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MEASURING THE QUALITY OF EDUCATIONAL SERVICES ON THE EXAMPLE OF SECONDARY SCHOOLS IN POLAND

Marta Ciarko

Abstract. Research results, as well as the author's own observations show that the quality of educational services is one of the most important factors affecting the level of civilization of modern states, by affecting all aspects of their socio-economic life, including health, natural environment and economic growth, in the long run. The quality of education directly influences the formation of the human capital of the society, and this impacts the pace of economic development. The starting point for actions aimed at improving the quality of educational services is undoubtedly both the proper recognition of the main factors determining the quality of educational services and the measurement of this quality determinants. Thus, measuring the quality of educational services, identification and gradation of key determinants were considered the main purpose of this study. The research method used to achieve the set goal was a two-part, anonymous questionnaire sent to secondary schools' principals in the Zachodniopomorskie province in Poland. The conducted evaluation of the factors shaping the quality of educational services in the surveyed institutions indicated numerous needs in terms of improving their activity. It should be emphasized that none of the estimated factors obtained a fully satisfactory outcome in the survey of respondents' opinions. The general conclusion from the conducted research is to confirm the importance of recognizing properly the determinants of the educational services quality as the basis for developing a proposal for shaping the desired level of these services' quality.

Keywords: quality measurement, human capital, quality determinants

JEL Classification: I28, I29

Author:

Marta Ciarko

Stanisław Staszic State University of Applied Sciences in Pila, Poland

E-mail: mciarko@ans.pila.pl

<https://orcid.org/0000-0001-6690-3833>

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1. Introduction

Education is considered to be the most important national investment that guarantees a safe and prosperous future for Poland among both European and world nations. The education is a specific service, and the issue of quality assurance in education is closely related to both its development and financing. The starting point for actions aiming to improve the quality of educational services is, therefore, recognition of determinants (Stępień et al., 2022) for shaping this quality. The article is of theoretical, as well as of empirical, nature. Some considerations were dedicated to literature studies on the methodology of quality measurement, also presenting selected measurement methods in an ideological way. The focus was also on human capital issues. The above is a conceptualization of the discussed problems, taking into account the multidimensionality and interdisciplinarity of the indicated concepts. The following part presents the methodology and results of the author's own research, on the basis of which the gradation of the most important determinants of the educational services quality at secondary schools in the Zachodniopomorskie province was carried out. The conclusions from the conducted research allowed for a positive verification of the objective set in the article. The disquisition of this issue was concluded with a summary of considerations regarding the significance of the undertaken research, presentation of its main conclusions and practical recommendations.

2. Measuring the Quality of Educational Services – A Literature Review

In learning economics, measurement is an important tool of cognitive processes, constituting in its essence a specific type of observation enabling inference of the nature, complexity and significance of the studied phenomena. According to Borowiecki and Jaki (2008), the measurement methodology is a research system presenting both a procedure related to posing problems and a description of the ways of solving these problems. Measurement is closely related to a scientific definition and consists in determining the metric order between various manifestations of individual properties and giving scientific events usefulness for the mathematical description. Both the problem of identifying the measurable mechanisms to increase the efficiency (Bilan et al., 2019) and the quality measurement in the literature on the subject is widely discussed, but it is commonly accepted that the necessary condition for the evolution of quality science is the ability to measure the dynamics of phenomena occurring in it. It is also assumed that quality assessment leads consequently to various types of positive economic effects, and, thus, to an improvement in the socio-economic well-being of the whole society.

Measurement can be made in analytical and synthetic terms. The result of measurement at the analytical level is the vector of inherent properties value, and measurement in a synthetic approach is a numerical description of a distance between the numerical values assigned to the inherent properties of a specific object and the numerical values assigned to the requirements set for individual properties of an object, considering the relationship between these requirements (Szydłowski, 2000). According to Kindlarski (1988) measurement of the quality status should allow for making decisions similar to the optimal ones. Skrzypek (2000)

indicates that in order to have information about quality, the latter needs to be measured and constantly controlled. Lesiński (1996) reduces the essence of measuring the quality of services to comparing the values observed with the values required for a given service. A quality measure is a numerical measure of one or more quality-of-service properties. These measures may be determined in SI units or in relative numbers. Kolman (2009) believes that quality cannot be measured because the concept of quality is considered abstract. The author justifies his position by indicating that measurement is understood as comparing two appointed values (expressed in units of measurement), one of which is the measurement standard. Moreover, there is no single, universally recognised physical quantity that universally determines quality, thus, preventing it from being measured. The author believes that quality measurement can only be properly spoken of if all the criteria describing the quality status are measurable values. The author also points out that analytical methods for calculating the quantitative quality level should be used primarily to examine the quality of equipment, e.g., tools, instruments, machinery and equipment, materials and raw materials, and to analyse components that are very important for the economy, such as the quality of work. Tkaczyk (2000) analyses measurability of quality depending on the adopted quality definition, as shown in Figure 1. This author claims that only the case of a transcendental approach indicates the inability to measure quality, in other approaches, such as: product orientation, user orientation, production orientation or value orientation he indicates the measurability of quality.

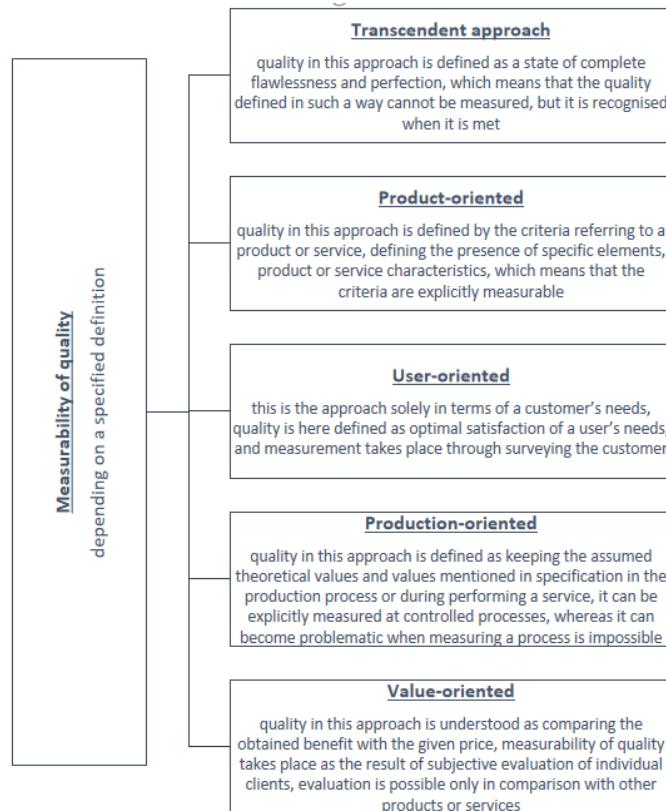


Figure 1. Measurability of quality depending on a specific definition

Source: the author's own study based on (Tkaczyk, 2000).

Since in most research cases, when measuring and evaluating the quality of services, the application of many tools used to measure the quality of products becomes impossible, the selection of appropriate sources of information and a model for assessing the level of quality of services should always be made earlier, in terms of the purpose of the conducted research. It should be noted that the universality and topicality of the issue of quality measurement require constant verification.

In order to achieve optimal precision in the study, according to N. Denzin et al. (Denzin & Marshall, 2004), it is justified to use methodological triangulation, giving the possibility of using quantitative methods (observation, questionnaire interview, survey, test, sociometry, quantitative analysis of documents) and qualitative methods (participant observation, personal interview, qualitative content analysis, biographical method, case study) in one study (Denzin, 1970; Nadolna, 2017). Assuming that quality is defined as the satisfiability of the customer's expectations, according to this definition, the service (intangible product) provider should primarily ensure that the manufactured product satisfies the customer (Pacana & Stadnicka, 2010). The results of the research prove that the degree of meeting customer's expectations examined *post factum*, i.e., after delivery of the product, does not guarantee success. It is only ensured by shaping the optimal quality by early recognition of customers' expectations (Gazda, 2007). Determination of a product pattern to be pursued makes this possible, which is particularly important in the case of the quality of services which are characterized by the much higher number of non-measurable features, compared to tangible products, and the assessment of their quality depends to a significant extent on a customer's opinion. There is a common belief that it is difficult to measure the quality of a service, but people usually know when they get a bad service.

According to Czyżewski et al. (2016), various methods are used to measure quality. For example, Borkowski (2004) presents the ABCD method, which method can be interchangeably used with the Pareto-Lorenz analysis and, after identifying the causes of a given problem, used to create a ranking of their importance.

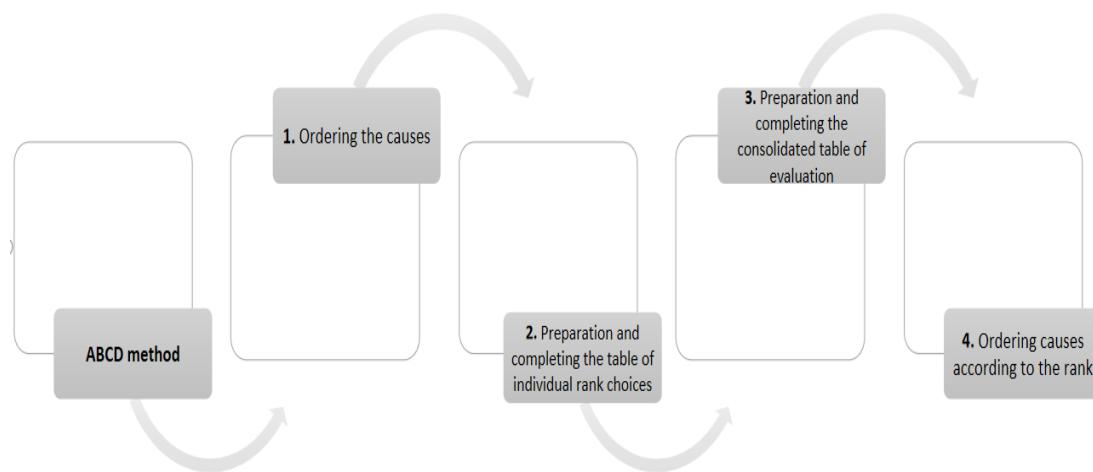


Figure 2. Stages of the ABCD Method

Source: (Borkowski, 2004).

Analysing the literature on the subject, it can be noted that in numerous publications on quality-related issues, the authors propose various approaches to the problem of its measurement, namely:

- Wawak (2000) presents a numerical measure of quality as a quotient of the actual status and expectations. If the result of such a quotient is less than 1, this status is referred to as a "sub-quality"; if the result is exactly equal to 1, then there is a "full quality", i.e., complete fulfilment of expectations by a product; if the result is greater than 1, then it should be referred to as an "excess quality", i.e., the actual status of a product that exceeds all expectations of a customer.
- Crosby (1995) proposes to measure quality at the expense of non-compliance, attracting attention to the financial aspect of non-quality and suggests the expression of quality in monetary units. The maximum quality, according to this measure, is a lack of any costs of non-compliance to requirements.
- Dahlgard et al. (2000) recognize that there are two aspects to practical quality measurements. The first aspect concerns the features that are explicit or hidden, since explicit features are directly measurable, while hidden features are not directly measurable. The second aspect concerns user issues, in particular, whether they have a uniform approach to quality or its assessment, or whether they have different perceptions of quality. The combination of these two aspects of measurement allows creating a typology of the concept of quality, which can be the basis for measuring quality in practice. In this approach, quality can be measured in two ways. The first one is direct measurement of consumer preferences through statistical methods of scaling and designing experiences, while the second one is indirect measurement of preferences based on observations of market reactions.
- Smoluk (2000) demonstrates a mathematical argument of the possibility to measure quality understood as a relation of preferences. In his opinion, the family of all preferences in the set M, ordered by the relationship, is a matrix, which means that the multiplicity product of two preferences is their lower bound. The upper bound, however, is the extension of the union of these preferences to the minimum preference containing this sum. What is more, quality is a property that depends on individual preferences, but quality is also a measure of compliance with the pattern. The author believes that quality changes when a pattern changes. In his view, therefore, there is no objective quality. Quality is a relative concept and depends primarily on experience and needs. Quality is a preference, and a quality feature is a linear preference, called tolerance (pre-order). It is reciprocal and transitional. According to Sage & Rouse (2009), any action aimed at improving the quality of service involves the elimination of losses, which means everything that does not create added value for a customer. Therefore, each activity should be treated as a process that can be improved. Kujawiński (2001) claims that in practical terms, one can point to a number of methodological approaches used to measure and assess the quality of products, as shown in Figure 3.

In conclusion, it may be stated there are many quantitative and qualitative methods, documented theoretically and verified in practice that allow for effective measurement of quality. The results of the conducted assessments are used both in planning quality improvement, as well as in checking and analysing the results after pro-quality changes are implemented. Withal, it should be pointed out that there is a difficulty in selecting the

appropriate measurement method, adequate for the category of the examined problem, as well as the purpose of the conducted research.

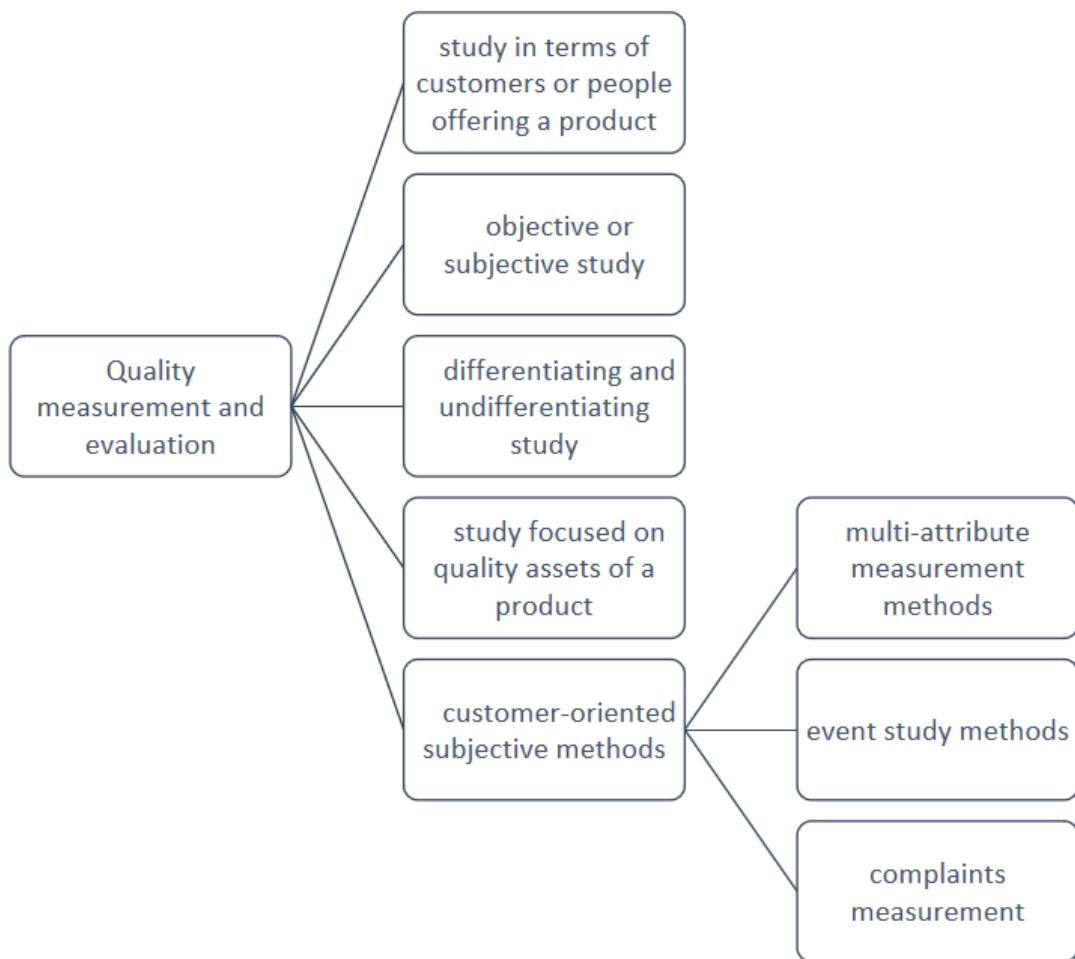


Figure 3. Quality measurement and assessment

Source: the author's own study based on (Kujawiński, 1998).

3. The Importance of the Education Quality in Shaping Human Capital

The quality of educational service is defined as a degree of meeting the requirements for the educational process and its effects, formulated by stakeholders, considering internal and external conditions (UNESCO Roadmap for Artistic Education, 2006). Withal, the key importance of the education effectiveness, measured by a degree of competences adaptation to social and economic life, and thus to the needs of the labour market, is emphasized. In the scientific literature, the quality of educational service is considered primarily as (Piotrowski & Kirejczyk, 2001):

- the quality of a school, i.e., the educational institution which is defined by: its organizational structure, management style used, interpersonal relations between the participants of the educational process, teaching methods and means used, educational impacts, forms and methods of cooperation with parents, system of intra-school evaluation.

The quality of a school may be perceived differently by various groups of stakeholders, e.g., pupils, the governing authority;

- the quality of education or a teaching process, which includes: the objectives of education, its content, principles of education, its methods, organizational forms, means of education, plans, syllabi and methods of selecting the content, textbooks, auxiliary materials, procedures for testing and evaluating the study results and the results achieved by students in external examinations, especially the secondary school leaving examination and examinations confirming professional qualifications in individual professions, as well as the number of winners of out-of-school competitions. Assuming that education should be understood as both developing students' intellect and building their attitudes regarding their comprehensive development and functioning in the society, the quality of educational service is essentially the quality of education, as school has no other socially important goals than education understood this way;
- the quality of teacher training and professional experience;
- the quality of the outcome, i.e., preparation for the next educational or work stage in accordance with the current expectations and requirements of employers. The assessment of the outcome should be combined with evaluating the educational service effectiveness, which is measured by the volume of knowledge transferred at a given time, with a specific effort and financial costs.

Both theoreticians and practitioners of education and upbringing agree that among the various factors determining the quality and effectiveness of school work, one of the most important is the teachers' professional development, understood as their qualifications and competences (Nowacki, 1999). As a consequence, the above means that it is a team of teachers who are responsible for creating new and enriching the already functioning human society capital (Polcyn, 2012). The conducted literature studies, therefore, encourage to combine closely the competences and qualifications of teachers with the category of human capital. Some authors clearly emphasize the direct relationship between the employees' qualifications and the quality of their work when defining human capital (Stankiewicz, 1987), which in a broader sense means the relationship between the employees' qualifications and the economic development of a country. Table 1 presents examples of definitions and descriptions of human capital justifying such a position.

Considerations formulated by Petty (1958) and Smith (1954) in this regard are also worth noting. In his works, Petty (1958) emphasized that the quality of work depends on the qualifications of employees. This author drew attention to the similarity of human capital to fixed capital and proposed estimating the economic value of employees. In his opinion, an employee's value consists of his/her performed profession, age, health and skills (Petty, 1958). Smith analysed the importance and cost-effectiveness of skills he described as useful, acquired by members of the society in the process of education and vocational training. The author argued that the wealth of a country increases with the increase in employment and human labour productivity. Both of these factors depend on employees' qualifications, as highly qualified employees prove to be more productive (Smith, 1954).

Table 1. Selected definitions and descriptions of human capital

| Author | Definition /description |
|--|---|
| J. Nicholson | Points to the "living" capital that is inherent in people and draws attention to the importance of employee competences as a very significant factor affecting the quality of their work. |
| J.H. Thuenen | The formation of human capital is greatly influenced by upbringing, care for physical fitness and education including literacy and numeracy skills. The following are important: appropriate remuneration of well-educated employees, the amount of remuneration appropriate to the education. It is necessary to increase investment in education as a form of investment in economic development. |
| T.W. Schultz | Human capital is all abilities (innate or acquired) that have value and can be enriched by appropriate investment. Human capital is a resource that is a source of future employee satisfaction, earnings, as well as work of a certain value for the economy. The feature that distinguishes human capital is that it is a part of man because it is embodied in people. |
| G.S. Becker, B. Lev and A. Schwartz. | Human capital is embodied in an employee, in his or her innate and acquired skills, which are at the same time a source of income. An individual decides to invest in his or her human capital if the expected return on this investment is higher than the incurred expenditures, whereby the return on investment can be analysed from the perspective of both an individual and society. |
| J. B. Say | The source of shaping human capital are various forms of education, while the accumulated knowledge is the capital contained in a man without the possibility of its disposal. |
| S. R. Domański | Human capital is a resource of: knowledge, skills and vital energy contained in society. This resource is determined by the genetic characteristics of a given population once and for all, but it can be increased through investments, called by various authors investments in: human; in people; in human capital; in human life. |
| J. Wilkin | Education is the main component of human capital, which is the most important factor in economic and civilizational development. |
| J. Laitner | Human capital is considered a synonym of education. |
| H. Uzawa | The leading role of the educational sector in shaping the value of human capital is emphasized. |
| J. Mincer | Human capital is understood as the sum of knowledge acquired at school, expressed by the learning time, and acquired during performing work. |

Source: The author's own study based on: Nicholson (1891); Schultz (1981); Fitz-Enz (2001); Schultz (1976); Bochniarz & Gugała (2005); Schwartz (1971); Say (2000); Domański (2000); Wilkin (1998); Laitner (1993); Uzawa (1965).

Smith (1954) believed that only productive work, which included, among others, the work of teachers and scientists, contributed to enhancing the wealth of a nation, which he justified with expenditure on education, productive in his opinion from the point of view of a country's economy. He proposed calculating qualification values as the sum of expenditures on education and maintenance in the period of learning and practice (Jarecki, 2002; Szałkowski, 2002). Smith (1954) also emphasized teachers' considerable responsibility for the level of conducted classes, claiming that reliable performance of their duties, supported by high requirements and their enforcement, translates into commitment to the work of school-leavers. Employers should be interested in hiring workers with the highest qualifications in

order to improve the quality of the manufactured products. The above allows concluding that improving the quality of schoolwork is inextricably linked to the need to invest in human capital represented by teachers' skills.

4. Research Methodology

In order to verify the purpose, set out in this research, a two-part survey was designed and conducted. In terms of location, the research covered the Zachodniopomorskie province. The terms of time, it covered a school year 2015/2016. Such a criterion of distinguishing the research area was supported by the practicality of conducting the research, related primarily to:

- a sufficiently large number of surveyed units: in the Zachodniopomorskie province in the school year 2015/2016, educational services were provided by 284 secondary schools (information with contact details was obtained from the Local Education Authority in Szczecin), whose work was managed by 98 headmasters. At this point, it should be clarified that some secondary schools form school complexes, and each complex has one principal. In order to avoid a situation in which a principal of a complex of schools completes more than one questionnaire, the author identified the number of units of the surveyed population with the number of principals;
- functioning of the surveyed units within the subordination to one local education authority that positively recommended the research, which had a positive impact on the level of survey return – the return from the research was obtained at the level of 53%;
- a lack of identified contraindications for generalising the conclusions of the research on a nationwide scale, which is justified primarily by the high homogeneity of the functioning conditions of education at the level of secondary schools at the national level.

In the first part of the survey, respondents – principals of secondary schools – were asked to evaluate and rank the sixteen factors shaping the quality of educational services in their subordinate institutions. In the questionnaire of the first part of the survey, a four-point rating scale was used, supplemented with the possibility of evading the point score by selecting the "difficult to say" box (Kaczmarek & Tarka, 2013). When designing a questionnaire, selected elements of the Servqual service quality assessment method were used. A typical questionnaire applying this method for research purposes consists of statements grouped into 5 dimensions: material appearance of the service, reliability, responsiveness, certainty and empathy. Thus, the presented research approach allows for an orderly, logical presentation of the quality determinants of the educational services.

In the second part of the survey, respondents evaluated significance of the factors in question from the viewpoint of their determination of the educational services quality. Respondents were asked to select the five most important determinants of the educational services quality, assigning them a rank, with 1 being of the lowest significance, and 5 being of the highest. Thus, each of the surveyed principals had a total of 15 points at their disposal, which could be awarded to the five most important, in their opinion, determinants of the educational services quality. A given determinant could get a maximum of 260 points in case that each respondent

assigns it 5 points. In order to calculate an aggregated value of partial assessments assigned by the respondents to individual examined factors, an arithmetic average was used.

5. Results and Discussion

The numerical values for the analysis are included in Tables 2 and 3. The data from Table 2 are the results of the evaluation assigned by the principals of secondary schools in the Zachodniopomorskie province to individual factors, indicated by the author, affecting the quality of educational services in the institutions managed by them.

Table 2. The results of the evaluation assigned by the principals of secondary schools in the Zachodniopomorskie province

| Item | Factor | Number of responses within each category AR | | | | | |
|------|--|--|----|----|----|---|------|
| | | V | G | S | IS | D | |
| 1. | An amount of financial resources allocated to the school development and maintenance | 7 | 5 | 12 | 28 | 0 | 2.83 |
| 2. | Conditions for conducting classes related to the number of students in classes and at school | 5 | 22 | 25 | 1 | 0 | 3.58 |
| 3. | A level of technical facilities of the school in teaching aids and teaching equipment | 5 | 10 | 33 | 4 | 0 | 3.31 |
| 4. | Quality of work of the teaching staff related to their competences and professional qualifications | 20 | 21 | 11 | 0 | 0 | 4.17 |
| 5. | Environmental conditions of the students' life and development | 14 | 14 | 22 | 2 | 0 | 3.77 |
| 6. | Teachers' cooperation with the school principal (e.g., in pedagogical councils, etc.) | 21 | 9 | 22 | 0 | 0 | 3.98 |
| 7. | The principal's and/or managerial staff's school management skills | 26 | 15 | 11 | 0 | 0 | 4.29 |
| 8. | Transparency and allocation of responsibilities and associated rules for awarding salaries, bonuses and allowances | 15 | 9 | 17 | 11 | 0 | 3.54 |
| 9. | A level of teachers' and management's motivation resulting from their sense of educational mission | 10 | 5 | 23 | 14 | 0 | 3.21 |
| 10. | An impact of material motivation tools addressed to teachers | 5 | 10 | 11 | 26 | 0 | 2.88 |
| 11. | An impact of non-material motivation tools addressed to teachers | 15 | 2 | 7 | 25 | 3 | 3.14 |
| 12. | Attractiveness of the school's offer of extracurricular activities (e.g., trips, cultural events, projects, interest groups) | 10 | 10 | 29 | 3 | 0 | 3.52 |
| 13. | Cooperation and competition with external entities | 10 | 31 | 4 | 2 | 5 | 4.04 |
| 14. | Relevance of selecting educational profiles and curriculum content in relation to the needs of the labour market | 6 | 15 | 25 | 6 | 0 | 3.40 |
| 15. | Standardisation of teaching and external evaluation of the quality of education (e.g., conducting and interpreting the results of secondary school leaving examinations) | 5 | 19 | 20 | 8 | 0 | 3.40 |
| 16. | Internal evaluation of the quality of education (e.g., the number of observed classes) | 5 | 17 | 19 | 9 | 2 | 3.36 |

Note: V – very good; G – good, S – sufficient, IS – insufficient, D – difficulty to say, AR – average rating

Source: the author's own study based on an IT-conducted survey in 2016.

Analysing the respondents' responses from the first part of the survey, evaluation of the amount of financial resources allocated to the school development and maintenance on the average presented in the first point of Table 2 is sufficient, however, it should be emphasized

that the dominant response, i.e., in the case of 54% of the surveyed principals, was insufficient. This means that in more than a half of the secondary schools of the Zachodniopomorskie province, in the opinion of the principals of these schools, a minute number of financial resources allocated to the development and maintenance of their schools creates significantly worse conditions for the subject education of students and, according to the author, also limits professional development opportunities of teachers.

Regarding the results of the second point of the first part of the survey, the author indicates that the conditions for conducting classes are primarily the number of students in classes and school. These conditions were assessed by 2% of principals as insufficient, 47% of respondents said that they were at a sufficient level, for 42% of principals it is a good level, and for 10% it is very good. The obtained results confirm the author's own opinion about the relatively poor premises condition of secondary schools located in the area covered by the research. In many schools, due to the lack of classrooms, classes take place in shifts. When analysing evaluation of the schools' technical facilities, namely with teaching aids and equipment, it should be stated that for most principals (63%) the condition of this equipment is sufficient, for 19% it is at a good level, while 10% and 8% of respondents gave extreme grades: very good or insufficient respectively. The presented results indicate that vast majority of schools have the necessary technical equipment for the proper organisation of the teaching process.

The fourth point of the survey referred to the quality of work, professional competences, and qualifications of the teaching staff. Nearly 38% of the surveyed principals rated their level as very good in the institution they manage. A similar number of respondents, i.e., 40%, gave a good rating, and 21% said that this level was only sufficient. None of the surveyed principals assessed the quality of work, professional competences, and qualifications of the teaching staff as insufficient, nor did they choose a "difficult to say" option. The obtained result should be considered positive, considering that the economic condition of the professional group of teachers and the resulting consequences for young people to opt for the teaching profession have been one of the key unresolved problems of the government policy for years.

The fifth point of the first part of the survey concerned the impact of environmental conditions of the student's life and development on the quality of the educational service. In the answers obtained in the survey, more than a half of the surveyed principals assessed the impact of this factor on the quality of services in their schools as good and very good. 42% of the respondents considered this factor to have a weak impact, granting a sufficient assessment, and 4% indicated its negative impact. The author's observation shows that an impact of the environmental factor on the quality of educational services is strongly and positively identified primarily in the best, recognized as elite, general secondary schools, located in large agglomerations.

The sixth point of the first part of the survey referred to teachers' cooperation with the school administration. The quality of this cooperation was evaluated very well and well by almost 60% of the respondents, while the others described it as satisfactory. According to the author, the interpretation of the respondents' answers indicates, first of all, at least a good opinion of

the majority of principals regarding their interpersonal skills. However, the percentage of other responses suggests that the relationship between 40% of principals and the teachers they manage needs improving. The management skills of the administrative staff, as discussed in the next, seventh point of the first part of the survey, were best assessed by the respondents from among all the surveyed factors determining the quality of educational services. The author interprets this as a manifestation of generally good self-assessment of the surveyed principals, which is a positive phenomenon. However, due to the particularly strong characterization of the responses by the respondents' subjectivism, the obtained results should be treated with great caution.

The eighth point of the first part of the survey referred to the transparency and allocation of responsibilities and associated rules for awarding salaries, bonuses, and allowances. Half of the surveyed principals gave a good and very good evaluation in this regard, 33% – sufficient and 21% – insufficient. It should be noted that despite the limited possibilities for a school principal to act in terms of using salary, in particular its size, as a motivation tool, transparency, and division of responsibilities of teachers, together with the related principles of awarding remuneration components, are mainly dependent on his or her decision. The author acknowledges that the level of motivation of school employees is also largely determined by the quality of their relationship with the administration.

The ninth point of the survey raises the issue of evaluating the level of teachers and management staff motivation, resulting from their sense of an educational mission. Nearly a half of the respondents described the level of this factor only as satisfactory. In the author's opinion, this is primarily the result of a lack of a transparent system of evaluating the effects and quality of work in education and the phenomenon of so-called professional burnout.

The tenth point of the first part of the survey referred to the impact of material motivation tools, in particular salary elements applied to teachers, affecting the level of quality of services offered by the school. The percentage distribution of respondents' responses in this area was as follows: 10% assessed the state of this impact in the managed facility as very good, 19% of the respondents awarded a good rating, 21% a satisfactory rating, and the others, constituting almost half of all respondents, indicated an insufficient rating. In the Polish education, there is a noticeable lack of systemic correlation between the requirements formulated for the teacher's work and the motivational influences applied to them. For example, a teacher who has achieved the degree of a certified teacher has a closed path of further promotion, both vertical (positional) and horizontal (salary).

The eleventh point of the first part of the survey was dedicated to evaluating the impact that the influence of non-material motivation tools for teachers has on the quality of educational services. 29% of the surveyed principals rated the impact of these instruments as very good, 4% rated it as good, 13% rated it as satisfactory, and nearly half of the respondents rated it as insufficient. These results indicate that most respondents underestimate or even negate the motivational effectiveness (Kwilinski et al., 2019) of the non-material impacts at their disposal. The author's observations show that intangible stimuli are of greatest importance for teachers

who are at the end of their professional career. These people often feel a decreasing psychomotor efficiency, which is why this form of motivation (low-cost for the employer) is valued by them as a form of confirmation of their own value and professional utility. It should be noted that 6% of the respondents were unable to comment on the issue in question, which, according to the author, negatively confirms the management qualifications of this group of principals.

The twelfth point of the first part of the survey was dedicated to evaluating the attractiveness of the school offer of extracurricular activities. In this case, less than a half of the respondents gave a very good and good rating, 56% rated this aspect as sufficient, and 6% as insufficient. It bears mentioning that extracurricular activities are a permanent element of the entire process of education and upbringing. They should be adapted to the interests of young people, and their proper organization and realisation have an impact on the results of teaching and increasing students' satisfaction from participation in the school's, broadly understood, educational process.

The next, thirteenth point of the first part of the survey referred to cooperation and competition between the school and other entities. 19% of respondents rated this factor as very good in the subordinate institution, 59% rated it as good, 8% gave a satisfactory rating, and nearly 4% described it as not essential to the quality of educational services provided at school. One in ten respondents was unable to address this issue and indicated a "difficult to say" option. The scale of responses in the last two options is puzzling and, according to the author, proves, among others, that these principals did not pay due attention to the impact of inter-school comparison of students' achievements on improving the quality of work at their subordinate institutions. A negative signal, in relation to vocational schools, is the underestimation by a given group of principals of the importance of cooperation with companies and institutions offering apprenticeships for students.

Point fourteen of the first part of the survey concerned the relevance of the selection of educational profiles and curriculum content in relation to the labour market needs. In relation to this factor, 11% of principals gave their schools a very good rating, 29% gave a good rating, 48% a sufficient rating and 11% – an insufficient rating. When choosing a given school, students are guided by the expectations to obtain a specific education, needed to continue their education at the next educational stages and to obtain work in accordance with the education. It is, therefore, crucial that the school meets these requirements. The adequacy of the education offer to the conditions of the labour market and the good, professional preparation of students not only creates the opportunity for them to obtain a satisfactory job or to continue education at a renowned university, but it also shapes the good image and prestige of the educational institution. Principals actively monitoring the needs of the labour market are able to develop the educational offer of the taught professions or educational profiles more accurately. An effective action in this area requires appropriate regulation of the educational law, reducing formalisation and bureaucracy in terms of adapting the number of schools to the needs of the labour market.

The fifteenth point of the first part of the survey was dedicated to the standardization of teaching and external evaluation considered on the example of the nationwide secondary school leaving examinations. Nearly 10% of the surveyed principals rated the impact of these factors on the quality of educational services in their subordinate school as very good, 37% as good, 38% considered that the level of their impact should be attributed to a sufficient evaluation, and the remaining 15% of principals awarded insufficient evaluation. According to the author, the weak or negative evaluation made by almost a half of the principals is primarily influenced by the bureaucratic nuisance strongly emphasized in the school environment and organisational errors accompanying the standardisation and evaluation processes.

The sixteenth and last detailed issue from the questionnaire of the first part of the research survey is the perception of the internal evaluation carried out in the school. The schools' principals commented on this issue as follows: 43% rated the condition in this respect as very good or good, 36% of the respondents gave a satisfactory rating, 38% awarded the insufficient evaluation, and 4% chose a "difficult to say" option. According to the author, the obtained results indicate a lack of understanding by at least 42% of respondents of the importance of internal evaluation of schoolwork for the quality of educational services offered. Due to the function performed, a school principal should maximize his or her activity precisely and especially in this area. The best possible education of students is the only socially justified sense of the school existence. The system of external examinations should perform both diagnostic and evaluation functions of educational processes in a given school. The examination results should not only be used to improve the quality of work of both principals and teachers themselves, but also, just as importantly, provide reliable information to public administration bodies responsible for shaping the state education policy.

Moving on to the results of the second part of the study (Table 3) including the responses of the secondary school principals regarding the importance of individual factors determining the quality of educational services in the institutions managed by them, it should be pointed out that the most important determinant of the educational services quality in secondary schools of the Zachodniopomorskie province, clearly indicated by the respondents, are the teachers' qualifications and professional competences.

Table 3. Summary of responses by secondary school principals regarding the importance of individual factors determining the quality of educational services in institutions managed by them

| Item | Factor | Points | Ranking |
|------|--|--------|---------|
| 1. | An amount of financial resources allocated to the school development and maintenance | 194 | 3 |
| 2. | Conditions for conducting classes related to the number of students in classes and at school | 0 | 12 |
| 3. | A level of technical facilities at schools in teaching aids and teaching equipment | 105 | 4 |
| 4. | Quality of work of the teaching staff related to their competences and professional qualifications | 210 | 1 |
| 5. | Environmental conditions of the students' life and development | 27 | 8 |
| 6. | Teachers' cooperation with the school management staff | 6 | 10 |

| Item | Factor | Points | Ranking |
|------|--|--------|---------|
| 7. | The principal's and/or managerial staff's school management skills | 92 | 5 |
| 8. | Transparency and allocation of responsibilities and associated rules for awarding salaries, bonuses and allowances | 0 | 12 |
| 9. | A level of teachers' and management's motivation resulting from their sense of an educational mission | 41 | 7 |
| 10. | An impact of material motivation tools addressed to teachers | 201 | 2 |
| 11. | An impact of non-material motivation tools addressed to teachers | 0 | 12 |
| 12. | Attractiveness of the school's offer of extracurricular activities (e.g., trips, cultural events, projects, interest groups) | 17 | 9 |
| 13. | Cooperation and competition with external entities | 4 | 11 |
| 14. | Relevance of educational profiles and curriculum content selected in relation to the needs of the labour market | 27 | 8 |
| 15. | Standardisation of teaching and external evaluation of the quality of education (e.g., administering secondary school-leaving examinations and interpreting their results) | 57 | 6 |
| 16. | Internal evaluation of the quality of education (e.g., number of observed classes) | 0 | 12 |

Note: Ranking – Position in the ranking of significance, Points – points in total

Source: the author's own study based on an IT-conducted survey in 2016.

This statement was chosen by more than 94% of the surveyed principals. Most of them, more than 53%, considered this statement to be the most important, giving it a rating of 5; over 34% of the respondents gave this statement a rating of 4, and almost 12% – 2. Thus, this statement received 210 points out of 260 possible. This result confirms the author's own observations that a teacher educates, brings up and develops students under his or her care. Only thanks to the direct work of a teacher and a student, didactic ideas and content are implemented. Professional preparation of a teacher plays, therefore, a decisive role in the teaching process. According to the principals surveyed, the second most important determinant of the quality of educational services in the institutions managed by them is the motivational impact of monetary instruments of teachers' remuneration, to which the surveyed principals assigned 201 points. Most principals, i.e., 87%, gave this statement a rating of 4, and 13% graded it 3. There is no doubt that a financially motivated teacher works with greater commitment. Incentives also stimulate more activity of teaching staff to supplement and upgrade their professional qualifications.

The third most important determinant of the quality of educational services, selected by the respondents, is the financial resources allocated to the development and maintenance of a school. Over 96% of the respondents made such a choice, of which 22% gave this statement a rating of 5, nearly 38% gave 4, 34% graded it 3, and 6% marked 2. Only 4% of all the surveyed principals did not indicate the importance of this determinant. In total, the determinant in question gained 194 points. Such a strong exposure by the principals of this factor is associated with the perception of its significance through the prism of the scope of their professional responsibility.

The fourth and fifth, in terms of importance, factors determining the quality of educational services were indicated by the respondents as the "level of technical facilities at school with

teaching aids and equipment" and "the principal's and/or managerial staff's school management skills". These determinants were evaluated by the surveyed principals in a way that allows them to be assigned 109 and 92 points, respectively, which is half of the point value of the determinants ranked highest in the list in question.

In subsequent places, i.e., in the 6th and 7th place, with the results of 57 points and 41 points, there were "standardization of teaching and external evaluation of the quality of education" and "a level of teachers' and management staff's motivation resulting from their sense of educational mission". The last result, which is only 20% of the score obtained by the highest rated determinant, is noteworthy, as it is an important recognition of how teachers are perceived by the surveyed principals to spontaneously motivate themselves to fulfil their educational mission.

Other determinants of the educational services quality included in the questionnaire were given a negligible or zero number of points. However, this result should not be interpreted as an irrelevance of these determinants, but as a primacy of the determinants evaluated higher by the respondents. The results obtained from the author's own study allowed ranking the significance of the identified determinants of the educational services quality of secondary schools in the Zachodniopomorskie province.

5. Conclusions

The general conclusion from the conducted research confirms the importance of recognizing the economic determinants of the educational services quality properly as a basis for developing a proposal for shaping the desired level of these services' quality. The conducted research also allowed for a clear gradation of importance of the factors determining the quality of educational services in secondary schools. The determinant recognised as the most important by the respondents in this area was the professional qualifications and competences of teachers. The indication of the motivational impact of monetary instruments for remunerating teachers and the amount of financial resources allocated to school as the second and third most important determinants of the educational services quality confirms the author's own observations.

The development of education, including universality of education at all levels, requires constant control of the quality of education and the creation of systemic solutions supporting the improvement of this quality. Each educational institution is a team of cooperating teachers, whose coherent, pro-quality action determines the perception of a school in the environment, which translates into students' interest in studying at a given school, and consequently translates into the students' educational success. In addition, the author of this research identifies numerous examples that higher quality of human skills in the field of professional qualifications and competences translates into the desired economic growth and social development. People are typically aware that good education and a willingness to constantly deepen the acquired skills translate into their well-being – by acting rationally, through educating themselves, they will build the foundations for faster economic

development of a country. Considering the above considerations, the following general conclusions were formulated:

- the current way of financing education in Poland is not conducive to the provision of educational services at a high level, generating a negative selection phenomenon among candidates for teachers whose proper work is the basic determinant of the quality of the services in question;
- financial efforts aimed at education should make it possible to introduce a system of remuneration which attracts suitable candidates for a teaching profession, motivates teachers to upgrade their qualifications and induces them to remain in the profession;
- differentiation in teachers' remuneration should be based on an individualised system of grades for qualitative achievements in the field of teaching work provided;
- improving the quality of education services should be geared to the needs of all school stakeholders;
- the basic task of modern education is to equip students with digital competences, which requires schools to be equipped with modern computer equipment, access to the high-speed Internet and high-quality digital educational resources.

It should be pointed out that activities aimed at developing optimal solutions in the field of improving the quality of educational services require conducting a number of analyses and research among all school stakeholders (employees, students and candidates, parents, employers, superiors, graduates).

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