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Advantages and Disadvantages of Portfolio through a Prism of Indexed Characteristics of Evaluation

Urša Šinkovec[1]

Abstract

When using classical method of evaluation, achieving and consideration of characteristics of measurement is pursued, more strictly than it is possible when evaluating using portfolio. The purpose of this article is to reflect on portfolios measurements characteristics through which advantages and deficiencies of portfolio are revealed.

Advantages like, consideration of individual differences, stimulation and development of motivation, higher quality and deepened knowledge, active role of the pupil, ability of solving actual problems, developing of self-criticism, good content validity etc. all strike the eyes. Despite all said we must reasonably and critically undertake the treatment of portfolio, as one of the methods of alternative assessment and also emphasize its deficiencies. Only by doing that can we contribute to a higher quality of education process.

Keywords: portfolio, alternative assessment, measurements characteristics, assessment consequences, curriculum goals

Introduction

In the processes of evaluation we strive for the greatest validity, respectively toward establishing the state of actual knowledge the pupils have. To attain the objective it is important that during the process of evaluation of the knowledge, we not only evaluate the knowledge of sheer facts, but through examination and evaluation also establish what additional abilities the pupils have, especially those that are on principle hidden to traditional forms. As long as we pursue the objective of examining an

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individual holistically, we should not satisfy ourselves with only one form of examination and evaluation, but we should strive after connection between traditional and alternative forms. We think that each of them brings a certain segment to a holistic picture of an individual; additionally, the classic forms of evaluation are very well researched in Slovenia. That is why it is sensible to examine more thoroughly the alternative forms of evaluation[2] and their positive and/or negative consequences on the educational process. This field is too extensive to be analyzed on a few pages. Therefore, in this essay we try to get an insight into advantages and disadvantages of using portfolio, examination and evaluation from a perspective of indexed characteristics of evaluation.

Traditional and/or alternative examination and evaluation

Fundamental goal of examination and evaluation is supposed to be to examine and evaluate the knowledge an individual has. Traditional examination and evaluation is lately facing a series of critics that expose some deficiencies of such a form of evaluation of knowledge and its effects on educational process.

Experts on the field of education independently discuss some deficiencies of traditional examination and evaluation of knowledge, the use of which is rooted deeply in our schools and on the other hand, the contribution of the new paradigm on the field of evaluation. Caroline Gipps (1994, in Razdevšek Pučko, 1996) determines the need for new forms of evaluation as a shift away from the culture of testing and asking questions and towards the culture of examination and valuation in various forms. With other words, it is about a shift from psychometrical perspective (paradigm) toward holistic perspective of evaluation, (Boud, 1995, in Marentič Požarnik, 2000). Mary Henning Stout (1994, in Razdevšek Pučko, 1996) while arguing for new approaches exposes the role of the pupil in the process of examination and evaluation itself. She notes that alternative methods of examination and evaluation of knowledge increase the pupil's participation in this process and she also takes into account all relevant

[2] Marentič-Požarnik and Peklaj (2002: 111, 122) also include self-evaluation, mutual evaluation, "open-book" exams, diaries of work and deliberation, evaluation of practical performance, complex project assignments and group evaluation, among alternative forms of evaluation. They also ascertain, that lately the importance of portfolio as one of the forms of qualitative examination, has been increasing,.

information regarding the child's knowledge in an authentic environment. Sentočnik (2000: 83) highlights the importance of authentic exercises that expose the educational role of examination and evaluation of knowledge. She also emphasizes that for such a change, examination and evaluation of knowledge should become and integral part of teaching and learning, if not even the most essential part of the educational process. Knowledge tests for pupils should be devised to give a clear indication of responsible work that is expected from people in the real world. If these tests wish to pursue the above-mentioned idea, they cannot only be one-time tests at the end of certain (evaluation) period, which are also equal and under equal conditions for everyone.

Rutar Ilc (2002) also adds that with written examination and evaluation (especially with objective-type tests) we often cannot capture all planned and important goals or moreover, all aspects of knowledge. With those we can examine lower cognitive levels. However, we cannot examine all elements of the various thinking processes or skills like research, communication and cooperation. In a one-time written manner, in the sense of a classical test questions of the "pen&paper" style and in closed problem situations, we also cannot examine the process of work itself, namely the work process through longer periods of time and also individual's social skills.

Finally, there is also a new doctrine of examination and evaluation of knowledge based on constructivistic theory of teaching and learning (contrary to transmissive model, which is prevalent in the classical methods of teaching) and in humanistic and cognitive theories of motivation. Alternative forms of education, which are about transition from frontal teaching into assertion, respectively increasing use of group planning of learning situations and independent work are also based in constructivistic comprehension. A desire to activate as many of the pupils' senses as possible is being pursued. Such a transformation directly influences the organization of different, respectively variegated learning situations. This results in an increased variety of learning results, which however, cannot be examined and evaluated only by written tests or classic oral exams. What is more, all these forms give the pupils a bigger chance of expressing themselves in a manner that is close to them, which is exactly why we cannot compare the pupils among each other, but only the pupil with

himself, respectively the amount of progress the pupil made during an educational process (Razdevšek Pučko, 1994: 132—134).

Because of the aforementioned weaknesses and one-sidedness of traditional evaluation, the use of alternative methods of examination and evaluation is expanding. There is a debate over more genuine, realistic and even wholesome methods, which would allow the pupil to actively participate. They help the pupil to improve his/her learning style and methods. The goal of the use of alternative method of evaluation is not to become an alternative to other methods of examination and evaluation of knowledge, but only their supplement.

Portfolio,[3] also named personal folder, is a collection of documents regarding pupils' work, respectively their projects and assignments, which is created in a certain time period, accompanied with the pupil's reflexion about his/her work or achievements and plans, for the future development is usually closely connected with prescribed standards of knowledge (Flowers et al, 2005: 83). It is a piece of evidence, which enables authentic judgment of pupil's achievements during the process of education. Portfolio is a tool for self-evaluation of pupil's own achievements as well as a tool that enables the teacher to evaluate progress and results of teaching. If portfolio does not include any deliberation, as to why specific documents are included, then it is an ordinary album, respectively a collection of

[3] There are multiple types of personal folders, which we mainly divide into two groups. In the first group, there are personal folders of **the best achievements**, respectively the products of a pupil. Folder of the best achievements does not make possible to compare between the pupil's starting and final level of development or progress. (Brown, 2002). Second group of personal folders are the **personal progress** folders, which include all of the pupil's products. First group of the personal folders can also be divided into so-called *representative folders*, which include chosen examples of the best achievements, assignments or tests, made according to beforehand known criteria for a shorter time period. These folders are designed for pupils for advancing into next year. For longer periods of time the, so-called, *archive personal folders* are made, which include the best achievements of the pupils for multiple years. In the first group, reflexion of the pupils about the chosen achievements is especially important. The so-called *working folders* belong to the second group and include pupil's work in defined stages, class and time period. Within the second group we also classify the so-called developmental personal folders, which mainly include notes, drafts, reflexions of both, pupils and teachers, and the final result. (Trškan, 2004; Trškan, 2002). Razdevšek Pučko (1996) classifies personal maps according to the nature of the products the pupils insert into them. First products are key or standard and are identical for all pupils; they are inserted into personal folder as per instruction of the teacher while others are chosen. Pupils chose the products they believe are of extraordinary quality and are a good reflection of their knowledge in a certain field.

documents. Only a certain organization and deliberation about the reasons, as to why specific documents are included makes it a portfolio. (Sentočnik, 1999; Razdevšek Pučko, 1996; Marentič Požarnik and Peklaj, 2002).

It is sensible to use portfolio only for those goal and standards, which cannot be captured with other forms of evaluation. Moreover, such a method needs to be acceptable for both the pupils and broader public. Before the teacher decides to take a new path and initiate alternative methods of teaching and evaluation in his/her classes, the pupils, their parents and the school administration need to be informed. Evaluation with portfolio needs to be thoroughly presented to all interested parties in a way to motivate the pupils, for the aforementioned method of evaluation. A teacher can only achieve the latter by presenting, on one hand, the advantages and on the other, the disadvantages of such a method of evaluation.

One of the biggest challenges of evaluation, either traditional or alternative, is exactly in limiting its negative characteristics and/or negative influences. Evaluation in school is a measurement where the knowledge of a pupil is expressed with the help of a five-level scale. Results of the survey done by Pivk (2000: 74—76) have shown that majority of the pupils prefer written examination, because they believe it is more objective (equal terms for everyone) than oral exam. We can denote evaluation as a professional judgment of one person, usually the teacher who evaluates knowledge of another person, usually the pupil. In a desire for a valid evaluation of the pupil's knowledge, the evaluation process needs to fulfil characteristics of measurement as much as possible.

Characteristics of measurement

We allow a possibility that characteristics of measurement, as are known, respectively defined by the psychometric[4] perspective, are restrictive for a

[4] Psychometric perspective has a connection point with traditional evaluation within the time component, because both take the process of evaluation as a process that follows school lessons, yet they diverge from the same time. Educometric perspective strongly emphasizes the perfection of quantitative characteristics of procedures, which were used during evaluation. Those are mainly validity, reliability and objectivity. When evaluating in such a manner, tests of selective type are used mainly because they ensure objectivity. Answers are evaluated and the evaluations are transformed into a grade according to the logic of

holistic approach to evaluation. When using classical method of evaluation, achieving and consideration of characteristics of measurement is pursued more strictly than it is possible when evaluating use of portfolio. The latter could be labeled as a "narrative account", which demands interpretation of results during the process of evaluation (Johnston, 2004). Woolfolk (2002) warns that inaccurate interpretation of results is one of the most common problems when using tests. This happens because of the belief that the numbers – grades represent an accurate measurement of the pupil's abilities. Strmčnik also draws attention to a (too)large attribution of importance to numerical grades, to which we attribute more than they can show; that is validity (accuracy, comparability and objectivity) (1992). We base from a presumption that "classic" characteristics of measurement are not enough when determining (un)successfulness of teaching, learning and evaluation that are based on using a portfolio. We try to find solutions in increasingly innovative approaches to evaluation, which allow deviation from conventional considerations.

Numerous theorists (Frederiksen & Collins, 1989; Haertel, 1991; Linn et al, 1991 in Tigelaar et al, 2005) have suggested additional methodological characteristics for ensuring, respectively, achieving quality of new methods of examination and evaluation. A question arises – how compatible are the new characteristics with those that already exist. In the essay we try to expose some aspects of improvements of characteristics of measurement (already) in effect in conjunction with demands of alternative approaches to evaluation for higher level of integrity. Also Johnston (2004) and Tigelaar et al (2005: 597) speak in favour of interpretative approach[5] as the most important when evaluating a portfolio.

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normal curve. Procedures that enable comparison between pupils are at the forefront and have a selective and diagnostic function.
In the consciousness of psychometrically oriented experts' knowledge is something that can be dismantled into small pieces and can be measured with individual tasks. Wishing the grades to be a realistic image of pupil's knowledge, the teachers aspire to fulfill the measuring characteristics of evaluation.

[5] Interpretative evaluation includes discussions among the "interpretative group" of evaluation raters. This group either already exists, if it needs to be established with the purpose of achieving reasonable process of evaluation of the portfolio. Interpretative evaluation raters start with construction of an agreement through group discussions about their private evaluation processes. Each evaluation rater is supposed to achieve his own constructive judgment through own internal process of interpretation. The evaluation rater then enters into a process of negotiation (in pairs) to establish a final result (evaluation) of the evaluation process. Discussion about standards, discussion about individual evaluation

Validity

Marenrič Požarnik writes (2000a) that validity should be noted as the most important characteristic of good evaluation process and that the process of examination and evaluation is only valid when it truly includes everything we wanted to measure and when it appropriately captures important learning contents and goals of a certain sector of the curriculum. With other words (Marentič Požarnik and Peklaj, 2002), validity of evaluation process is diminished if chapters of content are not proportional. We can compare the validity of the content by comparing the questions with the goals and the content of the subject in the curriculum (Marentič Požarnik, 2000a: 265). Capturing appropriate chapters of content is not difficult; more complicated is to capture both, "lower" as well as "higher", more demanding goals of the subject. Validity of content can also be improved by regulating questions and duties of the evaluation process according to different (Bloomovi,[6] Marzanovi, SOLO) classifications of curriculum goals (Ibid.). Because lower goals, for example, memory, can easily be objectively measured with selective type tests or short answers, there are usually (too)many[7] written, respectively, classical examinations.

According to Sentočnik (2000), basic characteristic of alternative forms of examination and evaluation is that the use of knowledge and abilities for

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of the portfolio and its updating through debate and exactness of the valuation process are fundamental characteristics of interpretative approach.

[6] Bloom's taxonomy covers three areas of learning goals: cognitive, affective and psychomotoric. Cognitive area is classified hierarchically into six categories: knowledge, understanding, use, analysis, synthesis, and evaluation. Evaluation is the most demanding among cognitive learning goals.

[7] This is also one of the reproaches to traditional evaluating process, which is pointed out by Bergant (1992) in light of unwanted influences of objective-type tests. She writes that the American school system was the initiator of introduction of such a form of knowledge evaluation, but the system faces a series of negative consequences to the process of learning and knowledge of the pupils, caused by extensive use of objective-type tests. Reproaches are aimed especially towards lowering child's functional literacy in favor of developing factographic knowledge. The consequence of the latter is complete lack, or very poor verbal skills and poor coherent writing skills of the pupils. Objective-type exams make divergent thinking of more talented pupils impossible and also foil the pupils who are "slow" or have other special characteristics. Hence, it is not a surprise that such a method of evaluation process ignores individual differences and does not demand from pupils to their newly acquired knowledge in new (real life) circumstances.

solving real problems, appropriate for their level of development, is demanded from pupils. Actually the portfolio, as a form of examination and evaluation, does not satisfy itself only with the use of knowledge but also demands independent judgment about how an individual would make use of his/her own knowledge effectively, especially in new problem situations. In this case, we are talking about authentic tasks (Rutar Ilc, 2004: 120), which have a distinction of being as close to real problem (research, professional, life) situations as possible. Knowledge, which helps the pupils with deeper understanding of phenomena and their relations, cannot be efficiently gained simply by transferring facts from a teacher to a pupil. To form such knowledge learning situations must be created as authentically as possible so the pupils can uncover and construct knowledge on their own (with help of a teacher). Of course these tasks must also be designed in accordance with learning goals, because evaluation with portfolio is aimed especially at examining learning goals of "higher" difficulty, both cognitive (use, analysis, synthesis, valuation of knowledge gained) as well as affective and psychomotoric.

Especially affective (interest, viewpoints, valuation of pupils, relation toward the subject etc.) and psychomotoric field (verbal, agility and other skills) are not part of the goals of "classic" examination and evaluation of knowledge (Trškan, 2003, selected chapters from didactics, 1992).

In an ideal situation evaluation is not primarily focused to measurement of knowledge reproduction (with conventional exams) anymore, but has rather various methods included into the process itself. Those methods measure the level of understanding of learned knowledge (with authentic exercises). In this context both, the process of learning as well as the result, need to be evaluated in (for a pupil) a relevant context. Portfolio allows the pupils to show various aspects of knowledge in a variety of ways, contrary to only one way, which could not be best for them. This way the pupils with various manners of perception, learning, expressing, cognitive and learning styles and intelligence can affirm themselves (Rutar Ilc, 2002: 23).

To ensure the validity of the portfolio, it needs to be ensured that the process of measuring in education will be based on various evidence, regarding the pupil's progress which, is continual in a certain time frame and will be done in a variety of ways. The better evidence the pupil collects, the higher is the value of the judgment of his/her progress (Sentočnik,

2004). Despite the fact that there are multiple types of portfolio, the variety of the types does not meet the criteria of validity (yet). Various types of evaluation, which appeared in the process of formation of the folder, need to be included into the process of evaluation of the personal folder: self-evaluation, peer-to-peer or mutual evaluation, notes of reflexion etc. This way the evaluation gains a wholesome (holistic) picture of individual's development, learning process, comprehension and, of course, also the level of the knowledge gained.

Recently, importance of consequential validity[8] is becoming more important. It tells us, whether a certain method of evaluation and its use lead to positive or negative consequence for teaching and learning or, more exactly, how the chosen type of evaluation influences the learning process. The better the consequences are for learning, the higher is the consequential validity. (Marentič Požarnik and Peklaj, 2002).

Consequences that the examination and evaluation process has on pupils Marentič Požarnik (2004: 10) divide into cognitive, emotional and motivational.

Cognitive consequences[9] regard the cognitive level of learning. Knowledge tests, which interweave pupils into more meaningful learning, which leads to more complex learning goals, have positive consequential validity. These goals are: learning with deeper understanding, critical judgment, linkage of facts and phenomena. (Ibid.)

[8] Consequential validity cannot be established with statistical calculations but with research on what pupils and teachers actually do – which activities they are choosing and which activities they are giving up in a given educational situation under the influence of given evaluation system (Marentič Požarnik and Peklaj, 2002).

[9] Unfortunately, the situation in Slovenia is such that more and more pupils learn for the grades and to achieve good results on external tests like matura exam. The teachers also direct the lessons towards demands of external examination, because they want their pupils to achieve the best results possible. In order to be able to comply with external examination demands, the teachers begin to abandon or decrease the amount of methods they think are detrimental to increase the test results. In this way, the pupils are usually deprived of learning through project work, experimenting, discussions, role-play, excursions (Marentič Požarnik, 2000: 266), and methods, which are an integral part of alternative method of examination and evaluation.

Examination and evaluation also have emotional consequence[10] for the pupils. Positive emotional consequences of evaluation are shown (Marentič Požarnik, 2000, 2004) as an increase of confidence into own abilities, increase of self-confidence and motivation. Meanwhile, the negative emotional consequences develop fear of failure, low self-image, sense of inability, and emotional vulnerability.

Corcoran et al (2004) are certain that enthusiasm for content of learning and increased readiness for active inclusion and participation at evaluating own knowledge and progress can be an indication of positive consequences of alternative method of evaluation.

Motivational consequences (Marentič Požarnik, 2004) of evaluation influence the pupil's enthusiasm for learning, respectively his/her relationship with learning and their viewpoints regarding knowledge. Sadly, negative consequences of evaluation occur very often during the practice of pedagogy. When learning for grades prevails and when a negative attitude towards knowledge appears, we can speak of negative consequences on the pupil's motivation. We must also stress that none of the surveys have yet confirmed a positive effect of a negative evaluation for pupil's inner motivation for learning.

Therefore, Gusky (1996 in Sentočnik, 2000) suggests that teachers should motivate the pupils for a better quality of learning by considering their work unfinished and encourage them to invest more effort with deliberated return information instead of a bad grade. Brodnik, Cigler and Karba (2001) also ascertain that traditional method of examination and evaluation of knowledge represents no challenge at all to a lot of pupils. Learning of individual subjects seems too much and makes no sense to them, which is why they are unmotivated and apathetic. Reproaches in the style of: "I

[10] According to a survey, Smith (1995 in Razdevšek Pučko, 1994) reports positive influence of the use of portfolio was traced on teaching (more systematic), process of evaluation (higher degree of attention when creating criteria for evaluation and encouraging positive approach to work with bonus points), learning (higher degree of self-awareness about pupil's own strengths and weaknesses and increase of metacognition, triggered by writing reflexion), relationship towards the new method of evaluation (pupils have shown enthusiasm for portfolio by personalizing it), and finally, the influence on the pupils was notable. Pupils have pointed out they have learned more that way and they recognized the goals set for them. Moreover, they highlighted that the learning took place in a practical context.

wonder why do I have to learn that, when all the knowledge I gain will never be useful to me and I will soon forget it anyway?" are known to us.

With portfolio we can exceed such deliberations and vastly increase motivation for the subject and quality of knowledge among the pupils. Main intent of introduction of portfolio, respectively personal folder of the pupil's achievements, is (Trškan, 2004) to increase motivation to learn, independence in learning, self-esteem and getting the pupils used to understanding the learning process.

Messick (1995 in Tigelaar et al, 2005) offers another aspect of consequential validity inside the interpretative approach to evaluation. He directs attention to intentional and unintentional, long-term and short-term consequences of evaluating the portfolio and the importance of the final evaluation for continued advancement of an individual.

Importance of evaluation is even bigger, if it represents a starting-point for making decisions about the possibilities of individual's further education. Evaluation of knowledge for a grade is one of the essential elements of the learning process, especially in systems of education, which attribute an important selective function to the grade. Therefore, a grade has an extraordinary value for both, the teacher and the pupil and also pupil's parents. In conjunction with above-mentioned the danger of subjectivity of the evaluation rater and unfairness of the grades is emphasized.

There is no need to further emphasize that, this has both, negative emotional and negative motivational consequence for pupils. That is why Frederiksen and Collins (1989 in Tigelaar et al, 2005: 600) add additional criteria to the concept of consequential validity, namely fairness, meaningfulness and transparency of the grade.

Criterion of objectivity announces that the consequences of evaluation are equal for all and there is no friendly disposition of the evaluation rater towards any particular group or individual. Criterion of importance presents itself as a pupil's perception of the (test) assignments making sense to them.

Criterion of clarity emphasizes importance of pupil's awareness about what is expected from them - which learning goals they should achieve. It means

that pupils are supposed to be informed, not only regarding which knowledge and skill will be assessed, but also according to which criteria will their knowledge be judged and they can still do something to improve their knowledge (Ibid.).

Results of evaluation are not only grades, but also return information[11] regarding the pupil and his/her work, which are extraordinarily important for his/her learning process and further success at his/her work. They tell the pupil, which parts of subject he/she has already mastered and/or which he/she has not – yet. In the latter instance the teacher gives the pupil information, on how he/she should undertake the matter, in order to improve it, respectively what he/she needs to learn. Only in this case we can label the return information as reasonable and important for further learning. They also make possible a shift towards higher quality of knowledge examination (Jakara, 2000: 97).

Razdevšek Pučko (1992: 28—33) also writes about the criterion of clarity when she speaks about pedagogical and psychological principles and legalities, which the teachers are supposed to consider within the process of evaluation. Criterion of clarity is, according to her opinion, directly connected with professional qualifications of teachers, because it is expected from them to graphically explain to pupils what they consider when formulating an evaluation. Teacher avoids misunderstandings and feelings of injustice of individual pupils in this way. Evaluation of knowledge is fair when adapting to differences between pupils, respectively bearing in mind their equal status. Formulation of criteria is also a headword for explanation of evaluation and foundation for formulation of return information, which is passed to the pupil as an opinion about his/her knowledge.

Formulation of criteria and principles bound teachers to be more consistent at examination and evaluation of knowledge. Teacher can deliberately avoid some subjective mistakes of evaluation in this way. Evaluation of

[11] Results of examination and evaluation of knowledge are important return information for the teacher also. They help the teacher to establish successfulness of every individual pupil and class as a whole as well. Teacher receives an insight into how good he/she introduced, respectively taught a certain subject and how good has he/she led, respectively, done certain teaching method. Results of an evaluation show which more demanding parts of subject were presented badly and where the explanation was incomprehensible.

portfolio demands careful judgment on the side of the teacher and clear communication with pupils regarding when something is good and what still needs improving.

Beside content and consequential validity, we also know prognostic validity. The better we can predict success in further schooling based on current results, the higher is the prognostic validity. High prognostic validity is expected at knowledge tests, which are decisive regarding an individual getting accepted into certain school or not. We have such tests in Slovenia, which are taken after completion of basic and secondary school. We express the prognostic validity in a shape of correlation ratio – measure of connection between grades and criteria (Marentič Požarnik and Peklaj, 2002).

Pupil's portfolio represents a collection of documents of work, which the pupil gathered through a certain time period and is accompanied with reflexion. As a result, different procedures of evaluation are supposed to be used in evaluating portfolio and that information is supposed to be gathered during an extended period of time, with intent to get an integrated picture regarding pupil's knowledge and skills. Portfolio can be, with its time expansion, used for longitudinal evaluation of learning process and learning results. With a full picture of pupil's "condition" the portfolio can assure valid method of evaluation, because it includes longitudinal evidence from various areas. Unfortunately there are not many researches, which would prove prognostic validity of portfolio; mainly because such types of evaluation are still only asserting themselves on the field of educational.

As already mentioned, prognostic validity with use of portfolio can be achieved, with longitudinal evaluation of individual with authentic type examinations. The latter is even more important, because prognostic validity should deal with the question whether an individual would be successful in his/her own profession or schooling. How can paper-pencil form of evaluation predict successfulness of individual at further schooling or chosen profession, if it is not based upon real life – sensible tasks, problems and responsibilities, with which an individual will be meeting in the future and will be the base for measuring, respectively determining his/her successfulness? In other words, if a teacher wants to find and predict successfulness of a pupil at writing, e.g. business plan, then the

teacher should not be asking questions about how the plan is made, but let the pupil write it.

We can finish the debate regarding validity as one of most important measuring characteristics, with a warning by Harlen (1993: 383 in Porenta, 1995) who thinks that no evaluation can be used with certainty for predicting a future for an individual. It is best to treat them hypothetically, as a temporary finding, which is constantly supplemented and upgraded with further data regarding child's successfulness.

Reliability

Reliability is a characteristic, closely related to validity. Some also name it accuracy. Accuracy, respectively stability of evaluation, tells how carefully we measured certain characteristics. It is a question about, whether we would get similar results at repeated measuring (evaluation of knowledge) of the same amount (of knowledge), given the knowledge during this time did not change.

No measurement, let it be physical or pedagogical, is not completely reliable and at every measuring error happens, big or small, however the error should be as small as possible. Simplest method of evaluating reliability would be multiple sequential measurements and comparing of results, which is not feasible when examining knowledge (Marentič Požarnik and Peklaj, 2002). In the practice of pedagogy this would mean that grades would be reliable, if the same teacher would give equal evaluation to the same written or oral answers at repeated evaluation. This is hardly possible, especially at oral exams (Marentič Požarnik, 2000a: 267). The other method is comparing results, acquired at two equivalent tests of knowledge.

At this point, one question occurs: how can we reduce the error in order for the result to be as close approximation of a real achievement as possible? Reliability can be increased with a larger number of questions and also with more precise questions and more defined scale of evaluation – criteria (Marentič Požarnik, 2000: 6; Marentič Požarnik and Peklaj, 2002: 38—39). If we have too few questions, there is a greater possibility that the pupil will accidentally only come across areas of good or bad knowledge. The bigger the amount of questions, the smaller is the likelihood of this happening.

When it is about higher cognitive goals (independent planning of a certain procedure with practical use of principles learned), then one enough complex question, which captures individual knowledge, the ability of integration and use of that knowledge, is satisfactory (Marentič Požarnik and Peklaj, 2002: 39). Inconsistency of an individual evaluation rater is the greatest threat to reliability, which is why it is useful, if evaluation rater sometimes checks reliability of him/herself by evaluating the same products again after a certain time period and compares results of the first evaluation with results of the second evaluation. Reliability will be greater, if questions are clear and uniform and if he/she has carefully defined criteria of assessment (Ibid.).

Moreover, we also must draw attention to the fact that every system of evaluation will be as good as the competence of the teachers will be. Namely the teachers are those that are guiding the process of learning. That is why it is important that teachers not only introduce alternative aspects, but must also have examples and stimulations, which they gradually begin to use, because only successful use will convince them into reasonableness of additional work, which initiating all the novelty, including portfolio, brings (Razdevšek Pučko, 1996). Exactly the implementation of portfolio with classical method of teaching is the key problem the teachers are facing. With other words, teachers are uncertain regarding the manner of merging qualitative evaluation process with daily pedagogic routine (Corcoran, 2004). We can determine that incessant enrichment of teacher's knowledge and skills regarding planning, realization and of use of portfolio are seen as one of the forms of alternative method of evaluation, as well as one of the key elements to assure its better credibility.

Objectivity

Evaluation is always subjective, because it depends upon the teacher who defines certain knowledge or skill. School assessment can be a problem, since the teachers have a definite scale – a scale of five grades and units are different, intervals between one and the other grade differ from one evaluation rater to another (Porenta, 1995: 149).

We characterize measuring, respectively evaluation as objective, when the results we get are dependant upon measured characteristic (amount and quality of knowledge), and not by any other characteristic, like those of an

evaluation rater, the person under evaluation or those of situation, in which the evaluation process is taking place. This way school evaluation would only be objective[12] if the evaluation depends only on pupil's knowledge and not on his properties, teaching aids or characteristics (Marentič Požarnik, 2000; 2000a: 267).

When examining and evaluating knowledge with an intention of finding pupil's actual knowledge, it is necessary to precisely define goals of learning and standards of knowledge in advance. What exactly must the pupil know at the end of evaluation period or at the end of the theme needs to be defined. Learning goals should be set up clearly and everyone taking part in the process of examination and evaluation must be thoroughly informed. Solid, uniform and valid measures, respectively criteria[13] for achieving learning goals contribute to objective and quality evaluation.

Suitability and accuracy of the criteria can adopt two important functions. They can appear in a diagnostic function where findings about what else must the pupil still learn and how quickly he/she makes progress at learning are based upon. Carefully formed measures can also assume the motivational function for learning. Objectivity and with this quality of examination and evaluation of knowledge are also dependent on procedures, respectively the method of evaluation, used to check individual's knowledge and skills. The method is a path for examination and evaluation. We must choose a method which best shows pupil's knowledge in given circumstances. For a more objective evaluation and a better

[12] Objectivity is a problem with every evaluation. Marentič Požarnik and Peklaj (2002) see two reasons why evaluation cannot be completely objective. People are not precise measuring instruments (we cannot be a match for carefully moderated accessories for measurement, used in natural science) and the evaluation situation is always also a social situation (especially at oral exams). Objectivity is especially problematic when evaluating complex products, when teacher enters as specialist with formed opinion, are the characteristic for good product or knowledge. (Ibid.).

[13] Criteria of evaluation are connected with learning goals of individual subject and with learning goals of the personal folder. However, analog criteria, valid at different subjects, can be chosen for evaluating the personal folder. It is useful, if the teacher first shows some good and some not so good examples, makes a list of possible criteria for evaluation and also include the pupils into this selection. General standards for evaluation of personal folder refer to diversity of products, organization, respectively order of things (introductory part, table of contents, dates of products), communication (clear presentation of ideas), proof of understanding and self-evaluation (evidence regarding realistic and creative self-evaluation), progress, and learning experience (achieving of set learning goals, diversity and absorption into reflexion, diversity of peer forms) (Tršak, 2002, 2004).

realization of pupil's knowledge and skills it is reasonable to combine multiple different methods.

We are checking objectivity by giving the same product to be evaluated by different evaluation raters and compare their evaluations – we calculate correlations. Final evaluation is the average of evaluations of all evaluation raters (Marentič Požarnik, 2000a: 267). Objectivity of examination and evaluation is not increasing only because of larger number of evaluation raters, but because of their different points of view on examination and evaluation (Jakara, 2000). Subjective impacts[14] can be reduced under condition that all evaluation raters have very clear understanding of criteria. Evaluation raters, respectively teachers, are often not aware of presence of subjective mistakes in their evaluation process. That is why acquainting the teachers with possible subjective mistakes in the evaluation process contributes to improvement of objectivity of evaluation and mechanisms of their activity (Marentič Požarnik and Peklaj, 2002: 34—35).

Bearing in mind measuring characteristics of evaluations and by realizing the possibility of phenomenon of subjective mistakes teacher approaches to evaluation the pupils define as "fair". With such method of work they gain trust and respect from pupils at the same time.

Involvement in authentic method of examination and evaluation led to change in the process of assessment itself. Portfolio often includes work, which is still ongoing, amended work, pupil's self-analysis and reflexion regarding what the pupil learned (Woolfolk, 2002: 516—517), which is why it is hard to achieve a consensus regarding pupil's achievements. Analysis of Vermont programme of assessment with personal folders from year 1992 is also pointing this out (Woolfolk, 2002: 499, 521) that it was recognized that the evaluation raters when evaluating one portfolio gave it different evaluations, which shows that objectivity can be inadequate. Therefore, a doubt appears whether the evaluation conceived, based on portfolio, can be objective. Much was already written regarding the problematic and complexity of alternative method of evaluation, however little (research) attention was given to the process of evaluation itself, with intention of improvement of objectivity and quality of evaluation process.

[14]Subjective influences, which reduce objectivity at evaluation, are: halo effect, effect of contrast, logic error, first impression, stereotypes and prejudices, personal equation, mistake of median and extreme values, length of answer, adapting to sample, respectively to class.

Baume, Yorke and Coffey (2004) made a research in order to gain a deeper insight into the process of portfolio assessment. The research was devoted to a question about why and how the evaluation raters evaluate the portfolio. That is supposed to shed some light on the problem of objectivity when evaluating portfolio. They asked ten evaluation raters to individually evaluate two already evaluated portfolios. Every evaluation rater was asked to critically evaluate the portfolios and was properly trained for such a method of evaluation. Essential differences appeared between evaluations of portfolio awarded by the so-called experimental evaluation raters and preliminary evaluation of portfolio.

Baume, Yorke and Coffey (2004: 469) searched for the reasons for differences in evaluations in time determinant, where experimental evaluation raters had considerably more time for evaluation of (only two) portfolios and writing commentaries, respectively explanations of evaluations considering individual criteria. In an experimental effect the evaluation raters were introduced to the fact that their evaluation would not have any consequences for further education of candidates - evaluation was not in function of selection, but in the possibility for evaluation raters to explain their judgment when determining an evaluation.

In the research (Ibid.) it was established that during the process of evaluation following occured:

- problems already in the criteria, referring to technical items (number of permitted words, CV of individual),
- consideration of evaluation raters regarding intermediate points, although there is chart from 4 to 5 points for individual criterion,
- readiness of evaluation raters to articulate reasons for their own decision regarding evaluation; however they do it in a myriad of different manners and according to those explanations, it is possible to understand additional criteria for evaluation, of which possibility influences the evaluation (it normally lowers it),
- phenomenon when complex and seemingly precise evaluation procedures leave a sense of uncertainty and disagreement between those that use them,

- two basic problems of evaluation of portfolio: firstly, evaluation raters (do not) understand instructions and criteria for evaluation and secondly, evaluation raters (do not)agree with them.

Exactly the possibility of evaluation raters to explain their decision (evaluation) improves the objectivity on assessment of portfolio according to Baume, Yorke and Coffey (2004: 472). Brown (2002) adds that objectivity of measurement is higher, if it is evident that the content of portfolio achieves learning goals of curriculum or prescribed standards of knowledge. Objectivity of assessment is also higher when there is a consensus regarding criteria of assessment between evaluation raters evaluating the portfolio. The latter can be, according to conviction of Brown (2002), achieved with planned and continual professional improvement of (future) teachers.

Pupils have considerable freedom of choice of products they file to formulate their personal folder. This is what makes every portfolio a unique personal document.

What is more, information enclosed in the portfolio is often not standardized and qualitative, not even sourcing from various learning contexts, which is why clarity and objectivity of portfolio evaluation are hard to achieve. Previously-mentioned study of Baume et al. (2004) can contribute to formulation of easily understandable evaluation criteria; nevertheless, it is impossible to set universal evaluation criteria.

Sensitivity

In the case of sensitivity it is about determining to what extent can we capture and express variations in knowledge with evaluation. Partly, the sensitivity is defined with a scale (Marentič Požarnik and Peklaj, 2002: 39). A five-level scale, which is in use in our elementary and secondary schools, is too tight for some teachers. Therefore, they also give intermediate grades, while others do not utilize all levels. Sensitivity depends upon length of test and above all, it depends upon its difficulty.

We can balance sensitivity with a careful and optimal selection of tasks, if we include majority of tasks of normal difficulty into the knowledge tests and if we avoid tasks with a low degree of discrimination – separability

(Marentič Požarnik, 2000a: 268). More complexed tasks of evaluation accurately differ between successful and unsuccessful pupils. It is right on the contrary at easy tasks of evaluation, where differences between the best disappear and teacher can establish which pupils achieved minimal standards. Care for highest degree of objectivity of evaluation originates from the aspiration to establish differences between pupils more precisely, yet we are not primarily interested if, and in what extent they achieved set goals (Marentič Požarnik and Peklaj, 2002: 40).

Economy

Economic procedures of assessment are those, which give the best quality of results with regard to proper use of time and energy. When using this characteristic of measurement we must consider the time the pupils need for answering the question and time the teacher needs for preparation, realization and evaluation of results (Marentič Požarnik, 2000a: 268—269).

A research with intention to discover the teacher's perception regarding alternative evaluation, done by Flowers et al. (2005) on a sample of 983 teachers from five different states of the United States of America, emphasized that portfolio, as a method of knowledge evaluation, demands a lot of teacher's (also private) time for preparation and evaluation and also requires a lot of administrative work. Teachers taking part in the research also emphasized that portfolio is not only demanding a lot of time for preparation and successful realization from themselves, but also from the pupils. Essential deficiency of portfolio is its massive time consumption (Razdevšek Pučko, Rutar Ilc, Sentočnik, 2002; Tigelaar et al, 2005). Consequentially, the economy as a characteristic of measurement is less assured. Objective-type tests take a lot of time to prepare but less for realization and evaluation.

Instead of conclusion

Many scholars are attributing numerous positive characteristics to alternative examination and evaluation process that influences the entire education process. Such conviction could easily get us sidetracked, because they convincingly introduce advantages of "new culture" of examination and evaluation. Advantages like consideration of individual differences, stimulation and development of inner motivation, higher quality

and deepened knowledge, active role of the pupil, ability of solving actual problems of life, developing of self-criticism, good content validity etc. all strike the eyes. Notwithstanding the above-mentioned, we must reasonably and critically undertake the treatment of portfolio as one of the methods of alternative evaluation and also emphasize its deficiencies. Only by contributing to a higher quality of execution of the entire education process will upgrade the education system itself.

Advantages of portfolio

Portfolio as a supplementary method to traditional method of evaluation is reasonable because of a changed, more active role of the pupil at examination and evaluation of knowledge. New didactic trends are emphasizing increased activity and inclusion of pupils into evaluation process. Above all, cognitive psychologists emphasized the importance of such activity at which a pupil alone, and with a thought-out teacher's support is discovering, analyzing and connecting, comes to own realizations, respectively he/she composes them in the process of researching. (Rutar Ilc, 2002: 10—11). Consequentially, the portfolio is a method of examination and evaluation of knowledge where there is no place for simple verbal reproduction or even learning by heart without understanding. The product or the execution is a true expression of pupil's knowledge.

Some would want to abolish the evaluation with portfolio due to its deficiencies, but it is actually more about perfecting it or organizing it in a way for the positive effects to prevail over negative (Marentič Požarnik, 2000a). One of the advantages of portfolio is its good consequential validity. However, we cannot imagine a gaze towards positive impacts without thorough preliminary preparation of teachers and pupils. Within this preliminary preparation it is crucial that the teachers introduce both positive as well as negative effects to pupils and are supposed to activate their motivation, respectively their readiness for work, especially, if pupils are challenged intellectually. This way work is not a burden. However, the learning process, its goals, instructions and anticipations must be conceived clearly. If these conditions are met, no "short circuit" should appear between teachers and pupils. Pupils undertake their work with larger enthusiasm, which increases their independence. This again

influences good class climate, which is necessary for a stimulating working atmosphere, which mirrors itself in relaxed and pleasant feeling of pupils.

Primary nature of evaluation in school is a pedagogical measure, with which the teacher leads the pupil towards a certain global educational goal. Evaluation as a teaching measure has a steering effect and works as a measure of incentive (Jurman, 1989: 63). The teacher can only achieve motivational value with evaluation, if he/she knows pupil's personality well and can therefore foresee pupil's reactions. Evaluation has motivational value in an instance, when pupil's achievements are noticed, considered and acknowledged. Motivational value of evaluation also increases, if the pupil is acquainted with goals, criteria and paths to knowledge (Karba, 2000: 6). We can designate the portfolio as a method that stimulates motivation, because when the teacher is evaluating pupil's personal folder, he/she shows his/her respect for the pupil's diverse work, respectively interest, which has a motivational effect on the pupil. As long as portfolio is executed during a longer period of time, it reduces pressure on pupils as a rule. Frequent evaluation pressure can result in a development of conforming type of motivation of pupils. This means that pupils, who develop this type of motivation, work with as minimum effort as possible and are at the same time dependent, because they accept goals, which the teachers or parents set for them.

One of the advantages of portfolio is certainly adapting itself more to child's individual particularities and what is more, enables weak pupils and pupils with less verbal skills to show themselves in a different, for them more suitable manner. Examination and evaluation of knowledge is supposed be an opportunity for pupils to get return information regarding their progress and regarding their future work in order be as successful as they can be within the limits of their own abilities.

According to conviction of Lazeara (1994: 166 in Sentočnik; 1999: 17) and his backers, entire evaluation of knowledge is based on a false assumption that not every pupil can be successful in school (we cannot expect them to be). This assumption manifests itself at most at standardized tests of knowledge, when knowledge is (usually) evaluated according "to the logic of a bell curve" or normatively oriented evaluation. With such method of distribution of achievements of pupils an attempt is made to, above all, establish differences between pupils with intention of ranking and perhaps

even selection. Aforementioned model of examination and evaluation of knowledge transforms individual's result into an evaluation considering (in principle) a five-grade chart, which presumes that majority of pupils are supposed to be average, some of them must too be unsuccessful and only rare can indeed be really successful.

According to experts, we get more reliable data regarding how the process of learning, knowing and understandings of pupils really works, if we look at them as a curve in shape of the letter J. Such manner of looking at acquiring knowledge supposes that all pupils can be successful and that they are starting every process of learning with certain knowledge, which can only grow (Sentočnik, 1999: 17). Establishing which pupils achieved set goals and standards of knowledge is the main intention. That is why we do not compare the pupils among themselves, but we compare their knowledge to set criteria and establish evaluation on the base of these findings (Marentič Požarnik and Peklaj, 2002). We speak about criteria-oriented evaluation[15]. Because the achievements of individual pupils in the process are not judged in comparison to achievements of other pupils, but it is about oversight of individual development in comparison to standards of knowledge, known to everyone in advance, cooperation and mutual support develop instead of competition (Sentočnik, 2000: 84). Furthermore, such method of evaluation is enabling the teacher to gain multidimensional information regarding knowledge of pupils and also considers some dimensions of knowledge that other methods (above all written) do not achieve. That is why we can attribute assuring of *content validity* as one of portfolio's key advantages, because we are evaluating individual's knowledge of facts as well as his/her understanding, use and also his/her ability of analyzing, synthesizing and evaluating of acquired knowledge.

When examining and evaluating knowledge with alternative tests "finding" pupil's cognitive knowledge is not a top priority only, but his affective areas, psychomotoric abilities and metacognitive knowledge can also be examined. The latter includes declarative (information), procedural (to know how to do a task) and conditional (to know when and which procedures to

[15] At criteria-oriented evaluation we compare the results with given criterion or standard of successfulness and not with results of other pupils. It is not important what the pupil's results are in comparison to results of others. Criteria-oriented evaluation measures performance at achieving very specific goals and its results are supposed to tell the teacher what exactly the pupil can and cannot do (Woolfolk, 2002: 476).

use at certain task) knowledge (Rutar Ilc and Žagar, 2002: 13 in Trškan, 2003: 96).

Deficiencies of portfolio

We have not yet (in whole) succeeded to bridge the passage, that happened with arrival of alternative method teaching into the Slovene school system, because only rare exceptions are pursuing such method of work. Reasons for such state of affairs on the field of alternative approach can be found in its massive time consumption and self-sacrifice that such a method of work demands from a teacher. It is expected from a teacher that he/she will accurately and carefully evaluate the portfolio of every individual pupil and then consult another teacher regarding his evaluation and final evaluation. If their evaluations of portfolio would show (too)large discrepancy, a third, impartial teacher would be appointed. This way larger objectivity would be assured, because it emphasizes itself as a problem at evaluation of knowledge and skills, which the pupil shows with products, filled in portfolio.

Unfortunately the reality is slightly different. Even in an individual school it would be hard to find three teachers teaching the same subject and could, or would be willing to take part in evaluation of portfolio. Such readiness would mean increased scope of work, respectively the number of pupils, whose progress needs evaluation, would increase per every teacher. Furthermore, the teachers are already emphasizing the problem of overload with learning plans and successful following of incessant changes. That is why it would be quite optimistic from us to expect that teachers would, beside their daily work, be ready to devote their own (free) time to quality initiation and use of portfolio as a supplementary form of evaluation. On the other hand the invested effort pays off to the teacher, because he/she changes pupils from “good” listeners, afraid to ask anything, into the centre of attention.

It is reasonable to search for solutions in contiguous education of teachers. In today’s increasingly indirectly led lessons the teacher needs broader and more thorough intelligence, which must not only be deepened and expanded, but the teacher should also supplement knowledge from pedagogic and didactic subjects. In all views it is most important, that the teacher is innovative, creative and critical intellectual at his/her work.

Teacher must be capable to outgrow traditional didactic concepts and strategies with contemporary didactic decisions and activities. That is exactly why it is necessary to educate and qualify the teacher as an expert with an insight into various theories and concepts of contemporary teaching thought (Strmčnik, 2003, in Blažič et al., 2003: 93). That is why teacher's first contact with portfolio should be made with the help of education, but we must be aware that primary lever for the decision itself, for the use, lies in their inner wish for better method of teaching and better knowledge of pupils.

Core of assessment with portfolio is not in the amount and reproduction of knowledge by pupils, but in demonstration of abilities and skills they gained. We must be mindful at the goal of assessment, which puts originality, criticism, development of creative opinion and attitude towards research of the pupil in foreground. That could be dangerous because of complexity that portfolio captures and with this evaluates components, which do not fit in with knowledge from the field as it is defined. In this instance there is also a question of validity.

We must be aware of imminent fact that portfolio can not to give birth to a success, if only individual teachers are undertaking it, but perhaps only once in a while, in order to variegate standard method of examination and evaluation of knowledge a bit. It is a fact that alternative methods of examination and evaluation demand new comprehension of entire education process. Such practice has future only in case, if it becomes a part of school culture and is present in everyday life, in class as well as in school.

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