Мотивација и инструкција у настави

Motivation and instruction in the teaching process

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Резиме

Мотивација и инструкција у настави су комплексни, суптили и разноврсни феномени које смо истраживали својевремени инструментаријем који је конструктиво пакујући Сузић Ненад. Инструмент има обухваћен читав низ аспекта наставног часа који у циљелости дају слику о ефикасности наставе. Кључно питање у овом истраживању било је да ли је могуће примењеном другачијег начина рада, придобити ученика да се ангажују читавих четрдесет минута и да се базе градивом у сарадничкој и топлој радној атмосфери. Полазећи од поставке да пријатне емоције, похвале и учење од вршњака мотивишу много више него предањем настава, фронтална обилук рада и негативне критике, у овој студији примењено је низ педагогских едукацијских радношти у експерименталној групи, а добијени резултати су покренути струменим, сложеним и разноврсним феноменима у настави.

Summary

Motivation and instruction in the teaching process are complex, subtle and diverse phenomena and we examined these using complex instruments designed by Nenad Suzić. These instruments included a series of aspects related to classes, which provide a complete image of the teaching process efficiency. The key issue in this research was whether it was possible to use a different approach to work in order to get pupils to participate for forty-five minutes and to deal with the syllabus in a warm atmosphere of cooperation. Starting from the premise that pleasant emotions, praise and learning from one’s peers motivate much more than lecturing, frontal instruction and negative criticism, various pedagogical educational workshops were applied in the experimental group.
The results were then compared with the control group, in which pupils worked in the traditional way. The findings raised a lot of questions, but at the same time they also certainly confirmed that learning to learn is possible only if we create certain communication, understanding and cooperation between participants in the educational process.

**Key words:** motivation, instruction, mirror neurons, Hawthorne effect, EfX-instrument for observing classes

**Introduction**

Information represents an essential factor in any learning process. If there was no information, we would not have knowledge, we would not ask questions, and we would not seek and come up with answers. In 1948, Simon and Shannon (see Stojaković, 2010) founded information theory, arguing that in any system there is a source, transmission channel and recipient of information. In the teaching process, pupil is the information recipient, teacher is in general the source or sender, and the transmission channel is usually corrupted by noise or distractor (Suzić, 2003). In the teaching process we are word-oriented, but pupils can learn in different ways as well. In a research carried out in 2005, it was found that "we managed to make children and young people pay attention to everything that was not words, learn without words and express themselves without words, without putting pressure on them" (Đurđević, 2010, page 204). When it comes to "school" communication, it is necessary to create conditions for learning to learn, since only a motivated
 Motivation and school

Throughout the life, each individual develops the sensitivity or insensitivity to certain stimuli. If a pupil has formed the sensitivity to certain information and the teaching process provides contrary or significantly different ones, learning will be very slow or even impossible. We can assume that motivation depends on early learning in the family. Motivation is one of the processes which are necessary for the normal and healthy functioning of an individual. This process can be of a varying intensity, it can last for a certain time period and it can change.

Motivation, as all other processes (learning, memory, concentration), is influenced by a number of factors. Why are our pupils often unmotivated for school learning? They are motivated for sport activities, video games, social networks on the Internet, but motivation for school learning is at a low level. What is it we do to our children that makes them, at the age of ten or twelve, label school as hassle, boredom, pain in the neck, or similar? At our schools we still have classes during which teachers present what is already written in the books, then pupils retell the same thing, and teachers give them grades for this. In the classroom,
pupils sit two by two at school desks, one behind the other. This makes them look like flower pots in a boring garden and not like alive and playful human beings. In most cases, teachers stand over pupils’ heads or sit in front of them, to “keep an eye” on them. There is no equal communication at such classes, because in the non-verbal itself the teacher’s supremacy and authority are reflected. Pupils cannot feel comfortable. In addition to all this, since they are trapped into the framework of forty-five minutes, teachers try to realise the syllabus and they have no time to think about pupils. Kathleen Gould-Lundy picked up from her own practice certain methods of organization, which we could take as the starting point of any work with pupils, both in the regular teaching process and in other activities (clubs, various activities, school trips, and similar).

Suggestions in the book Engage Pupils in Learning are based on the following five ways to organize the teaching process:

- Establishing an environment in which the teaching process and learning take place in meaningful contexts;
- Engaging or “hiring” pupils to want to find out more about the topic of the lesson;
- Active exploration of the curriculum contents with pupils;
- Expanding the experience, which makes the teaching process more focused and thought-oriented;
- Evaluation of learning that takes place in the classroom (Guld-Landi, 2007, p. 7).
Teachers and parents often “play” with the pupils’ motivation. At times, they even have a negative influence on the intrinsic motivation of children and on their personalities, because they rely too much on the extrinsic motivation. We all know about the situations when a child refuses to learn and parents promise the world just to make the child learn. Teachers use day trips into nature and excursions for this purpose. “You will go on the trip if you improve your grade in physics.” When we transfer these situations into the world of adults, we can as well give them their right name. This is blackmail!

Parents offer certain things to children, provided that they fulfill their commitments. Children transfer such situations to other events in their lives and if they grow up with this they will probably try to buy friendship, love, and when they fail at his, we will have unhappy young people who will probably not be capable to see what went wrong. What would it be like if children had to pay to their mothers to make lunch or wash clothes? Obviously, this seems ridiculous. Buying children’s willingness to fulfill their commitments should seem just as ridiculous. Teachers do not engage in the intrinsic motivation of pupils, whether due to extensive syllabus or shortness of the class is of less importance. It is important that we do not pay enough attention and time to such an important and obvious process and we do not have to be psychologists, pedagogues or teachers to see the importance and strength of motivation.
Инструкција родитеља и наставника

Говорећи о мотивацији, осврнули смо се на грецке које родитељи праве потражном употребом средстава ваљске мотивације. Унутрашња мотивација наставницима, педагогима и психолозима остаје скривена, јер није могуће са оваким учеником радити тако дуго, систематично и студироно да би смо увидели величину супутних фактора који га покрету.

У већини домаћин радитељи своје децу понаваљу у себи да учи. Наредно, прије тога га наоружају књигама, енциклопедијама, лексиконима и школским прибором. Очекују да ће, након два-три сата самована с књигом, ученик освојити планирану знања и успоставити све наставне садржаје. Можда би смо се требало осврнути на „Аристотелову тео да је човек животина (sociable) и да у интерперсоналном простору, у интеракцији људи, постоји огромна енергија коју можемо користити у педагошкој сврхе“ (Suzić, 2005, стр. 20). На наставним часовима ово може да се примени кроз рад у пару или рад у групама, а код куће у партнерском односу родитеља и дјетета. Нису ријетке ситуације у којима наставници само дају задатке, а код куће се родитељи не упућују у школске обвезе свог дјетета. „Научите то за сљедећи час, кажу наставници, това је само да учиш, кажете Ви, под таквим притиском да ли бисте Ви учили?“ (Holzer, 2009, стр. 20). Учење учења се учи! Када кажемо дје-

Instruction of parents and teachers

When it comes to motivation, we focused on the mistakes parents make when they use means of extrinsic motivation in a wrong way. Intrinsic motivation remains hidden from teachers, pedagogues and psychologists, because it is not possible to work with every single pupil for such a long time, systematically and meticulously, in order to see most of the subtle factors driving it.

In most homes, parents send their children to their rooms to study. Obviously, they provide children with books, encyclopaedias, lexicons and school supplies before this. They expect children to acquire enormous knowledge and entire teaching content after being alone with the book for two or three hours. Maybe we should remember “Aristotle’s thesis that man is an animal sociale (social animal) and that in the interpersonal space, in human interaction, there is an enormous energy we could use for pedagogical purposes” (Suzić, 2005, p. 20). This can be applied at classes through pair work or group work, and at home in the partnership between parents and child. We often encounter the situations in which teachers only give assignments, and parents at home do not engage in their child’s school duties. “Learn this for the next class, teachers say, all you have to do is learn, you say. Under such pressure, would you be willing to learn?” (Holzer, 2009, p. 20). Learning to learn has to be learned! When we tell a child
to learn, we should expect the question How? and we are probably surprised that we do not know the real answer to this question. We give children the tools (books, encyclopedias, lessons, templates), but we do not give them answers to their questions: How am I supposed to learn? Or How can I understand? It is as if someone brought you to a very modern and well-equipped surgery room and told you to perform a surgery. Would you know how to do it?

Most of our schools do not provide freedom, time and space for pupils to show their capabilities, express ideas and solve problems creatively. Pupils are rarely challenged and their imagination is not provoked. We ask them to repeat and explain things in the way teachers imagined, using their own experiences. Pupils should be free, spontaneous and unique. All this can be provided only by those teachers who are creative and who are not inhibited by rules and norms. Teachers who are at school because of children do not mind noises in the classroom, questions, different answers, or different methods of presentation. These teachers do not place themselves in the forefront with long and boring lectures and contents which are already written in the textbooks. Each their class is a mini research and the classroom is a laboratory, workshop, playroom, or anything else required by pupils.

Many creative teachers encounter problems in their environment. Colleagues are against them, because they are smart hackers, constantly coming up with something new. University professors are also against them, because they do not work
Higher engagement of teachers is required if we wish to allow pupils to learn alone from the provided materials, to construct the lesson and to acquire the syllabus in their own way, using drawings, tables, maps, to link new findings with what they already know and to present their knowledge in their own way. People are different, of course. “If a man is called to be a street sweeper, he should sweep streets even as a Michelangelo painted, or Beethoven composed music or Shakespeare wrote poetry. He should sweep streets so well that all the hosts of heaven and earth will pause to say, ‘Here lived a great street sweeper who did his job well’”, Martin Luther King (according to: Scharma, 2007, p. 20). I believe that every teacher could be a Michelangelo, a Beethoven or a Shakespeare, and each class could be a work of art. Pupils like to have a role model, someone who is there to show and explain to them and whom they can interact with. “School curriculum will be better understood if it is explained to the child directly and personally. As our brain is primarily a social instrument, pupils find it easier to learn if the teaching content is accompanied by illustrative examples. When the new teaching content is explained by whether teachers or parents, immediate assistance allows children to better understand and imagine its complex content” (Kamarovsky, 2010, p. 113). Learning represents a sort of interaction, but if it also involves interaction between two or more human beings, it is assumed that it will be more successful.
S. Dudenjic: MOTIVATION AND INSTRUCTION IN THE...

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We all have certain experiences, and we link new ones with the existing ones. Research carried out in 1992, at an Italian university (in Parma), confirmed the existence of certain structures called "mirror neurons" by scientists. Researchers examined the brain of macaque monkeys. "When a monkey sees a man-researcher pick up a peanut and bring it to his mouth, his brain reacts intensely, as if the monkey picked up the peanut and brought it to its mouth, even though in fact it does not move at all. The monkey automatically simulates the mental process it observes in someone else" (Brooks, 2012, p. 67). Here we have mechanisms that lead us to assume how a situation might end. Kamarovsky also gave an interesting example of a man who raises his hand and clenches his fist, which leads us to assume that a punch will ensue. "You expect him to deliver a punch. Even though the action is only assumed, your brain produces the entire process. You become a telepath and the context helps the interpretation" (Kamarovsky, 2010, p. 112). If we transfer this into the classroom, it is clear that pupils connect teaching contents with the manner in which they were presented to them, as well as with working conditions in the classroom and with the context in general.

We are familiar with cases of a pupil not liking a school subject, but when another teacher replaces the old one, the pupil suddenly becomes interested in the subject, also achieving good results. Of course, liking the subject was not an issue here, but the attitude towards the teacher. Also, much depends on the context, and as research has shown, mirror brain cells are to blame here. "These brain cells represent
Just think of the teacher as in fact being a false god! He is at the centre of attention — he orders and everyone listens to him, he weighs justice, he is practically the only one who speaks... The element of power does not exist at modern school. A teacher at Summerhill has no opportunity to brag with his ego. He cannot compete with a loudly expressed egoism of children. Thus, instead of respecting me, children often call me a fool or a donkey. These are usually names given out of fondness. The element of love becomes important at free school. Words that are used become secondary (Neill, 2003, p. 257).

What would you prefer: being respected or loved? The time pupils spend at school is much more than pure acquisition of teaching contents. The influence of the group and peers is often stronger than we imagine. “Also, I believe that I benefited from the Hawthorne effect, which states that people try harder when someone observes them only for the additional attention they receive” (Gretchen, 2010, p. 26). This phenomenon is obvious among children. School is not just a place where they attend classes. Lives of pupils are much more intensely marked by school breaks. All those important, turning situations, such as falling in love, success, failure, arguments, friendships which quickly turn hostile and then become friendships again, op-
posing authority for the first time, happen at school. All this is pervaded with a strong desire to belong to a group and to rank high on the list of school popularity.

Research

The research was carried out in two primary schools in Banja Luka, "Petar Petrović Njegoš" and "Ivo Andrić", in early 2012. It resulted in significant findings, and in this paper we present a small segment which refers to motivation of respondents and efficiency of classes.

Instrument

We have used the instrument Efx-instrument for observation of classes, which was designed by Nenad Suzić (2003). Using this instrument, we have measured the frequency of use of certain teaching methods, direction of communication during the class, frequency of motivational activities of the teacher, emotional climate in the classroom, suitability of the teaching process to the cognitive style of pupils, and didactic organization of the class. Through further processing, we have calculated the values of each five-minute reading, using the obtained data. This paper presents only a segment of the work which relates to the emotional climate and frequency of motivational activities of teachers. We have used statistical procedures to calculate the arithmetic mean, standard deviation, and
finally t-value (see Table 1). Through the analysis of covariance in a multivariate design (ANCOVA), we have examined the overall efficiency of observed classes during the first five minutes of the class, at twenty-five minutes of it and at forty minutes of the class (see Table 2).

Sample and course of the research

We formed two groups for the purpose of the experiment — experimental and control group. These groups were spatially separated, but the initial and final phases of the research took place simultaneously. The respondents worked on the same contents, in accordance with the given syllabus. The only difference was that in the experimental group the respondents came to new findings through the workshop activities and techniques of successful learning. The respondents were pupils of the fifth grade of primary school (ninety respondents). The respondents in the control group attended the primary school “Ivo Andrić”, while those in the experimental group attended the school “Petar Petrović Njegoš”. The experimental group worked on the teaching contents with their teachers through educational workshops that required the application of techniques of successful learning and this represented the experimental programme. In the control group, the respondents worked on the same contents, but in a traditional way, with frontal instruction and other characteristics of the traditional teaching process. For the experimental group we had prepared the workshops which covered the technique
манипурање, асоцијативну технику и контрастирање. Наставне јединице су биле из три предмета: српски језик и књижевност, познавање природе и познавање друштва. Уједначавање група је рађено према сљедећим критеријумама: број испитника у експерименталној и контролној групи, пол, разред (узраст), план и програм (обрађују неге наставне садржаје). Такође, нисмо имали испитничке оцијенисе оцјенама један и два ли у једној групи. Уједначавање група на неким другим критеријумима није било од сутичног значаја, јер нисмо испитивали ниво знања ученика, нити смо сматрале да ученици не могу овладати техникама успјешног учења у оквиру својих могућности и афинитета.

Хипотезе

У току примјене експерименталног програма, вршена је опсервација појединачних наставних часова и то са два оспособљена истраживача на сваком часу. Посматрајући час биљежили су у протокол за снимање часа све запажене феномене. Поставили смо три хипотезе:

- Претпостављамо да се оба дида, сајер комуникације и активности ученика и наставника (сонмаскост наставног часа) значајно разликују у експерименталној и контролној групи током реализације експерименталног програма;
- Претпостављамо да су фракцисне мотивационе активности наставника статистички значајна разлике у експерименталној и контролној групи и

оа speed reading, mental images, cognitive mapping, association technique and contrasting. The teaching units were in three subjects: Serbian language and literature, science studies and social studies. Balancing of the groups was carried out in accordance with the following criteria: number of respondents in the experimental and control groups, sex, grade (age), syllabus (same teaching contents). Also, we excluded all respondents whose grades were 1 and 2 from both groups. Balancing of the groups by other criteria was not crucial, as we did not investigate the pupils’ levels of knowledge and we believed that pupils could master the techniques of successful learning within their capabilities and preferences.

Hypotheses

In the implementation of the experimental programme, the observation of certain classes was carried out, with two trained researchers at each class. Observing the class, they recorded in the classroom observation protocol all observed phenomena. We have defined the following three hypotheses:

- We assume that teaching methods, direction of communication and activities of pupils and teachers (efficiency of the class) are significantly different in the experimental and control groups during the realisation of the experimental programme;
- We assume that the frequencies of teachers’ motivational activities are significantly different in the experimental and control groups, and

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— We expect the experimental programme to have positive effects on the efficiency of classes at the three time intervals.

Results

A small change in the routine and method in our experiment (while sticking to the planned lessons and without changing the forty-five minute system) resulted in more opportunities for teachers to motivate pupils. Teachers assigned tasks, gave instructions for work, recommended additional literature, gave proposals and provided support. They moved between pupils, from group to group, they sat on their chairs and only at the beginning of the class they occupied an honoured place to record the lesson. Pupils were free to move about in the classroom, to exchange ideas and observe the work of their own and other groups. They were allowed to talk to the teacher whenever they felt like it. This is why, in our research, we have significantly different motivational activities of teachers, which is reflected in the efficiency of classes in general (Table 1).
Таблица 1

Ефикасност отсврваних часова и фреквенције мотивационих активности наставника у експерименталној и контролној групи

Table 1

*Efficiency of observed classes and frequency of motivational activities of teachers in the experimental and control groups*

<table>
<thead>
<tr>
<th>Class</th>
<th>Efficiency of the class: E</th>
<th>Efficiency of the class: C</th>
<th>Frequency of motivational activities of the teacher (E)</th>
<th>Frequency of motivational activities of the teacher (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
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<tr>
<td>-------</td>
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<td>---------------------------</td>
<td>------------------------------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>1. Class</td>
<td>80.11</td>
<td>29.71</td>
<td>30.44</td>
<td>9.91</td>
</tr>
<tr>
<td>2. Class</td>
<td>61.78</td>
<td>20.98</td>
<td>29.99</td>
<td>6.49</td>
</tr>
<tr>
<td>3. Class</td>
<td>72.93</td>
<td>27.66</td>
<td>27.79</td>
<td>14.15</td>
</tr>
<tr>
<td>4. Class</td>
<td>72.80</td>
<td>25.81</td>
<td>36.83</td>
<td>8.59</td>
</tr>
<tr>
<td>5. Class</td>
<td>61.37</td>
<td>16.37</td>
<td>15.73</td>
<td>6.30</td>
</tr>
<tr>
<td>6. Class</td>
<td>49.27</td>
<td>13.41</td>
<td>54.47</td>
<td>17.33</td>
</tr>
<tr>
<td>7. Class</td>
<td>56.00</td>
<td>11.95</td>
<td>69.17</td>
<td>8.75</td>
</tr>
<tr>
<td>8. Class</td>
<td>82.22</td>
<td>23.73</td>
<td>36.56</td>
<td>6.73</td>
</tr>
<tr>
<td>9. Class</td>
<td>75.28</td>
<td>21.30</td>
<td>40.04</td>
<td>14.18</td>
</tr>
<tr>
<td>10. Class</td>
<td>69.44</td>
<td>16.67</td>
<td>36.53</td>
<td>9.96</td>
</tr>
<tr>
<td>11. Class</td>
<td>53.62</td>
<td>11.02</td>
<td>52.06</td>
<td>5.79</td>
</tr>
<tr>
<td>12. Class</td>
<td>94.44</td>
<td>16.67</td>
<td>34.87</td>
<td>9.32</td>
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<tr>
<td>14. Class</td>
<td>61.40</td>
<td>16.61</td>
<td>42.53</td>
<td>5.60</td>
</tr>
<tr>
<td>15. Class</td>
<td>51.70</td>
<td>17.51</td>
<td>18.48</td>
<td>9.12</td>
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<td>18. Class</td>
<td>74.44</td>
<td>24.89</td>
<td>26.70</td>
<td>2.25</td>
</tr>
<tr>
<td>Total</td>
<td>67.78</td>
<td>12.71</td>
<td>36.67</td>
<td>18.34</td>
</tr>
</tbody>
</table>

Note: (E) represents findings obtained in the experimental group, while (C) represents findings obtained in the control group.

Легенда: Час, Ефикасност часа (E), Ефикасност часа (K), Фреквенција мотивационих активности наставника (Б), Фреквенција мотивационих активности наставника (К), 1. Час, 2. Час, 3. Час ..., Тотал, t-вриједност

Назнака: (E) представља налазе добијене у експерименталној групи, док (K) означава налазе контROLE

Doшли оимо до статистички значајних налаза. Вриједности аритметичких средина експерименталне и контролске групе \( (M_E = 67.78 \text{ and } M_C = 36.67) \) упућују на даљи статистичку анализу, те испити-We came to statistically significant findings. Values of the arithmetic means in the experimental and control groups \( (M_E = 67.78 \text{ and } M_C = 36.67) \) led to further statistical analysis, and through the ex-
amination of the significance of difference (t-value amounts to 4.969 and \( p = 0.001 \)) we came to the conclusion that classes in the experimental group were significantly more pleasant, relaxed and efficient. The direction of communication at classes realized in the experimental group alternated (teacher – pupil, teacher – class, pupil – pupil, pupil – syllabus, pupil – teacher, and pupils – class). Teachers and pupils were not in the subject– object position (which characterizes the traditional teaching process), they cooperated and participated jointly in class activities instead. Teaching methods in the experimental group also alternated and they were at times initiated by pupils themselves. Pupils had an opportunity to choose whether they wanted to work in pairs or in groups and whether they wished to make presentations alone or with others. Essentially, students felt more freedom, which provided classes with a dose of creativity and made them significantly (statistically) more efficient in comparison with classes in the control group.

The second hypothesis is that the frequencies of teacher’s motivational activities are statistically significantly different in the experimental and control groups. Upon the calculation of individual scores, we entered all the findings in Table 1. Classes were significantly different according to the criteria of teachers’ motivational activities in the experimental and control groups. Taking into account the fact that praise, reward, grade, highlighting of pupils’ achievement, emphasizing benefits of teaching contents are on one side, and reprimand, irony, highlighting of mistakes, poor grades, doubting pupils’ achievements and capabilities on the other, these indica-
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tors should prompt us to think. The relationship between teacher and pupils can be friendly, cooperative, humane and imbued with understanding. This will be reflected in the pupils' attitude towards the teaching process and the subject itself. We have achieved this in our research thanks to the techniques of successful learning. This hypothesis was accepted, because we found that teachers' activities were significantly different and that they had a stimulating effect on pupils in the experimental group. Scores obtained through the observation of certain classes in the control group had a negative sign, which implies that teachers' activities were demotivating and undesirable in the teaching process. We examined the significance of differences in the arithmetic means, which resulted in t-value = 5.308, significant at the 0.001 level. If we look at the research published in 2003, in which Nenad Sušić concludes that "the more prominent positive characteristics of the teacher, the higher the motivation during classes and vice versa; greater presence of negative characteristics results in lower motivation in the classroom" (Sušić, 2003, page 189), we can safely say that only a teacher who loves his/her job and who is willing to learn can help pupils in the classroom. A teacher who is willing to learn and open new dimensions of communication among pupils motivates his/her pupils in a different way. "In the situation where the dominating direction of communication is teacher -- pupil, motivation increases" (ibidem, page 189). At our workshops, communication involved frontal instruction and teacher addressing pupils, but pupil addressing teachers or other pupils was not ruled out at any moment.
All the findings imposed the question (third hypothesis) how the experimental group acts in the time-group interaction, and how the control group acts in this same interaction. Through the analysis of covariance in a multivariate design (ANCOVA) we came to interesting conclusions. We have examined the trend of overall efficiency of observed classes at certain time intervals. During the observation, researches recorded activities and direction of conversation every five minutes. We used this in the further analysis, investigating the efficiency of observed classes in the experimental and control groups at five, twenty-five and forty minutes. We present the findings in Table 2.

Table 2
Effects of time on the efficiency of observed classes in the experimental and control groups

<table>
<thead>
<tr>
<th>Variables - Group</th>
<th>Test</th>
<th>Values</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
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<td>.415</td>
<td>11.706</td>
<td>2.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Wilks' Lambda</td>
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<td>.000</td>
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<tr>
<td></td>
<td>Hotelling's Trace</td>
<td>.709</td>
<td>11.706</td>
<td>2.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Roy's Largest Root</td>
<td>.709</td>
<td>11.706</td>
<td>2.000</td>
<td>.000</td>
</tr>
<tr>
<td>Time - Group</td>
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<td>6.408</td>
<td>2.000</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>Wilks' Lambda</td>
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<td>6.408</td>
<td>2.000</td>
<td>.004</td>
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<tr>
<td></td>
<td>Hotelling's Trace</td>
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<td>6.408</td>
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<tr>
<td></td>
<td>Roy's Largest Root</td>
<td>.388</td>
<td>6.408</td>
<td>2.000</td>
<td>.004</td>
</tr>
</tbody>
</table>

Legend: Varijabla, Test; Vrijednosti, Vrijeme, Vrijeme - Grupa

In the Time-Group interaction, we can see that the efficiency of classes in the experimental group, during the implementation of pedagogical workshops and techniques of successful learning, had an
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Conclusion

The conclusion is simple: if a pupil feels free to speak and ask for information or help, this pupil will not abuse this freedom (as we heard from some teachers). Instead, the pupil will be more relaxed and he/she will approach new tasks without being afraid of making a mistake. “Learning to learn through the teaching process is the first step on the way of improving the quality of life” (ibidem, page 253). If a task of school of the future is to develop competent individuals who are free and creative, responsible and cooperative, then it is quite certain that traditional teaching cannot respond to the challenge called learning to learn. The next
questions we could ask are: Why don’t we realise the teaching process which would develop pupils’ competences? Do our schools prepare pupils to be citizens of the modern age or do they choke them by being past-oriented? Realised workshop activities not only provided immediate efficiency, which could be explained as a change in routine and breaking the monotony, but they also led to changes in pupil-teacher activities and in communication in the teaching process. Sometimes it is enough for pupils to count on the support, even if they do not ask for it. Highlighting pupils’ achievement, public praise, reward and grades are no less important. All these represent external sources of motivation, which means that if a teacher uses them meaningfully and purposefully in the teaching process, in time they will probably make pupils love learning, without them wanting to escape from the engagement in school work.

Литература


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