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The role of quality assessment in higher education and its impact on student performance and interest in studies

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Abstract

In the age of demonstrated outcomes assessment and changing technologies, it is necessary to incorporate quality assessment in higher education academic programs to ensure pedagogical outcomes. Innovative quality assessment is a tool, when utilized, that can provide data to inform educational approaches ensuring outcomes consistent with students' perceived outcomes as the use of a digital platform become increasing common in the delivery of higher education. This paper focuses on the benefits of higher education quality assessment and the importance to students and other stakeholders, especially as the delivery is trending more digital. The approach to innovative quality evaluation and system of quality development is crucial to achieve competitiveness of every higher education institution. It allows for sustainable growth and development of skilled and motivated graduates to join current and future workforce to support development of society, nationally and internationally. The paper aims to identify factors that determine quality education as perceived by students and the importance of the pursuit of education impacting personal and professional development in light of the shifting digital modalities. Significant factors influencing quality perception by students are presented and included some of the following: practicing; open and discussing teachers; subject extent; and focus on newcomers. These factors are also linked to the impact on development of students' independent skills and the ability to expand knowledge specific to the field of business, thus ensuring quality outcomes.

Keywords: quality assessment; student perception; retention; academic performance; digital technologies; education;

1. Introduction

The current shift to online teaching which was accelerated by the COVID-19 brought a number of opportunities and challenges for higher education quality. The wide range of activities that are impacted need to be successfully managed in order to meet all stakeholders' expectations. The main issues which came to the light are the quality of online teaching, technological literacy and achievement of all learning outcomes and competences of graduates. The improvement of the quality level of higher education is main theme of may authors, among others by (Garwe, 2014), Deveci (2015), Leonnard (2021), Šnýdrová et al. (2021). Todays and future situation requires even greater focus on quality management due to ever changing conditions and

environment. He and Hutson (2016) and Heffernan et al. (2016) add that the most crucial in the quality assessment in the future is focus on competences for practice and development of initiation for life-long learning. The increased need for social accountability put a pressure on university leadership to constantly develop their programs and quality assessment in line with ethical and social values. It is necessary to provide transparent outputs to ensure reliability of an institution, its staff, faculty, curricula, programs and learning outcomes. Academic quality needs to be created and managed as a complex, mission-driven processes closely attached to constant reevaluation, improvement and achievement of better results. Data analysis, constant feedback and knowledge management form are necessary to be provided and all stakeholders must be part of data collection. Results need to provide information for a university, public, students and other interest group and need to be taken as a starting point for constant redesign, reevaluation and improvement (among others: ACBSP, 2020, IACBE, 2019). Academic quality relates to quantitative and qualitative levels of several factors, especially on human, financial, material resources, but most importantly, on quality of education processes and its readiness to deliver learning outcomes. That means the interaction between faculty and students, faculty development and scholarly activities. This all have to be under umbrella of innovative curricula and future-oriented strategic management.

The urgency of a quality-ensuring process in higher education is increasing due to demographic changes, new trends in society, and shift to new technologies which were accelerated by the COVID-19 and necessity to change the form of delivery while maintaining or increasing level of quality. It is obvious that universities are currently located in changing environment which may lead to either success or failure. Higher education institutions have to provide the best service quality in order to attract interest of students, potential students and other stakeholders.

Furthermore, students' perception and expectations of a quality education currently albeit with increasing use of technology. Revealing impacts of these incremental changes form a crucial theme of this paper. This theme is supported by results of several primary and secondary statistical analyses complemented with data captured from over 1,500 students. Categorization of students according to their various matriculation is grouped to further determine impact of digital modality. The results will better inform retention strategies of students with different preferences and aspirations using their attitudes, emotions generated from data evaluation. Findings and implications of this study can be used by higher education institutions to further refine their approach to work with students on their academic preparation retention.

2. Theoretical Background

The quality education assessment is crucial to provide up-to-date information on efficiency of a given institution Mazais et al. (2012). Higher educational institutions should be able to provide updated responses and updates on their teaching-learning processes and supporting activities. Universities are currently forced to excel in ongoing assessment of programs and all activities (Dufour, 2015). There are numerous aspects to be assessed. According to Simic et al. (2019) the most important criteria are organization of the study, the quality of the study program, usefulness of the information obtained, study program as a source of personal development, quality of services provided by both academic and non-academic staff, competencies of staff and faculty, accessibility of sources etc. On the other hand, Hossain et al. (2018), further suggest in-depth assessment of curriculum quality, teaching competence, service facility and also service delivery. In their words, students' perceived satisfaction depends mostly on service facility. Ashraf et al. (2009) based on their study suggest measurement and reporting on the following areas: (1) faculty's academic background, (2) teaching experience, (3) updated course content, (4) communication skills and least but not last (5) fair treatments to students. Additionally, the study points at importance of classroom facilities, academic calendar, campus facility, research facility, cost of education and quality education in general on students and their perception of quality. In general, most of the authors suggest that it is a teacher who is usually perceived as one of the most important variable in student quality perception, as a teacher is always the one who has the main impact on student learning outcomes and the likelihood of successful completion of studies (Wachtel, 1998; Tram & Williamson, 2009; Flegl & Andrade Rosas, 2019). To gain the best outputs from teacher, Feldman (1996) stresses the importance of preparation of the teacher and his/her organization of the course, the clarity and comprehensibility of the interpretation and course delivery, fulfillment of the course objectives and the outcome or impact of the course. Zeithaml (1988) adds that student satisfaction and motivation to graduate rise when a university provides an environment that generally facilitates and simplifies learning.

The students' assessment of a higher education institution is usually impacted by several areas, such as peer opinions (Ryan, 2001), teachers' motivation (Sammons et al., 2011), academic responsibility (Merchant et al., 2012), implementation of practical examples and case studies to increase students' professional competences (Colombo & Gómez Pradas, 2014), interactivity of tuition and engagement of students in their education processes (Gamiz Sánchez et al., 2014; Kramarsky & Michalsky, 2009). Very important for students is the interest of students

themselves, which is usually influenced by the above-mentioned factors, their peers, attitudes of teachers and teaching materials or the university environment (Hopland & Nyhus, 2016), which includes technologies, i.e. e-learning, video leactures, online tutoring and flexibility in time and place from both teachers and students (Alepis & Virvou, 2014). Bryk & Schneider (2002) add that interpersonal relationships among students, teachers, and other university staff plays an important role together with social school environment in general. In general, studies mapping the relationship between students' interest and their study results have long history (i.e. Devadoss & Foltz, 1996; Dolton et al., 2003, etc.). The conclusions of these researches states that attendance of lectures, seminars, etc., leads to higher success rate of students (Stanca, 2006). Lindtstadt (2005), McCluskey et al. (2004) add that students' motivation, satisfaction, outputs and positive evaluation of an institution are affected not just by an individual, but also by family or societal ones.

Additionally, students are coming to higher education with a different performance focus (Trajkovik et al., 2018; Voronchenko et al., 2014; Savva et al., 2017). Furthers, students are always affected by a comparison to others by teachers and peers. The overall performance results also impact students´ motivation and satisfaction which impact also their evaluation of an institution. Furthermore, students will reach successful graduation only when they are adequately motivated. Thus, to reach optimal internal motivation is necessary in regard to individual competencies and personal characteristics (Zhdanko, 2018; Trajkovik et al., 2018).

2.1. Technologies in quality assessment

Currently, higher education institutions need to focus on implementation of remote tools and procedures in online teaching, solving issues related to the pedagogical approach, formulation and implementation of new ways to prepare students for the required skills in information and upgrade digital literacy for online teaching (de Boer, 2021; Stone, 2021) and change professional internships (Silva, 2021). The digitalization and online teaching is a challenge especially for practical training, ethics and integrity of online testing and of course, online lectures had to convey theoretical and practical knowledge (Kidess et al., 2021). A very important area is the evaluation of this form of teaching by regular and periodical feedback (Kidess et al., 2021). Digitalization of delivery also causes changes in curricula (Silva, 2021). Universities need to adapt their curricula by supplementing them with learning strategies that are compatible with virtual learning environments (Silva, 2021). Based on reported studies, online teaching of theoretical and practical subjects shows significant differences in nationality.

Despite the fact that some practical subjects were moved to a virtual environment, the level of satisfaction among students with practical teaching was lower (Ferro et al., 2021).

Online and distance delivery significantly impact psychic and social behavior of students and in some cases lead to the burnout syndrome and impact the overall mental health of students. According to Zis et al. (2021) and Roig-Vila et al. (2021), online teaching carries significant risks, especially emotional exhaustion. Distance learning through technologies influence communication with students and impact teachers´ relationship to teaching. Teachers have to fully rely on virtual classroom to teach and communicate, they need to be aware and identify communication needs and barriers, and constantly working to improve communication so that students are not alienated (Roig-Vila et al., 2021). Furthermore, although teachers use a synchronous type of audiovisual communication, communication with students in the online environment is still imperfect and requires further elements and improvements. Alhadreti (2021) in his study assessed the usability of online teaching aids, such as virtual whiteboards, questionnaires, etc., which could lead to improved communication with students. The outputs show that the communication needs to be further strengthened by other elements, because like Zis et al. (2021) and Alhadreti (2021) stated, communication within online teaching proved to be insufficient even from the point of view of academic staff. Pasion et al. (2021), add that the degree of involvement in teaching, the degree of motivation and connection to the university was also more difficult to achieve when lessons were only online. Further efforts should be made to ensure that online tutoring does not impact above mentioned areas. One of the paths is hybrid education, or mixed education, which combines elements of online teaching and full-time teaching. On the other hand, digital education means an opportunity to expand activities and educational events in the field of informatics, work with resources, etc. through online form. All activities have to ensure strengthening of students' digital competencies (Martzoukou, 2021).

Based on the above-mentioned, institutions have to tailor curricula and delivery methods to achieve learning outcomes required by specialized accreditors even in online system. Higher education institution also needs to ensure performance of students to achieve competences necessary for their jobs through online studies (Mocanu et al., 2014). Uuniversities have to responded adequately to protect staff and support them in technical and technological literacy, upgrade communication and support mechanisms (Wang et al., 2021; Karasmanaki & Tsantopoulos, 2021; Gamage et al., 2020; de Bruin et al., 2020; Baloran, 2020; Huckins et al., 2020; Peters et al., 2020; Zalite & Zvirbule, 2020; Agasisti & Soncin, 2021). In times of changes

and crisis, universities need to continue to fulfill their mission and functions, especially in key processes. Therefore, the transformation of teaching into other forms have to take place (Agasisti & Soncin, 2021).

Online teaching brings also broad opportunities, such as flexible online teaching; international coordination and cooperation; strong university leadership; proactive preventive measures; flexibility to verify results in terms of meeting deadlines and tests; fast, straight and open communication by university leaders (Gamage et al., 2020). The aim must be to ensure compliance with the quality teaching and all processess, which have to meet the requirements of external bodies, accreditors, stakeholders and public (Gamage et al., 2020). One of the measures suggested is the creation of teams that focus on quality and its further shift, especially in the areas of learning, teaching and student accommodation (Gamage et al., 2020). For evaluation of online teaching, it is necessary to put in place a mechanism that control both the quality of employees' work and their performance (Aguinis & Jing Burgi-Tian, 2021). Teaching in subjects that require practical demonstration methods has to be managed and evaluated carefully. Otherwise it may be reflected in a lower quality of education and work of graduates in practice after graduation (Puljak et al., 2020). To maintain the quality of education, it is recommended to use the black box method, to create a system of student support by administrative staff and to do the same in relation to teachers (Agasisti & Soncin, 2020). Overall, positive attitude of teachers, their fast decision-making and mutual communication with students has a great influence on the level of study and its results in the environment of online teaching and also on its communication and facilitation. The processing of instructions in the form of Best Practice is also very helpful and contribute effectively to the situation (Barbosa, 2020; Day et al., 2021; Mackert et al. 2020). Yuriy (2017) and Knight & Yorke (2004) found that attention needs to be paid in development of teachers and staff abilities linked to crisis management and planning, problem solving, and continuous improvement.

3. Methods

To provide insight into the phenomena of quality assessment in higher education, research used analysis of secondary sources, data gathering through questionnaire, data analysis of financial reports and knowledge synthesis. The research was designed based on theory and similar studies (see the theoretical background). Respondents' reactions to target statements and their attitudes to the situation were studied. The statements were developed based on literature search and in some cases modified according to the specifics of our study purpose to fit the conditions. Based

on this design, our study results may help other institutions in their application to meet students' needs in online or distance teaching.

The paper focuses on an in-depth discussion of the preferences in higher education by students given current discussion of the changes and value of online university education. Qualitative data were processed and analyzed based on Hendl (2016). The content analysis of responses from open questions and interviews was conducted. The resultant coded data and tables were created and the results were interpreted according to individual categories. All qualitative data were analysed based on the transcript of answers. This research refers to an in-depth, detailed study of individual responses resulting in a narrative description of situation during online learning or experience with the nature of the distance education.

The data for our study was collected in a questionnaire investigation by a computer assisted web interviewing (CAWI). The data collection started in 2020 and followed in 2021 by interviews. Students were responding to the experience of online or distance learning.

The data were gathered from 1,722 students in higher education in the Czech Republic. The sample contained only active students. The evaluated areas were related to evaluation of online education, use of alternative forms for exams and control of studies, evaluation of abilities to achieve learning outcomes through online delivery, evaluation of the institution communication and providing information and ensuring quality. All questions were open with a space to write text answer. All answers were mandatory. Pilot survey was made prior to the main research on 54 respondents. The results of pilot survey shown adequate results and Cronbach alpha confirmed validity of constructs and thus the questionnaire was used for the final questioning.

The content analysis was used to analyse interviews. Interviews were made online by MS Teams. Totally, 173 interviews by eight interviewers were made and respondents´ answers were transcribed into Excel file. To make replicable and valid outcomes from texts, categories were use based on the matter of the contexts and their use. The method clearly identifies areas of text that are not clear in the responses at the first sight. The steps of our quantitative content analysis reflected main steps according to Disman (2018). The qualitative categories formed units for analysis. The units and their context were analysed and attention was also paid to individual words. Logical clusters of units were recorded. To create system for statistical analyses, the nominal quantification was used to monitor frequencies of occurrence of each unit or category. The final number of occurrences of each unite and category was loaded. The outputs from this analysis were further studied and statistically processed. The data were inserted in tables and

descriptive and two-dimensional statistical tests by correlation analysis were used to evaluate the data.

4. Results

Students evaluated the best the possibility to be part of the teaching-learning process. Activities such as presentation of their project, seminar or workshop designed or led by students or groups or other possibilities to discuss with the teacher and other students and colleagues were mentioned. These activities help students to be active part of the process and leads to improvement of their performance and learning outcomes. The revealed correlation is very strong ($p<0.001$).

Based on result of analysis students' expectations are satisfied when the subject is adequately placed in the study plan and program. Students expect the subjects to be in accordance to their study plans and their programs, providing logical structure and ongoing gradual development. This is important for their satisfaction with the education process and leads to positive evaluation of quality education and its modalities (see details in Table 1).

Table 1 Perception of quality by students

Hypothesis	Correlation coefficient
Positive evaluation of course - connected to practice	0.895
Courses are gradually developing knowledge – performance development	0.527
Courses are understandable – teacher adjust explanation to students	0.799
Courses are positively assessed – teacher express emphasis	0.547
Teacher are positively assessed – giving opportunity to express opinion	0.564
Focus on practicing – attractiveness of courses	0.555
Active involvement of students – motivates to learn	0.620
Teacher leads by example – use of modern teaching techniques/technologies	0.616

As results of tests suggest, students assess courses positively when the pace and style of explanation are adequate, involving and focusing on students and practice. These areas have a significant impact on students' positive attitude and motivation to learn and perform. Following, it is necessary that teacher focuses on the student and study group to reach study goals and learning outcomes. This is also confirmed by significant correlations showing relation between appropriate explanation and perception of courses as understandable. Another important factors in online education proven to be carefulness of teacher, ensuring students understanding, opportunity to express opinion. Distance education need to be student oriented. Teachers are positively assessed in case they care about students' understanding and discuss

with students. Students motivation rises when they are active part of the discussion and are able to express and discuss their opinions to unite their thoughts.

Similarly, important is also orientation on practice. Students assessed courses as attractive and motivating when real-life case studies and examples are given and discussed. Teachers should place emphasis on these aspects. Furthermore, use of modern teaching techniques inspires students. Attention of students can be attracted by any teaching techniques, but students are attracted by discussion and practical application of studied theory. To achieve learning outcomes, the best way is to use practical orientation and explanation by teachers. The more practice-relevant are courses the more the students are attracted and motivated and it leads to positive assessment and achievement of learning outcomes. Student-centered education is preferred and support student attention and participation in the education process.

The impact of interest in courses on assessment of education process was further studied. Results show that subject and its content do not always relate to student interest in courses. Relations were found only in profiling courses, rather than general. In specific areas, students are attracted by the content of subjects and the teachers' experiences.

In the view of attendance, students are mainly attending hundred per cent at courses that they perceive as difficult. Courses that are referred as having excessive load and are perceived as demanding are the most attended.

Interest in courses also relates to teachers and their reference. Students follows teachers' evaluation by their peers and are attending those that are pointed as the best. Students appreciate help of a teacher and the possibility to discuss, ask questions and communicate about problematic areas.

However, student interest in lessons and courses also depends on their own experience in higher education. Freshmen students attend courses more often than in the following years. On the other hand, specialized subjects are often highly attended by students in higher grades. Students usually appreciate deep and practical focus of these courses and are interested in the specific content.

4.1. Current impact of technologies on quality education

Students evaluate their online or distance studies mostly positively. Only five per cent of students report negative experience. The largest category of positive evaluations contains generally positive evaluation. Excellent evaluation was given by over ten per cent of students Most positive was according to students the possibility of having all courses flexible online as well as exams. Along with their online studies, students mostly appreciated fast reactions of teachers and staff, and excellent communication with the administrative staff. Important for distance students is up-to-date information. The mostly appreciated were fast reactions and sending most important information immediately by short text message (SMS) to students´ phones.

Important for distance students is flexible support and on-demand consultations during the process of writing seminar papers, thesis and other written, papers and projects. Higher education institution should be also able to provide flexible exam dates and use flexible exam forms. Distance students praise Advisory Centre if an institution has one. During online education, students expect some administrative staff to be constantly online and providing answers to students´ questions and concerns. Technical staff that would help solving problems during online live lessons are also highly appreciated. Furthermore, friendliness towards students is another important factor stated by ten per cent of students.

Complaints of students usually concerned insufficient information about the study (five per cent), difficulties to access libraries (another five per cent of students). Around five per cent of students have difficulties with use of technologies and need further support.

The most important for distance students are clear schedules without changes, fast management of changes and an opportunity to watch missed lesson on-demand (this was expressed by over forty per cent of students). Another important area stated by students is speeding up the process of evaluation of exams, papers and projects.

Following the content analysis, the answers were sorted according to the area they describe into five categories: social impact, self-study, online education process, exams and information. The most characteristic comments were selected into each category and described below.

In the area of social impact, comments such as the following were mostly found:

Students lack social interaction: *Everything was nicely explained and I was able to orient myself. The only downside is that I haven't been able to meet anyone in person, including my*

classmates. So far, the school has made a positive impression on me." B Students positively evaluated online lessons which could be always attended without excuses: "*I evaluate my studies rather positively, as I could not make excuses (not go to school) and participated in the vast majority of lectures / lessons."* Further, students welcomed additional possibilities online: *"I also welcomed the offer of workshops that I have visited several times."* Finally, students appreciate possibility to watch lessons later if they cannot attend live: *"I very much welcomed the possibility of lectures on the YouTube channel and the possibility to watch them any time."*

In the area of self-study students appreciated video-learning: *"It is possible to see video-learning and script to study on demand any time and refresh most important knowledge."* Students appreciated meaningful use of their time: *"I (…) pay maximum attention to my study obligations. Distance learning suits me very well."* Or: *"I have a very positive time to study for the tests, to write written presentations and more time for personal life, I like it like this."* Similarly: "*I can devote my time to write a written paper and learn for tests at my convenience."*

Students evaluated online education process mostly positive. Students evaluated attendance on video courses as better and students as more active: *"In addition, it seems to me that there is more participation in lectures and students are more active."* Other student added: "*The possibility of an alternative test is great*." Or: "*To be allowed to take the exams in a different way was beneficial for me. Alternative online lectures I found suitable and not less interesting."*

Timely information is crucial. Students had these typical comments: "*Willing staff of the Information Center always advised me and cleared information*". "*The first necessary info came by text message, the rest in the student's IS*." Fast and responses were praised: "*(…) I needed to ask at the beginning about the textbooks I borrowed and I called the study department without problem."* Suggestion came to improve Social network communication: *"All right, I would improve communication on the social networks."*

The answers of students show that online teaching is the future for students, either completely or increasing the share of online teaching. The reasons for online learning are usually time flexibility, work responsibilities or no need to travel long distance from the place of residence to the institution.

5. Discussion

To re-design the future quality assessment of higher education institutions, it is necessary to follow current and future needs of key stakeholders. This is supported by Noroozi et al. (2016) who confirmed that students' feedback is important for the quality of the teaching process.

Further, Jones et al. (2016) states that the teachers' feedback from the students plays key role for upgrades and re-design of quality assessment. Based on presented results and in line with Deveci (2015) it is possible to state that assessment of courses by students is nowadays crucial for the management of universities. The results show that practical orientation of the subjects is important for all students, that was also stated by He & Hutson (2016) and Darwin (2016). Student feedback-based assessment also drives perceptions of the quality of teaching in higher education. It is crucial tool for developing student understanding and awareness of learning outcomes and is a key to students' autonomy (Darwin, 2016). Furthermore, it is the main motive to enhance the quality of teaching and to manage student retention. Overall, motives for student feedback-based evaluation in higher education are very important for high education quality nowadays (Darwin, 2016).

In line with Aminbeidokhti et al. (2014), the total quality management (TQM) is equally important in the area of higher education as well as in practice. TQM positively and meaningfully affects the organizational learning and innovation which is crucial for universities nowadays. Further, Garwe (2014), Chui et al. (2016), Khosravi et al., (2013) and Ferro & D'Elia (2020) add that universities operate in a global and competitive environment and thus quality assessment is crucial to provide quality of processes implementation and quality management. Klein et al. (2019) in this context stress the importance of a comprehensive, inclusive and well-communicated plan for implementing learning analytics tools for maximal student acceptance.

As ENQA defines, higher education institutions are responsible for the quality of their education and programs. This study investigates more from analysis of the basic standards; it is possible to compare it to the actual students´ interests. Development of a culture of quality and demonstration of its accountability are the most important areas (AACSB, 2016). Higher education institutions should be able to demonstrate their quality, diversity and innovation by focusing on areas described in the presented study.

Current time period is bringing a number of changes to the field of higher education. Universities are forced to respond to the inclusion of online teaching and thus provide an alternative to existing teaching (Stone, 2021; Al-Balas et al. 2020; Valleé et al; 2020). Engagement of students is the key, as referred also by (Horstmanshof & Zimitat, 2007; Lowe & Cook, 2003). As Glover et al. (2002), Gore & Cross (2006), Fryer et al. (2016) and Wharton et al. (2014) stated, students want to continue their studies in turbulent times to increase their employability, chances and possibilities at labor market. Future education still has to follow the Houle´s division of motivators to study: (1) goal-orientation (getting courses and exams done

to obtain the diploma at the end); (2) activity-orientation (learning process itself, social interaction), and (3) learning-orientation (information on knowledge and skills development) (Merriam & Brockett, 2007). It is possible to state that the main focus of higher education institution management lies in timely and sufficient information, ability to guarantee access to literature and sources, offer alternative variants possibilities for courses where distance delivery is not suitable, support everyone with knowledgeable technical help line and ensure direct and personalized communication with respect to social impact.

Focus on revealed factors brings, according to data of case university financial department, additional income of approximately 20% above average enrolled students paying tuitions and it also resulted in elimination of losses based on drop offs of unsatisfied students which on average reach from 5 to 30% of income.

6. Conclusions

Higher educational institutions are suggested to focus on preferences of students and their expected outcomes of higher education. Students appreciate the most personalized online video-meetings, friendliness and openness of staff with regard to social impact, excellent communication, university's fast reactions, alternative study possibilities, and flexible exam dates, or alternative exams. As the debate on the value and quality of online higher education currently continues, this paper shows how students perceive it.

It is undiscussable that the quality of education process affects students' interest, motivation and attendance in lessons and courses. Students are actively searching for the best evaluation to attend those programs. The main factors that leads to student motivation, attendance, and performance are practically oriented lessons; open and discussing teachers; subject extent and difficulty. All students at risk need to be addressed, all opportunities have to be communicated carefully and students should be offered personalized support and help.

The theoretical contribution of this paper is the systemic formulation of factors impacting quality assessment and perception of quality at higher education institutions. Further, the impact of quality of courses, teachers and lessons on students' interest and attendance was proven. The quality influences the course of study and study results, completing education and later also employability of graduates. The practical contribution lies in definition and validation of factors affecting quality perception and its impacts. Furthermore, all surveyed students evaluate focus on quality positively.

A limitation is presentation of results from only one country. However, the results are presented as a case study, and these findings may help other higher education institutions with implementation of the process of quality assessment Furthermore, results support the importance of quality assurance and its impact on innovations and financial results of an institution. Quality monitoring and implementation of continuous improvement based on feedback loop leads to internal improvements and increase attractiveness for students and potential students and staff.

References

AACSB (2016). *Eligibility Procedures and Accreditation Standards for Business Accreditation*, Aacsb.edu [Online], Available: http://www.aacsb.edu/~/media/AACSB/Docs/Accreditation/Standards/2013-bus-standards-update.ashx [9 July 2020].

ACBSP (2020). *ACBSP standards and criteria for demonstrating excellence in baccalaureate/graduate degree business programs*, [Online] Available: https://cdn.ymaws.com/www.acbsp.org/resource/collection/EB5F486D-441E-4156-9991-00D6C3A44ED1/ACBSP_Unified_Standards_and_Criteria_for_Accreditation.pdf [9 July 2020].

Agasisti, T., and Soncin, M. (2021). Higher education in troubled times: on the impact of Covid-19 in Italy. *Studies in higher education,* vol. 46(1), pp. 86-95. https://doi.org/10.1080/03075079.2020.1859689.

Aguinis, H, and Burgi-Tian, J. (2021). Measuring performance during crises and beyond: The Performance Promoter Score. *Business Horizons*, vol. 64(1), pp. 149-160. https://doi.org/10.1016/j.bushor.2020.09.001.

Al-Balas, M., Al-Balas, H. I., Jaber, H. M. *et al*. (2020). Correction to: Distance learning in clinical medical education amid COVID-19 pandemic in Jordan: current situation, challenges, and perspectives. *BMC Medical Education*, vol. 20(1), pp. 513. https://doi.org/10.1186/s12909-020-02428-3.

Alepis, E. and Virvou, M. (2014). *Object-oriented user interfaces for personalized mobile learning*. Berlin: Springer Berlin Heidelberg.

Alhadreti, O. (2021). Assessing Academics´Perceptions of Blackboard Usability Using SUS and CSUQ; A Case Study during the COVID-19 Pancemic. *International Journal of Human Computer Interaction,* (in press). ISSN 1044-7318.

Aminbeidokhti, A., Jamshidi, L. and Mohammadi Hoseini, A. (2014). The effect of the total quality management on organizational innovation in higher education mediated by organizational learning. *Studies in Higher Education*, vol. 41(7), pp. 1153-1166. http://dx.doi.org/10.1080/03075079.2014.966667.

Anderson, V., Fontinha, R., & Robson, F. (2019). *Research Methods in Human Resource Management*. London, UK: Chartered Institute of Personnel Development.

Ashraf, M. A., Ibrahim, Y., and Joarder, M. (2009). Quality education management at private universities in Bangladesh: An exploratory study. *Journal of Educators & Education/Jurnal Pendidik dan Pendidikan*, vol. 24.

Baloran, E. T. (2020). Knowledge, attitudes, anxiety, and coping strategies of students during COVID-19 pandemic. *Journal of Loss and Trauma*, vol. 25(8), pp. 635–642. https://doi.org/10.1080/15325024.2020.1769300.

Barbosa, B. R. (2020). Covid-19 and doctoral research in Brazil and Portugal: who pays the bill for confinement and remote work in research? *Fennia-international journal of geography*, vol. 198(1-2), pp.239-242. https://doi.org/10.11143/fennia.99208.

Bryk, A. and Schneider, B. (2002). *Trust in schools*. New York: Russell Sage Foundation.

Chui, T. B. and bin Ahmad, M. S. (2016). Evaluation of service quality of private higher education using service improvement matrix. *Procedia - Social and Behavioral Sciences*, vol. 224, pp. 132-140. https://doi.org/10.1016/j.sbspro.2016.05.417.

Colombo, A. and Gómez Pradas, M. (2014). SIMULACRE: A proposal for practical training in e learning environments. *RUSC. Univ. and Know. Soc*., vol. 11(3), pp. 4. http://dx.doi.org/10.7238/rusc.v11i3.1781.

Crosling, G., Heagney, M., & Thomas, L. (2009). Improving student retention in higher education: Improving teaching and learning. *Australian Universities' Review*, vol. 51(2), pp. 9.

Day, T., Chang, I-Ch. C., Chung, C. K. L., Doolittle, W. E., Housel, J. & McDaniel, P. N. (2021). The Immediate Impact of COVID-19on Postsecondary Teaching and Learning. *The Professional Geographer*, vol. 73(1), pp. 1-13. https://doi.org/10.1080/00330124.2020.1823864.

de Bruin, Y, B., Lequarre, A. S., McCourt, J., Clevestig, P., Pigazzani, F., Jeddi, M. Z., & Goulart, M. (2020). Initial impacts of global risk mitigation measures taken during the combatting of the COVID-19 pandemic. *Safety Science*, vol. 128, pp. 1-8. https://doi.org/10.1016/j.ssci.2020.104773.

Darwin, S. (2015). The emergence of contesting motives for student feedback-based evaluation in Australian higher education. *Higher Education Research & Development*, vol. 35(3), pp. 419-432. http://dx.doi.org/10.1080/07294360.2015.1107879.

Devadoss, S. and Foltz, J. (1996). Evaluation of Factors Influencing Student Class Attendance and Performance. *American Journal of Agricultural Economics*, vol. 78(3), pp. 499-507. http://dx.doi.org/10.2307/1243268.

Deveci, H. (2015). Value Education Through Distance Learning: Opinions of Students who already Completed Value Education. *Turkish Online Journal of Distance Education*, vol. 16(1). http://dx.doi.org/10.17718/tojde.89079.

Disman, M. (2018). *How to create a knowledge in sociology* (in Czech). Karolinum, Prague, CZ. 372 p.

Dolton, P., Marcenaro, O. and Navarro, L. (2003). The effective use of student time: a stochastic frontier production function case study. *Economics of Education Review*, vol. 22(6), pp. 547-560. http://dx.doi.org/10.1016/S0272-7757(03)00027-X.

Dufour, C. (2015). The Tools and Methods Used for the Continuous Evaluation of Education Programmes. *Documentation et Bibliotheques*, vol. 61(2-3), pp. 90-103.

ENQA (2005). *Standards and Guidelines for Quality Assurance in the European Higher Education Area*, drafted by ENQA in cooperation with EUA, EURASHE and ESIB and endorsed by the ministers of education of the Bologna signatory states at the Bergen meeting of May 2005. [Online] Available: http://www.enqa.eu/wp-content/uploads/2013/06/ESG_3edition-2.pdf.

Feldman, K. A. (1996). Identifying exemplary teaching: Using data from course and teacher evaluations. *New directions for teaching and learning*, vol. 65, pp. 41-50. http://dx.doi.org/10.1002/tl.37219966509.

Ferro, G. and D'Elia, V. (2020). Higher Education Efficiency Frontier Analysis: A Review of Variables to Consider, *Journal on Efficiency and Responsibility in Education and Science*, vol. 13(3), pp. 140–153 https://doi.org/10.7160/eriesj.2020.130304.

Flegl, M., Andrade Rosas, L. A. (2019). Do professor's age and gender matter or do students give higher value to professors' experience? *Quality assurance in education*, vol. 27(4), pp. 511-532. https://doi.org/10.1108/QAE-12-2018-0127.

Fryer, L. K. *et al*. (2016). Understanding Students' Instrumental Goals, Motivation Deficits and Achievement: Through the Lens of a Latent Profile Analysis. *Psychologica Belgica*, vol. 56(3), pp. 226-243. DOI: http://doi.org/10.5334/pb.265.

Gamage, K. A. A., Roshan Pradeep, R. G. G., Najdanovic-Visak, V, & Gunawardhana, N. (2020). Academic Standards and Quality Assurance: The Impact of COVID-19 on UniversityDegree Programs. *Sustainability*, vol. 12, pp. 1-18, 10032. doi:10.3390/su12231003.

Garwe, E. C. (2014). Quality assurance in higher education in Zimbabwe. *Research in Higher Education Journal*, vol. 23(1), pp. 1-10.

Gore, J. S., and Cross, S. E. (2006). Pursuing goals for us: Relationally-autonomous reasons in long-term goal pursuit. *Journal of Personality and Social Psychology*, 90, 848–861. http://dx.doi.org/10.1037/0022-3514.90.5.848.

He, Y. and Hutson, B. (2016). Appreciative Assessment in Academic Advising. *The Review of Higher Education*, vol. 39(2), pp. 213-240. http://dx.doi.org/10.1353/rhe.2016.0003.

Hebák, P., Malá, I. and Hustopecký, J. (2006) *Vícerozměrné statistické metody. (Multidimensional Statistical Methods)*. Prague: Informatorium.

Heffernan, N., Ostrow, K., Kelly, K., Selent, D., Van Inwegen, E., Xiong, X. and Williams, J. (2016). The Future of Adaptive Learning: Does the Crowd Hold the Key? *Int J Artif Intell Educ*, vol. 26(2), pp. 615-644. http://dx.doi.org/10.1007/s40593-016-0094-z.

Hendl, J. (2016). *Qualitative research (in Czech).* Portál, Prague, CZ.

Hopland, A. and Nyhus, O. (2016). Learning environment and student effort. *International Journal of Educational Management*, vol. 30(2), pp. 271-286. http://dx.doi.org/10.1108/IJEM-05-2014-0070.

Horstmanshof, L., and Zimitat, C. (2007). Future time orientation predicts academic engagement among first-year university students. *British Journal of educational Psychology*, vol. 77, pp. 703-718. http://dx.doi.org/10.1348/000709906X160778.

Hossain, M. A., Hossain, M. M. and Chowdhury, T. H. (2018). Understanding the success of private universities: An empirical investigation from graduates' perspective. *International Journal of Quality & Reliability Management*, vol. 35(1), pp. 145-162. http://dx.doi.org/10.1108/IJQRM-02-2015-0031.

Huckins, J. F., da Silva, A. W., Wang, W., Hedlund, E., Rogers, C., Nepal, S. K., Wu, J., Obuchi, M., Murphy, E. I., Meyer, M. L., Wagner, D. D., Holtzheimer, P. E., and Campbell, A. T. (2020). Mental health and behavior of college students during the early phases of the COVID-19 pandemic: Longitudinal smartphone and ecological momentary assessment study. *Journal of Medical Internet Research*, vol. 6(6), pp. 1-22. https://doi.org/10.2196/20185.

IACBE (2019) *Accreditation process manual*, [Online] Available: https://iacbe.org/wp-content/uploads/2019/04/Accred-Process-Manual-Approved-April-2019-1.pdf [25 January 2022].

Jones, L., Allen, B., Dunn, P. and Brooker, L. (2016). Demystifying the rubric: a five-step pedagogy to improve student understanding and utilisation of marking criteria. *Higher Education Research & Development*, vol. 1, pp. 1-14. http://dx.doi.org/10.1080/07294360.2016.1177000.

Karasmanaki, E., and Tsantopoulos, G. (2021). Impacts of social distancing during COVID-19 pandemic on the daily life of forestry students. *Children and Youth Services Review*, vol. 120, pp. 1-7. https://doi.org/10.1016/j.childyouth.2020.105781.

Kidess, M., Schmid, S., C. *et al*. (2021). Virtual Skills-training in Urology Teaching at the Technical University of Munich During th COVID-19 Pandemic. *Urologe,* (in press). ISSN 0340-2592.

Khosravi, A. A., Poushaneh, K., Roozegar, A. and Sohrabifard, N (2013). Determination of Factors Affecting Student Satisfaction of Islamic Azad University. *Procedia - Social and Behavioral Sciences*, vol. 84, pp. 579-583. https://doi.org/10.1016/j.sbspro.2013.06.607.

Klein, C., Lester, J., Rangwala, H. and Johri, A. (2019). Learning Analytics Tools in Higher Education: Adoption at the Intersection of Institutional Commitment and Individual Action. *Review of Higher Education,* vol. 42(2), pp. 565-593. http://dx.doi.org/10.1353/rhe.2019.0007.

Knight, P., and Yorke, M. (2004). *Learning, curriculum and employability in higher education*. Howe, UK: Psychology Press.

Leonnard (2021). Antecedents of private university students' satisfaction: The effects of traditional and electronic service quality. *Journal on Efficiency and Responsibility in Education and Science*, vol. 14(3), pp. 154–166 https://doi.org/10.7160/eriesj.2021.140303.

Lowe, H. and Cook, A. (2003). Mind the Gap: Are students prepared for higher education? *Journal of Further and Higher Education,* vol. 27(1), pp. 53-76. http://dx.doi.org/10.1080/03098770305629.

Mackert, M., Table, B., Yang, J., Bouchacour, L. Woods, J. M., Bernhardt, J. M., and Hughes Wagner, J. (2020). Applying Best Practices from Health Communication to Support a University's Response to COVID-19. *Health Communication*, vol. 35(14), pp. 1750-1753. doi:10.1080/10410236.2020.1839204.

Mazais, J., Lapiņa, I. and Liepiņa, R. (2012). Process Management for Quality Assurance: Case of Universities. In *Proceedings of the 8th European Conference on Management, Leadership and Governance,* Pafos, pp. 8-9.

McCluskey, C., Bynum, T. and Patchin, J. (2004). Reducing Chronic Absenteeism: an Assessment of an Early Truancy Initiative. *Crime & Delinquency*, vol. 50(2), pp. 214-234. http://dx.doi.org/10.1177/0011128703258942.

Merchant, B., Ärlestig, H., Garza, E., Johansson, O., Murakami-Ramalho, E. and Törnsen, M. (2012). Succesful school leadership in Sweden and the US. Contexts of social responsibility and individualism. *International Journal of Educational Management,* vol. 26(5), pp. 428-441.

Merriam, S. B., and Brockett, R. G. (2007). *The profession and practice of adult education: An introduction*. San Francisco, CA: John Wiley & Sons.

Mocanu, C., Zamfir, A. M., and Pirciog, S. (2014). Matching Curricula with Labour Market Needs for Higher Education: State of Art, Obstacles and Facilitating Factors. *Procedia-Social*

and Behavioral Sciences, vol. 149, pp. 602-606. http://dx.doi.org/10.1016/j.sbspro.2014.08.234.

Noroozi, O., Biemans, H. and Mulder, M. (2016). Relations between scripted online peer feedback processes and quality of written argumentative essay. *The Internet and Higher Education*, vol. 31, pp. 20-31. http://dx.doi.org/10.1016/j.iheduc.2016.05.002.

Pasion, R., Dias, O. *et al*. (2021). Impact of COVID-19 on undergraduate business students: a longitudinal study on academic motivation, engagement and attachment to university. *Accounting Research Journal*, vol. 34(2), pp. 246. http://dx.doi.org/10.1108/ARJ-09-2020-0286.

Peters, M. A., Rizvi, F., McCulloch, G., Gibbs, P., Gorur, R., Hong, M., Hwang, Y., Zipin, L., Brennan, M., Robertson, S., Quay, J., Malbon, J., Tagliettie, D., Barnett, R., Chengbing, W., McLaren, P., Apple, R., Papastephanou, M., Burbules, N., and Misiaszek, L. (2020). Reimagining the new pedagogical possibilities for universities post-Covid-19, *Educational Philosophy and Theory*, pp. 1–45. https://doi.org/10.1080/00131857.2020.1777655.

Puljak, L., Čivljak, M., Haramina, A., Mališa, S., Čavić, D., Klinec, D., Aranza, D., Mesarić, J., Skitarelić, N., Zoranić, S., Majstorović, D., Neuberg, M., Mikšić, Š., and Ivanišević, K. (2020). Attitudes and concerns of undergraduate university health sciences students in Croatia regarding complete switch to e-learning during COVID-19 pandemic: a survey. *BMC Medical Education*, vol. 20(416), pp. 1-11. https://doi.org/10.1186/s12909-020-02343-7.

Roig-Vila, R., Urrea-Solano, M. *et al*. (2021). Communication at university classsrooms in the kontext of COVID-19 by means of videoconferencing with Google Meet. *Ried-Revista Iberoamericana De Education a Distancia*, vol. 24(1), pp. 197-220. ISSN 1138-2783.

Ryan, A. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development*, vol. 72(4), pp. 1135-1150. http://dx.doi.org/10.1111/1467-8624.00338.

Savva, L. I., Saigushev, N. Y., Vedeneeva, O.A., Pavlova, L.V., Rabin, E. I. (2017). Student's time-awareness formation: Self-organized personality as promoting factor for mental health. *European Proceedings of Social and Behavioural Sciences*, vol. 26, pp. 858-864, DOI 10.15405/epsbs.2017.07.02.111.

Sammons, P., Gu, Q., Day, C. and Ko, J. (2011). Exploring the impact of school leadership on pupil outcomes. Results from a study of academically improved and effective schools in England. *International Journal of Educational Management*, vol. 25(1), pp. 83-101.

Silva, O., Hernand, S. *et al*. (2021). Surgery Clerkship Curriculum Changes at an Academic Institution during the COVID-19 Pandemic. *Journal of Surgical Education*, vol. 78(1), pp. 327-331. ISNN 1931-7204.

Simic, M. L., Stimac, H. and Barilovic, Z. (2019). Education sevice yuality – Private vs. public business education in Croatia. *Economic and Social Development: Book of Proceedings*, pp. 75-84.

Stanca, L. (2006). The Effects of Attendance on Academic Performance: Panel Data Evidence for Introductory Microeconomics. *The Journal of Economic Education*, vol. 37(3), pp. 251-266. http://dx.doi.org/10.3200/JECE.37.3.251-266.

Stone, C., and Worsley, A. (2021). It´s my time now´: the experiences of social work degrese apprenties. *Soc. Work Educ*, vol. 1(1), pp. 1-5. ISSN 0261-5479. http://dx.doi.org/10.1080/02615479.2021.1873936.

Šnýdrová, M., Depoo, L. and Šnýdrová, I. (2021). How University Graduation Shapes Attitudes Toward Employment in Different Generations Operating at Job Market? *Journal on Efficiency and Responsibility in Education and Science*, vol. 14(3), pp. 143–153 https://doi.org/10.7160/eriesj.2021.140302.

Trajkovik, V., Malinovski, T., Vasileva-Stojanovska, T., Vasileva, M. (2018). Traditional games in elementary school: Relationships of student's personality traits, motivation and experience with learning outcomes. *Plos One*, vol. 13(8). DOI 10.1371/journal.pone.0202172.

Tram, D. N. and Williamson, J. (2009). Evaluation of teaching: hidden assumptions about conception of teaching. *Proceedings of the 2nd International Conference of Teaching and Learning*, Rotterdam, [s.n.].

Voronchenko, T., Vinogradova, N., Zherebtsova, E. (2014). Teacher's Professional Health as a Factor of the Development of a Student's Harmonic Personality. *5th World conference on psychology, counseling and guidance*, Dubrovnik, pp. 235-238. DOI 10.1016/j.sbspro.2014.12.364.

Wachtel, H. K. (1998). Student evaluation of college teaching effectiveness: A brief review. *Assessment & Evaluation in Higher Education*, vol. 23(2), pp. 191-212. http://dx.doi.org/10.1080/0260293980230207.

Wang, Y., Hao, H., and Platt, L. S. (2021). Examining risk and crisis communications of government agencies and stakeholders during early-stages of COVID-19 on Twitter. *Computers in Human Behavior*, vol. 114, pp. 1-15. https://doi.org/10.16/j.chb.2020. 105568.

Wharton, C. Y., Goodwin, L. J., and Cameron, A. J. (2014). Living up to our students' expectations using student voice to influence the way academics think about their undergraduates learning and their own teaching. *International Journal of Higher Education*, vol. 3(4), pp. 72. http://dx.doi.org/10.5430/ijhe.v3n4p72.

Yuriy, M. (2017). Study of trends of students' demand for the formation of competences by higher educational institutions. *Education*, vol. 5, pp. 128-134. DOI: https://doi.org/10.24195/2414-4665-2017-5-22.

Zalite, G. G., and Zvirbule, A. (2020). Digital readiness and competitiveness of the EU higher education institutions: The COVID-19 pandemic impact. *Emerging Science Journal*, vol. 4(4), pp. 297–304. https://doi.org/10. 28991/esj-2020-01232.

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of marketing*, vol. 52(3), pp. 2-22. http://dx.doi.org/10.1177/002224298805200302.

Zhdanko, T. A. (2018). Competitiveness of student´s personality – Modern imperative. *European Proceedings of Social and Behavioural Sciences*, vol. 50, pp. 1254-1261. doi: 10.15405/epsbs.2018.12.154.

Zis, P. *et al*. (2021). Medical Studies during the COVID-19 Pandemic: The Impact of Digital Learning on Medical Students´Burnout and Mental Health. *International Journal of Enviromental Research and Public Health*, vol. 18(1), pp. 349. DOI 10.3390/ijerph18010349.

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