

Implementing Assessment Methods in Primary State Schools

Nikola Jagrović
Matija Gubec International School

Abstract

The aim of the research was to compare the assessment methods of state schools and those of some alternative schools and examine the opinions and estimates of teachers on the possibility and need to implement assessment methods from some alternative schools into state schools. The purpose of the paper is to enhance existing assessment methods in state schools. The longitudinal research was carried out in five alternative schools and in state schools in the city of Zagreb. Triangulation methodology was applied. Seventeen participants were included in the qualitative phase of the research carried out in 2011 while the sample in the quantitative phase of the research in 2018 comprised 159 participants. The first phase collected data using the case study and interview, while a questionnaire – Assessment models and methods – was developed for the second phase. The research did not show significant differences in opinions between teachers regarding the same assessment methods seven years later. The results show that teachers in alternative schools give a more positive estimate of the possibility and need for implementation. The existing manner of assessment and evaluation in state schools should be modernized with alternative methods such as the yearly report, portfolio and Montessori materials.

Keywords: *alternative schools; assessment and evaluation; primary education, specific assessment methods; state schools.*

Introduction

Assessment and evaluation of student achievement is an important segment of each school curriculum, as it marks the initial and final part of the learning and teaching process. It also marks the process itself. Considering that the long-awaited curriculum reform in Croatia resembles the search for the “Holy Grail”, it seems justifiable to analyse the tried and tested assessment methods which have existed in alternative schools throughout the world for well over 100 years. Each curriculum reform should

imply an assessment reform. The weakness and shortcomings of numerical grading, teacher subjectivity, reorganization of the primary school, etc. have been detected by professionals in education for a number of years (see Grgin 1994; Furlan, 1970; Ivanek, 1998; Jurman, 1989; Kapac, 2008; Matijević, 2002, 2004; Mrkonjić, 1992; Munjiza, 2000; Rhine & Smith, 2001; Razdevšek-Pučko, 1994; Strahinić, 2012; Stiggins, 1998; Strugar, 2002; Vrgoč, 2002). The situation is such that the following statements still hold ground "...even marked improvements of the educational process, teaching in particular, have not been adequately followed by improvements of its assessment and evaluation" (Vrgoč & Mužić, 1999, p. 564).

Assessment methods in state schools, for the majority part, depend on the tradition of an educational system established under the influence of dominant models of surrounding countries. State schools follow educational policies and standards, while assessment methods of alternative schools are in line with the aims and the educational philosophy of their founders. Both state and alternative schools, however, need to meet the required annual teaching hours, the number of obligatory subjects, teaching load and achievements, assessment solutions, and their approaches differ. For reaching the set educational aims, each alternative school has a specific teaching-assessment view of the teaching process (see Helmich & Teigeler, 1995; Matijević, 2001; Seitz & Hallwachs, 1997). Because of the absence of the possibility of continuing education in line with particular alternative concepts, such schools must adjust their documents on student achievement with the state model and in that way enable students to move up on the educational ladder. That frequently presents a problem as it is in contradiction with the educational philosophy of the school.

It is worth mentioning here that the number of schools with alternative teaching concepts is still rather small in Croatia. Parents' and teachers' awareness of such concepts is also very weak (Rajić, 2008).

Because of the above-mentioned reasons, assessment methods in primary education were researched in the: Waldorf school (see Carlgren, 1990; Steiner, 1995), the "Baroness Dédé Vranyczany" Montessori school (see Buczynski, 2007; Montessori, 1964; Lillard, 1972), schools (teachers) working according to the teaching concept of Célestin Freinet (the "Harmonie" European school in Eitorf, Germany) (see Baillet, 1989; Koitka 1972), the "Matija Gubec" International primary school, the "Lauder – Hugo Kon" private school, and in a Croatian public school.

Although the mentioned schools have differing philosophical foundations, these alternative schools have similar educational aims. Some of the common teaching constituents are *focus on the student* and respect of the *pedagogy of success for all* paradigm. In this paper, the subject studied covers assessment methods of alternative schools which are not exclusively focused on the summative but include the formative dimension of evaluation. Such methods support, in a subtler way, the assessment of students' progress, and possibly positively affect teacher's objectivity. It is important for teachers in primary education to discover a child's strengths and help its affirmation in the area (Herzog, 2016). What is more, these methods support the self-evaluation

approach (McMillan & Hearn, 2008), encourage intrinsic motivation, i.e. they involve students, and some of them involve the parents in the evaluation process (e.g. learning agreements, see Matijević, 2011). In that way, the number of possible conflict situations due to numerical grades can be reduced while cooperation and incentive for success are encouraged.

In this research, we will focus on the issue of assessment methods in primary education with an emphasis on the possibility and need to implement in public schools the assessment methods applied in alternative schools. As school systems evolve over time to meet the various needs of contemporary society, the broader spectrum of methods which encourage innovativeness in the teaching practice can become relevant.

Methods

The nature of the research problem stipulated the selection of methods and research outline. The triangulation method was used, i.e. triangulation “between-methods” (Denzin, 1970). The research is *longitudinal* (see Cohen et al., 2007), with data having been collected from the same group, using the same questions, seven years later (2011/2018). This combined outline follows the design of the *two-phase research* approach, where qualitative research is carried out separately from quantitative research and the results are presented in the same manner (Creswell & Plano Clark, 2007; Creswell, 2009; Halmi, 2005). The synthesis of data of the two approaches is used in the interpretation of results (Mužić, 1979).

The results of the *qualitative research phase* (first phase) are presented first. They are based on inductive logic, comparative method, and case study. The results of the *quantitative research phase* (second phase) are presented second. They are based on deductive logic and sample method. For the purpose of better understanding the results, a comparative method was used with the aim of monitoring the *evolution, stagnation or regression of occurrences* (see Šešić, 1982) which is suitable for this type of research. The method used can also be referred to as the comparative-historical method as it compares occurrences with a longitudinal approach (Zvonarević, 1978).

The problem was to compare similarities, differences and relationships of assessment solutions and answer the question: “What specific assessment methods used in alternative schools could be applied in state schools?”. In the quantitative research phase, the problem was expanded to examining the *possibilities and needs* of implementing selected assessment methods.

The research aim was to study the logic and philosophy of assessment methods in various pedagogical concepts and examine the opinions and evaluations of primary education teachers on the possibility and need for implementing some assessment methods used in alternative schools in state schools.

The research question: “Which documentation is used for the assessment and evaluation of students in state and some alternatives schools?” was formulated for the *qualitative phase* of the research.

The following **additional research aims** were set for the *quantitative phase*:

1. Examine whether primary education teachers differ in their estimate of the *possibility* of implementing assessment methods with respect to years of work experience, gender, type of school, grade-level taught and the number of students in the classroom.
2. Examine whether primary education teachers differ in their estimate of *need* for implementing assessment methods with respect to years of work experience, gender, type of school, grade level taught and the number of students in the classroom.
3. Examine whether there is a correlation in the teachers' estimates of *possibility* and *need* for implementing assessment methods.

Sample

A convenience sample of teachers in public and alternative school in the city of Zagreb was selected. The basic sampling criteria was to gather educated participants coming from different pedagogical concepts who apply specific assessment methods in their teaching.

Qualitative research was carried out from January until May 2011. The sample consisted of primary education teachers in state schools and alternative schools ($N = 17$). The teachers are also experts in the area of education, and therefore, we can refer to them as an *expert sample* (Petz, Kolesarić, Ivanec, 2012).

The quantitative research was conducted from April to June 2018. The sample was of the same type; however, the number of participants was larger. Primary education teachers ($N = 159$), from state ($n = 142$) and alternative ($n = 17$) schools were surveyed.

Procedures

Data collection for the *qualitative phase* was done using the case study method and interviewing. Each school was observed as an independent case study, together making a *composite study* (Yin, 2007) which is why a multiple-case design was applied ($N = 6$). In its development, the *replication logic* was used (Figure 1). A total of 16 opinions were collected from 14 participants, as two participants gave answers for two pedagogical concepts. In total, there were 8 opinions for alternative and 8 opinions for state schools. The participants' answers were recorded during visits and later paraphrased, coded and copied into a computer.

The interview took place in two cycles. In the first round, data was collected by personal contact, and the answers were recorded during the conversation. The second round was conducted via email. A sample of primary education teachers ($N = 20$), in state ($n = 10$) and alternative ($n = 10$) schools was surveyed. In the first, semi-structured interview cycle, 15 participants agreed to collaborate, while in the second, structured interview cycle, we had 17 participants.

A questionnaire titled *Assessment models and methods* was developed for the *quantitative phase*. Data was collected through the paper-pencil method. The survey was anonymous, and the participants handed in the completed questionnaires to the researcher.

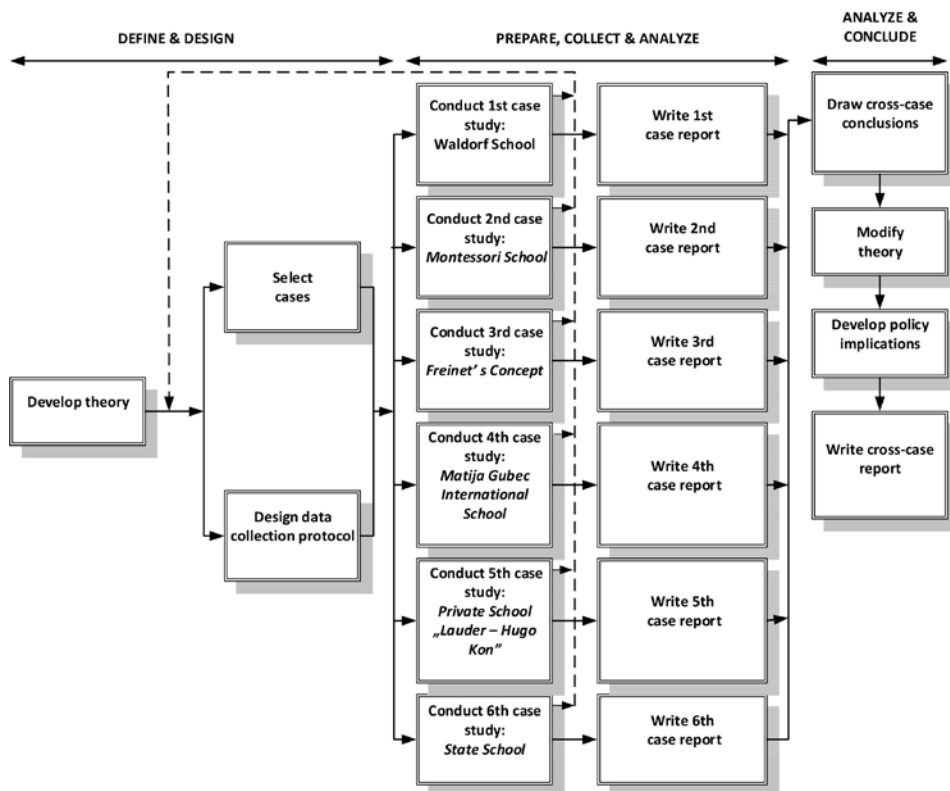


Figure 1: Case study method (replication approach)
Adapted from: Yin, 2007, pp.65.

Instruments

The qualitative phase of the research relied on the *case study protocol*, the *semi-structured interview* and *structured interview*.

The protocol uniformly shows data of individual case and each case study is made up of 4 parts consisting of the following questions (Yin, 2007):

Introduction to the Case Study and purpose of the protocols (4 questions): 1. What is the aim of the case study? 2. What is the case study problem? 3. What is the theoretical framework for case studies? 4. What is the role of the protocol in research?

Data collection procedures (3 questions): 1. Which places will be visited (people for the connection) and address? 2. When is it possible to visit the school (date) and what is the level of effort (small, moderate, large)? 3. What preparation tasks preceded school visits?

Case Study Report Framework (5 questions): 1. How does practice work? 2. What kind of innovative practice is being implemented? 3. What are the results of the practice so far? 4. Explain the context: a) What are the assessment models and methods used in primary education of each elementary school? b) Historical review of the pedagogical

concept and 5. List of supplements that relate to: a) Chronology, b) Specific logical model for practice, c) Relevant documents (data sources) and d) List of interviewees.

Case study questions (12 questions): 1. What is the name of the school you work in? 2. What kind of primary school are you working at (state / private / alternative)? 3. How many students attend school? 4. In what class do you teach and what is the number of students in your classroom? 5. Does your school have a curriculum and who participates in its design? 6. Are there any characteristics of the school curriculum which you find reflect the assessment approaches and methods? 7. What kind of assessment model is applied in primary education of your school? 8. What ways of observing and recording methods of students' progress are used in practice? 9. How do you determine the assessment criteria? 10. Are the assessment criteria and methods presented to parents? 11. What are the most common difficulties in teacher-parent relations caused by the assessment model or methods? 12. What are the advantages and disadvantages of the assessment model in your school?

Out of the 12 questions, 2 key questions related to assessment methods and the number of students in the classroom (questions no. 4 and 6) were extracted (Table 1).

The questions for the *semi-structured interview* were constructed based on the analysis of answers from the case studies. The semi-structured interview contained 16 open-ended questions. The answer to the question: "Are there any characteristics of the school curriculum which you find reflect the assessment approaches and methods?" yielded six assessment solutions which were used for further analysis. The questions for the structured interview were developed based on the synthesis of questions from the first cycle around which the participants reached consensus. The *structured interview* contained 6 closed-ended questions (Table 3). The purpose of the second cycle was to establish perspectives on implementing assessment methods into the existing model of states schools. The question was: "In how many years can we expect the implementation of assessment methods?"

For carrying out the quantitative phase for the research, the *Assessment models and methods* questionnaire was devised. The questionnaire was compiled based on the results of the qualitative phase of the research conducted in 2011, and the main criteria for selecting statements were assessment solutions which were approved by the majority of the participants. The questionnaire contained 6 statements: 1. The monthly report is a pedagogically justifiable assessment method for implementation in teaching practice; 2. The annual report is a pedagogically justifiable assessment method for implementation in teaching practice; 3. Graphical presentation of achievement is a pedagogically justifiable assessment method for implementation in teaching practice; 4. Montessori material is a pedagogically justifiable assessment method for implementation in teaching practice; 5. The portfolio is a pedagogically justifiable assessment method for implementation in teaching practice; 6. The learning agreement is a pedagogically justifiable assessment method for implementation in teaching practice; where for the segment *possibilities* of assessment methods implementation

the degree of agreement with the statements was recorded on a five-point Likert-type scale (1 - entirely impossible up to 5 - entirely possible) and for the segment *needs* of assessment methods implementation was recorded on a five-point Likert-type scale (1 - entirely unnecessary up to 5 - entirely necessary). The instrument was verified through an experimental application on a subsample of experts.

The scales showed acceptable internal reliability, i.e. the *possibility* of implementation $\alpha = .75$ and the *need* for implementation $\alpha = .72$. All other descriptive characteristics are shown in Tables 4 and 5.

Analysis of results

The problem studied in the qualitative research phase was fitting for *comparative analysis*. The data analysis technique used was *synthesis of case comparisons* as it combines the findings of a series of independent cases (Yin, 2007) (Table 1). Answers obtained through the semi-structured interview in the first cycle (Table 2) are grouped into three categories according to similarity: positive, negative, and neutral or ambiguous answers. The second cycle estimated the possibilities of implementation in the future. For that purpose, in the structured interview, time categories were defined: 0 – 5 yrs., 6 – 10 yrs., 11 – 15 yrs. and more than 15 years. Answers were compared and presented in Table 3.

Data obtained through the questionnaire were analyzed using the statistical package for social sciences (SPSS). Descriptive analysis was used initially followed by non-parametric tests Mann-Whitney U- test, Kruskal-Wallis H test and Spearman ρ test.

Results and discussion

Qualitative results

Results obtained through the case studies established *specific assessment methods* (Table 1). Similarities and differences in the use of specific methods can be observed. Here, we also call attention to methods such as intensive monthly assessment of one or several students, weekly reports, monthly work plan published on the internet, descriptors for conduct and list for self-evaluation, peer assessment and self-assessment, which were not selected by the majority of participants, but are considered relevant solutions for improving assessment practice. The subject of further analysis will be the methods approved by the majority of teachers.

Based on the characteristics of each of the school's curricula, we will present the similarities and differences of assessment models. The results of the case studies are unified and shown in Table 1.

Looking at Table 1, similarities can be observed. For example, the *learning agreement* is used in Freinet's concept, the Montessori school, and the "Lauder – Hugo Kon" school; students have a *portfolio* in the Montessori school, Freinet's concept, the International school, the "Lauder – Hugo Kon" school, and state schools (some); while the yearly report (annual, narrative school report) is used in the International school, the "Lauder – Hugo Kon" school, and Freinet's concept.

Table 1.

Comparative analysis of data obtained through case studies (Explanation – n = participants)

STATEMENTS \ SCHOOL	WALDORF SCHOOL	MONTESSORI SCHOOL	FREINET'S CONCEPT
1. Grade level – number of students	n1 - second – 12 n2 - first - 13	n1 - second – 15 n2 - third – 13	n1 - second – 12 n2 - second – 12
2. Specificities of school curriculum related to assessment approaches and methods	<ul style="list-style-type: none"> - intensive monthly assessment of one or more students by all teachers - no written knowledge tests - students' notebooks are marked ("student's mirror") - a report is given according to student temperament – yearly reports 	<ul style="list-style-type: none"> - learning agreement (weekly work plan) - written monthly reports describing achievement - work using Montessori materials (prepared environment) - student portfolio 	<ul style="list-style-type: none"> - learning agreement (weekly work plan) - self-assessment and peer assessment, - class meetings (activity planning), - semiannual and annual (yearly) reports - practical and research work is emphasized - student portfolio
	INTERNATIONAL SCHOOL MATIJA GUBEC	PRIVATE SCHOOL LAUDER – HUGO KON	STATE SCHOOL
	n1 - fourth – 11 n2 - first – 12	n1 - third – 6 n2 - second – 12	n1 - second – 25, n2 - first – 25 n3 - fourth – 26, n4 - third – 26 n5 - fourth – 8, n6 - first – 25
	<ul style="list-style-type: none"> - yearly reports - graphical presentation of achievement, - some have self-assessment lists (self-evaluation) - monthly work plan and weekly schedule published on the internet - student portfolio 	<ul style="list-style-type: none"> - weekly reports (and through e-mail), - yearly report (descriptive school report) - no reporting in numerical grades in initial grades - student portfolio - some teachers use learning agreements 	<ul style="list-style-type: none"> - non-existent (assessment and evaluation are done according to Policy) - except for the first semester of the first grade when students are not marked numerically only through narratives (some write reports) - student portfolio in some classrooms - some teachers have additional records

Table 2.

Comparative analysis of data obtained through the semi-structured interview (1st cycle) (Explanation: n = number of answers)

STATEMENTS	Yes	No	I don't know
1. It is possible to apply monthly reporting in work.	n = 10	n = 0	n = 5
2. A yearly report is a useful assessment tool.	n = 12	n = 0	n = 3
3. Student's success should be presented graphically.	n = 9	n = 4	n = 2
4. A learning agreement would be a good assessment method for primary education students.	n = 10	n = 2	n = 3
5. Montessori material offers possibilities for better evaluation of research and practical work.	n = 12	n = 0	n = 3
6. Portfolio is a good support method for the evaluation of achievement.	n = 13	n = 0	n = 2

Table 3.

Comparative analysis of data obtained through the structured interview (2nd cycle) – Perspective for implementing these methods from 2011 (Explanation: n = number of answers)

Assessment methods which are possible and necessary to implement:	Time period				
	0 – 5 yrs.	6 – 10 yrs.	11 – 15 yrs.	More than 15 yrs.	Impossible/ Unnecessary
1) Monthly report	n = 9	n = 3	n = 1	n = 2	n = 2
2) Yearly report	n = 13	n = 1	n = 0	n = 1	n = 2
3) Graphical presentation of achievement	n = 8	n = 2	n = 1	n = 3	n = 3
4) Learning agreement	n = 9	n = 4	n = 1	n = 0	n = 3
5) Montessori materials	n = 14	n = 0	n = 0	n = 0	n = 3
6) Portfolio	n = 12	n = 2	n = 0	n = 0	n = 3

Differences have also been established. In the **Waldorf school**, with characteristics of the school curriculum being: intensive monthly assessment of one or more students by all teachers; no written knowledge tests; students' notebooks are marked as they "mirror" the student; textbooks are not used, a report is written for each student in line with the student's temperament. The **Montessori school** has the following characteristics: writing monthly reports describing student achievement; work using Montessori materials (prepared environment). Schools working according to **Freinet's pedagogy** are characterized by the following: self-assessment and peer-assessment; classroom meetings (planning activities); emphasis is on practical and research work. The **International school** is characterized by the following: graphical presentation of achievement, some use self-assessment lists; monthly work plans and weekly schedule are published on the internet. The "**Lauder – Hugo Kon**" school uses the following: weekly reports (through e-mail); teachers do not say the numerical marks to students (publicly) in initial grades but report to parents through the weekly report. **State schools** do not have marked characteristics regarding assessment in the school curriculum. Assessment and evaluation are done in accordance with the Regulations on assessment and evaluation (NN 112/2010). The exception is the first semester of the first grade when students are not graded numerically but only have narrative reports, and only some teachers write a half-year report.

Through the case study and interviews carried out in the research, specific assessment methods applied in alternative schools were defined. Based on the comparative approach, the summarized participants' opinions of the solutions and their view of a prospective implementation of such solutions in the teaching practice of state schools will be presented.

Monthly reports are used in teaching in the "Baroness Dédée Vranyczany" Montessori school. It is considered a quality assessment method, as such monitoring of work is continuous and detailed, and changes can be observed in a short period of time. Concrete teaching aims for all subjects are highlighted, along with elective and compulsory work,

joint work of teachers and students, various reminders, and the classroom atmosphere, events and relationships in the classroom. The collected reports differ in appearance, scope, and in their focus on the student. The comfort and sincerity of teachers are observed in the reports along with an appealing manner of writing. Parents should be able to clearly discern their children's achievement. Such a manner of assessing students is considered to be of high quality and, simultaneously, demanding for the teacher. Results show that monthly reports can be applied in work, which has been agreed on by the majority of participants (15 out of 17), and the application of that method in state schools can be expected within five years (by 2016). This is an indicative result as it shows the enthusiasm of teachers considering the number of students in state schools. If a classroom has 25 students and we multiply that by 9 months (if we do not include January), that would translate into a teacher writing 225 reports per year! The final report would most likely be expected.

Yearly report (narrative, annual report) is used in four out of six schools. The aim of descriptive reporting is to clearly and concretely show a student's achievement and progress in learning, skills and abilities throughout the school year. Schools such as "Lauder – Hugo Kon" and the International school use numerical records of student achievement in student books (or paper reports), but this is supplemented with a descriptive school report. The Waldorf school solely uses the descriptive school report as the only document showing student achievement. In analyzing the descriptive reports, it can be safely concluded that they are written in a quality manner. The main rule of writing descriptive marks is adhered to (according to concrete teaching aims), they are very clear and detailed. They show the student's relationship towards others, the student's interests and similar. Overall achievement is descriptive in all subject areas. The majority of the participants (15 out of 17) find the yearly report (descriptive school report) a useful assessment solution which should be implemented. Its application in state schools is expected within the next five years (by 2016). Here we point to the fact that descriptive grading was applied in Croatia during the 1980s (see Rozmarić, 1987).

Graphical presentation of achievement is used in the "Matija Gubec" International school. In the yearly report, achievement is presented graphically by grading some important elements such as independent reading, solving mathematical problems, project work, and general knowledge. A "percentage" of the realization of set learning aims is evident. Justification for such a solution is found in the explanation that such an approach gives students (and parents) a clear indication of achievement in the mentioned components. That is an additional assessment solution as the student's achievement is presented numerically and descriptively. What is more, the graphical presentation of success of the selected components in form of a graph showing the percentage of the achievement is considered a useful solution supported by the majority of participants (14 to 17). Its implementation into the teaching practice of state schools is expected within the next five years (by 2016). The method is original and not overly demanding on teachers. Perhaps it could be used as a solution which

emphasizes individual advancement of a pupil particularly in those components in which a child shows greatest interest or ability.

Learning agreements are used in three schools. Learning agreements are firstly a teaching method where the purpose is not grading but planning and organization of work. In this example, the assessment side of the learning agreement was examined with respect to self-assessment. In other words, both the teacher and the student can more easily monitor the development of interest, independence, responsibility, and work ethic. Planning work and time in such a way could definitely be useful for students while in school and later in life, especially if they learned to work in such a way in the initial grades of primary school as that is basically an agreement, they make with themselves. Freinet's pedagogy traditionally uses the learning agreement as the teaching-assessment solution. In the Montessori school, some teachers created attractive learning agreements, while in the "Lauder – Hugo Kon" school, teachers used "ready-made" learning agreements for teaching the Social Studies subject. A learning agreement is an interesting and useful method; however, it would require a lot of effort should it be successfully implemented in practice without giving up. Results show that the learning agreement is a good teaching-assessment method which the majority of participants agree with (14 out of 17). The application of the learning agreement encourages self-assessment and one can clearly see the aims realized. The application of this method in state schools is expected within the next five years (by 2016). This is an indicative result as such work demands perseverance and control of several subjects (students, teachers and parents) which is often not that simple.

Although working with material is not officially graded, some of the main roles of **Montessori materials** are making theoretical knowledge (often abstract) more accessible to students by using concrete materials (e.g. materials for Mathematics, the mother tongue, Science and Social Studies, etc.) and in the fact that the material "automatically corrects" the student until the student attains the desired aim. In that way, it offers an opportunity for self-assessment of work, and we refer to it as autodidactic. The teacher gives out instructions on using specific material and then, based on need, helps in using them. It should be noted that the material is aimed for individual work as there is only one copy for each task. That is in agreement with the pedagogy as it is considered that a student practices patience in that way. The majority of participants (14 out of 17) find that the Montessori materials offer better possibilities for the assessment of students' research and practical work by teachers and should be implemented in states schools. The results show that it should be implemented in the practice of state schools within five years (by 2016). Here, we emphasize that teaching with materials requires teacher training and the original material is expensive.

Portfolio or collection of student work is used in almost all of the schools. Some teachers in state schools use it, while in the Waldorf school the traditional form of the portfolio is not present. Emphasis is given on the appearance of student's notebooks, while other samples of student's work are collected into a group portfolio. The student portfolio

is considered an important method for monitoring student progress throughout their education (see Grace, 1992). It is defined as the purposeful collection of student work which shows (to the student and others) the student's effort, progress, and achievement in a given area or areas. The collection should include student participation in deciding on the portfolio content, criteria for selection, criteria for evaluation of achievement, and proof of student self-assessment (Arter, 1990). It is claimed that the use of portfolio motivates students, encourages self-assessment, selection of work, or investing more effort depending on the purpose of the portfolio. In this research, according to the majority of the participants (14 out of 17), the portfolio is a good assessment method for (self)assessment of work, guided teaching, and writing of reports by teachers. Emphasis is placed on teacher's guidance and encouragement of students, deciding on criteria for selection of work, and the relationship students develop towards work, interest and willingness to cooperate. The introduction of the portfolio into the practice of state school is expected within five years (by 2016).

Quantitative results

Possibility of implementation

The descriptive analyses established the following values of the possibility of implementation of each method: monthly report ($M = 3.43$; $SD = 0.951$), yearly report ($M = 3.77$; $SD = 0.963$), graphical presentation of achievement ($M = 3.43$; $SD = 1.046$), Montessori materials ($M = 3.62$; $SD = 0.912$), portfolio ($M = 3.97$; $SD = 0.775$), learning agreement ($M = 3.33$; $SD = 1.122$). This leads to the conclusion that *portfolio*, *yearly report*, and *Montessori materials* have the greatest possibility for implementation.

Table 4.
Descriptive characteristics of the scale – Possibility of implementation

	N	Min	Max	M	SD	α	N statements
Possibility of implementation	159	1	5	3.59	.646	.752	6

The Mann-Whitney U-test showed that there are no statistically significant differences in the estimated possibility of implementation of assessment methods with respect to *gender* ($U = 473.5$; $z = -1.033$; $p = .302$).

The Kruskal-Wallis H-test showed that there are no statistically significant differences in the estimate on the possibility of implementation of assessment methods with respect to *years of work experience* ($\chi^2 = 6.196$; $df = 4$; $p = .185$). However, it showed that younger teachers (0 – 7 years of work experience) estimate the possibility of implementation somewhat more positively than their older colleagues.

The Mann-Whitney U-test established the existence of significant differences in the estimates on the possibility of implementation of assessment methods with respect to the *type of school* where teachers work ($U = 720.0$; $z = -2.727$; $p = .006$) in the way that

teachers in alternative school estimate the possibility of implementations significantly more positively than teachers in state school, which is probably the result of them implementing the mentioned in their work.

The Kruskal-Wallis H-test showed that there is no significant difference in the possibility of implementation of assessment methods with respect to *grade level taught* ($\chi^2 = 2.603$; $df = 3$; $p = .185$). However, it showed that third-grade teachers are somewhat more positive in their estimate of the possibility of implementation than their colleagues ($M = 85.43$).

For the purpose of establishing differences in estimates on the possibility of implementation of assessment methods with respect to the variable number of students in the classroom, categories for class size were determined according to the *State pedagogical standard* (NN, 63/2008). The standard states that the optimal number of students per class is 20 with a minimum of 14 students and a maximum of 28 students per class. The following categories were established: small class (1 – 18 students); optimal class (19 – 24 students) and large class (25 – 35 and more students).

The Kruskal-Wallis H-test showed that there is no statistically significant difference in the estimate of possibility of implementation of assessment methods with respect to the *number of students in the classroom* ($\chi^2 = 1.423$; $df = 2$; $p = .491$). However, it showed that teachers teaching in small classes more positively estimate the possibility of implementation ($M = 93.19$). The majority of teachers teach in *optimal classrooms* (19 – 24 students). As opposed to the results from the qualitative research phase where classrooms in state schools comprised between 25 and 30 students, the results of the quantitative phase show that the number of students in state schools is now lower, which is possibly the result of low natality levels.

Need for implementation

The results obtained for the estimate of *need* for implementation for each method are the following: monthly report ($M = 3.05$; $SD = 0.1072$), yearly report ($M = 3.60$; $SD = 1.181$), graphical representation of achievement ($M = 2.96$; $SD = 1.201$), Montessori materials ($M = 3.99$; $SD = 0.795$), portfolio ($M = 3.86$; $SD = 0.823$), learning agreement ($M = 3.05$; $SD = 1.195$). This leads to the conclusion that Montessori materials and portfolio are considered as most needed for the implementation, followed by the yearly report.

Table 5.

Descriptive characteristics of the scale: Need for implementation

	N	Min	Max	M	SD	α	N statements
Need for implementation	159	1	5	3.42	.685	.722	6

The Mann-Whitney U-test showed that there are no statistically significant differences in the estimate of *need* for implementation of assessment methods with respect to *gender* ($U = 460.5$; $z = -1.135$; $p = .257$).

The Kruskal-Wallis H-test indicated that there are no statistically significant differences in the estimate of need for implementation of assessment methods with respect to *years of work experience* ($\chi^2 = 9.341$; $df = 4$; $p = .053$). However, it showed that younger teachers (0 – 7 years) have a somewhat more positive estimate of need for implementation.

The Mann-Whitney U-test established the existence of a significant difference in the estimate of need for implementation of assessment solutions with respect to *type of school* where teachers work ($U = 543.0$; $z = -3.714$; $p = .000$) in the way that teachers from alternative schools significantly more positively estimate the *need* for implementation than teachers in state schools.

The Kruskal-Wallis H-test showed that there are no statistically significant differences in the estimate of need for implementation of assessment methods with respect to *grade level taught* ($\chi^2 = 4.147$; $df = 3$; $p = .246$).

The Kruskal-Wallis H-test showed that there is no statistically significant difference in the estimate of need for implementation of assessment methods with respect to the *number of students in the class* ($\chi^2 = 2.491$; $df = 2$; $p = .288$). However, it showed that teachers teaching in small classes have a more positive estimate of the need for implementation ($M = 99.15$).

Although there are differences in the estimates of need of assessment methods which establish that younger teachers, teachers in alternative schools and those working in small classes, but also those working in higher grades of primary school (3rd and 4th grade), more positively estimate the need for implementation, the difference is not statistically significant.

Correlation between possibility and need for implementation

There is a true, significant correlation in the estimate of need and possibility of implementation of all assessment methods of alternative schools as the intercorrelation of factors indicates a correlation between *need* and *possibility* $\rho = .64$. Of the more significant correlations between possibility and need the following can be extracted for the *same* variables ($p = .01$): yearly report ($\rho = .66$; $p = .000$), learning agreement ($\rho = .65$; $p = .000$) and portfolio ($\rho = .55$; $p = .000$), monthly report ($\rho = .52$; $p = .000$) and graphical representation of achievement ($\rho = .56$; $p = .000$).

Significant correlations between *different* variables for **possibility** of implementation are: monthly – yearly reports ($\rho = .49$; $p = .000$); monthly report – learning agreement ($\rho = .49$; $p = .000$); yearly report – learning agreement ($\rho = .45$; $p = .000$); portfolio – learning agreement ($\rho = .44$; $p = .000$). Significant correlations between *different* variables for **need** of implementation are: monthly report – learning agreement ($\rho = .44$; $p = .000$); monthly report – yearly report ($\rho = .43$; $p = .000$).

Conclusions

By testing opinions of teachers on the possibility and need for implementing assessment methods, we researched their estimate of pedagogical justification for the implementation of such methods in the teaching practice. Possibility and need for implementation of

assessment methods are factors that make up pedagogical justification. *Possibility* referred to existing conditions in state schools, i.e. the understanding and training of teachers for the application of such methods, while *need* referred to the assessment practice demanded by such solutions in order to become better, i.e. improved. It is conditioned by the teachers' satisfaction or dissatisfaction with existing methods in state schools.

Based on the research results we can conclude that *portfolio*, *yearly report (descriptive final report)*, and *the Montessori materials* are assessment methods which are possible to implement and need to be implemented into the practice of state schools. Justification for the application of such methods in primary education is found in previous research. The portfolio is considered a method which positively affects student success and assessment of individual progress by all participants of the teaching process (Gozuyesil & Tanriseven, 2017; Koelper & Messerges, 2003), Montessori materials as a good medium for systematic observation of a student's work with materials and encouragement of intrinsic motivation (Fitch, 2013), and using yearly reports is applied in many alternative and state schools in countries around the world (see Matijević, 2004).

The monthly report, graphical presentation of achievement, and the learning agreement are lower in rank in research, which does not lessen their assessment value, but points to the need for further research of the issue, for example, learning agreements, which correlate with many methods selected by the majority.

Our teachers differ in their estimates of *possibility* of implementation with respect to the independent variables. The research established that teachers in alternative schools more positively estimate the possibility and need for implementation than teachers in state schools, which is in agreement with the results of the quantitative research phase. Significant statistical differences in opinion were not present for other variables.

There is a significant *correlation* between *possibility* and *need* for implementing assessment methods, which indicates that those teachers who had a more positive opinion on the possibility of implementation had a similar estimate for the need of implementation. The results show that possibility of implementation has a better mean value than need. The cause could possibly be summarized in the following statement: "Yes, (anything) is possible, but is not needed". The result can be linked to the qualitative research phase when predictions for the time-frame during which the implementation was to take place were presented somewhat unrealistically (but indicative). The teachers anticipated that assessment methods could be implemented into teaching practice within a five-year time frame, which would be 2016. Of the methods offered, the proposed *Framework for the assessment of processes and learning outcomes for primary and high school education* (2016, p.21) mentioned assessment method is the analysis of student work through *portfolio*, and *observation of student performance* is also mentioned in some activity / practical work which can be linked to observations in using the Montessori materials. Other methods mentioned in this paper are not found in the official document and therefore could be a good foundation for future research on a larger sample (for instance, it could include subject teachers) to get more realistic observations of the situation.

Finally, it can be concluded that teachers, as the main bearers of change in education, have implemented some of the mentioned methods in their own work, regardless of the concept or type of school. The criterion of selection probably depended on their affinity, motivation, philosophy of education and assessment, interest in particular solutions, and pedagogical justification of methods that meet the structure of a particular class. What should be mentioned is that such methods demand additional engagement by the teacher and willingness to change, particularly at the initial implementation of change in teaching practice.

References

- Arter, J. A. (1990). *Using Portfolios in Instruction and Assessment*. Portland, OR: Northwest Regional Educational Laboratory, Test Center.
- Baillet, D. (1989). *Freinet – praktisch: Beispiele und Berichte aus Grundschule und Sekundarstufe. [Freinet – in Practice: Examples and Reports from Primary and Secondary School]* Basel und Weinheim: Beltz Verlag.
- Buczynski, N. (2007). *Hrvatska Montessori priča [The Croatian Montessori Story]*. Zagreb: Naklada Agram.
- Carlgrén, F. (1990). *Odgoj ka slobodi [Education Towards Freedom]*. Zagreb: Društvo za waldorfsku pedagogiju.
- Cohen, L., Manion, L., Morrison, K. (2007). *Metode istraživanja u obrazovanju [Research Methods in Education]*. Jastrebarsko: Naklada Slap.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, California: SAGE.
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, California: SAGE.
- Denzin, N. K. (1970). *Sociological Methods: a sourcebook*. Chicago: Aldine Publishing Company.
- Furlan, I. (1970). *Upoznavanje, ispitivanje i ocjenjivanje učenika [Knowing, Assessing and Evaluating Students]*. Zagreb: Pedagoško-književni zbor.
- Fitch, V. A. (2013). Further Fostering Intrinsic Motivation in the Montessori Elementary Classroom. ERIC /online/. Retrieved on 21st September 2018 from: <https://eric.ed.gov/?q=montessori+material+&id=ED540068>
- Gozuyesil, E. & Tanriseven, I. (2017). A Meta-Analysis of the Effectiveness of Alternative Assessment Techniques. *Eurasian Journal of Educational Research*, 70, 37-56. <https://doi.org/10.14689/ejer.2017.70.3>
- Grace, C. (1992). *The Portfolio and Its Use: Developmentally Appropriate Assessment of Young Children*. ERIC Clearinghouse on Elementary and Early Childhood Education Urbana IL.
- Grgin, T. (1994). *Školska dokimologija [School Assessment]*. Jastrebarsko: Naklada Slap.
- Ivanek, A. (1998). Provreravanje, ispitivanje, vrednovanje i ocjenjivanje u funkciji poticanja razvoja učenika. [Assessing, testing, evaluating and grading in the function of student development] *Školski vjesnik*, 47(1), 33-42.

- Halmi, A. (2005). *Strategije kvalitativnih istraživanja u primijenjenim društvenim znanostima [Qualitative Research Strategies in Applied Social Sciences]*. Jastrebarsko: Naklada Slap.
- Herzog, J. (2016). *Hospitacijski mentor - nov subjekt v organizaciji pedagoške prakse [Exemplary teaching mentor - new subject in organising teaching practice]*. *Pedagoška obzorja*, 31 (3/4), 98 – 112.
- Helmich, A. & Teigeler, P. (Hrs.) (1995). *Montessori, Freinet, Waldorf – pädagogik: Konzeption und aktuelle Praxis*. Weinheim und Basel: Belz Verlag.
- Jurman, B. (1989). *Ocjenjivanje znanja: selekcija ali orientacija učenecv [Evaluation of Knowledge: selection or student orientation]*. Ljubljana: Državna založba Slovenije.
- Kapac, V. (2008). Znanja i stavovi nastavnika o školskom ocjenjivanju. [Teachers' knowledge and attitudes of school assessment] *Život i škola*, 56 (20), 163 – 172.
- Koelper, M.; Messerges, M. (2003). *The Power of Portfolio*. (Doctoral Dissertation). Chicago: Saint Xavier University and IRI/SkyLight.
- Koitka, C. (Hrsg.) (1977). *Freinet Pädagogik: Unterrichtsfahrungen zu „Freier Text, Selbstverwaltung, Klassenzeitung, Korespondenz u.a.“ [Freinet Pedagogy: Experiences from practice: "Free text, self-government, class newspaper, correspondence i.e."]*. Berlin: Basis-Verlag.
- Lillard, P. P. (1972). *Montessori: A Modern Approach*. New York, Schocken Books Inc.
- Matijević, M. (2001). *Alternativne škole. [Alternative Schools]* Zagreb: Tipex.
- Matijević, M. (2002). Učitelji razredne nastave i problemi ocjenjivanja u osnovnoj školi [Primary education teachers and issues of assessment in primary school]. *Zbornik Učiteljske akademije u Zagrebu*, 4(1), 23 – 36.
- Matijević, M. (2004). *Ocjenjivanje u osnovnoj školi [Assessment in Primary School]*. Zagreb: Tipex.
- Matijević, M. (2011). *Pedagoški vid vrednovanja i ocjenjivanja učenika [The Pedagogical Aspect of Assessment and Evaluation]*. In Pravno-pedagoški priručnik za osnovne i srednje škole, Drandić, B. (Ed.). Zagreb: Znamen, 241-251.
- McMillan, J. H. & Hearn, J. (2008). Student Self-Assessment: The Key to Stronger Student Motivation and Higher Achievement. *Educational Horizons*, 87(1), 40 – 49.
- Mrkonjić, A. (1991/1992). Problemi ocjenjivanja u školi [Issues Regarding Evaluation in Schools]. *Radovi*, 31(8), 113 – 132.
- Munjiza, E. (2000). Subjektivnost učitelja u ocjenjivanju učenika [Teacher Subjectivity in Student Evaluation]. *Zbornik Učiteljske akademije u Zagrebu*, 2(1), 95 – 103.
- Mužić, V. (1979). *Metodologija pedagoškog istraživanja [Research Methodology in Teaching]*. Sarajevo: IGKRO „Svjetlost”.
- Okvir za vrednovanje procesa i ishoda učenja u osnovnoškolskome i srednjoškolskome odgoju i obrazovanju* (2016) [Framework for the assessment of processes and learning outcomes for primary and high school education]. *Cjelovita kurikularna reforma*, <http://www.kurikulum.hr/>. Retrieved on March 20, 2018.
- Petz, B., Kolesarić, V., Ivanec, D. (2012). *Petzova statistika [Petz's Statistics]*. Jastrebarsko: Naklada Slap.
- Pravilnik o načinima, postupcima i elementima vrednovanja učenika u osnovnoj i srednjoj školi (2010) [Regulations on assessment and evaluation of students in primary school and high school] /online/. *Narodne novine*, 112/2010. https://narodne.novine.nn.hr/clanci/sluzbeni/2010_09_112_2973.html. Retrieved on March 3, 2018.

- Rajić, V. (2008). Stavovi učitelja i roditelja o razvoju privatnog i alternativnog osnovnog školstva u Republici Hrvatskoj [Teacher and parent attitudes towards the development of private and alternative primary education in the Republic of Croatia]. *Odgojne znanosti* (Zagreb), 10, 2 (16), 329 – 347.
- Razdevšek-Pučko, C. (1999). *Opisno ocenjevanje [Descriptive Evaluation]*. Ljubljana: Pedagoška fakulteta.
- Rhine, S., & Smith, E. (2001). *Appropriate Assessment of Primary School Students*. Chicago: Dissertations/Theses, Saint Xavier University and IRI/SkyLight.
- Rozmarić, A. (1987). *Primjena opisnog praćenja i ocjenjivanja učenika u osnovnoj školi [Applying descriptive assessment and evaluation of students in primary school]*. In *Nastava u suvremenoj školi – zbornik radova u povodu 75. godišnjice života prof. Dr. Pere Šimleše*. Zagreb: Institut za pedagoška istraživanja Filozofskog fakulteta Sveučilišta u Zagrebu i NIRO “Školske novine”, 87 – 91.
- Seitz, M., & Hallwachs, U. (1997). *Montessori ili Waldorf? [Montessori or Waldorf?]*. Zagreb: Educa.
- State pedagogical standard (2008) /online/. *Narodne novine*, 63/2008. https://narodne-novine.nn.hr/clanci/sluzbeni/2008_06_63_2129.html. Retrieved on July 20, 2018.
- Steiner, R. (1995). *Pedagoška osnova i ciljevi waldorfske škole [Pedagogical Foundation and Aims of the Waldorf School]*. Zagreb: Društvo za waldorfsku pedagogiju Hrvatske.
- Stiggins, R. J. (1998). *Classroom assessment for student success*. Washington, D.C.: National Education Association of the United States (NEA), Professional Library.
- Strahinić, C. (2012). *Škola bez ocjena [School Without Grades]*. Osijek: Grafika d.o.o.
- Strugar, V. (2002). Vrednovanje odgojno-obrazovnih postignuća: imamo li nove odgovore na stara pitanja? [Evaluation of educational achievements: do we have new answers to old questions?]. *Napredak*, 143(4), 431 – 439.
- Šešić, B. (1988). *Osnovi metodologije društvenih nauka [Foundations of Methodology in Social Sciences]*. Naučna knjiga, Beograd.
- Vrgoč, H., & Mužić, V. (1999). Praćenje, vrednovanje i prosudba učinkovitosti odgojno-obrazovnog rada [Assessment, Evaluation and Estimation of the Effectiveness of Educational Work]. In Mijatović, A. (Ed.), *Osnove suvremene pedagogije*, Zagreb: Hrvatski pedagoško-književni zbor.
- Vrgoč, H. (Ed.) (2002). *Praćenje i ocjenjivanje školskog uspjeha [Assessment and Evaluation of School Achievement]*. Zagreb: Hrvatski pedagoško-književni zbor.
- Yin, R. K. (2007). *Studija slučaja – dizajn i metode [Case Study – Design and Methods]*. Zagreb: Fakultet političkih znanosti.
- Zvonarević, M. (1978). *Socijalna psihologija [Social Psychology]*. Zagreb: Školska knjiga.

Nikola Jagrović

Matija Gubec International School

Davorina Bazjanca 2, 10 000 Zagreb, Croatia

n.jagrovic@gmail.com

Implementacija dokimoloških rješenja u primarnom obrazovanju državnih škola

Sažetak

Cilj istraživanja bio je usporediti dokimološka rješenja u državnim i nekim alternativnim školama te ispitati mišljenja i procjene učitelja o mogućnosti i potrebi implementacije dokimoloških rješenja iz nekih alternativnih škola u državne škole. Svrha rada jest unaprjeđenje postojećih dokimoloških rješenja u državnim školama. Istraživanje je longitudinalno i provedeno je u pet alternativnih i u državnim školama u gradu Zagrebu. Korištena je metodološka triangulacija. U kvalitativnoj fazi istraživanja iz 2011. godine, sudjelovalo je 17 ispitanika, a u kvantitativnoj fazi istraživanja 2018. godine, 159 ispitanika. U prvoj fazi za prikupljanje podataka korištena je studija slučaja i intervju, a za drugu je konstruiran anketni upitnik – Dokimološki modeli i rješenja. Ispitivanje nije pokazalo značajnije razlike u mišljenjima učiteljica i učitelja o istim dokimološkim rješenjima 7 godina kasnije. Rezultati pokazuju kako učitelji alternativnih škola pozitivnije procjenjuju mogućnost i potrebu implementacije, a postojeće načine praćenja i ocjenjivanja u državnoj školi treba osuvremeniti alternativnim dokimološkim rješenjima poput godišnjega izvještaja, portfolija i Montessori materijala.

Ključne riječi: *alternativne škole; državne škole; praćenje i ocjenjivanje; primarno obrazovanje; specifična dokimološka rješenja.*

Uvod

Vrednovanje i ocjenjivanje učeničkih postignuća predstavlja važan segment svakog školskog kurikula jer se odnosi na početak, tijek i kraj procesa učenja i poučavanja. Budući da dugo očekivana kurikulska reforma u Hrvatskoj izgleda kao potraga za „svetim gralom”, čini se opravdanim analizirati prokušana dokimološka rješenja koja egzistiraju u alternativnim školama diljem svijeta gotovo 100 godina. Naime, svaka bi kurikulska reforma trebala podrazumijevati i dokimološku reformu, a na slabosti i nedostatke brojčanoga ocjenjivanja, subjektivnost nastavnika, reorganizaciju osnovne škole i sl. već duži niz godina ukazuju brojni stručnjaci u obrazovanju (vidi Grgin 1994; Furlan, 1970; Ivanek, 1998; Jurman, 1989; Kapac, 2008; Matijević, 2002, 2004; Mrkonjić, 1992; Munjiza, 2000; Rhine & Smith, 2001; Razdevšek-Pučko, 1994; Strahinić, 2012;

Stiggins, 1998; Strugar, 2002; Vrgoč, 2002). Stanje je takvo da i dalje vrijedi konstatacija kako „... čak ni ostvarena unaprjeđivanja odgojno-obrazovnog procesa, osobito nastave, nisu primjereno praćena unaprjeđivanjem njegovog praćenja i vrednovanja” (Vrgoč i Mužić, 1999, str. 564).

Dokimološka rješenja državnih škola velikim dijelom ovise o tradiciji nekog odgojno-obrazovnog sustava nastalog pod utjecajima dominantnih modela zemalja u okruženju. Državne škole slijede obrazovne propise i standarde, dok su dokimološka rješenja alternativnih škola u skladu s ciljevima i filozofijom odgoja njihovih utemeljitelja. Iako i jedni i drugi trebaju zadovoljiti propisanu godišnju količinu nastave, broj obveznih predmeta, satnicu i postignuća, dokimološka rješenja i pristupi se razlikuju. U ostvarivanju ciljeva odgoja i obrazovanja svaka alternativna škola ima specifičan didaktičko-dokimološki pogled na nastavni proces (vidi Helmich i Teigeler, 1995; Matijević, 2001; Seitz i Hallwachs, 1997). Događa se i to da zbog nepostojanja obrazovne vertikale pojedinih alternativnih koncepcija, ove škole svoje dokumente o uspjehu učenika moraju uskladiti s državnim modelom, kako bi učenici mogli nastaviti školovanje. To nerijetko predstavlja problem jer je u suprotnosti s filozofijom odgoja. Treba podsjetiti da je broj škola koje rade prema alternativnim pedagoškim koncepcijama u Hrvatskoj još malen, kao što je i slaba upoznatost roditelja i učitelja s tim koncepcijama (Rajić, 2008).

Zbog navedenih razloga dokimološka rješenja u primarnom obrazovanju istraživala su se u: Waldorfskoj školi (vidi Carlgren, 1990; Steiner, 1995), Montessori školi „Barunice Dédé Vranyczany” (vidi Buczynski, 2007; Montessori, 1964; Lillard, 1972), školama (učiteljima) koje rade prema pedagoškoj koncepciji Célestina Freineta (Europska škola „Harmonie” u Eitorfu, Njemačka) (vidi Baillet, 1989; Koitka, 1972), Međunarodnoj osnovnoj školi „Matija Gubec”, u Privatnoj osnovnoj školi „Lauder –Hugo Kon” te u hrvatskoj državnoj školi.

Iako imaju različite filozofske osnove, ove alternativne škole imaju slične odgojno-obrazovne ciljeve. Jedna od zajedničkih pedagoških sastavnica jest *usmjerenost na učenika* i poštivanje paradigme *pedagogija uspjeha za sve*. U ovome radu predmet interesa su dokimološka rješenja alternativnih škola koja nisu usmjerena isključivo na sumativnu, već i na formativnu dimenziju vrednovanja. Takva rješenja na suptilniji način podržavaju praćenje napretka učenika, a kod nastavnika mogu pozitivno utjecati na objektivnost. Za učitelje u primarnom obrazovanju bitno je otkriti ono u čemu je neko dijete uspješno kako bi se u tome afirmiralo (Herzog, 2016). Također, metode podržavaju pristup samoevaluacije (McMillan & Hearn, 2008) i potiču intrinzičnu motivaciju, dakle, uključuju učenike, a neke uključuju i roditelje u proces vrednovanja (npr. didaktički ugovor, vidi Matijević, 2011). Tako se nastoji smanjiti broj konfliktnih situacija zbog ocjena, razvijati suradnja i poticati uspjeh.

U ovome istraživanju baviti ćemo se problematikom dokimoloških rješenja u primarnom obrazovanju s naglaskom na mogućnost i potrebu implementacije dokimoloških

rješenja iz alternativnih u državne škole. Kako školski sustavi trebaju s vremenom evoluirati zbog različitih potreba suvremenoga društva, tako i širi dijapazon rješenja koja potiču inovativnost nastavne prakse može više dobiti na važnosti.

Metode

Priroda problema ovoga istraživanja uvjetovala je izbor metoda i metodološki nacrt. Korištena je metodološka triangulacija, točnije, triangulacija „između metoda” (Denzin, 1970). Istraživanje je *longitudinalno* (vidi Cohen i sur., 2007), a podatci se prikupljaju od iste grupe, istim pitanjima, 7 godina kasnije (2011./2018.). Ovaj kombinirani nacrt slijedi dizajn *dvofaznog nacrta* u kojem se odvojeno provode kvalitativno od kvantitativnoga istraživanja, a tako se prezentiraju i rezultati (Creswell & Plano Clark, 2007; Creswell, 2009; Halmi, 2005). U interpretaciji rezultata korištena je sinteza podataka tih dvaju pristupa (Mužić, 1979).

Najprije su prikazani rezultati *kvalitativne faze istraživanja* (prva faza) koji se temelje na induktivnoj logici, komparativnoj metodi i studiji slučaja, a zatim rezultati *kvantitativne faze istraživanja* (druga faza) zasnovani na deduktivnoj logici i metodi uzoraka. U svrhu boljega razumijevanja rezultata, komparativna metoda korištena je s ciljem praćenja *evolucije, stagnacije ili regresa pojava* (vidi Šešić, 1982) što odgovara ovom tipu istraživanja. Korištenu metodu može se nazvati i *komparativno-historijskom* jer uspoređujemo pojave longitudinalnim pristupom (Zvonarević, 1978).

Problem je bio usporediti sličnosti i razlike te veze i odnose dokimoloških rješenja i odgovoriti na pitanje: *Što bi se od specifičnih dokimoloških rješenja iz alternativnih škola moglo i trebalo implementirati u državne škole?* U kvantitativnoj fazi istraživanja problem je proširen provjerom *mogućnosti i potrebe* implementacije odabranih dokimoloških rješenja.

Cilj istraživanja bio je proučiti logiku i filozofiju dokimoloških rješenja u različitim pedagoškim koncepcijama te ispitati mišljenja i procjene učitelja primarnoga obrazovanja o mogućnostima i potrebi implementacije nekih dokimoloških rješenja iz alternativnih škola u državne škole.

Za *kvalitativnu fazu* istraživanja formulirano je istraživačko pitanje: *Kakva se dokumentacija koristi za praćenje i ocjenjivanje učenika u državnim i nekim alternativnim školama?*

Za *kvantitativnu fazu* postavljeni su dodatni ciljevi istraživanja:

1. Ispitati postoji li razlika kod učitelja razredne nastave u procjeni *mogućnosti* implementacije dokimoloških rješenja s obzirom na: godine radnoga staža, spol, tip škole, razred u kojem učitelji poučavaju i broj učenika u razredu.
2. Ispitati postoji li razlika kod učitelja razredne nastave u procjeni *potrebe* implementacije dokimoloških rješenja s obzirom na: godine radnoga staža, spol, tip škole, razred u kojem učitelji poučavaju i broj učenika u razredu.
3. Ispitati postoji li povezanost učiteljske procjene *mogućnosti i potrebe* implementacije dokimoloških rješenja.

Uzorak

Odabran je prigodni uzorak učitelja državnih i alternativnih škola u gradu Zagrebu. Osnovni kriterij odabira uzorka bilo je osigurati educirane ispitanike iz različitih pedagoških koncepcija, koji u nastavi primjenjuju specifična dokimološka rješenja.

Kvalitativno istraživanje provedeno je od siječnja do svibnja 2011. godine. Uzorak su činili učitelji razredne nastave alternativnih i državnih škola ($N = 17$). Učitelji su i eksperti u području obrazovanja, pa možemo govoriti o uzorku *eksperata* (Petz, Kolesarić, Ivanec, 2012).

Kvantitativno istraživanje provedeno je od travnja do lipnja 2018. godine. Tip uzorka je isti, samo je broj ispitanika veći. Anketirane su učiteljice i učitelji razredne nastave ($N = 159$) iz državnih ($n = 142$) i alternativnih ($n = 17$) škola.

Postupci

U *kvalitativnoj fazi* za prikupljanje podataka koristili su se studija slučaja i intervjuiranje. Svaka od škola promatrana je kao zasebna studija slučaja, koje zajedno čine *kompozitnu studiju* i zato se primjenjuje dizajn s više slučajeva ($N = 6$). U dizajniranju se koristila *replikacijska logika* (slika 1). Prikupljeno je 16 mišljenja od 14 ispitanika jer su dva ispitanika dala odgovore za dvije pedagoške koncepcije. Ukupno 8 mišljenja za alternativne i 8 za državne škole. Odgovori su tijekom posjeta zapisivani, a zatim parafrazirani, kodirani i prepisani u računalo.

Intervjuiranje se provodilo u 2 kruga. U prvom krugu podatci su prikupljeni izravnim kontaktom, a odgovori su tijekom razgovora zapisivani. Drugi krug provodio se elektroničkom poštom. Ispitan je uzorak učitelja razredne nastave ($N = 20$), u državnim školama ($n = 10$) i u alternativnim školama ($n = 10$). U 1. krugu intervjuja, pozivu na suradnju odazvalo se 15 ispitanika, a u 2. krugu 17 ispitanika.

Za *kvantitativnu fazu* konstruiran je upitnik – *Dokimološki modeli i rješenja*. Podatci su prikupljeni metodom papir - olovka. Anketiranje je bilo anonimno, a ispunjene upitnike ispitanici su predali istraživaču.

Slika 1.

Instrumenti

U *kvalitativnoj fazi* istraživanja korišteni su *protokol studije slučaja, polustrukturirani i strukturirani intervju*.

Protokol ujednačeno prikazuje podatke pojedinačnih slučajeva, a za svaku studiju slučaja sačinjen je od 4 dijela i sastoji se od sljedećih pitanja (Yin, 2007):

Uvod u studiju slučaja i svrha protokola (4 pitanja): 1. Koji je cilj studije slučaja? 2. Koji je problem studije slučaja? 3. Koji je teorijski okvir za studiju slučaja? 4. Koja je uloga protokola u istraživanju?

Postupci prikupljanja podataka (3 pitanja): 1. Koja će se mjesta posjetiti (osobe za vezu) i adresa? 2. Kada će se posjetiti škola i kakva je bila razina napora (mala, umjerena i velika)? 3. Kakva priprema prethodi posjetima mjesta?

Nacrt izvještaja studije slučaja (5 pitanja): 1. Kako funkcionira praksa? 2. Koja su inovativna rješenja implementirana u praksi? 3. Kakvi su dosadašnji rezultati prakse? 4. Objasniti kontekst: a) Kakvi se dokimološki modeli i rješenja koriste u primarnom obrazovanju pojedine osnovne škole? i b) Prikazati povijest pedagoške koncepcije; 5. Navesti dodatke koji su se odnosili na: a) Kronologiju; b) Specifični logički model za praksu; c) Pozivanje na relevantne dokumente (izvori podataka) i d) Popis intervjuiranih osoba.

Pitanja studije slučaja (12 pitanja): 1. Kako se zove škola u kojoj radite? 2. Koja je vrsta osnovne škole u kojoj radite (državna, privatna/alternativna)? 3. Koliko učenika pohađa školu? 4. U kojem razredu poučavate i koliki je broj učenika u Vašem razrednom odjelu? 5. Postoji li u Vašoj školi školski kurikulum i tko sudjeluje u njegovoj izradi? 6. Postoje li specifičnosti školskoga kurikula za koje mislite da su vezane uz dokimološke pristupe i rješenja? 7. Kakav se način *ocjenjivanja* primjenjuje u Vašoj školi u početnim razredima (1. – 3. razred)? 8. Na koji se način *prati* uspjeh i napredak učenika u nižim razredima osnovne škole? 9. Kako određujete kriterije ocjenjivanja? 10. Jesu li roditelji upoznati s kriterijima ocjenjivanja učenika? 11. Koje su najčešće poteškoće koje se pojavljuju u suradnji s roditeljima o pitanju ocjenjivanja? 12. Koje su po Vašem mišljenju prednosti, a koji nedostaci dokimološkoga modela u Vašoj školi?

Izdvojena su 2 ključna pitanja vezana uz specifična dokimološka rješenja i broj učenika u razredu (pitanja br. 4 i 6) (tablica 1).

Pitanja za *polustrukturirani intervju* konstruirana su na temelju analize odgovora iz studija slučaja. Podsjetnik je sadržavao je 16 pitanja otvorenoga tipa. Odgovor na pitanje: Postoje li specifičnosti školskoga kurikula, za koje mislite da su vezane uz dokimološke pristupe i rješenja? dao je šest dokimoloških rješenja koja su korištena za daljnju analizu. Pitanja za *strukturirani intervju* nastala su na temelju sinteze pitanja iz 1. kruga oko kojih je većina ispitanika postigla konsenzus. Svrha drugog kruga intervjuja bila je prognoza implementacije dokimoloških rješenja u postojeći model državne škole. Pitanje je glasilo: Za koliko je godina moguće očekivati implementaciju dokimoloških rješenja?

Za potrebe kvantitativne faze istraživanja konstruiran je upitnik - *Dokimološki modeli i rješenja*. Sastavljen je na temelju rezultata kvalitativne faze istraživanja iz 2011. godine, a kriterij za odabir tvrdnji bila su dokimološka rješenja koja odobrava većina ispitanika. Upitnik se sastojao od šest tvrdnji: 1. Mjesečni izvještaj je pedagoški opravdano dokimološko rješenje za implementaciju u nastavnu praksu; 2. Godišnji izvještaj je pedagoški opravdano dokimološko rješenje za implementaciju u nastavnu praksu; 3. Grafičko prikazivanje uspjeha je pedagoški opravdano dokimološko rješenje za implementaciju u nastavnu praksu; 4. Montessori materijal je pedagoški opravdano dokimološko rješenje za implementaciju u nastavnu praksu; 5. Portfolio je pedagoški opravdano dokimološko rješenje za implementaciju u nastavnu praksu; 6. Didaktički ugovor je pedagoški opravdano dokimološko rješenje za implementaciju u nastavnu praksu; gdje se za segment *mogućnosti implementacije dokimoloških rješenja* stupanj

slaganja s tvrdnjama bilježio na Likertovoj ljestvici od 5 stupnjeva (1 - u potpunosti nemoguće do 5 - u potpunosti moguće), a za segment o *potrebama* implementacije dokimoloških rješenja bilježio na Likertovoj ljestvici od pet stupnjeva (1 - u potpunosti nepotrebno do 5 - u potpunosti potrebno).

Skale su pokazale zadovoljavajuće unutarnje pouzdanosti, tj. *mogućnost* implementacije je $\alpha = ,75$, a *potreba* implementacije dokimoloških rješenja je $\alpha = ,72$. Sva ostala deskriptivna obilježja upitnika vidljiva su u tablicama 4 i 5.

Analiza rezultata

Problematika kvalitativne faze istraživanja nalagala je korištenje *komparativne analize*. Tehnika korištena u analizi podataka studije slučaja jest *sinteza usporedbe slučajeva* jer agregira nalaze niza pojedinačnih slučajeva (Yin, 2007) (tablica 1). Odgovori prikupljeni *polustrukturiranim intervjuom* u prvom krugu (tablica 2) grupirani su prema sličnosti u tri kategorije: pozitivni, negativni i neutralni ili neodređeni odgovori. U drugom krugu, u *strukturiranom intervjuu*, trebalo je procijeniti mogućnost implementacije u budućnosti. U tu svrhu konstruirane su vremenske kategorije: 0 – 5 g., 6 – 10 g., 11 – 15 g. i više od 15 godina. Odgovori su komparirani i tablično prikazani (tablica 3).

Podatci dobiveni upitnikom analizirani su pomoću statističkoga paketa za društvene znanosti (SPSS). Najprije je korištena deskriptivna analiza, a zatim neparametrijska testiranja Mann-Whitneyjevim U- testom, Kruskal-Wallisovim H testom i Spearmanovim ρ testom.

Rezultati i rasprava

Kvalitativni rezultati

Rezultati dobiveni studijom slučaja utvrdili su *specifična dokimološka rješenja* (tablica 1). Mogu se prepoznati sličnosti i razlike u korištenju specifičnih rješenja. Treba istaknuti i rješenja poput intenzivnoga mjesečnog praćenja jednog ili nekolicine učenika, tjednog izvještaja, mjesečnog plana rada objavljenoga na internetu, deskriptora za vladanje i lista za samoprocjenu, vršnjačkoga vrednovanja i samovrednovanja koja nije odobrila većina ispitanika, ali se također smatraju važnim rješenjima za poboljšanje dokimološke prakse. Predmet daljnje analize bit će rješenja koja odobrava većina učitelja.

Tablica 1.

Tablica 2.

Tablica 3.

Na temelju specifičnosti školskoga kurikula svake škole, prikazat ćemo sličnosti i razlike dokimoloških modela. Rezultati studije slučaja su objedinjeni u tablici 1.

Iz tablice se mogu prepoznati sličnosti. Tako se *didaktički ugovor* koristi u: Freinetovoj koncepciji, Montessori školi, školi „Lauder - Hugo Kon”; učenici posjeduju *portfolio* u: Montessori školi, Freinetovoj koncepciji, Međunarodnoj školi, školi „Lauder – Hugo Kon” i državnoj školi (neki); te se godišnji izvještaj (opisna svjedodžba) koristi u: Međunarodnoj školi, Freinetovoj koncepciji i u školi „Lauder - Hugo Kon”.

Utvrđene su i razlike. U **valdorfskoj školi** specifičnosti školskoga kurikula su: intenzivno mjesečno praćenje jednog ili više učenika od strane svih učitelja; nema pisanih provjera znanja; ocjenjuju se učeničke bilježnice koje su „ogledalo” učenika; u radu se ne koriste udžbenici; piše se izrijek za svakog učenika u skladu s temperamentom. U **Montessori školi** to je: pisanje mjesečnih izvještaja u kojima se opisuje uspjeh; rad putem Montessori materijala (pripremljena okolina). U školama koje rade prema **Freinetovoj pedagoškoj koncepciji** to su: samoocjenjivanje i međusobno ocjenjivanje učenika; razredni sastanak (planiranje aktivnosti); naglašen praktični i istraživački rad. U **Međunarodnoj školi** specifičnosti su: grafičko prikazivanje uspjeha, neki koriste liste za samoprocjenu (samoocjenjivanje); mjesečni planovi rada i tjedni raspored objavljen na internetu. U školi „**Lauder – Hugo Kon**” to su: tjedni izvještaj (i putem *e-maila*); učitelji ne govore brojčane ocjene učenicima (javno) u početnim razredima, već o tome izvještavaju roditelje putem tjednog izvještaja. U **državnoj školi** nema nekih izrazitih specifičnosti školskoga kurikula o pitanju ocjenjivanja. Prati se i ocjenjuje u skladu s Pravilnikom o praćenju i ocjenjivanju (NN 112/2010). Izuzetak je samo prvo polugodište prvog razreda kada se učenike ne ocjenjuje brojčano, već se samo opisno prati, a samo neki učitelji pišu polugodišnji izvještaj.

Studijom slučaja i intervjuiranjem provedenim u istraživanju definirana su specifična dokimološka rješenja koja se primjenjuju u alternativnim školama. Na temelju komparativnoga pristupa prikazat će se, u sažetom obliku, što ispitanici misle o rješenjima i kako prognoziraju budućnost implementacije tih rješenja u praksu državnih škola.

Mjesečni izvještaj u nastavi koristi se u Montessori školi „Barunice Dédéé Vranyczany”. Smatra se vrlo kvalitetnim dokimološkim rješenjem jer je takvo praćenje rada kontinuirano i detaljno, te se mogu uočiti promjene u kraćem periodu. Istaknuti su konkretni ciljevi nastave po predmetima, slobodan i obvezan rad, zajednički rad učitelja i učenika, razni podsjetnici, a prikazano je i razredno ozračje, događanja i odnosi u kolektivu. Primjećuje se i to da se izvještaji koje smo prikupili razlikuju izgledom, opsegom i usmjerenošću na učenika. Uočava se opuštenost i iskrenost nastavnika u izvještavanju kao i dopadljiv stil pisanja. Roditeljima bi trebao biti jasan napredak njihove djece. Smatra se da je ovakav način praćenja učenika kvalitetan, ali istovremeno i zahtjevan za učitelja. Rezultati pokazuju kako je mjesečni izvještaj moguće primjenjivati u radu, s čime se slaže većina sudionika (15 od 17), a primjenu takvog rješenja moguće je u državnim školama očekivati u idućih 5 godina (do 2016.). Ovo je vrlo indikativan rezultat i pokazuje entuzijazam učitelja s obzirom na broj učenika u državnim školama. Ako u razredu ima 25 učenika i to pomnožimo s 9 mj. (ako preskočimo siječanj) to bi značilo da učitelj treba napisati 225 izvještaja u jednoj godini! A vjerojatno još i završni izvještaj.

Godišnji izvještaj (opisna svjedodžba) koristi se u četiri od šest škola. Cilj opisnoga ocjenjivanja je u tome da se što jasnije i konkretnije prikaže uspjeh i napredak učenika u znanju, vještinama i sposobnostima tijekom čitave školske godine. U školama **Lauder - Hugo Kon** i **Međunarodnoj školi** postoji brojčano iskazivanje uspjeha u učeničkim

knjižicama (ili izvještajima na papiru), ali i opisna svjedodžba koja to upotpunjuje. U valdorfskoj školi opisna svjedodžba je jedini dokument za iskazivanja uspjeha. Za pregledane opisne svjedodžbe s priličnom sigurnošću može se tvrditi da su kvalitetno napisane. Uvažava se glavno pravilo pisanja opisnih ocjena (prema konkretiziranim ciljevima nastave), vrlo su jasne i detaljne, a prikazuje se i odnos učenika prema drugima, interesi i slično. Uspjeh se iskazuje opisno u svim nastavnim predmetima. Većina sudionika (15 od 17) godišnji izvještaj (opisnu svjedodžbu) smatra korisnim dokimološkim rješenjem koji treba implementirati, a primjena se u državnim školama očekuje u idućih 5 godina (do 2016.). Treba podsjetiti kako se opisno ocjenjivanje primjenjivalo u Hrvatskoj 80-ih godina prošloga stoljeća (vidi Rozmarić, 1987).

Grafičko prikazivanje uspjeha koristi se u Međunarodnoj školi „Matije Gupca”. Naime, u godišnjem izvještaju uspjeh se prikazuje grafički i to u ocjenjivanju nekih bitnih elemenata kao npr.: samostalno čitanje, rješavanje matematičkih problema, rad na projektu i opće znanje. Tako se jasno vidi „postotak” u ostvarenosti ciljeva učenja. Opravdanost za takvim rješenjem nalazi se u tome da je za učenike (a i za roditelje) takav način jasan pokazatelj uspjeha u navedenim komponentama. To je dodatno dokimološko rješenje jer se uspjeh učenika također prikazuje i broičano i opisno. Također, grafičko prikazivanje uspjeha odabranih komponenti, u obliku grafikona iz kojeg je vidljiv postotak uspjeha smatra se korisnim rješenjem i podržava ga većina sudionika (14 od 17), a implementacija u praksu državnih škola očekuje se u idućih 5 godina (do 2016.). Rješenje je originalno i nije pretjerano zahtjevno za učitelje. Možda bi se moglo koristiti i kao rješenje koje ističe individualni napredak učenika i to onih komponenti u kojima dijete pokazuje najveći interes ili sposobnost.

Didaktički ugovor koristi se u tri škole. Didaktički ugovor prvenstveno je didaktičko rješenje kojem svrha nije ocjenjivanje već planiranje i organizacija rada. Ovdje se nastojala propitati dokimološka „strana” didaktičkoga ugovora povezana sa samoocjenjivanjem. To znači da učitelj može, kao i učenik, lakše pratiti razvoj interesa, samostalnosti, odgovornosti i odnosa prema radu. Takav način planiranja rada i vremena, učenicima bi svakako koristio i kasnije u životu, naročito ako su to naučili u početnim razredima osnovne škole jer je to zapravo ugovor sa samim sobom. U Freinetovoj pedagoškoj koncepciji, didaktički ugovor već je tradicionalno didaktičko-dokimološko rješenje. U Montessori školi neki učitelji su izradili atraktivne didaktičke ugovore, a u školi „Lauder“ - Hugo Kon učitelji su u nastavi prirode i društva koristili „gotove” didaktičke ugovore. Didaktički ugovor je prema tome zanimljivo i korisno rješenje, no potrebno je uložiti puno truda kako bi takav način rada zaživio u praksi, a da se prethodno od njega ne odustane. Rezultati pokazuju da je didaktički ugovor dobro didaktičko-dokimološko rješenje s čim se slaže većina sudionika (14 od 17). Primjenom didaktičkoga ugovora potiče se samoocjenjivanje i jasno se vide ostvareni zadatci. Primjena ovoga rješenja u državnim školama očekuje se u idućih 5 godina (do 2016.). Ovo je indikativan rezultat jer je za takav način rada potrebna ustrajnost i kontrola rada više subjekata (učenika, učitelja i roditelja) što često nije jednostavno.

Iako se rad s materijalom službeno ne ocjenjuje neke od glavnih uloga **Montessori materijala** su u tome što se učenicima neke teorijske spoznaje (često apstraktne), mogu približiti korištenjem konkretnih materijala (npr. materijal za matematiku, maternski jezik, prirodu i društvo i sl.) i u tome što materijal učenika „automatski ispravlja”, dok njime u potpunosti ne ovlada. Time pruža i osnovu za samoprocjenu rada, pa zato kažemo da je autodidaktički. Učitelj daje upute o korištenju određenoga materijala, a zatim, po potrebi, pomaže u korištenju. Treba reći kako je materijal namijenjen za individualan rad jer za svaku radnju postoji po jedan primjerak. To je u skladu s pedagogijom jer se smatra da učenik tako vježba strpljenje. Većina sudionika (14 od 17) smatra da Montessori materijal pruža mogućnost bolje procjene istraživačkoga i praktičnoga rada učenika od strane učitelja i treba ga primjenjivati u državnim školama. Rezultati pokazuju da ga treba implementirati u praksu državnih škola u narednih 5 godina (do 2016). Ne treba zaboraviti kako je za rad s materijalom potrebno osposobljavanje učitelja i da je originalni materijal skup.

Portfolio ili zbirka učeničkih radova, koristi se gotovo u svim školama. U državnoj školi koriste ga neki učitelji, a u valdorfskoj školi izostaje klasičan oblik portfolija. Pažnja se pridaje izgledu učeničkih bilježnica, a ostali radovi učenika skupljaju se u grupnom portfoliju. Učenički portfolio smatra se važnim rješenjem u praćenju učenikova napretka tijekom školovanja (vidi Grace, 1992). Definira se kao svrhovita zbirka učenikova rada koja pokazuje (učeniku i drugima) učenikov trud, napredak i postignuća u danom području ili područjima. Zbirka treba uključivati: sudjelovanje učenika u odabiru sadržaja portfolija, kriterije za odabir, kriterije za procjenu postignuća i dokaze o učenikovo samovaluciji (Arter, 1990). Smatra se da se upotrebom portfolija učenike motivira, potiče na samoprocjenu, selekciju radova ili ulaganje dodatnoga truda s obzirom na svrhu portfolija. U ovom istraživanju, portfolio je prema većini sudionika (14 od 17), dobro dokimološko rješenje za (samo)procjenu rada, pedagoško vođenje i pisanje izvještaja od strane učitelja. Značajno je učiteljevo usmjeravanje i poticanje učenika, određivanje kriterija za odabir radova, ali i odnos učenika prema radu, interes i spremnost na suradnju. Uvođenje portfolija u praksu državnih škola očekuje se u idućih 5 godina (do 2016. godine).

Kvantitativni rezultati

Mogućnost implementacije

Deskriptivnom analizom utvrđene su sljedeće vrijednosti mogućnosti implementacije pojedinoga rješenja: mjesečni izvještaj ($M = 3,43$; $SD = 0,951$), godišnji izvještaj ($M = 3,77$; $SD = 0,963$), grafičko prikazivanje uspjeha ($M = 3,43$; $SD = 1,046$), Montessori materijal ($M = 3,62$; $SD = 0,912$), portfolio ($M = 3,97$; $SD = 0,775$), didaktički ugovor ($M = 3,33$; $SD = 1,122$). Iz ovoga slijedi kako najveću mogućnost za implementaciju imaju *portfolio*, *godišnji izvještaj* i *Montessori materijal*.

Tablica 4.

Mann-Whitneyevim U-testom pokazalo se da ne postoje statistički značajne razlike u procjeni *moгуćnosti* implementacije dokimoloških rješenja s obzirom na *spol* ($U = 473,5$; $z = -1,033$; $p = ,302$).

Kruskal-Wallisovim H-testom pokazalo se da ne postoji statistički značajna razlika u procjeni *moгуćnosti* implementacije dokimoloških rješenja s obzirom na *radni staž* ($\chi^2 = 6,196$; $df = 4$; $p = ,185$), ali se pokazalo da mlađi učitelji (0 – 7 g. staža) nešto pozitivnije procjenjuju mogućnost implementacije od njihovih starijih kolega.

Mann-Whitneyevim U-testom utvrđeno je da postoje značajne razlike u procjeni mogućnosti implementacije dokimoloških rješenja s obzirom na *vrstu škole* u kojoj učitelji rade ($U = 720,0$; $z = -2,727$; $p = ,006$) i to tako da učitelji u alternativnim školama značajno pozitivnije procjenjuju mogućnost implementacije od učitelja u državnim školama što je vjerojatno uvjetovano time što iste primjenjuju u radu.

Kruskal-Wallisovim H-testom pokazalo se da ne postoji značajna razlika u procjeni mogućnosti implementacije dokimoloških rješenja s obzirom na *razred u kojem učitelji poučavaju* ($\chi^2 = 2,603$; $df = 3$; $p = ,185$), ali se pokazalo da učitelji trećega razreda nešto pozitivnije procjenjuju mogućnost implementacije od njihovih kolega ($M = 85,43$).

Za potrebe utvrđivanja razlike u procjeni mogućnosti implementacije dokimoloških rješenja s obzirom na varijablu *broj učenika u razredu* određene su kategorije za veličinu razreda prema *Državnom pedagoškom standardu* (NN, 63/2008). Navodi se da je optimalan broj učenika u razrednom odjelu 20, najmanji 14, a najviši 28 učenika. Utvrđene kategorije bile su: malen razred (1 – 18 učenika); optimalan razred (19 – 24 učenika) i velik razred (25 – 35 i više učenika).

Kruskal-Wallisovim H-testom pokazalo se da ne postoji statistički značajna razlika u procjeni mogućnosti implementacije dokimoloških rješenja s obzirom na *broj učenika u razredu* ($\chi^2 = 1,423$; $df = 2$; $p = ,491$), ali se pokazalo da učitelji koji poučavaju u malim razredima pozitivnije procjenjuju mogućnost implementacije ($M = 93,19$). Najviše učitelja nastavu održava u *optimalnim* razredima (19 – 24 učenika). Za razliku od rezultata kvalitativne faze istraživanja prema kojima su razredi državnih škola imali između 25 i 30 učenika, rezultati kvantitativne faze pokazuju kako je broj učenika u državnim školama sada manji, što je vjerojatno posljedica niskog nataliteta.

Potreba implementacije

Dobiveni rezultati za procjenu *potrebe* implementacije pojedinoga rješenja iznose: mjesečni izvještaj ($M = 3,05$; $SD = 0,1072$), godišnji izvještaj ($M = 3,60$; $SD = 1,181$), grafičko prikazivanje uspjeha ($M = 2,96$; $SD = 1,201$), Montessori materijal ($M = 3,99$; $SD = 0,795$), portfolio ($M = 3,86$; $SD = 0,823$), didaktički ugovor ($M = 3,05$; $SD = 1,195$). Iz ovoga slijedi kako se Montessori materijal i portfolio smatraju najpotrebnijim za implementaciju, a potom godišnji izvještaj.

Tablica 5.

Mann-Whitneyevim U-testom pokazalo se da ne postoje statistički značajne razlike u procjeni *potrebe* implementacije dokimoloških rješenja s obzirom na *spol* ($U = 460,5$; $z = -1,135$; $p = ,257$).

Kruskal-Wallisovim H-testom pokazalo se da ne postoji statistički značajna razlika u procjeni *potrebe* implementacije dokimoloških rješenja s obzirom na *radni staž* ($\chi^2 = 9,341$; $df = 4$; $p = ,053$), ali se pokazalo da mlađi učitelji (0 – 7 g.) nešto pozitivnije procjenjuju potrebu implementacije.

Mann-Whitneyevim U-testom utvrđeno je da postoje značajne razlike u procjeni *potrebe* za implementacijom dokimoloških rješenja s obzirom na *vrstu škole* u kojoj učitelji rade ($U = 543,0$; $z = - 3,714$; $p = ,000$) i to tako da učitelji u alternativnim školama značajno pozitivnije procjenjuju *potrebu* implementacije od učitelja u državnim školama.

Kruskal-Wallisovim H-testom pokazalo se da ne postoji statistički značajna razlika u procjeni *potrebe* implementacije dokimoloških rješenja s obzirom na *razred u kojem učitelji poučavaju* ($\chi^2 = 4,147$; $df = 3$; $p = ,246$).

Kruskal-Wallisovim H-testom pokazalo se da ne postoji značajna razlika u procjeni *potrebe* implementacije dokimoloških rješenja s obzirom na *broj učenika u razredu* ($\chi^2 = 2,491$; $df = 2$; $p = ,288$), ali se pokazalo da učitelji koji poučavaju u malim razredima pozitivnije procjenjuju potrebu implementacije ($M = 99,15$).

Iako postoje razlike u procjenama potrebe implementacije dokimoloških rješenja kojima je utvrđeno da su mlađi učitelji, učitelji alternativnih škola, oni koji rade u manjim razredima, ali i oni koji rade u višim razredima primarnoga obrazovanja (3., 4. razred) pozitivnije procijenili potrebu implementacije, razlika nije statistički značajna.

Povezanost mogućnosti i potrebe implementacije

Postoji stvarna značajna povezanost u procjeni potrebe i mogućnosti implementacije svih dokimoloških rješenja alternativnih škola jer međukorelacije faktora pokazuju povezanost između potrebe i mogućnosti $\rho = ,64$. Od značajnijih povezanosti između *mogućnosti* i *potrebe* mogu se za iste varijable ($p = ,01$) izdvojiti: godišnji izvještaj ($\rho = ,66$; $p = ,000$), didaktički ugovor ($\rho = ,65$; $p = ,000$) i portfolio ($\rho = ,55$; $p = ,000$), mjesečni izvještaj ($\rho = ,52$; $p = ,000$) i grafičko prikazivanje uspjeha ($\rho = ,56$; $p = ,000$).

Značajne korelacije između *različitih* varijabli za **mogućnost** uvođenja su: mjesečni – godišnji izvještaj ($\rho = ,49$; $p = ,000$); mjesečni izvještaj – didaktički ugovor ($\rho = ,49$; $p = ,000$); godišnji izvještaj – didaktički ugovor ($\rho = ,45$; $p = ,000$); portfolio – didaktički ugovor ($\rho = ,44$; $p = ,000$). Značajne korelacije između *različitih* varijabli za **potrebu** uvođenja su: mjesečni izvještaj - didaktički ugovor ($\rho = ,44$; $p = ,000$); mjesečni izvještaj – godišnji izvještaj ($\rho = ,43$; $p = ,000$).

Zaključci

Ispitivanjem mišljenja učitelja o mogućnosti i potrebi implementacije dokimoloških rješenja istraživali smo procjenu pedagoške opravdanosti implementacije tih rješenja u nastavnu praksu. Mogućnost i potreba implementacije dokimoloških rješenja čimbenici su koji čine pedagošku opravdanost. *Mogućnost* se odnosila na postojeće uvjete u državnim školama, tj. razumijevanje i osposobljenost učitelja za primjenu takvih rješenja, a *potreba* na dokimološku praksu koja takva rješenja zahtijeva kako

bi bila bolja, odnosno kako bi se unaprijedila. Ona je uvjetovana zadovoljstvom ili nezadovoljstvom učitelja postojećim rješenjima u državnim školama.

Na temelju rezultata istraživanja možemo zaključiti kako su *portfolio, godišnji izvještaj (opisna svjedodžba) i Montessori materijal* dokimološka rješenja koje je moguće i potrebno implementirati u praksu državnih škola. Opravdanost primjene tih rješenja u primarnom obrazovanju potvrđuju i neka prijašnja istraživanja. Portfolio se smatra rješenjem koje pozitivno utječe na uspjeh učenika i praćenje individualnoga napretka od strane svih sudionika odgojno-obrazovnoga procesa (Gozuyesil & Tanriseven, 2017; Koelper & Messerges, 2003), Montessori materijal kao dobar medij za sustavno promatranje učenikova rada s materijalom i poticanje intrinzične motivacije (Fitch, 2013), a korištenje godišnjega izvještaja primjenjuje se u brojnim alternativnim i državnim školama stranih zemalja (vidi Matijević, 2004).

Mjesečni izvještaj, grafičko prikazivanje uspjeha i didaktički ugovor niže su rangirani u istraživanjima, što ne umanjuje njihovu dokimološku vrijednost već upućuje na dodatno istraživanje problematike. Primjerice, didaktički ugovor, koji korelira s mnogim većinski odabranim rješenjima.

Naši učitelji razlikuju se u procjeni *mogućnosti* implementacije s obzirom na nezavisne varijable. Utvrđeno je da učitelji u alternativnim školama pozitivnije procjenjuju mogućnost i potrebu implementacije od učitelja u državnim školama, što odgovara rezultatima kvalitativne faze istraživanja. U ostalim varijablama nisu se pokazale značajnije razlike u mišljenjima.

Postoji značajna *povezanost* između *mogućnosti* i *potrebe* implementacije dokimoloških rješenja što nam govori o tome da su oni učitelji koji su imali pozitivnije mišljenje o mogućnosti implementacije, slično procijenili i potrebu implementacije. Rezultati pokazuju kako mogućnost implementacije ima bolju srednju vrijednost od potrebe, a uzrok tome možda se može sažeti rečenicom: „Da, moguće je (štošta), ali nije potrebno”. Rezultat se može povezati s kvalitativnom fazom istraživanja kada su predviđeni pomalo nerealni (ali indikativni) rokovi za implementaciju svih rješenja. Učitelji su prognozirali da bi se dokimološka rješenja mogla implementirati u nastavnu praksu u roku od 5 godina, što znači 2016. godine. Od ponuđenih rješenja u međuvremenu je u prijedlogu *Okvira za vrednovanje procesa i ishoda učenja u osnovnoškolskome i srednjoškolskome odgoju i obrazovanju* (2016, str. 21) kao dokimološko rješenje, navedena analiza učeničkih radova korištenjem *portfolija*. Spominje se i *opažanje učeničke izvedbe* u nekoj aktivnosti/ praktičnome radu, što se može dovesti u vezu s opažanjem pri korištenju Montessori materijala. Ostala rješenja iz ovoga rada ne nalaze se na popisu službenoga dokumenta pa bi mogla biti dobra osnova za neka buduća istraživanja na još širem uzorku (uključiti primjerice predmetne nastavnike) kako bi se dobila još realnija slika.

Može se također zaključiti da su učitelji, kao glavni nositelji promjena u školstvu, neka rješenja implementirali u svoj rad, bez obzira na koncepciju ili vrstu škole, a kriterij odabira vjerojatno je ovisio o njihovim afinitetima, motivaciji, filozofiji odgoja

i ocjenjivanja, zanimljivosti određenih rješenja te pedagoškoj opravdanosti rješenja koja odgovara strukturi određenoga razreda. Ono što treba istaknuti jest da sva ova rješenja iziskuju dodatan angažman učitelja i spremnost na promjene, naročito na početku primjene u praksi.