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RELEVANT ISSUES OF HIGHER EDUCATION QUALITY IN SCIENTIFIC RESEARCH IN 2021

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Abstract: *The present paper deals with the investigation of scientific papers published in 2021 on global experiences in higher education under the effect of the COVID-19 pandemic and immediately changed conditions on the quality of studies. Advantages and disadvantages of distance studies, effect of digitalisation on the changes and content of the study process, demands for learning facilities and new competencies to use digital technologies are emphasised. The conclusions point out that there is a great lack of research on this topic; therefore, it is important to continue investigation on the impact of the distance studies mode and digitalisation of the study content on higher education quality.*

Key words: *quality of higher education, distance studies, digital technologies.*

1. INTRODUCTION

Relevance of the research. It has been predicted that the global demand for higher education might reach 263 million by 2025. This means that over the latter 25 years (since 2000) a number of higher education students will increase by 163 million. As the demand for higher education grows, importance of quality assurance increases, too; it prompts institutions to seek as high excellence in higher education as possible [1].

Investigation of constructive international experience in the field of higher education quality remains relevant and meaningful. In the initial stages of higher education in the framework of the Bologna Process, most attention was focused on structural reforms, increased mobility, collaboration and international dimensions in studies. However, recently, under the conditions of the COVID-19 pandemic, when the study process has mostly shifted to the

distance mode, most of attention is paid to transformation of the content and methods of studies while using digital technologies.

Research problem. The role of digital technologies in developing a competitive and mobile graduate becomes obvious; nevertheless, this aspect is still little investigated [2]. Seeking to offer specific practical steps and identify the trends of digitalisation processes in higher education, it is necessary to investigate basic organisational and methodical conditions for modernisation of higher education, to assess international experiences of higher education institutions and their contribution to designing studies that meet up-to-date requirements, empowering graduates to pursuit their successful careers.

Often, education delays exploring the accumulated experiences in organising and implementing international studies, assessing learning outcomes, including functional literacy obtained by students. If this was earlier linked with empirical under-investigation of issues and data relevant to the labour market, currently it is caused by lack of conceptual research works after an unexpectedly emerged completely new, different social and economic conditions within the pandemic period in 2020–2021. Moreover, there is lack of clearly specified methodical support in defining the new situation in higher education and implementation of new measures aiming to retain and improve the quality of higher education.

Research aim: to investigate and generalise relevant key issues of higher education quality in global scientific research published in 2021.

Research methods. A theoretical research was conducted at the end of 2021 and it involved selection of scientific papers from The Directory of Open Access Journals (DOAJ, https://doaj.org/) identifying them with key words "quality of higher education" in titles of papers published in 2021. Out of 47 papers published in the said year, 13 were selected according to the following criteria: 1) a paper allows open and free access in the DOAJ catalogue; 2) a paper was published in 2021; 3) a paper is in English; 4) content of a paper does not specialises for any particular country; 5) content of a paper is relevant to the system of higher education in Lithuania.

Investigations of such a character are found in scientific literature quite often. Brika et al. (2021) conducted bibliometric (statistical) analysis of literature on higher education quality having surveyed data of 500 research works published in the Web of Science within the period from 2000 to 2018 [3]. This investigation identified the most frequently used key words, most often cited authors, scientific publications, explored countries and education

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institutions. The research demonstrated the increase of the amounts of literature on quality of higher education, the broadness of content of higher education.

2. QUALITY OF HIGHER EDUCATION AND ITS ASSESSMENT

The quality of the higher education sector is one of the most relevant problems of the academic community. Surveying the current situation of higher education in higher education systems of various countries, it can be concluded that there is no single method how to assess quality of higher education institutions. Presently, there are at least 50 national systems of rating higher education and approximately 10 large-scale international rating systems. They hold different goals: to improve outcomes of major performance – higher quality of research and studies (to eliminate bad results and to increase efficiency); to increase of accountability and transparency (informing interested parties; promotion of dialogue and trust); to encourage higher education institutions to strategically position, diversify, combine national and institutional policies and performance. Lazic´ et al. (2021) analysed characteristics, benefit, drawbacks of different rating systems and designed a new rating system which offers weighs of rating criteria combining different approaches to new requirements of the digital age [4]. The model was tested in Serbia and the results are presented to demonstrate advantages of the designed model.

In higher education, the following major aspects of study quality are highly important: organisation of the study process, teacher's activities, level of students' readiness for studies, quality of scientific literature for studies and methods of delivery of lectures [1]. The quality of the study process in a higher education institution is achieved by planning study programmes, choosing relevant content and developing students' competencies. The planning, organisation and implementation of the study process require a multiple approach. Students should be ready for the lifelong learning and development of the ability to apply theoretical knowledge to solve daily practical problems. Present-day processes of higher education are learner-oriented, and this is an essential condition for efficient studies. Learner-oriented education requires appropriate methods. Seeking to increase efficiency of studies, formal recognition of some education models is not enough. The striving to achieve high quality in higher education has never been such complex like in contemporary society whose challenges stimulate search for new trends in higher education reaching beyond institutional and national boundaries. Formal education that was familiar earlier is gradually losing its

purpose in the age of the Internet and easily accessible on-line materials allowing individuals learn independently. Moreover, this is also a circumstance that makes it easier to render most of information to students in a form of distance teaching and learning mode. Critical thinking should be treated as a major academic competence, similar to reading and writing, which needs to be learnt.

Shirobokov and Lorents (2021) underlined the following criteria that, in their mind, are important for graduates becoming ready for the labour market: 1) duration of time when a graduate adjusts to a work place; 2) number of specialised (adjacent) occupations where a graduate can work according to one's obtained qualification. Meeting these practice-oriented criteria of a specialist-to-be, a task of coordination between students' curriculum and personal development occurs [2]. Scientific research works usually applied traditional methods of quality assessment in training specialists and correspondence of study services to the demands of the labour market. However, since 2020, when completely new conditions for the training of specialists under the COVID-19 pandemic have globally developed, a lack of effective diagnostic methods to assess quality of largely digitalised studies at higher education institutions occurred. There is also lack of scientific and methodical support to the existing quality monitoring of studies, when education also seeks to meet significantly altered requirements of the labour market posed for a specialist and to develop new abilities of teaching staff to train and prepare a qualified specialist who would be competitive under new conditions of the labour market.

The analysis of assessment of graduates-to-be education quality in a context of the professional standard requirements is a complex procedure, an inseparable part of the holistic study process, containing its own general regularities. When designing assessment technologies, appropriate assessment criteria must be substantiated and selected to adequately meet a set goal. Quality of educating a specialist at a higher education institution is assessed on the basis of four major criteria: 1) professional skills (knowledge of a subject and specialised knowledge); 2) level of the communication culture; 3) pursuit of professional growth; 4) ability to implement own capacities. Universal soft skills should be treated as significant standards in study programmes. When providing conditions for active performance of projection and student engagement in innovative processes, an active stance and personal professional awareness, a strategy of professional growth are being developed. Development of creative independent cognitive activity, professional and personal development contribute to self-education and building of professional self-expression skills,

critical thinking and ability to solve profession-related problems in the epoch of continuous changes. A continuous trend of humanisation and internationalisation of higher education can encompass implementation of open study systems allowing students to apply individual study paths which ensure students' academic mobility and independence [2].

Holovan et al. (2021) focused their attention on the effect of higher education institution's organisational culture on quality of services and methods for diagnosis of the said culture. Summing up the concepts of organisational culture of higher education institutions provided in scientific papers, the authors defined the corporative culture of a higher education institution as the whole of norms, values and traditions that are shared by all people taking part in institution's performance and which is the ground for building relationship among all participants of that higher education institution [5]. Even though there is significant experience in the area of assessment of quality of services, quality criteria influencing clients' choices across organisations in the services sector are identified, methods for assessment of quality of serving clients and competitiveness of institutions in this sector, still, the effect of organisational culture in the higher education sector on quality of services remains under-investigated, as the said authors put it.

Higher education institutions seek to provide high quality education meeting requirements of interested parties as well as interests of common society. Nosyreva et al. (2021) consider the quality of higher education to be a balanced triangle combination of: 1) outcomes of a complex study process in the system of higher education, 2) demands of the labour market, 3) the whole of goals and requirements set by common society and entire state. Grounding on this definition, high quality education at a higher education level can be reached when focusing on meeting the requirements and expectations of the three interested parties:

– students as consumers of study services;

– employers representing demand for graduates;

– the state which represents interests of all common society [6].

The quality of studies directly depends on the ability of higher education institutions to ensure the above-mentioned balance of the three interested parties. Therefore, assessment of quality of higher education is closely connected to assessment of satisfaction of the interested parties.

In many study programmes, development of students' entrepreneurship is an important constituent part of study quality that creates and develops students' insights on how to discover hidden own personal capacities and develop abilities as well as skills to turn an

innovative idea into a start of successful performance. Entrepreneurial studies develop students' need to seek achievements, encourage them to focus on various innovative activities and to make a decision to engage in independent activities. The term "need for achievement" means individual's desire to seek certain goals and achieve good results [7]. Entrepreneurial studies develop students' desire not only to search for employment opportunities in the labour market, but also to create a work place by using innovative ideas and developing appropriate competencies. Students who have a high need for achievement tend to have a high desire and motivation to engage into innovative activities and seek defined goals. Entrepreneurship is a way of thinking; it develops not only the need for achievement, but also trains self-control, tendency to take reasoned risks. An ability to observe trends of the market and consumers, insightfulness and creative non-standard thinking, resolution, courage and drive are person's universal entrepreneurial traits which are beneficial in many fields of life.

A major factor of competitiveness and attractiveness of higher education is its quality. Presently, globalisation is the most relevant trend in the development of higher education. A teacher is one of major figures of this process. Along with an improving system of higher education, competences of teaching staff of higher education institutions must increase, too. A system of teachers' professional development is oriented towards its major goal – quality improvement in studies. Trends of globalisation set new requirements for teacher's qualification as well: one must be a creative personality, have an original, problem-based and critical thinking, be able to design new study programmes, follow world's best practices, apply new technologies in studies. Professional growth of teachers is influenced by innovations of study processes.

The present times are characteristic of an increasingly rapid pace of living, updating of information and increasing digitalisation. Therefore, requirements for a contemporary teacher change, too. It becomes necessary to meet professional requirements and also to increase agility of one's thinking, level of development, ability to timely orient in social environment and to promptly respond to innovations. Creativity, social disposition, adjustment, resistance to stress, mobility, agility of character become highly important personal traits of a teacher [8]. Teachers are required to purposefully develop their professionalism and skills framed by contemporary conditions, to use not only traditional, but also innovative methods and forms, education technologies and means to assess outcomes for organisation of studies.

3. EFFECT OF THE COVID-19 PANDEMIC ON THE QUALITY OF HIGHER EDUCATION

Due to the global COVID-19 pandemic, majority of world's higher education institutions have dramatically moved to on-line studies within the period of January–May 2020; however, they faced a multitude of problems related to installation of on-line programs, uploading them with study contents and appropriate design. The situation caused by the COVID-19 pandemic determined either complete transfer of study processes to the distance mode or a highly increased part of them in the study process. Distance studies became a regular practice. Forced to engage in distance studies, students and teachers started actively mastering new technologies for rendering study materials, assessing knowledge and communication via the Internet.

Kadhila and Nyambe (2021) carried out a critical analysis of scientific literature seeking to investigate challenges higher education institutions faced because of disruptions of studies during the COVID-19 pandemic. The research revealed that, in the autumn of 2021, many higher education institutions around the world still were dealing with technical facilities, such as reliable Internet connection, capacities of information technologies, clear navigation tools in the study content, planning of timetables and sessions as well as reliable hardware and software required to get access to on-line study platforms. However, the authors observed the lack of more attention paid to the analysis of the quality of on-line studies in scientific literature [9]. Approaches to engaging study environment including on-line facilities to make students develop their skills of critical thinking are little investigated. Current practice of quality assurance in studies must change to efficiently respond to new demands of studying in on-line platforms. Students must self-develop more new skills to enable them effectively use an on-line system.

3.1. ADVANTAGES AND DISADVANTAGES OF ON-LINE STUDIES

Scientific literature underlines a number of advantages and disadvantages of on-line studies. Kadhila and Nyambe (2021) list the following advantages: flexibility in terms of time and space, easy access to large amounts of information, opportunities for extensive cooperation, individualised learning, independent pace of learning and stimulation of learners' independence [9].

Alhammadi (2021) emphasised that information technologies increased student engagement in discussions because students found facilities for additional correspondence, demonstration and sending of study materials supplementing oral conversation possibilities in on-line study platforms. Moreover, majority of teachers tried to upload as much of teaching materials to on-line platforms as possible; therefore, students became more informed than during traditional lectures. The research by Alhammadi (2021) demonstrated that exam marks during spring session in 2021 increased compared to results of traditional studying two years ago, there were less missed lectures or seminars and delayed assignments [10]. Such facts are important in improvement of study methods, designing new study modes and means. Good practices of on-line studies are likely to remain in the future around the world after the pandemic is over.

The conducted research works ([9], [10], [11]) pointed out major disadvantages that include limited personal communication, negative impact on students' skills of communication, increased probability of plagiarism, cheating, copying. Moreover, students' socialisation leading to isolation during on-line studies and lack of social connections may be negatively impacted. Entirely the use of on-line studies can cause problems in fields of education where practical experience is required, for example, in areas of engineering and medical sciences, because on-line modelling may not meet the needs for practical experience. On-line studies can cause challenges for just assessment of students' learning outcomes and overall quality assessment in studies. Having conducted the research, Zaborova (2021) demonstrated students' negative attitudes towards on-line studies, providing them next to obvious benefits of distance studies: students suppose that quality of on-line studies is poorer than that of the studies in the traditional direct face-to-face mode. The author has it that inability to select information, to assess its reliability and distinguish significant information from insignificant are among problems that students face while studying on-line [11].

3.2. RAPID TRANSITION FROM TRADITIONAL TO ON-LINE STUDIES

A critical analysis of literature carried out by Kadhila and Nyambe (2021) demonstrates that COVID-19 caused confusion and added to social panics resulting in closure of many student campuses around the world. It became impossible to have face-to-face meetings when delivering courses in university campuses and to personally communicate and use physical environment and facilities for intellectual and academic classes. The UNESCO statistics for 23 March 2020 demonstrated that approximately 1.7 billion students and learners all around

the world were unable to attend either comprehensive education or higher education institutions. 90% of world's students could not study in premises of their higher education institutions [9]. On-line studies became a new form in many places worldwide and prevention of the consequences of the COVID-19 pandemic became the main goal. On-line studies were considered to be a means helping to mitigate the unprecedented disruption caused by the outbreak of COVID-19. Regarding this outbreak, higher education institutions had no choice but to use digital platforms to provide their study programmes via the Internet in the distance mode to their students. On-line studies at least facilitated easier interaction between students and teachers. However, since the commencement of such processes, it was declared that on-line studies greatly differed from regular in-class studies [10]. It is highly important to note that transition to on-line studies can impact traditional studies once and for all, when on-line studies will become an essential part of higher education.

Due to an instantaneous outbreak of COVID-19 in early 2020, majority of higher education institutions worldwide were forced to rapidly substitute their traditional studies with on-line ones. In many cases, this shift was given approximately one week, study materials had to be promptly prepared for uploading on-line. Many teachers were unable to timely properly prepare for that, part of them were immediately trained for that. Properly unprepared on-line studies had a negative effect on the quality of delivery of study programmes. Some higher education institutions had to immediately find an agreement with information technologies and Internet providers to supply staff and students with on-line devices and platforms for an affordable price [9]. Both staff and students underwent many challenges when rapidly installing on-line studies.

4. EFFECT OF DIGITAL TECHNOLOGIES AND E-SERVICES ON QUALITY OF HIGHER EDUCATION

We live in the information era which means an increase of a significant role of information in social life, its shift to become a major production force, a key condition for social progress and individual functioning. The information age is also called the digital age; therefore, rapid implementation of digital technologies, new technical means, new software and big data bases in economy and social life is underlined. These processes are being undergone by areas of research and higher education, too; therefore, distance modes of education spread rapidly,

the role of the Internet as a source of information increases, the role of a teacher changes [11].

Already back in the early twenty-first century, extensive papers on digitalisation at a global scale and, consequently, on the new, digital economy appeared. Digital economic environment is economic activity which is the result of daily interaction of billions of people, enterprises, devices, data, mobile technologies and processes taking place on-line [12]. Due to this, Digital Economy is sometimes also called the Internet Economy, Web Economy or New Economy. Digitalisation also causes extensive social changes by influencing all social aspects, including interaction of people and, thus, the dynamics of the learning process.

Since 2014, the European Commission carries out annual assessment of digital economy and social environment at six levels: connectivity, digital skills of human resources, use of on-line services by citizens, integration of business and digital technologies, digital public services, scientific research on information and communication technologies (ICT). When investigating processes of learning in the digital society, most attention is focused on connectivity and digital skills of human resources. Connectivity in terms of the study process means that students have Internet access to sources of information (e.g. learning environment, research data base), to a source of experience (teacher), to a coordinator of the study process (higher education institution) and to a group of peer students [12]. The aspect of connectivity in the study process can be assessed by particular criteria and indicators.

Digital studies are a comparatively new and under-investigated field. Nevertheless, when the wave of the COVID-19 pandemic rolled across the world at the beginning of 2020, it made majority of higher education institutions shift to distance studies as much as possible; therefore, a demand for application of digital technologies in study processes increased. Correspondingly, interest of scientists in this field grew as well; they started more extensively analysing accumulated experiences and advanced prospects. Results of conducted research demonstrated an increasing effect of digitalisation on many constituent parts of the study process; information technologies practically penetrate all elements of the education system. Nevertheless, still there is lack of research on this topic. Zaborova (2021) made a conclusion that it is important to continue investigation of the effect of digitalisation on the quality of higher education [11].

Zaborova (2021) puts it that managerial bodies of higher education institutions as well as students who occurred in geographically and socially remote and uncomfortable situations have become the most interested parties in promotion of distance studies. As far back as in

2017, the author substantiated that distance studies were useful for management of higher education institutions because this meant a high financial contribution with insignificant material cost. In environment where higher education institutions rely on their funding resources, distance studies help to save up costs for maintaining premises, providing accommodation, catering and other services to students. Moreover, promotion of the distance studies mode contributes to a higher education institution positioning itself as an advanced studies institution [11].

Students, especially those residing in remote areas, are the second group that supports the distance studies mode. Moreover, many students have built their own families, raise children, have to combine work, studies and family wellbeing duties. For such students, distance studies are an effective way to obtain a higher education diploma without distancing from their families and work places [11]. With regard to distance studies that are cheaper than traditional in-class studies in some higher education institutions, the result becomes predictable: majority of students support distance studies on-line.

Experts assess positive aspects of the Internet and its significant role in the development of intercultural collaboration. The Internet has become the main source of information for students. Quite recently, they would mostly read books in libraries, listen to teachers lecturing in auditoria, study materials would be a major source of information. Now, they refer to information from the Internet, many books have been digitalised and available on the Internet, e-journals and e-newspapers are being issued.

Senior representatives of the Generation Z starting from 1995 as counted by sociologists have already become students. The Generation Z is often called the 'digital natives'; for the youth attributed to this generation, information from the Internet and socialising in social networks are a daily need occupying a large part of their lives. Therefore, a proper use of the Internet and social networks has high significance to enhancement of Generation Z students' active engagement in higher education because it is a usual and acceptable way to search for, select and use information for students [13].

Nevertheless, can the Internet be treated as a reliable source of information? As analysis of scientific literature reveals, this source cannot be trusted at full extent; it is necessary to check the information obtained from the Internet. There is much information on the Internet and it is easily accessible, and it undoubtedly can be treated as a benefit of this information base. However, insufficiently competent authors can be providers of this information. Abundance of information that is considered today as an information boost (over five recent years, people

have produced more information than during the entire earlier period of history; the amount of information worldwide increases by 30% each year); it causes other problems related to search and selection of information [11]. This needs time, patience, self-organisation skills.

Knowledge is a form of information where logic, clarity, rigidity, obvious distinction between truth and error prevail; scientific knowledge is on top of it. Information itself can be shallow and of a low value. Often, it only resembles wisdom, but lacks depth.

As information flows via computers, Internet technologies expand, school students and later students do not learn or they neglect thinking, reflection and drawing of conclusions from materials they read. Usually, students deliver oral presentations while reading their notes or computer screen, they are unable to express their thoughts in a clear, understandable, simple language [11]. In a such situation, a teacher's role is indispensable and increases because many students are unable to assess reliability, significance and value of obtained information themselves. Students need advice and support from teaching staff.

Recently, large changes are taking place in digitalisation of higher education. Digitalisation holds a transforming power in its global sense, it appropriately alters the mission and goals of higher education institutions [8]. It is necessary to efficiently use advantages of digital technologies, to embrace new opportunities that modern technologies offer. Technological innovations need to be promptly integrated into study processes and content to make graduates meet the demands of the labour market. Wishing to effectively use new technologies, investments into appropriate facilities, personnel training, digitalisation of study content and employment of new measures seeking to retain the obtained quality of studies and to increase it are necessary.

5. CONCLUSIONS

Various aspects of higher education quality have always been extensively investigated in scientific literature However, since early 2020, when the COVID-19 pandemic overwhelmed the world, new relevant issues in relation to higher education quality appeared. A rapid transition to the distance studies mode at large has become very prominent as it required not only new resources of information technologies, but also new competencies of teachers and students. The analysis of recent scientific sources demonstrates that scholars investigate conditions for retaining and, in quite usual cases, improving quality of higher education.

Recent papers published in 2021 emphasise how the following aspects are highly important to the quality of studies: organisation of the study process, teachers' activities, level of students' readiness for studies, quality of scientific literature provided for studies and modes for delivery of lectures. Quality of studies at a higher education institution can be achieved through improvement of study programmes, selection of their relevant content and development of students' competencies. High quality education can be achieved by focusing on meeting expectations of the three major interested parties: students, employers, the state.

Studies in the distance mode revealed a number of advantages: information technologies increased student engagement in discussions because more opportunities for correspondence, demonstration and sending learning materials appeared supplementing speaking; majority of teaching staff uploaded much of study materials to Internet-based platforms, which allowed students become more informed; less of missed lectures and delayed assignments.

However, quite many drawbacks of on-line studies were revealed as well: limited building of students' communication skills, negative effect on socialisation of students, isolation and lack of social relationships; increased probability of plagiarism, cheating, copying; many problems in the fields of studies where practical experience is required, for instance, in engineering and medical sciences; many challenges to just assessment of students' learning outcomes and overall assessment of the quality of studies; inability to select information, assess reliability of it and distinguish between significant and insignificant information.

Along with the massive global transition to the distance mode of higher education in 2020, the interest of scholars in this field increased as well; they started more extensively investigating accumulated experiences and advanced prospects. Results of the conducted research studies demonstrate an increasing effect of digitalisation on many constituent parts of the study process; information technologies penetrate practically all elements of the education system. However, still there is lack of research works on this topic; therefore, it is important to continue investigation of the effect of digitalisation on the quality of higher education.

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