Perception and understanding of quality in Deming's management theory and quality process improvement in education

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Abstract: H. Grabowski (2000) defined the teacher as a specialist in human behaviour, whose work consists in intentionally motivating him to change socially desirable behaviour. The assumptions of the reform of the education system in Poland clearly define the tasks of the general school, in which it is stated that teachers should strive for a comprehensive (multidirectional) development of the pupil as the overriding goal of educational work. School education consists in the harmonious implementation of teaching, skills and education by teachers. These tasks are mutually complementary and equivalent dimensions of each teacher's work. The implementation of these tasks must be based on the basic idea of the functioning of a modern school that the student is the subject of all teachers' activities (school). The article is preliminary and it is material for future research. The 'new look' research method chosen by the authors is to give an alternative view of the described issue, which is a presentation of the broadly understood issues related to a new view of the quality of education at the level of primary and secondary schools, using the Deming method.

Key words: education system, quality, knowledge, Deming, management

It's not about being better
but to be better than yourself.
William Faulkner

1. Admission

Recent economic developments have made quality of products and services a key criterion for success. Equally important is the knowledge of the managerial staff about the potential for enhancing the results of the work, which is the result of knowledge of the theoretical and practical basis for improving the company's business. Sustainable and continuous quality improvement can only be achieved by directing organization's efforts to plan and prevent problems that arise at the source. This quality management concept is called quality assurance, where greater emphasis is placed on advanced

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quality planning. Improving quality also requires knowledge of customer expectations. Improving the quality of school work is more than just collecting data from processes and from the customer. The study is based on the perception and understanding of quality in management theory, including the theory of W.E. Deming, trying to apply 14 principles in education. In order to be able to measure the quality of school work, a proper measuring tool should be developed to answer the hypothesis 'what is really our school.' The literature on the subject was used to present this issue, taking into account the method of a new look at the presented subject. The authors of this paper will attempt to investigate the dependence of pupils, teachers and parents on specific competences in the education process at school.

2. Introduction to quality issues

The origin of the issue of quality dates to the beginning of the world. In the Bible (in the Book of Genesis) in the description of the creation of the world one can find certain elements of it (*God knew that everything he did was very good*), i.e. distinguishing things better (good) and worse (bad ones). Other records on this issue can be found in the Hammurabi Code (*If a builder built a house and his work was not done permanently and the house he built collapsed and killed the owner, the builder will be punished with death*), Chinese Chronicles of Ethics (*Tools below standards cannot be marketed, cotton and silk whose quality and size do not have the required parameters, cannot be marketed*) or Phoenician legislation (*In case of re-identification of poor quality handicraft products, its makers must cut their hands*) (Ostasiewicz [ed.], 2004, p. 110). Thus, the sources of quality of goods and services should be seen in times of great civilizations such as Egyptians, Mesopotamians, Israelites, Romans, Greeks, Chinese, or even Hindus.

Literature of the subject indicates that in the era of classical Greek philosophy (5th–4th c. BC), i.e. in the second decade of the development of ancient philosophy (Plato's work), the term 'quality' first appeared. In his work *Symposium* Plato recognized that the real world was an imperfect reflection of realistically perfect ideas. According to this conviction, the author has defined 'quality' as a certain degree of perfection (objective idealism), stating that quality as beauty is a judgment expressed by the user. If there is no user, then there is no such court (Skrzypek, 2000, p. 15). Therefore, understanding quality can only be through experience, since it is the judgment, subjectively dependent on experience (Wasilewski, 1998, p. 20).

In the literature of the subject, there are many different concepts and definitions of quality. This diversity results from the view of the category and the level in which the issue of quality is considered, and thus their ordering, according to a single, precisely-accepted criterion, seems impossible. The classification of this concept according to the most common criterion, which is the domain of knowledge, is presented in Table 1 below.

Table 1. Selected quality assortments found in literature

Type of quality improvement	Essence of quality
Philosophical	Separation of things or phenomena of certain elements that can be considered qualitatively homogeneous
Legal	Quality standards, contained in relevant legislation
Sociological	Attitude of consumers to the specific characteristics of the products
Humanistic	Shaping of living conditions and work conducive to the rise of culture and morality in society

Type of quality improvement	Essence of quality
Technical	Preferences of certain qualities of objects, in order to demonstrate optimum social and utility suitability meeting the expectations of users
Economic	Level of conformity of the product or service with the requirements of the customer, and these in turn result primarily from his needs, income and prices

S o u r c e: Authors' own elaboration based on: Horbaczewski, 2006, p. 10; Oyrzanowski, 1969, p. 586; Prussak, 2006, p. 1.

When considering quality definitions, it should also be noted that the term is generally accepted where quality is (Kolman, 2009, p. 15) technical progress, machine reliability, modernity of products, and an important competitive advantage and a fundamental requirement in acquiring new markets. In view of the above, we note that quality is a concept that is not clearly defined. One of the reasons for this situation is undoubtedly that quality often depends on the context in which it is used. It seems correct to say that it is the quality of 'we are dealing with everyone and every day' (Kolman, 2009, p. 14), because it can affect, among others, the use of products, services offered, teacher qualifications, student skills. Thus, this concept is applied in various scientific fields, including the science of management.

The definitions of the concept of quality found in the literature are presented in Table 2.

Table 2. Selected quality definitions found in literature

Source	Definition
Platon	Quality is a judgmental court that marks the degree of perfection in relation to ideas.
E. W. Deming	Quality is the predicted degree of homogeneity and reliability achieved at low cost and according to market requirements.
J. Juran	Quality is suitability for use.
R. Kolman	Quality is the degree to which the requirements are met.
W. Shewhart	Quality is a product goodness that can be applied to all products and services.
J. Bank	Quality is the full satisfaction of specific customer needs at minimal cost.
E. Skrzypek	Quality is the fulfilment of the requirements and expectations of each customer, it is the way leading to its satisfaction, and satisfaction is a very good and reliable measure of quality.
ISO 9000:2000	Quality refers to the degree to which a set of inherent properties meets requirements, where „inherent" is to be understood as „inherent in itself.
Little Dictionary of Polish Language	Quality is a set of characteristics that make an object a subject, not something else.
T. Ansell	Quality is giving customers what they want when they want it, at the right price without making mistakes.
A. Piątek	Quality means higher or lower grade in the scale of the value that can be determined by comparing with the standards recommended or considered the best.
P. Crosby	Quality is the fulfilment of the requirements.
E. Kindlarski	Quality is the degree to which the product can meet the requirements of the recipient.

S o u r c e: Authors' own elaboration based on: Hamrol, 2005, p. 19; Friday, 1994, p. 2; Gudanowska, 2010, p. 162; Skrzypek, 2002, p. 9, 15; Bank, 1997, p. 17, 94; Juran, 1982, p. 72; *Little Dictionary of Polish Language*, 1983, p. 276; Crosby, 1986, p. 99; Kolman, 2009, p. 14; Ansell, 1997, p. 2; Deming, 1982, pp. 1–2.

The above table indicates that the quality is subjective, volatile, subject to constant modifications, and interpretations of this concept are different because (Bugdol, 2008, p. 18):

a) the quality assessment depends on knowledge, experience, product demand,
b) customer requirements determine the level of product quality,
c) the concept of quality is transformed by human development and qualitative change,
d) quality is a multidimensional and interdisciplinary concept.

However, different definitions of quality, in spite of appearances, complement one another and form a coherent whole. M. Bugdol (2008, p. 18) distinguished eight fundamental definitional approaches to the notion of quality:

1) 'transcendental'—quality is something we strive for, but it is beyond our reach,
2) 'product'—quality is a set of characteristics that determine durability and functionality,
3) 'user'—quality determines the degree of ability to meet needs and expectations,
4) 'manufacturer'—quality is the degree of compliance with the specialized values defined by the projects and processes,
5) 'value'—is the difference between the benefits we derive from the purchase and use of a product and its price,
6) 'social losses'—quality occurs when the products do not contribute to social losses,
7) 'multidimensional'—quality has many characteristics, it is based on quality of service and self-evaluation models,
8) 'strategic'—quality is something that distinguishes one product from other products that are marketed by other organizations: quality is part of a strategy in which to make a profit from product's high quality.

Today science has justified problems with the systematization of the notion of quality, because 'it does not exist in itself and therefore it can only be considered in conjunction with the purpose it serves' (Olejnik and Wieczorek, 1982, p. 124). Subordination and unification of terms and naming related to quality is the subject of analysis and research of qualitative science, i.e. whose name is made up of a combination of the Latin word *qualitas* (quality) and the Greek word *lógos* (science)[1] (Bagiński, 2004, p. 11).

3. Development of quality activities

The first activities related to shaping, analyzing, researching or observing quality emerged in Antiquity. The ancient Egyptians, through the development of engineering, geometry and arithmetic, have initiated work on quality control. Concrete evidence of this fact survived to this day and these are precise pyramidal structures. In turn, on the one hand, an important contribution to the development of quality control is visible, especially in the sphere of mathematics, architecture, art and literature of the ancient Greeks (Ostasiewicz [ed.], 2004, p. 110). On the other hand, the greatest achievement of the Romans was probably the invention of concrete. Moreover, the Romans, through their architecture and engineering sciences, contributed quite a lot to the quality and progress of the construction of roads and bridges. Consequently, the achievements of these ancient cultures have been the foundation of the current, formalized approach to quality.

[1] This is an interdisciplinary field of knowledge dealing with all kinds of quality, whose name is made up of a combination of Latin *qualitas* (quality) and Greek *lógos* (science) (Duda, 1994, p. 80).

In the Middle Ages, when all goods were produced by small groups, even the individual developed a paradigm of controllers of the results of their work. What, in practice, meant that the performers themselves were using individualized quality standards.

In Europe, in the modern era, craft characteristics began to be grouped in order to protect the economic and social interests of craftsmanship masters, resulting in the creation of a list of quality standards for manufactured goods, or even the training and promotion of craftsmen. Craftsmanship undoubtedly influenced quality, as there was no room for any, even the smallest defects of products or services.

With the onset of industrial revolution, at the end of the nineteenth century there was a breakthrough, where the rapid development of technology and technology (analogous increase in the complexity of manufacturing processes) required the implementation of far-reaching specialization of work. Mass production has raised the demand for quality control. At that time, the era of managers overseeing the groups entrusted to them was growing (Haffer, 2003, pp. 296–297). At this point, literature of the subject distinguishes four consecutive stages of the concept of quality development, such as (Dahlgaard, Kristensen and Kanji, 2004, p. 15): quality inspection, quality control, quality assurance and quality management.

The first stage, quality inspection, dates back to 1910, when the first Ford Motor Company models came off the production line—mass production, as well as specialization and division of labour. At this stage the company began to employ trained specialists who tested finished products and compared them with the prototype, as a result of which they were rejected or not (Hamrol and Mantura, 2002, p. 92). The second stage, quality control, was initiated by the use of control charts developed by W. A. Shewhart in 1924. According to this view, it should be random (not systematically) detect and remove technology interfering factors, which will allow the production of such products that will meet the requirements set (Latzko and Saunders, 1998, p. 149). This has led to a reduction in inspection costs, as well as the development of statistical methods for controlling the process and the design of experiments. Quality control workers were also included in the quality control process and feedback was generated between the inspection results and the production line. In turn, in the early fifties came the third stage, quality assurance. Unlike the previous ones, he focused on preventing low quality rather than detecting it. This period gave an opportunity for gradual reorientation to the quality expected by consumers of a product of narrowly understood quality, referring only to the production function (Szczepańska, 2010, pp. 15–16). As a result, improved control methods have been developed by extending them to include planning, regulation and quality simulation. Quality management (Konarzewska-Gubała [ed.], 2006, pp. 19–24) is the last from the above-mentioned stages of perception of quality. This is a philosophy of organization management in which all components influence the quality of the product and the process of its manufacture. This means that it is based on work skills teamwork and commitment, self-control and continuous improvement of employees' qualifications to achieve long-term success, i.e. full customer satisfaction and, at the same time, benefits for the organization, its members and society (Konarzewska-Gubała, 2006, p. 19).

The above stages of quality perception have a different domain and at the same time they correspond to the way in which they perceive and change the perception of quality. Thus, all the implications in the various stages of this development bring down the conclusion that the

quality understood comprehensively relates to the product or service, as well as to all organizational processes that contribute to it. In addition, it is very difficult to accurately date the stages of quality development, as the countries, industries, and businesses have been different. In addition, in each subsequent stage applied solutions from earlier stages. Therefore, the above dates, which make it possible to clearly illustrate changes in the approach to quality, should be treated in a contractual manner. However, always 'the interest in quality issues on a universal scale has been dictated by the needs of the practice, mainly in the areas of manufacturing, trade and product exploitation' (Hamrol and Mantura, 2011, p. 9).

In conclusion, it should be emphasized that the further development of the quality issue from the perspective of the field of social sciences is inseparably connected with many outstanding researchers[2], especially in the disciplines of management sciences. Therefore, on the one hand, their findings, which are the result of observations and analyses, still define and prioritize research in the field of quality management. The current pro-quality trends are a reaction to the nature of the economy. On the other hand, the need to integrate the quality aspect of the company's activity, regardless of its nature (manufacturing, commercial, service or various types of business), is primarily due to its growing significance, especially in the last decade. Quality is widely recognized as the most effective weapon in the competitive fight on the domestic market, as well as the international (Ładoński and Szołtysek, 2005, p. 17), which from year to year seems to be increasingly difficult to achieve. Quality, as opposed to some of the best practices of the time, to be used in marginal ways or to fall into oblivion—is a category that permanently associates people and their activity almost in every field of life. This means that regardless of the circumstances or the specific nature of the activity, each organization in its strategy must take into account the quality that is indispensable in the process of setting objectives, plans or tasks, particularly in the organizational, economic, financial or legal sense (Ładoński and Szołtysek, 2005, p. 17). Therefore, all activities should be geared towards adapting to the current realities, which will enable us to recognize and shape the market in the future. Furthermore, given that the customer is the final verifier of the business, it is important to keep an eye on it and respond to dynamically changing needs and requirements. Hence, 'the inclusion of quality in an organization's business results from the fact that: quality is not an end in itself but a means of establishing a system that will provide value to the customer in a comprehensive way. Companies treat quality as a new parameter in the priceless strategies of competition, and that so far is applied. In enterprises, product orientation or marketing is replaced by market orientation' (Szczepańska, 2010, p. 19). Moreover, the quality improvement process is characterized by continuity, and its abandonment can cause it to slip out of control. Consequently, it is necessary to postulate that quality is not left to itself, to the weave of internal and external determinants, or to the case, but to deal with it in a systemic (comprehensive) manner, covering all levels of its functioning. Consequently, we must continually strive to better identify and interpret the quality, management, and performance correlation within our market strategy.

[2] W. E. Deming, whose merits for quality management will be discussed in the next section of this publication.

4. Contribution of W. E. Deming in the development of quality philosophy

In the early fifties, the twentieth century began to realize the importance of quality in building competitive products in the USA. W. E. Deming (1900–1993), American lecturer, engineer, statistics, management consultant has become an important part in building quality, not only in the field of industry and economy, but as shown below also in the field of education (Przybytniowski, 2007, pp. 112–117).

W. E. Deming is known for his work in Japan after the Second World War, especially with the work of the leaders of the Japanese industry. At the end of the war, in 1947, at the invitation of General MacArthur, he left for Japan, where American professionals were to assist in the organization of the census. He was the first American specialist who methodically passed on to Japanese engineers and managers the knowledge of statistical process control (Bugdol and Jedynak, 2012, p. 164; Przybytniowski, 2014, pp. 195–204).

It is believed that W. E. Deming was one of the main inspirers of Japan's development after the Second World War and the post-war economic miracle of 1950–1963. During his lecture in 1950, he taught (http://hclectures.blogspot.com/1970/08/demings-1950-lecture-to--japanese.html, accessed: 2017-09-19): 'if modern producers want to make their company successful in the long run, they must keep the following':

1) better product design to improve service,
2) a higher level of uniform product quality,
3) improving product testing at the workplace and in research centres,
4) increase sales through global markets.

In his paper, 'New Economy of Industry, Government and Education', W. E. Deming used the experience of W. Shewhart to introduce his theory: statistical process control, operational definitions, and what W. E. Deming called the 'Shewhart Cycle' (Deming, 2012, p. 114), which evolved into the PDCA (Plan-Do-Check-Act). The PDCA spirit was derived from a scientific approach from the seventeenth century. The author's achievements do not end with the PDCA cycle alone. He has developed 14 principles that help him to understand his philosophy of continuous improvement (Deming, 1982). Implementing these principles has contributed in many organizations to the extraordinary improvement of the quality of manufactured products or services. In addition, it is assumed that together with J. M. Juran, P. B. Crosby or W. Stewart he had the greatest impact on the current perception of issues that we could put under the heading 'quality' or 'quality management'.

The PDCA principle consists in (Hamrol, 2005, p. 156):

1. Plan—set goals and processes necessary to deliver results that meet customer expectations and organizational policies.
2. Follow—process the process.
3. Check—monitor and measure processes and results in terms of results, test results and results.
4. Act—action is taken on the continuous improvement of the functioning of the process.

Continuous quality improvement based on the 'Deming Wheel' principle has been a success for the US and Japanese companies as well as for the European companies, and has been

the basis for improving the quality of the implementation of the new approach to quality management systems in PN-EN ISO 9001:2001 process approach.

5. Attempting to apply 14 principles of W. E. Deming in education

The thought of a qualitative approach to education was taken in the late 1980. Since then, many publications appeared in the world and in Poland justifying the need to improve the quality of education in schools at various levels of education (Sztejnberg, 2008, p. 40). Education has become an extremely friendly area for the adoption of modern quality philosophy. The Organization for Economic Co-operation and Development (OECD) report published in 1989 identifies key factors affecting the quality of the school (Dzierzgowska and Wlazło, 2000, p. 104):

a) programme,
b) evaluation, evaluation and monitoring, the role of teachers,
c) organization of the school,
d) resources.

Schools that would implement the W. E. Deming can be called 'quality schools' because they show the prospective goal of creating a friendly school full of satisfied pupils geared to fully satisfy their specific needs. 'Quality schools' are good schools 'that provide a place for students and teachers to work and develop.' 'Thinking about a good school is tantamount to thinking about a safe and friendly school, an institution capable of transforming and changing, responsive to needs. The new philosophy of the school is based on the cooperation of all concerned: teachers, pupils and parents, local communities' (Goźlińska, 2000, pp. 14–15).

Students can see here a school with a rich inner and outer life: circles of interest, interesting events, school trips, and partnerships with teachers.

Parents can understand 'good school' as one that can boast of the highest number of pupils entering the next level of education or gaining an attractive job. The school in which these activities take place is not only a school friendly to the student but also a school that paves the way for scientific and professional success.

The most important, though not the only 'customer' for the school, is the student. We can talk about external clients (students, parents, society) as well as internal ones (teacher, janitor) (Stróżyński, 2003, pp. 28–29). The theory of W. E. Deming assumes the satisfaction of external and internal customers as well as enhancing the quality of internal processes of companies. The first scientist to attempt to apply the theory of W. E. Deming in the education process was J. J. Bonstingl, which lists the four pillars of 'quality schools', using Deming theory (Bonstingl, 2002, p. 39):

a) understanding the relationship between 'suppliers' and 'customers',
b) constant personal commitment to continuous improvement,
c) focus on systems and processes,
d) strong and consistent, focused on total quality, leadership from the management and authorities.

Based on the above considerations, school quality is a kind of comprehensive, collaborative, competent work of all stakeholders (e.g. pupils, teachers, directors, parents, members of the

local community, state authorities, business people, churches, etc.), dedicated to continuous improvement of the school in all established areas of functioning to pass on the correct values.

Of the above-mentioned entities involved in the process of building the so-called quality schools, the authors paid attention to the relationship between: the pupil, the teacher and the parent, without neglecting in these considerations other subjects of quality development in education. These relationships (relations), using the principles of W. E. Deming, are shown below. These dependencies will be analyzed on the basis of surveys conducted among children and youth in schools—catholic schools located in the Diocese of Sandomierz and presented in the next paper.

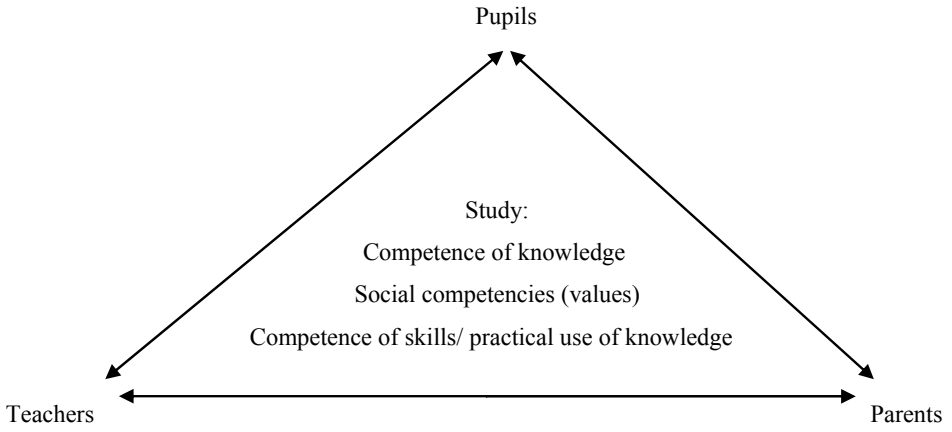

Figure 1. Student, teacher, parent relationship

S o u r c e: Authors' own elaboration.

Bearing in mind the above figure, the dependence is due to the fact that pupils, teachers and parents bring specific competences into the education process at school. We need to know about these specific competences so that the process of education and training takes place in the highest quality standards. This dialogue (exchange of views) should not lead to teaching the parties of the study, but to improving the quality of education.[3] The European Parliament defined competencies as 'a combination of knowledge, skills and attitudes appropriate to the situation' (2006/962 EC). This means that competencies are primarily based on the skilful use of knowledge, using skills and abilities. Skills are defined as the ability to apply knowledge and use by 'know-how' in terms to perform tasks and resolve any problems. There are cognitive skills (related to the cognitive process focused on learning about anything includ-

[3] The school is an educational institution. Education is—from Latin—educate, educate, educate and educate. The most important function of the school is the educational function. Education is the foundation of education, or teaching. Caring is a part of the responsibilities of a teacher. Education is the most important thing because it provides a proper attitude towards learning, working and utilizing their precepts for universal and individual good, never against man. The idea of the school should be to fulfil its educational function, i.e. to educate—shaping the minds, abilities, characters, attitudes and hearts of young people—the future intellectual and ethical elite of Polish society. The mission of the school, as seen, requires a specific vision of what it does, that is, the concept of the functioning and development of the school in order to accomplish the mission.

ing logical, intuitive and creative thinking and practical skills, as well as the efficiency and use of methods, materials, tools and any instruments (2008/C 111/01). The acquired knowledge of competencies will demonstrate the involvement of the parties in terms of the creation of the 'quality school'. The study of the area of competence and knowledge will allow to compare the state of knowledge of the respondents on school events, school procedures and predispositions to the position held. The study of social competencies allows us to know the knowledge of the principles, values and beliefs that affect the choices made—it will identify the motives of the action. Although the examination of the area of competence of skills, that is the practical use of knowledge, will show us how to obtain information on the factors necessary for success in a specific task. Communication, mental, interpersonal, organizational, leadership, self-management, etc. competences will be tested here.

The educational process should, in principle, lead to respect for the dignity of the pupil, the teacher and the parent. In addition, to point out that all parties of the study have voice, and their voice in the quality of education (on a balanced basis) counts. All parties are also supporters of the assumed strategy of cooperation in the learning process as well as the education of the pupils. At the same time this should not lead to undue dominance between the parties at school.

By analyzing the current literature, the authors of this paper have noted that in the qualitative development of education, the basic definition is of a defined standard. 'One of the first definitions of quality standards in Polish education defines standards as the criteria for assessing the effectiveness of a school, characterizing the postulated state, according to which we will determine the degree to which a school performs educational tasks or its values from the point of view of its social mission' (Bogaj, 1993, for: Toruński, 2009, p. 25). The quality of the school education process is based on acceptance and full acceptance by pupils, teachers and parents of expectations regarding the various aspects of the school's functioning. They must be elementary in view of the correct (intellectual) development of the student, the teacher, and the parent, as they are consistent with the principle of 'learning the whole of life'.

The correct setting of the quality of education at the school should allow us to determine the essence of the existence of a school, what is important in it, what is its identity, and what is the essence of the concept of the established learning process. 'The number of standards in education is not strictly defined. There are several classifications of standards developed for education that are related to different approaches to the term "educational standards"' (Toruński, 2009, p. 26; Przybytniowski, 2014, pp. 195–204). By creating the right standards for the proper functioning of the school, you should be aware of:

1. Knowledge requirements (assessment, examination).
2. Programme fundamentals.
3. Policy of the school (school board, ministry department).
4. Mission, school vision—related to the school's development strategy.
5. Expectations of school authorities—subjects taking part in the study.
6. Organizational structure of the school.
7. School resources (infrastructure).
8. Competence of teachers.

9. Religious values.

Standardization must meet the following criteria:

a) contain description of the expected and desirable condition for the development of an educational facility,
b) make a coherent whole,
c) be lawful,
d) be socially accepted,
e) be characterized by rationality and universality (Przybytniowski, 2007, pp. 112–117).

The formulation of standards is concerned with determining the indicators of their achievement. A pointer is a feature, an event, or a phenomenon on the basis of which we conclude with certainty, or with a certain probability that there is a phenomenon that interests us. It is important to formulate indicators that answer the question: 'What if we find that we have reached the standard?', because they are the ones that decide to acknowledge whether the standard was fulfilled or not (Pilch and Bauman, 2010, p. 53). The indicator in the operating form causes the focus to be shifted to the target, i.e. it becomes a proof of the school's achievement of the given standard. The indicators indicated above should indicate that the assumed and expected achievements (appropriate intellectual level) of the students are in accordance with the agreed learning strategy, compatible with the requirements of legal regulations. In order to be able to measure the quality of school work, a proper measuring tool should be developed to answer the hypothesis 'what is really our school?'. Acceptance of the appropriate measuring tool depends on the area under investigation: e.g. (U. 2004, No. 89, item. 845)[4]:

1. Workplace or school work concept, including areas:
   Area 1.1. Intra-school quality assurance system
   Area 1.2. Promotion
2. Management and organization, including areas:
   Area 2.1. Professional development of teachers
   Area 2.2. School conditions
3. Education, including areas:
   Area 3.1. Education programmes
   Area 3.2. Organization of the training process
   Area 3.3. Course of education
   Area 3.4. Educational outcomes
4. Education and care, including areas:
   Area 4.1. Equality of opportunity
   Area 4.2. Educational and preventive work for schools
   Area 4.3. Care work for the school
   Area 4.4. Effects of the educational, preventive and protective work of the school.

[4] The appendix to the regulation of Minister of Education and Science of the Republic of Poland should be used to develop the areas of school quality. It includes standards for assessing the quality of schools and institutions, along with sample indicators.

There is no doubt that the amount of research that is being carried out on school grounds can be very problematic for students, teachers and parents. Every effort to improve quality will only improve it and will make the educational service provided to a higher level.

6. Conclusions

Based on the literature analysis of the subject, it can be said that the problem of control and assessment is not easy, and as W. Okoń states (Maszczak, 2003, pp. 19–24), 'there is probably no problem in the pedagogy with which such different and sometimes contradictory views as school evaluation are concerned.' This also applies to the assessment of the functioning of the school, which for years has been at the centre of animated and often controversial discussions. It is a constantly open problem that draws the attention of teachers, students and their parents, as well as educational authorities and educators and psychologists—subject researchers (Maszczak, 2003, pp. 19–24).

Today the school believes that learning the structure of the teacher's activities and its determinants (conditions, factors) can make the teacher's work more effective and rational. Every job, including that of a teacher, is a set of activities aimed at achieving specific and beneficial effects. A characteristic feature of teaching activities is that it may involve directing the activities of pupils, parents and interacting with them (Strzyżewski, 1996).

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Jakość w teorii zarządzania Deminga i jej implementacja w procesie kształcenia

Abstrakt: H. Grabowski (2000) zdefiniował nauczyciela jako specjalistę w dziedzinie ludzkiego zachowania, którego praca polega na intencjonalnym motywowaniu do jego zmiany w kierunku społecznie pożądanym. Założenia reformy systemu edukacji w Polsce jasno określają zadania ogólne szkoły, w których stwierdza się, że nauczyciele winni dążyć do wszechstronnego (wielokierunkowego) rozwoju ucznia jako nadrzędnego celu pracy edukacyjnej. Edukacja szkolna polega na harmonijnej realizacji przez nauczycieli zadań w zakresie nauczania, kształcenia umiejętności i wychowania. Zadania te stanowią wzajemnie uzupełniające się i równoważne wymiary pracy każdego nauczyciela. Realizacja tychże zadań musi być oparta o podstawową ideę funkcjonowania współczesnej szkoły: że uczeń jest podmiotem wszelkich działań nauczyciela (szkoły). Artykuł ma charakter wstępny i stanowi materiał do badań na przyszłość. Ma charakter teoretyczny. Wybrana przez autorów metoda badawcza „nowego spojrzenia" ma dać alternatywny pogląd na opisywane zagadnienie, będące prezentacją szeroko rozumianej problematyki związanej z nowym spojrzeniem na jakość kształcenia na poziomie szkół podstawowych i ponadpodstawowych, z wykorzystaniem metody Deminga.

Słowa kluczowe: system edukacji, jakość, wiedza, Deming, zarządzanie