QUALITY GAPS IN HIGHER EDUCATION FROM THE PERSPECTIVE OF STUDENTS

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Abstract: The presented research work relates to the category of quality in higher education. This article aims to present the determinants of the quality of education in the context of international standards. The background of the considerations is the Bologna Declaration and the European Higher Education Area. The results of the research carried out with the use of the nominal group method and the data analysis carried out based on the SERVQUAL model for education revealed groups of quality determinants that are not included in the standards of internal quality assurance. It has been found that the principle of autonomy of universities in the European Higher Education Area is a sufficient basis to include the determinants of the quality of education identified by internal stakeholders of a given university in the internal quality of education assurance system.

Keywords*:* quality, quality of education, standards of quality assurance in higher education, SERVQUAL in higher education.

JEL Classification: I23, I28.

1 Introduction

The application of educational standards in higher education is the result of the Bologna Process, which was initiated by the signing in 1999 by the ministers responsible for higher education in 29 European countries of a document known as the Bologna Declaration. The declaration suggests changes in the systems of higher education in Europe, with the aim being to define the general principles of the organization of education in the European Higher Education Area (EHEA). The creation of the European Higher Education Area and related activities are benefit-oriented by the stakeholders:

- European governments are primarily interested in the positive impact of international academic cooperation on the situation of the labor market and economic growth.
- Universities perceive European cooperation as an opportunity to improve the quality of education and a competitive position in the global market of educational services.
- Applicants and students expect greater availability of studies and increased chances of obtaining a good education, creating opportunities for finding employment on the international labor market.
- Paradoxically, the concept of "quality" is not clearly defined in European standards for quality assurance in higher education. Failure to define the quality of the above-mentioned European standards causes, inter alia, problems such as the ambiguity of interpretation and the differentiation of the semantic context of many concepts included in the standards (e.g., qualifications, competencies, design, and relations with the environment). The need to develop a definition of quality in the context of standards for higher education results from the following premises: the term "quality" is ambiguous.
- It is desirable to limit the vagueness of the term "quality".
- The meaning of the term "quality" is not widely understood.

There is a need to establish a new meaning of the term "quality" due to the sector to which it refers. The European standards also do not define the term "education," the meaning of which can be understood as the process of learning facilitating or the acquisition of knowledge, skills, values, beliefs, and habits or the act, the process of imparting or acquiring general knowledge, developing powers of reasoning and judg-

ment, and generally of preparing oneself or others intellectually for mature life. Leaving aside the criteria for defining the concept of education (e.g., social, psychological, economic, and philosophical), it can be assumed that the essence of education is knowledge and providing conditions, resources, and ways to pass it on to students.

The following assumptions were used to formulate the definition of quality:

- there are specific dependencies between education at universities (as understood by institutions) and theories and concepts in management (e.g., corporate social responsibility or relationship marketing),
- each group of stakeholders (internal, external) of universities has an impact on the quality level and its effects (or results),
- education at universities is a social service, so it is directly related to the management of service quality. On this basis, the authors propose the following constructive definition of the term "quality": *the degree of meeting the requirements and expectations of university stakeholders*.

Therefore, the concept of quality of education means the degree of meeting the requirements and expectations of university stakeholders in the area of education. The narrow scope of the proposed definitions of the quality and quality of education is purposeful because they can be extended in research perspectives to include many aspects, for example, institutional, organizational, resource, functional, procedural, and process. The adoption of these definitions creates the possibility of defining:

- external conditions of the quality of education (e.g., strategies and policies, legal acts),
- internal conditions of the quality of education (e.g., strategies, resources, management style, systems, processes, organizational culture),
- the requirements of the identified groups of stakeholders (internal and external),
- methods and tools to meet the requirements of stakeholders,
- measuring and assessing the fulfillment of stakeholder requirements,
- determining the possibilities and methods of improving the quality of education.

The long-term perspective and the possibility of applying to various objects (e.g., activities, processes, and resources) are other features of the presented definitions, which enable their application to define the so-called quality gaps in terms of the difference between "what should be" and "what is." Filling these gaps results in the achievement of a higher level of education quality, although the limitations may be, for example, high dynamics of the variability of stakeholder requirements, the low operational flexibility of universities, insufficient resources of universities, and type and maturity of organizational culture. This justifies the need for continuous improvement of both education and the university due to the relations between them. Its goal is to increase the effectiveness and efficiency of operations, the results (effects) of which include increased satisfaction of interested parties, better adaptation to internal and external conditions, increased flexibility of procedures and systems, development of entrepreneurship, and social responsibility.

This article aims to present the determinants of the quality of education in the context of quality gaps concerning the standards set for universities. The following research methods were used to achieve the goal: literature analysis, the method of nominal groups, and the method of analysis and logical construction. The material scope of the considerations was limited to the internal quality assurance of education contained in various standards – both domestic and international.

2 Literature review

In marketing management, in assessing the quality of services, the SERVQUAL model of services is commonly used (Parasuraman, Zeithaml and Berry, 1985). Assuming that education is an educational service provided to students, J. Gallifa and P. Batalle (2010) presented the following description of the determinants of the quality of educational services for the SERVQUAL model:

- tangibility − attractive location of the university, cleanliness, aesthetics, spaciousness of rooms, reliability, the safety of laboratory equipment, and staff neatness,
- reliability − completeness, timeliness of classes, availability of lesson plans, schedules, didactic materials, size of student groups conducive to the quality of education, library services, living services, the structure of the curriculum in line with the substantive and methodological standards, and number of subjects to choose from appropriate to expectations,
- responsiveness − speed and correctness of responses to the changing needs and expectations of students,
- assurance − professionalism, teaching skills, practical experience of academic teachers, the fairness of the assessment system, and professionalism of the administrative staff,
- empathy − understanding and kindness of employees toward students, using an individualized approach to students, readiness to respond positively to social expectations (volunteering), and creating opportunities for students to participate in various additional forms of activities (e.g., scientific clubs, sports activities, and internships in enterprises).

The SERVQUAL model for educational services is developed in the article by M. Hrnciar and P. Madzik (2013), in which the quality gaps are characterized and the education process at the university is presented, taking into account two additional gaps compared to the five presented in the original SERVQUAL model (Gaps 6 and 7). The characteristics of all the gaps concerning the quality of education according to these authors are as follows:

- Gap 1 results from the comparison of stakeholder expectations (students, employers) and the perception of educational requirements by the university management,
- Gap 2 is the result of the management's perception of the requirements for the education process and the effects of their translation into the specified study programs and education process,
- Gap 3 concerns the comparison of the specification of study programs and the conducted education process,
- Gap 4 is determined based on the assessment of communication with students before, during, and after education, concerning the planned and implemented program,
- Gap 5 relates to the comparison of the conducted education process and its results as perceived by stakeholders,
- Gap 6 is derived from a comparison of stakeholder perceptions of learning and the institution's internal measurements of learning outcomes; answers the question of whether the results of internal measurements are properly interpreted,
- Gap 7 determines whether stakeholder satisfaction measurement results lead to effective improvement actions focused on the quality of education.

The developed model of education quality gaps has three dimensions: subjective (stakeholders, university management, persons responsible for the curriculum, teachers responsible for the subject, and administration and technical support staff), functional (15 activities that make up the education process), and qualitative (taking into account the.

The first dimension concerns external stakeholders (employers and students) and internal stakeholders (university managers and employees, including lecturers).

The second dimension concerns the learning process, the elements of which include: understanding the expectations of employers and students; developing strategy, goals, policies, requirements for education, study programs, and subjects; planning activities and resources; communicating with students; delivering education; and measuring learning outcomes (including external stakeholder satisfaction survey).

The third dimension concerns the PDCA cycle (P-plan, D-do, C-check, A-act) and is described as a subject-functional system. The "Plan" phase is understood as the preparation of the learning process. The "Do" phase represents the completion of the learning process. The "Check" phase concerns the evaluation of the learning process and its effects, and the "Act" phase means the improvement of the education process.

A graphic illustration of the discussed model is presented in Figure 1.

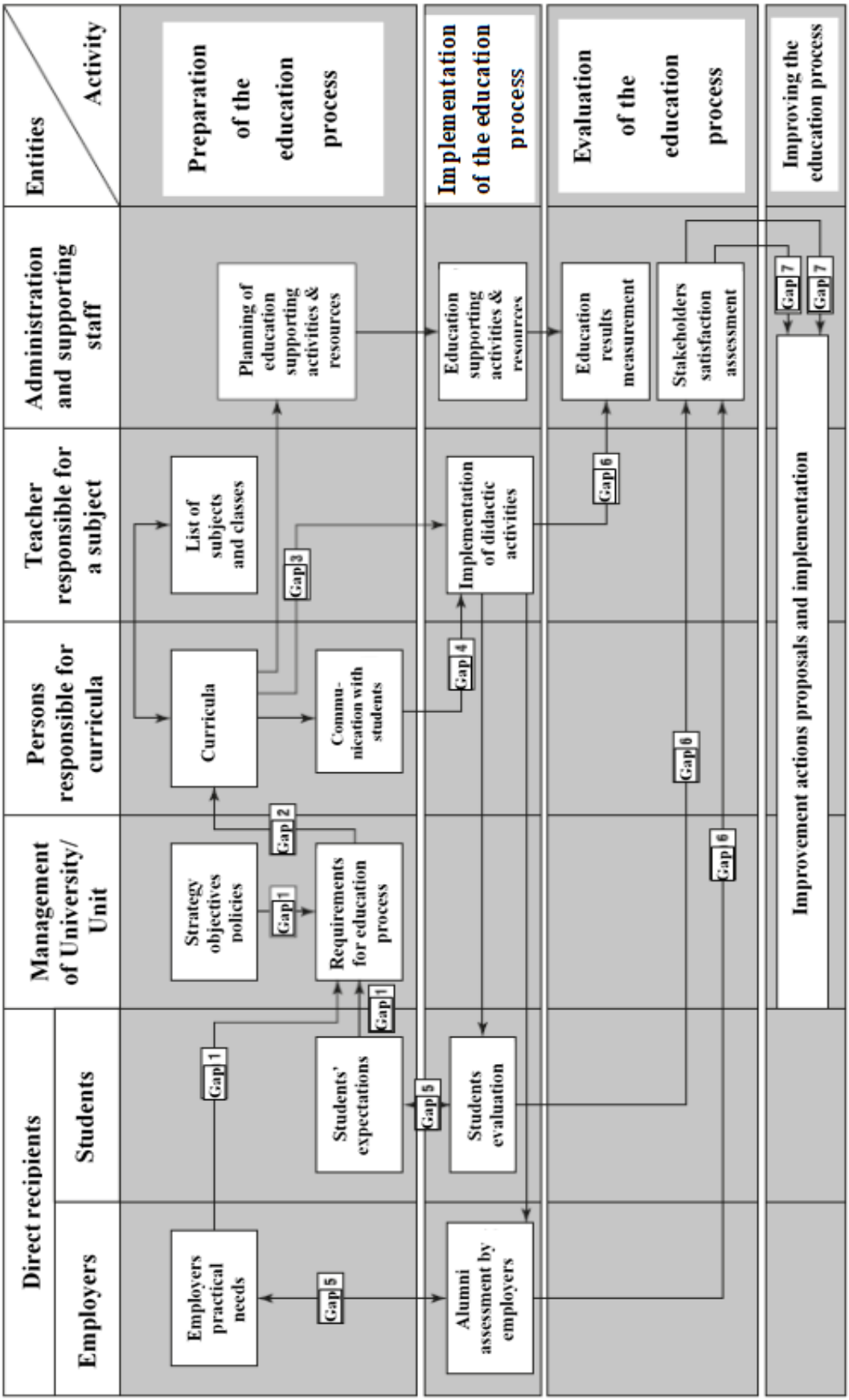

Figure 1. The SERVQUAL, gap model for educational services
(*Source:* Hrnciar and Madzík, 2013, pp.75-88)

3 International principles of quality in higher education

The international principles of quality were adopted in 2016 by the Council's International Quality Group for the Accreditation of Higher Education (CIQG).

According to the organization's declaration, the quality principles are consistent, inter alia, with the standards and guidelines of the European Association for Quality Assurance in Higher Education (ENQA) or the UNESCO-OECD guidelines (UNESCO-OECD, 2005). The characteristics of the quality principles are presented in Table 1.

Table 1. Quality principles for higher education institutions according to CIQG (*Source:* CHEA, 2018)

Principle	Description
Quality and higher education institutions	Quality assurance and achievement in higher education are the core responsibilities of higher education service providers and their staff
Quality and students	The education of students should always meet high-quality standards, regardless of the learning outcomes realized
Quality and society	The quality of tertiary education is judged by how well it responds to society's needs, and builds and maintains public trust
Quality and government	Local and central governments play a significant role in encouraging and supporting high-quality higher education
Quality and responsibility	It is the responsibility of higher education institutions and assurance and accreditation bodies to strongly commit to and regularly reaffirm responsibility for the quality
Quality and role of quality assurance and accreditation bodies	Quality assurance and accreditation bodies, working with higher education institutions and their management, staff, and students, are responsible for implementing processes, tools, and learning outcomes measures that help to build a common understanding of quality
Quality and change	High-quality higher education must be flexible, creative, and innovative; development and evolution are essential to meet the needs of students, to establish public confidence, and to preserve diversity

The principles adopted by the CIQG refer to the stakeholders, such as central and local authorities and the society, indicate the role of many relationships in the quality assurance system, and emphasize the importance of changes aimed at improving universities.

It can be concluded that the quality principles are in line with the development trends of the public service sector, that is, the increasing importance of institutional factors influencing efficiency as well as incorporating and using performance information in the budgeting process (Curristine, et al., 2007).

4 Quality assurance in the European Higher Education Area

The cooperation of European countries in assuring the quality of higher education was one of the essential elements of the Bologna Process. Document titled "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (ESG) was adopted in Bergen in 2005 and consisted of 23 standards and related guidelines divided into standards and guidelines for internal and external quality assurance and standards and guidelines for quality assurance agencies.

The principles of quality assurance presented in ESG are as follows (ESG, 2015, p.6):

- universities are primarily responsible for the quality of education and ensuring it,
- quality assurance responds to the diversity of higher education systems, colleges, programs, and students,
- quality assurance supports the development of a quality culture,
- quality assurance takes into account the needs and expectations of students, all other stakeholders, and society.

A key objective of ESG is to contribute to a shared understanding of what quality assurance is in learning and teaching, across borders and among all stakeholders. Others goals are as follows (ESG, 2015, p.5):

- define a common framework for quality assurance systems for learning and teaching at European, national, and institutional levels,
- enabling the provision and improvement of the quality of education in higher education,
- strengthening mutual trust, thus facilitating recognition and mobility within and outside the country,
- providing information on quality assurance in the European Higher Education Area.

ESG has been approved by the Ministerial Conference in Yerevan on May 14–15, 2015, by the ENQA, the European Student Union, the European Association of Universities, the European Association of Higher Education Institutions, Education International BUSINESSEUROPE, and the European Register of Accreditation Agencies.

The criteria for the internal quality assurance of this standard are presented in Table 2.

Table 2. ESG criteria for internal quality assurance (*Source:* ESG, 2015, pp.11-15)

No.	Criterion	Description
1	Policy for quality assurance	Institutions should have a policy for quality assurance that is made public and forms part of their strategic management. Internal stakeholders should develop and implement this policy through appropriate structures and processes while involving external stakeholders.
2	Design and approval of programs	Institutions should have processes for the design and approval of their programs. The programs should be designed so that they meet the objectives set for them, including the intended learning outcomes. The qualification resulting from a program should be specified and communicated, and refer to the correct level of the national qualifications framework for higher education and, consequently, to the Framework for Qualifications of the European Higher Education Area.
3	Student-centered learning, teaching, and assessment	Institutions should ensure that the programs are delivered in a way that encourages students to take an active role in creating the learning process, and that the assessment of students reflects this approach.
4	Student admission, progression, recognition, and certification	Institutions should consistently apply predefined and published regulations covering all phases of the student "life cycle," e.g., student admission, progression, recognition, and certification.
5	Teaching staff	Institutions should assure themselves of the competence of their teachers. They should apply fair and transparent processes for the recruitment and development of the staff.

Table 2. ESG criteria for internal quality assurance, cont. (*Source:* ESG, 2015, pp.11-15)

6	Learning resources and student support	Institutions should have appropriate funding for learning and teaching activities and ensure that adequate and readily accessible learning resources and student support are provided
7	Information management	Institutions should ensure that they collect, analyze, and use relevant information for the effective management of their programs and other activities
8	Public information	Institutions should publish information about their activities, including clear, accurate programs, up-to-date, and readily accessible
9	On-going monitoring and periodic review of programs	Institutions should monitor and periodically review their programs to ensure that they achieve the objectives set for them and respond to the needs of students and society. These reviews should lead to the continuous improvement of the program. Any action planned or taken as a result should be communicated to all those concerned.
10	Cyclical external quality assurance	Institutions should undergo external quality assurance in line with the ESG on a cyclical basis.

Comparing the quality principles presented in Table 1 with the ESG criteria for the internal quality assurance of education, it can be concluded that they comply with the four principles concerning higher education institutions, students, accountability, the role of quality assurance bodies, and accreditation. Thus, the ESG standard does not apply to principles concerning society, government, and change.

5 Polish standards of quality assurance in higher education

The Polska Komisja Akredytacyjna (PKA, Polish Accreditation Committee) is an independent institution working to ensure and improve the quality of education.

Table 3. PKA criteria for internal quality assurance of education (*Source:* PKA, 2019)

No.	Criterion	Description
1	Design of the study program: concept, learning objectives, and learning outcomes	1.1 The concept and objectives of education are in line with the university's strategy, fit into the discipline or disciplines to which the course is assigned, are related to the academic activity conducted at the university in this discipline or disciplines, and are oriented toward the needs of the socioeconomic environment, including especially the professional labor market. 1.2 The learning outcomes are consistent with the concept and objectives of education and the discipline or disciplines to which the course is assigned, describe, in an accurate, specific, realistic manner and allowing for a verification system, the knowledge, skills, and social competences achieved by students, as well as correspond to the appropriate level of the Polish Qualifications Framework and the general academic profile.

Table 3. PKA criteria for internal quality assurance of education, cont.
(*Source:* PKA, 2019)

No.	Criterion	Description
2	Implementation of the study program: program content, schedule for the implementation of the study program, forms and organization of classes, teaching methods, apprenticeships, organization of the teaching and learning process	2.1 The curriculum contents are consistent with the learning outcomes and take into account, in particular, the current state of knowledge and research methodology in the discipline or disciplines to which the course is assigned, as well as the results of the university's research activity in this discipline or disciplines. 2.2 The schedule for the implementation of the study program and the forms and organization of classes, as well as the number of semesters, the number of hours of classes conducted with the direct participation of academic teachers or other persons conducting classes, and the estimated workload of students, measured by the number of ECTS points, enable students to achieve all learning outcomes. 2.3 The teaching methods are student-oriented, motivate them to actively participate in the teaching and learning process, and enable students to achieve learning outcomes, including, in particular, preparation for or participation in scientific activities 2.4 If the study program includes apprenticeships, their program, organization and supervision, the selection of places and the environment in which they take place, including the infrastructure, as well as the competences of the tutors, ensure the proper implementation of the apprenticeship and the achievement of learning outcomes by students, in particular those related to the acquisition of research competences. 2.5 The organization of the teaching process ensures effective use of the time devoted to teaching and learning as well as the verification and assessment of learning outcomes.
3	Admission to studies, verification of students' achievement of learning outcomes, completing individual semesters and years, and diploma process	3.1 Formally adopted and published, consistent and transparent conditions for admitting candidates to studies are applied, enabling the proper selection of candidates, rules for student progression and crediting individual semesters and years of study, including the diploma process, recognition of learning outcomes and periods, and qualifications obtained in higher education as well as confirming the learning outcomes achieved in the learning process outside the study system. 3.2 The learning outcomes verification system enables the monitoring of learning progress and a reliable and credible assessment of the degree of achievement by students of the learning outcomes, and the applied verification and assessment methods are student-oriented, enable feedback on the degree of achievement of the learning outcomes, and motivate students to active participation in the teaching and learning process, as well as allow for the verification and assessment of all learning outcomes, including, in particular, preparation for conducting research activity or participation in this activity. 3.3 Stage and examination work, student projects, internship diaries (if internships are included in the study program), diploma theses, student scientific/artistic, or other achievements related to the field of study, as well as the documented position of graduates on the labor market or their further education, confirm achieving learning outcomes.

Table 3. PKA criteria for internal quality assurance of education, cont.
(*Source:* PKA, 2019)

No.	Criterion	Description
4	Competences, experience, qualifications, and number of staff involved in education, as well as staff development and improvement	4.1 Competences and experience, qualifications, and the number of academic teachers and other persons conducting classes with students ensure the proper implementation of classes and the achievement of learning outcomes by students. 4.2 The HR policy ensures the selection of academic teachers and other persons conducting classes, based on transparent rules and enabling the correct implementation of classes; takes into account the systematic evaluation of the teaching staff, carried out with the participation of students, whose results are used in the improvement of the staff; and creates conditions stimulating the staff to continuous development.
5	Infrastructure and educational resources used in the implementation of the study program and their improvement	5.1 Teaching, research, library and IT infrastructure, technical equipment of rooms, teaching resources and aids, library, information, educational resources, and research equipment, as well as the infrastructure of other entities where classes are held are modern, enable the proper implementation of the classes and the achievement of students of learning outcomes, including preparation for a scientific activity or participation in this activity, as well as are adapted to the needs of people with disabilities, in a way that ensures that these people fully participate in education and scientific activity. 5.2 Teaching, research, library and IT infrastructure, technical equipment of rooms, teaching resources and aids, library, information, educational resources, and research equipment are subject to systematic reviews in which students participate, and the results of these reviews are used in improvement activities.
6	Cooperation with the socioeconomic environment in the construction, implementation, and improvement of the study program and its impact on the development of the field of study	6.1 There is cooperation with the social and economic environment, including employers, in the design of the study program, its implementation, and improvement. Education quality standard. 6.2 Relationships with the socioeconomic environment concerning the study program and the impact of this environment on the program and its implementation are systematically assessed with the participation of students, and the results of these assessments are used in improvement activities.
7	Conditions and methods of increasing the degree of internationalization of the education process in the field	7.1 The conditions conducive to the internationalization of education in the field of study have been created, following the adopted concept of education, i.e., academic teachers are prepared to teach and students to learn in foreign languages, the international mobility of students and academic teachers are supported, and an offer of education in foreign languages, which results in a systematic increase in the degree of internationalization and exchange of students and staff. 7.2 The internationalization of education is systematically assessed with the participation of students, and the results of these assessments are used in improvement activities.

Table 3. PKA criteria for internal quality assurance of education, cont.
(*Source:* PKA, 2019)

No.	Criterion	Description
8	Supporting students in learning, social, scientific, or professional development and entering the labor market, as well as developing and improving forms of support	8.1 Support for students in the learning process is comprehensive, takes various forms, adequate to the learning outcomes, takes into account the diverse needs of students, fosters the scientific, social, and professional development of students by ensuring the availability of academic teachers, assisting in the learning process and achieving learning outcomes, and in preparation for conducting a scientific activity or participating in this activity, motivates students to achieve very good learning results, and provides competent assistance of administrative staff in solving student matters. 8.2 Student support in the learning process is subject to systematic reviews in which students participate and the results of these reviews are used in improvement activities.
9	Public access to information about the study program, the conditions for its implementation, and the results achieved	9.1 Public access to current, comprehensive, understandable, and consistent with the needs of various groups of recipients of information about the curriculum and implementation of the teaching and learning process in the field as well as about the awarded qualifications, admission conditions, and further education opportunities, as well as employment of graduates is ensured. 9.2 The scope and quality of information about studies are subject to systematic assessments, in which students and other recipients of information participate, and the results of these assessments are used in improvement activities.
10	Quality policy, design, approval, monitoring, review, and improvement of study programs	10.1 The principles of designing, approving, and modifying the study program have been formally adopted and applied, and systematic evaluations of the study program are carried out based on the results of the analysis of reliable data and information, with the participation of internal stakeholders, including students and external stakeholders, aimed at improving the quality of education. 10.2 The quality of education in the field of study is subject to cyclical external assessments of the quality of education, the results of which are publicly available and used in quality improvement.

The main goals of the Commission's activities are care for meeting the quality standards adopted for higher education, referring to the best practices in the European and global educational space, and supporting public and private universities in the process of improving the quality of education and building a quality culture.

The overriding value guided by the PKA in its work is social welfare because the quality and effectiveness of education significantly contribute to the development of intellectual capital and building a civil society (PKA, 2020).

The criteria for internal quality assurance in education are presented in Table 3.

When analyzing the compliance of the PKA education quality standard with the ESG standards, it should be stated that: the sixth and seventh PKA criteria do not refer to any of the ESG criteria, compliance of PKA criteria with ESG criteria concerns four criteria in terms of their content, and four PKA criteria are a compilation of seven ESG criteria. Summing up, it should be stated that the criteria adopted by PKA concerning the ESG criteria indicate a different approach to the internal quality assurance of education.

6 Methodology

The research was conducted at the Faculty of Management and Economics of the Gdańsk University

of Technology during classes in subjects related to the issues of quality in the period 2012–2017. A total of 245 full-time and part-time undergraduate and second-cycle students participated in the research. Participation in the study was voluntary and anonymous. The study aimed to determine the rank of factors influencing the quality of education by students. The study was conducted using the nominal group method (NGM) (Varga-Atkins, et al., 2017).

The research procedure included the following stages: 1) introduction and explanation; 2) silent generation of ideas; 3) sharing ideas; 4) group discussion; and 5) voting and ranking.

The criteria included in the SERVQUAL model (Parasuraman, et al., 1985) were used in the study of determinants of quality education because it is the most widely used and tested method to measure customers' perceptions of service quality. The following criteria were adopted from J. Gallifa and P. Batalle (2010) description of quality services in higher education: reliability, responsiveness, assurance, empathy, and tangibility. The scope of the education quality standards analysis includes an internal quality assurance. The multicriteria analysis was carried out for the compliance of the SERVQAL model with the standards of education quality.

7 Results and findings

The research results allow for the systematization of the respondents' answers according to the groups of determinants of the quality of education, which are as follows:

- reliability − emphasis on practical aspects during classes, the possibility of applying knowledge in practice during classes at the university – a laboratory enabling direct contact with real facilities, a wide range of study program choices, and a diverse offer of specialization profiles.
- responsiveness − an IT system tailored to students' needs, adjusting the schedule of classes to students' expectations.
- assurance − the quality of the Dean's Office's work, providing qualified teaching staff, the friendliness of lecturers, the ability to transfer knowledge by academic teachers, contact between universities and employers and their participation in education, lecturers "with passion," selection of candidates for studies ensuring the appropriate level of groups, avoiding repeating content in various subjects, and the fairness of student assessment.
- empathy − taking into account the opinions of students in the improvement activities introduced at the faculty, the possibility of participating in research clubs, and the possibility of implementing interesting student internships.
- tangibility − availability of modern teaching equipment and efficient system of information flow between teachers and students.

The ranking method adopted in NGM, concerning the votes cast for the most important factors according to the survey participants, depends on the number of proposals submitted by the team.

The principles adopted in this context are presented in Table 4. For example, when 24 factors are identified, one voter chooses, according to his judgment, 6 of them considered the most important and assigns them, respectively, from 1 point for the factor with the lowest importance to 6 points for the most important.

Table 4. The number of votes and the point value depending on the number of factors reported in the Nominal Group Method (*Source:* Own study based on: Delbecq, van de Ven and Gustavson, 1975)

Number of factors on the list	Number of ballots (voting cards) at the disposal of the participant	Score (points) for selected key factors (e.g., 1 point, least important; 4 points, most important)
1 to 20	4	1; 2; 3; 4
21 to 35	6	1; 2; 3; 4; 5; 6
More than 35	8	1; 2; 3; 4; 5; 6; 7; 8

In the context of the SERVQAL model criteria, the groups of criteria with the greatest impact on the quality of education, in the opinion of the respondents, following the principles given in Table 5, are assurance (869 points), reliability (776 points), responsiveness (341 points), tangibility (294 points), and empathy (213 points). Relating the above-mentioned criteria to the ESG and PKA education quality standards, it should be stated that:

- all standards are equally related to the following criteria: assurance, responsiveness, and tangibility,
- the relationships with the empathy criterion do not appear in the ESG standard,
- the highest number of relationships in all the standards discussed is characterized by the reliability criterion.

The obtained results make it possible to indicate criteria that are not referenced in the standards in question and are important from the point of view of the respondents. Table 5 presents the list of determinants of the quality of education according to the SERVQUAL determinant groups that are included (Yes) and not included (No) in the education quality standards. Taking into account the ranks of the SERVQAL criteria calculated according to students' indications and the number of gaps in the discussed standards of internal quality assurance of education, it should be stated that for the criterion:

- assessment – both standards have the same number of gaps (n = 5),
- reliability and tangibility – both standards have the same number of gaps (n = 1),
- responsiveness – the ESG and PKA standards have the same number of gaps (n = 2),
- empathy - there are 2 gaps in the ESG standard and 1 gap in the PKA standard.

When analyzing the determinants of the quality of education not included in the education quality standards in the context of the quality gap model of H. Hrnciar and P. Madzik, the first gap should be confirmed – the expectations of stakeholders (students) do not coincide with the requirements for education approved by the university management.

Table 5. Education quality determinants included and not included in the education quality standards (*Source:* Based on own work)

Determinant	SERVQAL	ESG	PKA
The ability to transfer knowledge by academic teachers	Assurance	No	No
Avoiding repeating content in different subjects		No	No
University contact with employers and their active participation in education		Yes	Yes
The friendliness of the lecturers		No	No
Lecturers "with passion"		No	No
Selection of candidates for studies ensuring the appropriate level of groups		No	No
Taking into account the opinions of students in improvement activities implemented at the faculty	Empathy	No	No
Justice in assessing students		No	Yes
Strong emphasis on practical aspects during the classes	Reliability	No	No
A wide range of study program choices	Responsiveness	Yes	Yes
The quality of the dean's office's work		No	No
A diversified offer of special profiles		Yes	Yes
Adapting the timetable to the students' expectations		Yes	No
IT system adapted to the needs of students		No	Yes
Efficient information flow system between teachers and students	Tangibility	No	No

On the other hand, taking into account the processes presented in the model, it should be stated that the initial stages of the preparation of the education process require improvement, so the achievement of the objectives of activities after the completion of this process should not be expected. Thus, the next process, the implementation of education, cannot be perfect. Consequently, the evaluation of the education process will not be the highest, which will necessitate the improvement of the education process.

8 Discussion and conclusion

According to the analysis of the presented standards of quality assurance in higher education, each of them, albeit to a different degree, directly or indirectly relates to international quality principles. Comparing the quality principles with the ESG and PKA criteria of internal quality assurance of education, their compliance with the four principles concerning higher education institutions, students, responsibility, the role of quality assurance bodies, and accreditation should be found. Thus, the standards do not apply to rules concerning society, government, and change. On this basis, it can be concluded that the international quality principles do not override the ESG and PKA standards regarding internal quality assurance of education.

The common features of all the discussed standards are quality policy, preparation and evaluation of the education process, and provision of resources for the implementation of the education process. The special features are orientation toward the student (activity and support) and public information (internal and external) concerning the broadly understood activity of a university.

Comparing the systems of internal quality assurance of higher education in Europe is determined by the adopted standard. The standard applied by PKA, although based on the ESG standard, cannot be compared with it due to the lack of consistency of the criteria. It follows that conducting a comparative analysis of the effectiveness of education quality assurance systems at Polish and European universities may be difficult.

This state of affairs is justified by the one adopted in the European Higher Education Area principle – diversity and respect for the autonomy of individual countries and universities. In this context, a question can be asked: what is the basis of the advantage of one standard over another? The answer should be sought in the benefits obtained from using the standard.

If the international cooperation of universities increases, universities will use good practices in education applied in other universities, and university graduates will find a job on the international labor market, then the evaluation (parameterization) of these benefits will determine the level of effectiveness and efficiency of the standard.

Measurement of the quality of educational services using the SERVQUAL method in the context of the applied standards of quality assurance of education requires the development of separate characteristics of quality determinants for each of them so that quality gaps can be identified. The analysis of the SERVQUAL model by M. Hrnciar and P. Madzik allows to state that: 1) the model includes improvement, so it should be assumed that the a priori assumption was the imperfection of the education process, and 2) it can be supplemented with communication between teachers and administrative and technical support services, persons responsible for study programs or students and university employees in the context of their requirements (in the group of internal stakeholders), and third sector organizations (NGOs) or employers' associations (in the group of external stakeholders).

Presenting the description of SERVQUAL elements in the context of all education quality assurance standards is beyond the scope of this work, although it sets the directions for further research. The determinants of the quality of education indicated by students indicate that their perception of the quality of education in the vast majority differs from the formal requirements contained in the education standards. In some cases, they may complement existing quality standards criteria (e.g., IT system adaptation) and in some cases exceed existing requirements in the standards criteria (e.g., lecturers' friendliness). It can also be concluded that the formal assessment of the application of education quality assurance standards may differ from the informal assessment of internal stakeholders (students, staff, and lecturers). Understanding the differences in formal and informal evaluation of the quality of education standard is a new research challenge. Its implementation may significantly influence

the adjustment of the quality assurance system in universities to the requirements of all stakeholders. In other words, it can determine the increase in the level of education quality.

The principle of the autonomy of universities in the European Higher Education Area is a sufficient basis to include in the internal education quality assurance systems determinants of the quality of education, which are identified by internal university stakeholders. In the case of Polish universities that apply the PKA standard, it is possible theoretically. The practical aspect depends on the awareness and willingness of university managers to assess the quality of education using the SERVQUAL model and the nominal group method.

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