhere. In turn, communication difficulties are seen more as a shortcoming by resident students, but technical problems - more by non-resident students. The views on time saving and limited social contact prevailed approximately equally in both groups.

Heidegger and the question concerning technology

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Objectives

Presentation focuses on Heidegger's analysis of human situation in the world and the human drive to control nature via technological attitude.

When thinking about Being, Heidegger turns to existential analysis of Dasein, a specific take on human being who asks the question concerning its own being and the way one exists. Heidegger criticizes both everyday and philosophical language as they fail to provide the necessary grammar for expressing the human situation as far as it is a being. Using terms like being-in-the-world, dealings in the world, ready-to-hand and present-to-hand, as well as facticity, Existenz, fallenness and The They, he talks about being-towards-death as the ultimate possibility for Dasein to fulfil its Eksistenz.

The collective human need to manifest control and simultaneously subject oneself to it is expressed in Heidegger's writings on technology. He describes it as a revealing – to enframe everything as a resource that is always ready to be called upon and engaged in an endless subjugation of nature.

Heidegger's take on technology is an especially important perspective in the case of biomedicine and genetic human enhancement.

Materials and Methods

Philosophical inquiry into Heidegger's "Being and Time" (1929) and "The Question Concerning Technology" (1954), as well as using practical experience working with medical students over the years and exploring their views on technology.

Results

Medicine can be seen as a litmus paper for goings-on in society (especially concerning technology), and so teaching and learning humanities is a way how to educate medical students to become more deliberate in their profession.

Conclusions

Heidegger looks for alternative revealings apart from technology, finding them in arts, poetry and free philosophical thinking that is not tied to immediate utility.

In search of new approaches of placing sociology into education of medicine: theoretical review

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Objectives

It has been considered recently that medicine sociology must become more applied in order to cope with a set of complicated challenges in health care systems in a highly globalized world. Precise social diagnostics and analysis of social patterns concerning health and illness issues are expected both from sociologists and young physicians. However, the question of implementing sociological knowledge in medical practice still remains only partly answered.

The above mentioned aim also includes searching for renewed methods and approaches of teaching of medical sociology. In terms of this paper, analysis of theoretical sources and studies is offered to establish a kind of methodological framework for its further processing and adaption into studies.

Materials and Methods

Methodological materials, results of different studies as well as experience stories were included into the sample and analyzed using qualitative approach of the content analysis.

Results

Within the framework of individualized medical sociology, there are several ideas in teaching sociological issues for students. One of the theoretical and practical solutions here is so called problem-based learning (PBL). It involves practical usage of a set of theoretical knowledge, research findings and realistic scenarios or individual cases. It implies the application of sociological knowledge to an individual case and the development of possible scenarios. Also, experiential learning and a necessity to develop critical approach are described in literature as well as importance of innovative problem-based, community-based and technologies-based learning initiatives.

Conclusions

All in all, several approaches and methods have been developed in order to erase the border between separate theoretical and practical branches in medical sociology. To generalize, they represent the attempt to extinguish borders between well-known approaches "sociology of medicine" and "sociology in medicine" establishing the ground for flourishing of "sociology with medicine" approach.

Jungian archetypes in modern psyche

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Objectives

My study aims to assess the relevance of Jungian concept of archetypes for the psyche and mental health of modern individuals.

Materials and Methods

The research material is the works of C.G. Jung and his followers.

Method: Philosophical reflection based on the analysis of literature.

Results

It was the dawn of 20th century, when Jung made a discovery that consciousness is capable not only of receiving, but also of providing relevant content – images and ideas from the past collective experiences of humankind. He called these phenomena “archetypes” from Greek words *arche* meaning “first” and *typos*, meaning “imprint” or “pattern”.

They function as forms for accessing and understanding the unconscious ideas. Collective unconscious, which is a container of all archetypes, is “a living system of reactions and aptitudes that determine the individual’s life in invisible ways – all the more effective because invisible.” (CW 8, § 339.)

From the moment of birth, archetypes are present in all humans, remaining at the deep level of the unconscious. They represent the unalterable structure of a psychic world and emerge as symbols, experiences and feelings that correspond to either inner or outer situations in our lives. Jung claims that archetypes are psychic universals, usually religious in their nature, so their appearance releases the numinous energy, which perspires our dreams and fantasies, as well as our conscious experiences.

Conclusions

1. Modern archetypes are variations on the universal phenomenon – different cultures may form a variety of archetypal images that all share the same origin.
2. Archetypes represent the idea of wholeness and balance of the psyche, however they include not only positive, but also destructive or “shadow” aspects of human nature.
3. Ignorance is dangerous – because of the dichotomous nature and the power that archetypes possess, their recognition and understanding is a relevant part of mental development and health.

Modern human from the perspective of Erich Fromm

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Objectives

Our study aims to critically assess the concept of modern human from the perspective of philosophical anthropology based on Fromm's humanistic psychoanalysis.

Materials and Methods

The research material is the works of Eric Fromm and its criticisms. Method: Philosophical reflection based on the analysis of literature.

Results

One of the fundamental ideas in Erich Fromm's work is the concept of the duality of human nature. He is convinced that recognition and investigation of this duality, and its critical analysis explain the controversial situation of modern human. By revealing this duality from psychological and social perspective, Fromm demonstrates it as conflicted and yet wholesome. His intention is to describe and explain the problem, thus preparing for its possible solutions.

Fromm sees the solution by studying the art of loving, destructiveness, freedom and escape from it, productive and non-productive personality orientations, alienation and self-awareness. An individual has to be tied with the society – he or she has to comply to its demands under the risk of exile. Human duality – his biosocial nature reveals itself most evidently in the construction of his social environment, which is consumer culture. Yet another contradiction is the fact that our intellect is developed according to the standards of 20th century, yet our emotions still belong to the stone age.

Conclusions

It follows from Fromm's work that:

- In contrast to Freud, all human drives are the product of the interaction between the inner and outer world, not just satisfaction of instincts, but a result of social process.
- The individuation gradually leads to the loss of connection with other people.
- Freedom leads to independence and consciousness of rationality of his existence, while at the same time triggering the sense of helplessness in human beings, instincts are substituted by the character.
- Main goal is to be, not to belong or possess.

Subjectivity and human being in the phenomenology of Husserl. Personalistic, naturalistic and phenomenological attitude

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Objectives

The aim of this presentation is to determine what is understood by subjectivity or I and how it is conceptually related to the concept of human being in the phenomenology of Edmund Husserl.

Materials and Methods

To reach the aim Husserl's textual corpus will be conceptually analysed.

Results

In the textual corpus of Husserl three different ways of how the experiencing subject (or I) experiences itself: (1) as an embodied person, (2) as a human being, and (3) as the transcendental subjectivity. The way I as the experiencing subject am given to myself depends on the attitude I take up toward myself and the world: (1) personalistic, (2) naturalistic, or (3) phenomenological.

Conclusions

In Husserlian phenomenology it is impossible to speak about one way of how I as the experiencing subject am given to myself. Based on Husserl's works, it is possible to discern three ways I myself can be experienced: (1) as an embodied person, (2) as a human being, and (3) as the transcendental subjectivity. The way I as the experiencing subject am given to myself depends on the attitude I take up toward myself and the world: (1) the personalistic, (2) naturalistic, or (3) phenomenological. Taking into account the different ways I can experience myself based on the attitude I take up, the concepts of "I" and "human being" do not completely overlap. I am a human being only in one of several attitudes, i.e., in the naturalistic attitude. Besides, one can be a human being without being an experiencing subject.

Time of the day in Latvian: corpus-based study

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Objectives

Students of medical sciences at Rīga Stradiņš University attend a mandatory course of Latvian which aims to enable a conversation between the student and a patient in later stages of the study process. One of the cultural aspects often overlooked is understanding the time of the day, e.g., the notion of "night" can be understood differently by native speakers of Latvian and English. This may lead to misunderstandings when discussing the progression of symptoms and/or instructing the patient. Thus, the objective of this research is to discuss the understanding of terms "night", "morning", "day", "afternoon", "evening" in Latvian for teaching them more efficiently in the future.

Materials and Methods

The Balanced Corpus of Modern Latvian is used to extract phrases containing exact time (hours and minutes) together with a time of the day, such as "trīs naktī" 'three in the night', used instead of "three P.M." in Latvian. The co-occurrences of each hour with each time of the day were counted to establish a pattern.

Results

The hours from 23:01 to 3:00 seem to be most strongly related to the night, from 3:01 to 11:00 – to the morning, from 11:01 to 16:00 – to the day or afternoon, and from 16:01 to 23:00 – to the evening. However, the hours from 10:01 to 13:00, from 15:01 to 17:00, and from 23:01 to 24:00 have a low occurrence frequency which suggests the need for a larger reference corpus.

Conclusions

The borders between respective times of the day are somewhat fuzzy, e.g., 4:00 can be considered either night or morning. However, the discovered time slots can be used as guidelines for foreign medical professionals trying to understand their patients better and instruct them precisely. These results are also useful for Latvian language teachers helping learners understand the alternatives to A.M. and P.M. in Latvian.

Simulation-Based Teaching And Learning

A national level COVID-19 training in Lithuania

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Objectives

Healthcare professionals are the major frontline fighters on the coronavirus pandemic battlefield. Increasing numbers of COVID-19 cases resulted in an alarming shortage of medical staff, who are capable to recognize and treat patients with the coronavirus. A national level training was intended to prepare a substantial number of professionals despite their level of expertise to respond to the COVID-19 crisis. Rapidly evolving situation demanded a novel approach to medical training in order to ensure the social distance between thousands of participants and effective development of practical skills. For this reason, Hybrid training was applied in order to combine both the virtual learning and simulations.

Materials and Methods

Two courses were prepared: "Initial Evaluation of Suspected COVID-19 and Management" and "Mechanical Ventilation Essentials". The courses consisted of theoretical and practical parts. Prior the practical part, the participants studied the material online. The practical part required to form the groups of two. Participants simulated the provided scenarios whilst following the standardised algorithms. Checklists were used to evaluate their progress. Participants filled in the questionnaires to evaluate the quality of the courses.

Results

20 hospitals of Lithuania participated in the national COVID-19 training. 1822 doctors and nurses were trained to evaluate and treat COVID-19. 1613 studied the mechanical ventilation essentials. Participants evaluated the courses as satisfactory and highly beneficial as high as 70%. Also, a substantial number of participants found the material to be completely novel (up to 64%).

Conclusions

Hybrid method allowed the reorganization of healthcare system and training of thousands of medical professionals in the face of COVID-19. The responses of the participants demonstrated a high demand for such training. The Hybrid method is an effective medical training tool in the emergency situations when the development of practical skills is the key.

A novel HybridLab® learning method improves practical skill performance of the endotracheal intubation as compared to conventional learning: randomised controlled study

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Objectives

Simulation-based training is a method for clinical skills learning that can replicate most of the real-life situations in an interactive manner. In our study, we compared a novel HybridLab® learning method to a conventional learning in teaching of an endotracheal intubation.

Materials and Methods

100 students/residents of Lithuanian University of Health Sciences were randomly divided into two groups and were taught to perform an endotracheal intubation. The first group (34 students) studied in a conventional way via lectures and practical training sessions. The second group (43 students) attempted the HybridLab learning method, which consisted of distant learning and hands-on simulations. After the teaching process, the endotracheal intubation procedure was performed on real patients under a supervision of an anesthesiologist in the operation theatre. The participants' performance was evaluated by standardized assessment form (checklist) in both groups.

Results

The endotracheal intubation steps were performed significantly better by the HybridLab participants than by the participants in the conventional group. The overall average evaluation score in the conventional group was 52±18%, while in the Hybridlab group it was 88±11% (p<0.001). Also, we found that all students of the HybridLab group followed the sequence of actions correctly, while in the conventional group only 11 participants (32%) followed the right order.

Conclusions

We conclude that the hybrid training methodology (HybridLab®) improves the practical skill performance of the endotracheal intubation significantly as compared to a conventional learning.

Interventional radiology video content gamification for improved learning experience

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Objectives

To repurpose video content and perform gamification of study material in order to increase engagement, improve clinical decision making, and enhance the distance learning experience.

Materials and Methods

We used video content that was made for students to introduce interventional radiology lab. Video content included basic information about interventional radiology lab, basic information about operators console, diagnostic materials, and therapeutic materials.

Results

We made scenario-based gamification where students can decide what they want to explore in the interventional radiology lab. At first, students have a choice between exploring operators console systems, diagnostic materials, and therapeutic materials in interventional radiology. After choosing the desired scenario, students are introduced to the topic with several subtopics, questions, and drag-and-drop tasks.

Conclusions

Nowadays we have the knowledge, tools, and materials to significantly improve the learning experience by providing gamified scenario-based learning materials that can significantly improve engagement and enhance the distance learning experience.

Simulation and real-life experience based interactive video tutorial for basic skills in percutaneous biliary drainage procedure

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Objectives

Practical skill simulation training plays an important role in medical education before real-life application. The aim of this interactive multiple choice based video simulation presentation of the percutaneous biliary drainage is to create step-by-step understanding of the procedure and also to highlight the role of digital teaching experience in modern education.

Materials and Methods

Multiple scenario/branched video guided by multiple-choice questions and answers was created in H5P program, which is open-source content collaboration framework based on JavaScript. Procedure materials and technical equipment used in every-day clinical practice in tertiary care hospital department of Interventional Radiology were included into this video.

Results

In 5 section video following steps of percutaneous biliary drainage are explained in interactive way:

1. Material demonstration with multiple branching sub-videos;
2. Material preparation for the procedure;
3. Steps of the procedure in ex-vivo model;
4. Explanation of anatomical and pathological findings on preoperative ultrasound in patient with intra- and extrahepatic cholestasis with following interactive quiz;
5. Steps of the procedure in real-life circumstances under ultrasound and fluoroscopy guidance.

Conclusions

Video based and interactive digital teaching tutorials would serve as a good platform for following practical hands-on procedures under the supervision. Interactive video materials like the one presented here could also serve as a practical reminder of the procedure steps for certified doctors not performing interventions on daily routine, thus increasing the role of digital learning.

Simulation-based medical English learning model – bridging the gap between medical practice and university classroom

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Objectives

To study:

1. If throughout the delivery of study courses "English for Dentistry" to students of Faculty of Dentistry, "Medical Terminology in English" to students of Faculty of Medicine, "English for Rehabilitation" to Occupational Therapy students at RSU they develop linguistic competence with professional terminology application.
2. Students' satisfaction level with the study courses being delivered.

Materials and Methods

Data were collected during the period of academic years from 2015/16 till 2019/20 at RSU from Faculty of Dentistry 1-st year students, Faculty of Medicine 2-nd year students and from Faculty of Rehabilitation 2-nd year students taking part in a cross-sectional study.

Results

Dental students being involved in a project "Dentist-Patient Interview", Medical students involved in a project "Doctor-Doctor Interview" with patient care manikins application, and Occupational Therapy students involved in a project "Occupational Therapist-Patient Interview" with an authentic speaker as a patient, demonstrated their ability to communicate in English with meaningful application of professional terminology and relevant attitude to the patient. Students report simulation to be challenging and alongside inspiring learning model that builds confidence within students to operate the language in a professional way and acquire occupation-specific skills. Simulation-based learning embedded in course structure builds synergy between language acquisition and professional competence, i.e. tangible value added for students and academia, thus enhancing students' satisfaction level with the course under delivery.

Conclusions

Effective communication between healthcare professionals and patients is important in delivering high-quality care this way improving patients' outcomes. From educational perspective, simulation-based learning enables students demonstrate their communicative competence interacting in English within an environment that is very close to their professional environment and motivates them to acquire professional terminology for productive use. Simulation-based learning is the way not only to develop students' linguistic competence but their professional attitude to the patient, thus enriching their knowledge and minimising risk to the patient.

Task trainers for distant home simulation training during COVID-19 restrictions

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Objectives

Due to covid-19 pandemic restrictions in 2020 medical students were not able to attend on-site practical training and learn various practical skills. The aim of this study was to find and create a solution for distant practical skills online learning

Materials and Methods

Task trainers for learning and practicing various medical skills (such as i/v injections, i/m injections, nasogastric tube insertion, and others) were created and sent to student's residences. These trainers were implemented and used for practicing during online classes. The number of medical skills learned during distant online simulation classes was summarized and analyzed

Results

Technical requirements were defined and manufacturing of 3 different types of task trainers (task-trainer for different injections, task-trainer for Naso-gastral feeding, and task-trainer for urinary catheterization) was performed. The total number of 207 home simulation training sets (including 3 task-trainers and additional equipment) was manufactured and delivered to students. Home simulation training sets allowed students to learn 20 different medical skills (injection task-trainer – 10 skills, nasogastric feeding task-trainer – 3 skills, and urinary catheterization task-trainer – 7 skills) during home online classes.

Conclusions

Manufacturing and integration of home simulation training sets in online home studies, allowed students to learn practical skills defined in the study program curriculum. Task-trainers for online home training showed high reliability and good resistance while students were mastering their skills. Based on survey re-sults (highly positive feedbacks) performed by students, task-trainers for online home training were realistic, well-performing, and fundamental in ensuring a qualitative home online learning process. Manufacturing of home simulation training sets will be continued in case of necessity for distant learning in the future.

Using discrete-event-simulation in health care – an application oriented approach to teach operations research techniques in health management

*Prof. Olav Goetz*¹

1. APOLLON University of Applied Sciences

Objectives

Health Care Systems are facing several challenges. The lack of resources, such as health workers, but also scarce capacities, such as Operating theatres, Quality aspects, such as waiting times, are important questions in the process of providing high class Health Care Services. Operations Research (OR) offers a variety of tools that support the analysis, modelling and evaluation of processes. Especially, Discrete Event Simulation (DES) is a method to support the analyses in Health Care and helps to support decision making to increase the efficiency and quality of Health Care Services. Bringing this OR-techniques including simulation into student's classes and can help to increase system understanding and current and future problem solving in Health Care.

Materials and Methods

Based on examples of teaching simulation including videos of classes provided in the context of Health Management the presentation will develop a simple Discrete-Event-Simulation Model "on the fly" for the participating audience to represent a simple admission process in a hospital.

Results

The participants of the presentation will gain in deep knowledge on how teaching Operations Research and Simulation can help to build an understanding of complex processes and system's behavior in Health Care. A Discrete-Event-Simulation Model will be constructed and based on different scenarios decision will be made how it is possible to reduce the time of a patient in a hospital system and thereby increase the quality of the whole process.

Conclusions

It can be concluded that teaching DES is a powerful tool to increase understanding of Health Care System behavior and thereby to support the areas of process management and decision making in Health Care.

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