The Quality Assessment of Primary Schools

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This paper explores themes from the management of the public sector, which is increasingly connected to the models and thinking of the private sector. This is also true for primary schools. The results of quality assessment in primary schools from six European countries are represented in this paper. They show that quite substantial differences exist between countries in most quality elements, and that the final level of quality assessed depends not only on the resulting elements' grades but also on their importance/weight. We find out that Slovenian grades are pretty good, but there are still the areas– e.g. educational programs – that have to be improved in the future.

Key words: total quality management (TQM), quality measurements, primary schools, decision models.

Ugotavljanje stanja kakovosti osnovnih šol

Članek posega na področje managementa v javnem sektorju, ki vse bolj – med drugim tudi na področju osnovnega šolstva – sledi pristopom in razmišljanju zasebnega sektorja. Prikazani so rezultati ugotavljanja kakovosti osnovnih šol v šestih evropskih državah, ki kažejo, da med evropskimi šolami obstajajo precejšnje razlike pri večini sestavin kakovosti, končna ocena kakovosti pa je odvisna ne samo od ocen posameznih sestavin, temveč tudi od pomena oziroma uteži, ki jih sestavine imajo. Ugotavljamo tudi, da so ocene za Slovenijo relativno dobre, obstaja pa nekaj področij, denimo izobraževalni programi, ki v prihodnje potrebujejo znatne izboljšave.

Ključne besede: management celovite kakovosti (TQM), meritve kakovosti, osnovne šole, odločitveni modeli.

1 Introduction

Quality assurance in education has become a very popular phrase in school policies and strategies in the past decade and at all levels of the educational system, from kindergarten to doctoral studies. The sole difference is that in higher education, which was supposed to have greater autonomy, quality assessment includes an increasing number of external independent stakeholders, to whom the quality of education is of vital importance, directly or indirectly. In pre-higher education though, an area that was traditionally governed externally, the quality assessment is increasingly becoming a responsibility of the schools themselves.

There are various ways of assuring quality within the school system. This surely includes the carefully planned continuous education and professional development of teachers and other educators and the activities of the inspectorate of education, although this is less and less true for the latter, since the inspectorate no longer controls the professional aspect of work. Various forms externalisation of the testing and grading of knowledge and the mutual comparison of teaching results should also be included, as well as the fact that management consists of pedagogues and the accompanying work of expert bodies within the school, etc. During the past decade, coinciding with the introduction of school autonomy principles, concepts of quality assurance have been appearing in numerous European countries, all united by the idea of self-assessment.

This article is focused on the concept of assuring overall quality through self-assessment. The self-assessment approach is present in Europe both in the public and private sector, including primary schools. In Slovenia, too, there have been aspirations and attempts to initiate these approaches at various levels of the educational system, allowing an insight into the basic elements of the workings of public organisations such as schools, which can trigger self-improvement processes. The research results presented in this article are a starting point for identifying the key ingredients of primary schools and comparing foreign schools with ours.

In the first place, the aim of this research is to ascertain what basic elements of primary schools' functionality give the best and the worst results and to decide how important a certain criterion is for the quality of a school. Based on the results, school managements will be able to more easily and precisely identify priorities and directives that need to be implemented, while the comparison with other countries on a national level can and should be the foundation for adopting system changes that raise quality on the state level regarding the deficiencies and weaknesses found in specific areas.

The subject of this research is therefore a comparison of quality in primary education between Slovene and foreign primary schools consistent with the methods of total quality management. It is expected that, (1) there are differences between the countries compared in a large majority of the elements of quality, and (2) that the quality of a primary school depends on the number of elements of quality that are graded as excellent.

A comparative method between the specific countries was used in this research to compare various parameters and

countries with each other. Fundamental conclusions were formed by synthesising results based on the comparison and analysis of specific results.

The article goes on to put forward a theoretical basis for a self-assessment model for schools and presents the results of the quality assessment of primary schools in six European countries. The following chapter thus presents a concise theoretical review of the concept of total quality management in connection with self-assessment, while the third chapter illustrates how to apply the concept of quality assurance to the functioning of primary schools. The fourth chapter introduces the building of the model for quality assessment in primary schools and the DEXi tool for multi-attribute decision making, which was used in the research. The fifth chapter includes the key results of quality assessment in primary schools in Slovenia and other countries and the sixth chapter summarises the article.

2 Total Quality Management and Self-Assessment

Self-assessment means adopting a total quality management (TQM) that is especially appropriate for use and implementation in various organisations, but differences in the organisational cultures of individual organisations have to be taken into account in its implementation (Kekäle et al., 2004).[1] Weick (1976) and Cervai et al. (2004) share the opinion that this is especially true of schools, as they have a specific culture, organization and functioning.

TQM needs to be clearly distinguished from quality control and quality assurance. *Quality control* includes the statistical monitoring of the quality of products or services and monitoring the final output of the production/service process. *Quality assurance,* on the other hand, goes a level higher compared to quality control (which defines standards of products or services, i.e. to define the quality of the processes or programs themselves. Therefore both internal and external assessments are included in the assessment of processes, which is similar to TQM, although the latter presents an even broader model of quality assurance and is defined as the process of continuous improvement (Kekäle et al., 2004). TQM thus encompasses monitoring and the constant process of quality improvement for services, processes and resources, both capital and human.

In fact, total quality management represents a change in organisational culture, since aiming for constant improvement calls for changes in the system of norms, values, notions and convictions that define how employees behave and respond to problems. Young and Wilkinson (1999) claim that trying to explain it otherwise would mean missing its essence. Changing culture is the foundation, although this does not mean that the process is simple or quick. These are long-term, constant activities and they have to be triggered internally, even though they are done with additional external help in many cases (Schein,

2004). Changes to culture are easier to introduce if all the members of the organisation believe or understand that they are necessary. Camp (1995) states that this collective understanding of the shortcomings of the current system and the need for changes can be achieved using benchmarking. This was the foundation upon which the European Quality Standard (EQS) was developed for all three levels of schools in the 2003 to 2006 period to encourage organisational changes in schools and to stimulate the self-assessment processes.

Projects for the self-assessment of quality in European countries have evolved into extensive activities that range from national and regional associations all the way through to the level of individual schools. Self-assessment of work means that a school, as a whole or on some level (class, subject, department, an individual teacher, a certain activity, e.g. school nutrition, extracurricular activities, parent meetings, etc.), carries out a self-assessment project. The basic principle here should be the voluntary cooperation of each individual. The concept envisages that the methods, instruments and other procedures used for assessing the current status should be tested or standardised at a national level to allow for the comparison of data.

The questionnaires that are uniformly devised for various levels of education and school types, which include the most important stakeholders, are a step closer to this concept. They are directed towards identifying the key elements of quality that schools should provide and assessing the level of quality already achieved in specific elements.

Assessing quality is not the goal, merely the means for planning measures to eliminate weaknesses in a school or strengthen its strong points. Thus any project dealing with the quality of work in a school is inevitably expanded into three stages:

- assessing quality by choosing the appropriate questionnaires,
- interpreting the data gathered, supplying it with objective information (the rate of success, working conditions, education of employees, environmental data, etc.) as well as opinions and evaluations from external independent experts;
- preparing a plan of measures to eliminate weak points or maintain high levels of assessed quality.

The most sensitive parts of the whole process are the last two stages, which are undoubtedly the hardest as well. Self-assessment therefore cannot be successful if it is simply stopped after phase one. In this case assessing quality would serve no purpose whatsoever. Carrying out phases two and three is a process that a school, or more precisely its management, needs to enact thoughtfully and systematically. Foreign experience shows that there are two key conditions for this: assuring a high level of professionalism and included the largest possible number of stakeholders in the process.

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[1] There are significant typical differences between the introduction of total quality management into either production or service organisations. The key element is including numerous interested parties and their mutually conflicting goals, especially in service organisations from the public service and the broader public sector, (Saaty, 1988). This fact is very important when it comes to schools.

3   Quality Assurance in Primary Schools

Primary education in Slovenia is regulated by the Elementary School Act (Zakon o osnovni šoli)[2]. As far as the compulsory program is concerned, primary education is free for all citizens and is financed by public funding.

As the founders of primary schools and as those responsible for primary education, municipalities need to provide the conditions necessary for carrying out the compulsory program of primary education and taking care of additional activities. The obligations of financing the compulsory program are split between the municipality and state by the Organization and Financing of Education Act (Zakon o organizaciji in financiranju vzgoje in izobraževanja)[3].

During the past decade quality assurance in education has become very important in the strategic orientations of countries at a regional level as well as at a micro level, i.e. directly within the institutions carrying it out. In addition to political, strategic and expert orientations in the area of quality assurance in primary schools, numerous articles have been written on the subject with international impact and many projects and researches have been done. An important example was the European Commenius project (QiS – Quality in School); the research presented in this article is part of it.[4] During the last decade a process of continuous improvements in elementary schools and at higher levels of education has been taking place in the USA under the influence of ASQ – the American Society for Quality. This is already showing a positive influence on the measured quality of schools that are a part of AQS (c.f. Amos and Keeley, 2003)[5]. Examples of authors writing on the importance of quality in education at the micro level in various countries are Kirchoff (1996), Geoff (1997), Berry (1998), Egol (1999), Beresford (2000) and Samy (2002) and, at the macro level, Barro (2001), Bratsberg and Terrel (2002).

There are several ways to achieve quality assurance in a school. The continuous education and improvement of the educators can certainly be classified here, as can the activities of the inspectorate of education, although this is less and less true since the inspectorate no longer controls the professional aspect of work. Various forms of externalising the testing and grading of knowledge and the mutual comparison of teaching results should also be included, as well as the fact that the management consists of pedagogues and the accompanying work of expert bodies within the school. During the past decade and coinciding with the introduction of school autonomy principles, concepts of quality assurance have been appearing in numerous European countries, all united by the idea of self-assessment. The role of self-assessment in the process of constant improvement is shown in Figure 1.
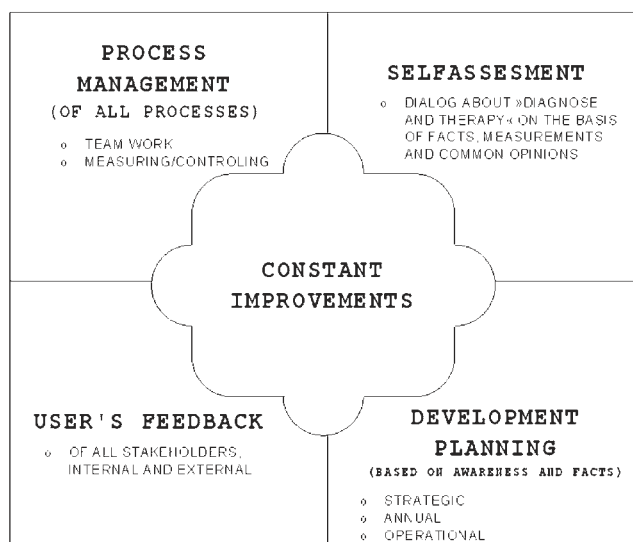

Figure 1: The Role of Self-Assessment

4   Developing a Self-Assessment Model

It has to be emphasised once again that assessing quality must not be the goal in itself. Instead it is the means for planning further procedures that will eliminate weakness and strengthen strong points in an area of schooling. The self-assessment model is one of the tools used to determine these weak and strong points. The development of this model usually consists of different stages.

4.1   The Stages of Developing a Self-Assessment Model

Stage one is the identification of the stakeholders that are connected at any level to the workings of a school and its level of quality. These include pupils, teachers, parents, the school board, municipality, etc. Questionnaires are devised in stage two, which identify how stakeholders perceive the key elements of quality. A trial questionnaire is devised at first and it is later revised and improved. The key elements of quality are then represented in a tree structure. In our model the structure consists of three main branches representing resources, processes and results. Each of those branches is then given a different value and is connected to some elements of quality.

It is important to give the elements of quality the appropriate weighting. The problem of finding this appropriate weight is minimised by increasing the number of indicators or attributes. Khan (2003) shows that the weight is distributed over a larger sample if the number of attributes is increased. Therefore it follows that in a small number of attributes, any of them contributes significantly to the assessment, which means that anomalies in the results can be considerable.

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[2] Official gazette RS, no. 12/1996; additions and changes 33/1997, 54/2000, 59/2001, 71/2004, 53/2005, 60/2006 (63/2006 – correction)
[3] Official gazette RS, no. 12/1996 (23/1996 – correction), 64/2001, 108/2002, 34/2003, 79/2003, 65/2005
[4] More on this project on www.qis.at.
[5] More on this association on www.asq.org.

The last stage is represented by the model's development and testing. Even when the model is developed it needs constant revision, addition and re-examination by democratic instruments (e.g. surveys completed by various stakeholders) to see whether the weight of key elements of quality have changed.

The quality in schools project does not end here however. After the model has been formed, developed and tested, it is then necessary to interpret the results and supply further objective information (the success rate, working conditions, the education of employees, environmental data, etc.). Opinions and evaluations from external independent experts are highly desirable at this point. The next step is a set of planned improvements for eliminating weaknesses or maintaining high levels of assessed quality. Every group of stakeholders and the policy makers at the macro level have to be included in the process of eliminating weaknesses and maintaining strengths. The whole process thus leads to total quality management.

Evaluating the results and strategic planning are processes that a school and its management need to carry out thoughtfully and systematically. Foreign experience shows that there are two key conditions for this: assuring a high level of professionalism and making the number of stakeholders included in the process as large as possible. The present article emphasises the importance of understanding this.

4.2 Connecting the Model with the DEXi Software Tool

Multi-attribute models may be useful assistants for decision making in complex situations, such as those that include a number of factors that might influence the decision and cover many variations or many groups of decision makers with various interests. These methods are not a substitute for the human decision maker, who is still entirely responsible for the final decision, and this means that results acquired by robust models need to be logically examined and considered thoughtfully. Multi-attribute methods may however make an important contribution to more systematic and better organised decision making. The decision maker is forced to think harder and gather more information, thus minimising the possibility of overlooking things that might crucially influence the decision.

Supportive software tools will help in creating the decision making model, evaluating variations and offering a variety of analyses with which decisions can be verified, substantiated, explained and documented in detail. The final decision is therefore usually higher in quality. This is normally also reflected in the fact that things are carried out more effectively as information gathered in assessment can be put to good use, for example information on the distinctive weaknesses or strengths of the variations processed (Bohanec and Rajkovič, 1999).

Multi-attribute decision making is based on deconstructing the decision problem into smaller subproblems. Variations are broken down into specific parameters (criteria and attributes). Specific parameters have to be evaluated in order to achieve the relevant decision making, which means that the chosen criteria are not of

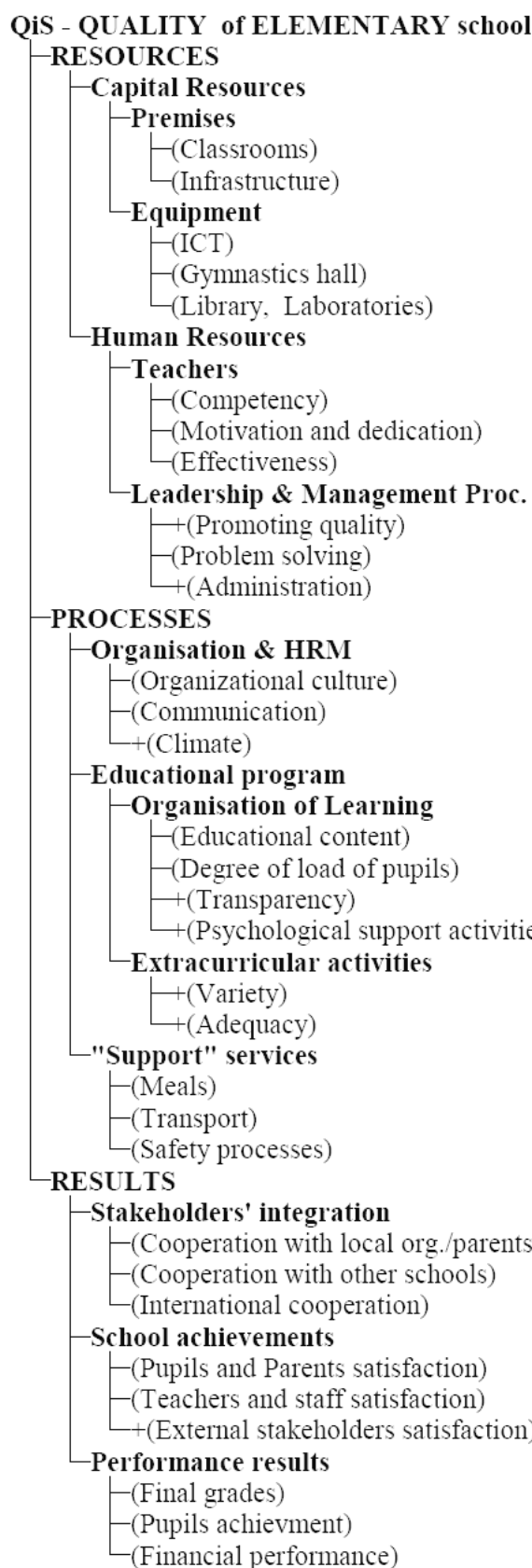equal importance in the final choice of variation (Bohanec et al., 2000).

Enough information has to be gathered in order to achieve proper results, which will allow for a higher quality decision. The process of gathering and sorting information is called the decision making process and consists of the following stages:

- Identifying the problem (identifying the problem, defining the problem and determining goals and requirements). It is important that this stage should include everyone affected by the problem (the stakeholders).
- Identifying the criteria (criteria are set and variations are then evaluated upon them. The structure of the decision making model is made and all criteria in the tree structure are assigned their potential values).
- Defining the usefulness functions (setting the weight of specific attributes according to their importance in the model as a whole). A certain attribute might happen to prevail in its importance over the others and so the final evaluation turns out to be different than it would have been if all the attributes were equally important.
- Describing variations (each variation is described by evaluating the basic criteria, which is acquired e.g. by a survey).
- Evaluating and analysing variations (using the DEXi computer program, variations are evaluated according to the structure of the criteria and defining rules). Graphs may be helpful in the analysis of variations.

The present research used the DEXi program for multi-attribute decision making and evaluating options in data analysis. DEXi is based on the tree structure model of evaluation, which means that the attributes (elements of quality) need to be arranged into a tree structure during the first stage. Figure 2 represents the tree structure of our model. Every element of quality has a certain set of values (e.g. in our quality assessment these are "very low, low, average, high and very high") and a usefulness function, which evaluates the element of quality at higher levels based on evaluations from the lower level of the decision making tree. The lowest level elements of quality ("leaves of the tree") are the so called basic attributes that have no children and represent the actual input attributes of the decision making model (Jereb et al, 2003). Participants themselves were only evaluating the basic attributes, and the evaluations for attributes at higher levels were then based upon the evaluations of lower levels and upon the decision making criteria. The decision making criteria define various combinations of attribute evaluations on the lower levels that will result in a certain evaluation on the higher level. Some example decision making criteria are given in Table 1.

Once all data is input for the basic attributes, the program will automatically generate results on all the higher levels of the decision making tree as well as the final result, i.e. the overall quality of a primary school. The results of our analysis and research are given in chapter 5.

Therefore, the DEXi program is a program for multi-attribute evaluation and decision making. It represents a qualitative approach for the evaluation of elements of quality

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QiS - QUALITY of ELEMENTARY school
  ─RESOURCES
      ─Capital Resources
          ─Premises
              ─(Classrooms)
              ─(Infrastructure)
          ─Equipment
              ─(ICT)
              ─(Gymnastics hall)
              ─(Library, Laboratories)
      ─Human Resources
          ─Teachers
              ─(Competency)
              ─(Motivation and dedication)
              ─(Effectiveness)
          ─Leadership & Management Proc.
              ─+(Promoting quality)
              ─(Problem solving)
              ─+(Administration)
  ─PROCESSES
      ─Organisation & HRM
          ─(Organizational culture)
          ─(Communication)
          ─+(Climate)
      ─Educational program
          ─Organisation of Learning
              ─(Educational content)
              ─(Degree of load of pupils)
              ─+(Transparency)
              ─+(Psychological support activities)
          ─Extracurricular activities
              ─+(Variety)
              ─+(Adequacy)
      ─"Support" services
          ─(Meals)
          ─(Transport)
          ─(Safety processes)
  ─RESULTS
      ─Stakeholders' integration
          ─(Cooperation with local org./parents)
          ─(Cooperation with other schools)
          ─(International cooperation)
      ─School achievements
          ─(Pupils and Parents satisfaction)
          ─(Teachers and staff satisfaction)
          ─+(External stakeholders satisfaction)
      ─Performance results
          ─(Final grades)
          ─(Pupils achievment)
          ─(Financial performance)
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Picture 2: The Tree Stucture of the Quality Assessment Model for Primary Scools

Capital Resources	Human Resources	RESOURCES
35%	65%	
1 not good enough	<=very good	not good enough
2 *	not good enough	not good enough
3 not good enough	*excelent*	good enough
4 >=good enough	good enough	good enough
5 good enough	>=very good	very good
6 >=good enough	very good	very good
7 >=very good	*excelent*	*excelent*

Table 1: Example of Decision Rules

and for indirectly determining the usefulness function, which allows for a more transparent construction and usage of the model (Jereb et al, 2003). The results, presented in the following part of the article, are comprehensive and useful to a wide number of users, not just the experts. The use of the model is therefore relatively simple and it has been programmed for the Windows platform, which is the most common operating system in our part of the world.

5   The Results of the Evaluation

As part of the Commenius QiS project, the evaluations were gathered in primary schools in various European countries (Slovenia, Germany, France, Lithuania, Italy and Finland). Since it was devised and agreed upon in meetings of the QiS workgroup, the questionnaire was the same in all these countries, which means that the results are completely mutually comparable. The limitations can be seen in the perception of quality, which differs from country to country. This means that a certain level of quality may be evaluated as "very high" in one country and as "excellent" in another. But it is impossible to avoid subjective perceptions in assessing quality and therefore this weakness in the survey has to be taken into account.

The results for a specific country are based on certain rules that had been set in advance and input into the DEXi computer program, as well as on the evaluations of certain basic attributes (elements of quality) acquired by questionnaires in the specific countries. The values attributed to the specific criteria were: not good enough, good, very good and excellent. Each element was given the value that was most frequent in the survey. Final evaluations have also taken into account the weight of the specific elements, which in some cases makes the final results quite different from what they would have been had all criteria been valued equally.

It turned out that measurements are necessary for total quality management to function, and that one of the key factors of success lies in the small number of key indicators (4-10). In our model the indicators were broken down into numerous sub-indicators, assuring an appropriate distribution of weights. Not only is the number of indicators (elements of quality) relevant, it is also important that their content is clear and directed at the end user, which means they should also allow the visualisation of the measurements (Pečar, 2003, p. 35).

Analysing the results acquired and searching for reasons why various situations occur is especially important in terms of looking for solutions to eliminate weaknesses. A

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clear representation of the current state is also important, as it may serve as an aid to management, which must in the end provide the conditions for eliminating the weaknesses and improving on the present state. For effective analysis it is not only necessary to take the final result into account, but also to analyse certain sub-elements of the complete model.

5.1 Results for the Main Sub-elements of the Model

The tree structure of the decision making model consists of three main branches. These are: resources (representing 27% of the weight in the final evaluation), processes (representing 32% of the weight) and results (representing 41% of the final evaluation). The results for Slovenia and some other countries are represented in Figures 3 and 4. Slovenia was evaluated as very good in two attributes while its processes were evaluated as good. Figure 4 shows that
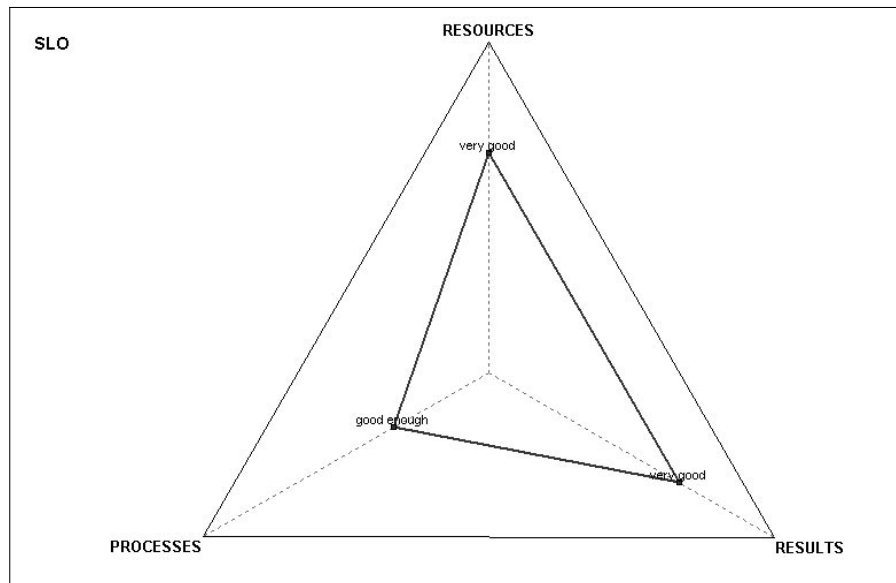
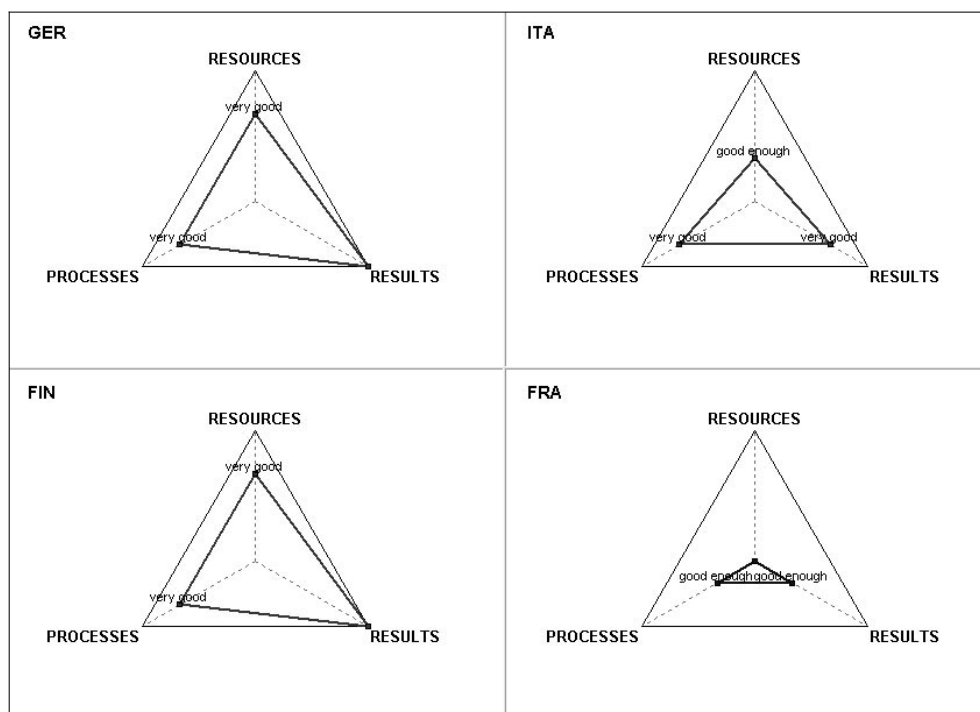*Figure 3: A Graphical Presentation of the Main Sub-elements for Slovenia*

Figure 4: A Graphical Presentation of the Main Sub-elements for Germany (GER), Italy (ITA), Finland (FIN) and France (FRA)

Finland and Germany were given relatively high values, while French schools were evaluated as relatively bad, especially in terms of resources. It will have to be analysed why the main attributes were evaluated this way.

5.2 The Areas with the Lowest Results

Each of the countries received bad results in certain areas. Considering the importance of certain parameters in a specific environment, it is of course possible that areas with the lowest evaluations will not be chosen as a priority by school boards or those responsible for the development of quality in schools. Certain countries have problems in specific areas, while some problems are common. The following figures show what the greatest shortcomings are in certain countries.

The Educational program parameter in Slovenia and the criteria tied to this parameter received the lowest grade of all countries assessed. From an economic point of view it could be said that this parameter is not among the most important, but this result still illustrates a certain weakness in Slovene primary schools, where there are inappropriate programs that are changing too quickly. Discontent can be felt equally among parents, pupils and teachers. The problem does not lie in the schools as such, but in inappropriate legislation. Changes here do not require financial means as much as the realisation that something has to be done to ensure the greater satisfaction of the end-user. The problem is especially worrying from the point of view of the pupils, to whom education will not bring the appropriate and expected knowledge. For an optimal solution of the problem, experts as well as the parents, pupils and other
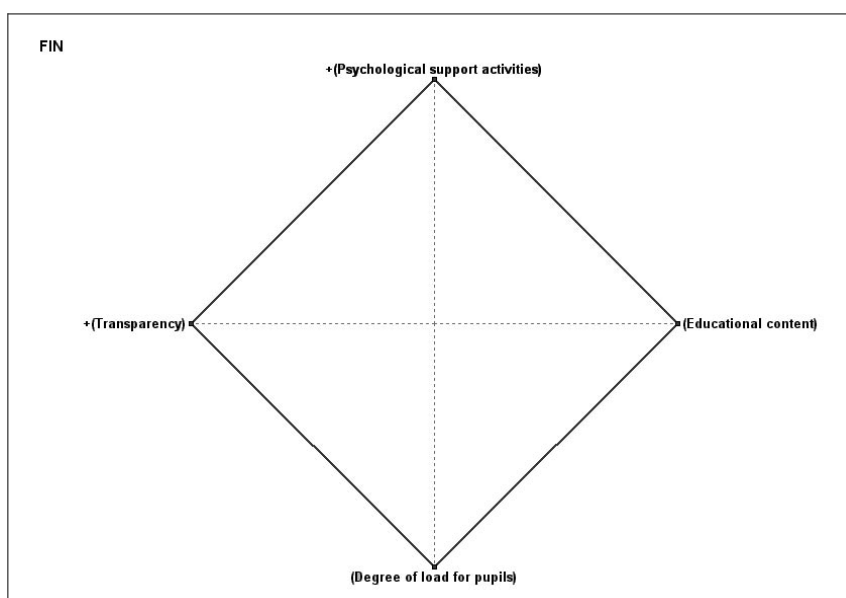
(a)
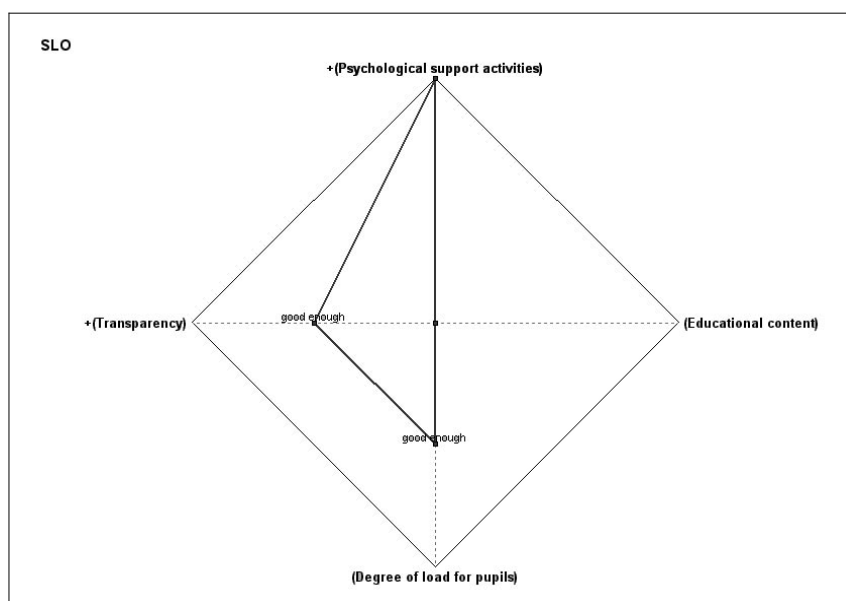
(b)

Figure 5: Quality Assessment of the Education Program for Slovenia (SLO) and Finland (FIN)

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stakeholders, will have to be included and certain solutions adopted from other comparable systems. A comparison of the evaluations for Slovenia (given a relatively low evaluation in the area of educational programs), for Germany (given average evaluations) and for Finland (highly successful in this area) is given in Figures 5a and 5b. In both cases the graph representing Finland, which is a sort of benchmark in this case, runs on the outer edge of the quadrangle, which means that the Finnish schools received the highest evaluations for all the levels of the educational process.

The Results parameter is the area that contributes the highest percentage of points to the final evaluation. This is easily understood, as in the end the success rate is always measured in terms of results and this is the main indicator of success, especially in economics. Three countries, Italy, Lithuania and France, have lower evaluations than they wanted. The reasons are different though. There is no data from Italy for the section of the criteria concerning the success of schools and their pupils, but the evaluation of the parameters concerning school cooperation and satisfaction are also barely adequate. In comparison, the cooperation between Slovene schools, locally and internationally is evaluated as excellent. The opposite is true in France, where cooperation was evaluated as bad. Schools in Lithuania on the other hand have distinct problems with financial operations.

These worse results may also mean that France and Italy do not take these areas very seriously. Despite this fact, their pupils are highly successful when it comes to final grades and in competitions and knowledge tests, where they are evaluated as the best of all the countries.

The worst evaluations were the ones given for school equipment. Lithuania especially has problems with the lack of equipment in classrooms, where they need more communication and informatics equipment. They also lack equipment in gyms, libraries and laboratories. It is interesting that a similar evaluation was given for these parameters in France. This shows an important dilemma in this area – the question of what quality actually stands for. Even though standards may be set – e.g. excellent evaluation means high speed internet access – a person who hasn't had internet access at all may perceive any kind of internet access as more satisfactory than a person who already has it and wants an upgrade. Despite setting the standards for evaluations, there is no way to avoid subjective judgement. The only low evaluation Finland was given was for the equipping of its gyms. Considering that the other evaluations are much higher, Finnish schools still rank among the best in this research.

An analysis of the quality of capital and human resources (Figure 6) shows that schools in France and Lithuania were evaluated slightly better when it came to human resources. In France they were even ranked as very good. Finland ranks highest when both types of resources are summed up, however, Germany was evaluated as the best in terms of human resources. Within the specific parameter of human resources, the competence of the teachers in all the countries was evaluated as one of the best parts of the whole decision making model. Motivation and effectiveness are also at very high levels. The inappropriate furnishing of schools therefore no longer affects teacher motivation.

5.3 Areas with the Best Results

Within the structure of the decision making model there were a few parameters that were evaluated as very good in all of the countries. The competences of teachers and the excellent pupil results have already been mentioned. The highest evaluations within the parameters, though, were given for extracurricular activities. All schools organise a wide range of extracurricular activities, allowing pupils to find undiscovered talents in various walks of life. At first glance these activities do not seem to be so important for the educational program, but they give children the
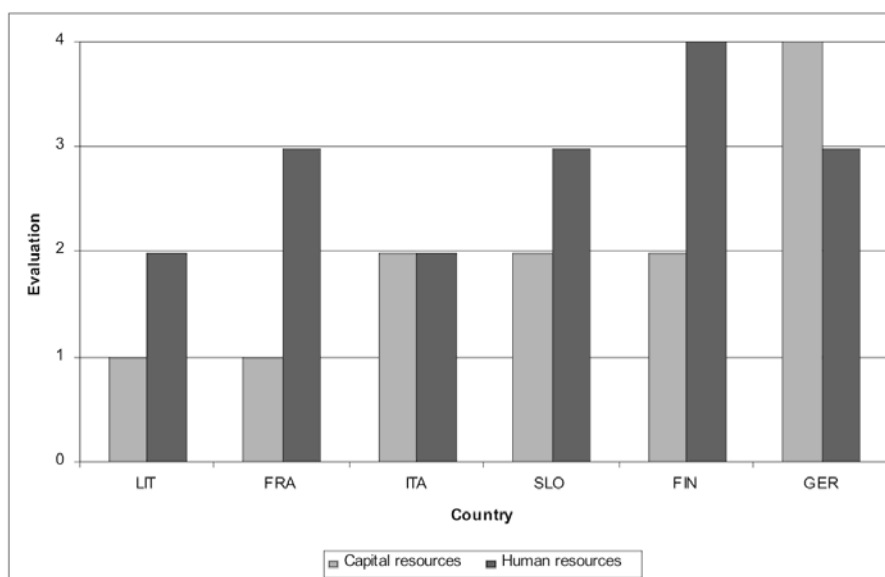

Figure 6: The Comparison Between Capital and Human Resources
Note: 1- not good enough, 2 – good enough, 3- very good, 4 – excellent

opportunity to find a field where they may actually achieve more than they could by mere education. The activities are also important from the social point of view, as they give children the opportunity to work in various fields and occupy their spare time, as well as facilitating socialisation and identification with others who share the same interests.

5.4 Final Results

The final evaluation is found by taking into account the evaluations of all the parameters and their weights and is presented in Figure 7. It has already been stated that France and Lithuania were evaluated as slightly worse than the others in the areas of capital resources and results. Lithuania also has problems with suitable organisation. On average the most uniform evaluations for the parameters throughout the decision making model were given in Germany. The final evaluation for Slovenia is rather encouraging, although it does show certain areas where better conditions need to be provided. Of all the six countries compared, Finland had the best results with schools there getting most parameters evaluated as excellent. The differences between some countries are considerable. The fact is that by using an expert approach, it is possible to raise the level of quality in all the countries and that constant upgrading of the existing systems is necessary, for being the best and staying the best means constant labour and accepting the new tasks that arise during development.

Our expectations that evaluations differ between countries in most elements of quality have been confirmed. The above representations show that primary schools in the countries compared were evaluated very differently. It cannot be claimed, though, that the quality of a primary school depends on the number of elements of quality that were evaluated as excellent. Obviously the final evaluation is formed not just by the number of elements of quality

evaluated as excellent, but also on what those elements are. Elements of quality have different weight. For example, a lot of excellent grades were given to Finnish schools but in terms of the total quality they do not have significant weight. On the other hand, elements with the highest weight were evaluated as less than excellent. This results in a total grade of only "very good".

6   Conclusion

This research presents foundations for progressive thinking in Slovene schools and for the introduction of total quality management into their functioning. While the formation of key elements of quality in the functioning of schools is presented on the one hand, along with setting their weights (self-assessment model), on the other the article also tries to form an opinion and a belief that organisations can build and improve their quality on the basis of such research. The ways to do this are through self-assessment and the process of constant improvement. Transferring an understanding of TQM ideas and the functioning of organisations from the private into the public sector will allow focusing upon key elements that influence business excellence and, consequentially, achieving a high level of social success and prosperity.

The research is pointing in the direction of strategic thinking in Slovenian primary schools. It represents an analysis of achieving quality functioning in Slovenian primary schools and an indirect comparison with the primary schools in five other European countries. The aim of the research was to develop a model of self-assessment for primary schools that is also useful for analysing processes, facilitating the identification and solving of problems, better internal communication, benchmarking and better strategic planning. The model developed was also linked to the multi-attribute decision making tool DEXi, which
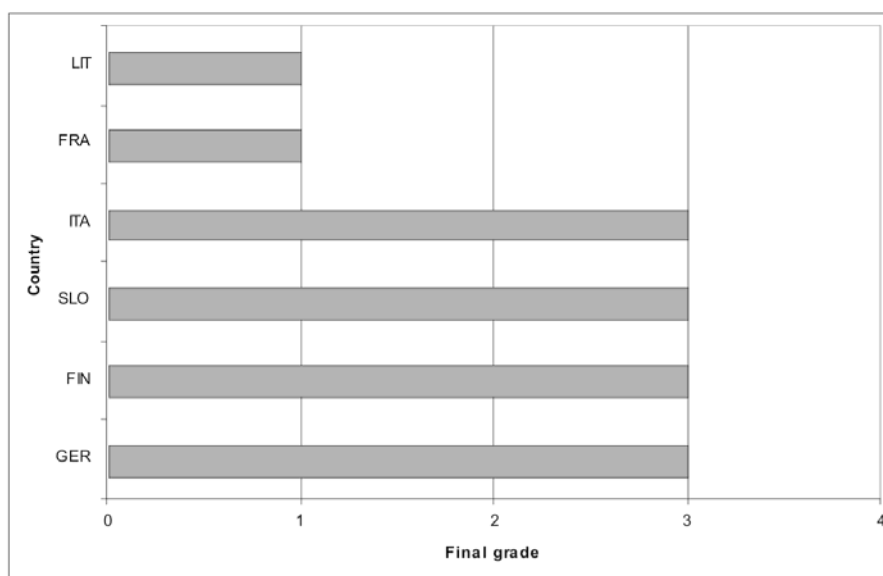

Figure 7: The Comparison of Final Grades among Countries
Note: 1- not good enough, 2 – good enough, 3- very good, 4 – excellent

helped us achieve certain important results that may be a foundation for further strategy forming.

In the future, of course, the model will be corrected, criticised and improved on, but in its present form it already allows for better strategic thinking and decision making in sectors and organisations similar to schools, where management was unknown until recently, but is necessary today for the development of quality, which is the basis for giving individuals internationally competitive knowledge.

References

Amos, A. & Keely, S. (2003). Quality's positive outcomes in education. *AQS's Annual Quality Congress Proceedings,* **57**: 107-110.

Barro, R.J. (2001). Human Capital and Growth. *The American Economic Review*, **91**(2): 12-17.

Beresford, J. (2000). Student Perspectives on School Improvement. *British Educational Research Association Conference*. London 4-7 sept. 2000. Cardiff: Cardiff University.

Berry, G. (1998). A quality systems model for the management quality in NSW schools. *Managing Service Quality,* **8**(2): 97-110.

Bohanec, M. & Rajkovič, V. (1999). Multi-attribute decision modeling: Industrial applications of DEX. *Informatica*, **23**(3): 487-491.

Bohanec, M., Zupan, B. & Rajkovič, V. (2000). Applications of qualitative multi-attribute decision modes in health care, *International Journal of Medical Informatics,* 58-59: 191-205.

Bratsberg, B. & Terrell, D. (2002). School quality and returns to education of U.S. immigrants. *Economic Inquiry,* **40**(2): 177-199.

Camp, R. (1995). *Business Process Benchmarking*, New York: Irwin Professional Publishing.

Cervai, S., Kekäle, T. & Fabbro, B. (2004). *Reworking the School Culture Though TQM*. Proceedings of the 10th Inaugural ICPQM Conference. Miami: University of Miami.

Egol, M. (1999). Transforming Education, *Global Conference Learning for 21st Century*. Illinos: Arthur Andersen's School.

Geoff, B. (1997). Leadership and developing quality culture in schools. *The International Journal of Educational Management,* **11**(2): 57-64.

Jereb, E., Bohanec, M. & Rajkovič, V. (2003). *Računalniški program za večparametrsko odločanje*, Kranj: Moderna organizacija.

Kekäle, T., Fecikova, I. & Kitaygorodskaya, N. (2004). To make it »Total«: Quality Management over Subcultures. *Total Quality Management and Business Excellence*, **15**(8): 1093-1108.

Khan, H. (1991). Measurement and Determinants of Socioeconomic Development: A Critical Conspectus, *Social Indicators Research*, **24**(2): 153-175.

Kirchoff, J. (1996). A study of Quality Improvement and its relationship to Financial characteristics of selected Iowa public school districts, Doctoral Disertation, Iowa State University.

Pečar, Z. (2003). *Management v javnem sektorju*, Ljubljana: Fakulteta za upravo.

Pečar, Z., Cervai, S. & Kekale, T.(2006). European quality standard: the European quality standard and its use for school assessment. *QiS – Quality in school : total quality management within European schools*. Kaunas: Technologija.

Pečar, Z. & Gramc, B. (2006). Managament celovite kakovosti v šolstvu. *Vladne reforme in javni sektor ter predsedovanje Slovenije v Evropski uniji: referati*. Uredila: Setnikar – Cankar, S. Ljubljana: Fakulteta za upravo.

Pečar, Z. (2006). QiS self – assessment (S-A) tool. *QiS – Quality in school: total quality management within European schools*. Kaunas: Technologija.

Samy, M. (2003). Perceptions of effectiveness – a study of schools of Victoria, Australia. *Journal of American Academy of Business*, **3**(1/2): 392-398.

Saaty, T. (1988). *Decision Making for Leaders: The Analytical Hierarchy Process for Decisions in a Complex World*, Pittsburgh: RWS Publications.

Schein, E. (2004). *Organizational Culture and Leadership*, San Francisco, CA: Jossey-Bass.

Weick, K.E. (1976). Educational Organisations as Loosely Coupled Systems, *Administrative Science Quarterly*, **21**(1): 1-19.

Yong, J. in Wilkinson, A. (1999). The state of total quality management: A review, *International Journal of Human Resource Management*, **10**(1), 137-161.

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Boris Gramc je asistent mladi raziskovalec na Fakulteti za upravo Univerze v Ljubljani in doktorski študent na Ekonomski fakulteti v Ljubljani. Kot raziskovalec se ukvarja predvsem s področji ekonomike (javnih) podjetij, javnih in podjetniških financ ter politične ekonomije. Je avtor in soavtor raziskav in projektov tako s področja ekonomike zasebnega kot javnega sektorja.