

STUDENTS` SELF-DIRECTED LEARNING IN THE PROCESS OF DEBATING

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Abstract. Nowadays methods promoting self-directed learning have become essential as thinking processes, deep understanding and an independent desire to explore and research the learning content gain importance. One of these methods is debating, which provides students the opportunity not only to be aware of topical problems in science and society, but also to understand the significance of them in their personal lives. The analysis of the survey show that for students with experience in debating, goal achievement is greatly influenced by individual interest and motivation, while for students without debating experience teacher's positive attitude is more important than personal interest and motivation to learn.

Keywords: components of self-directed learning, debating, self-directed learning, students.

Introduction

To achieve higher performance, teachers should apply an approach acknowledging that each student has different talents, abilities, attitudes, motivation and interests, which are important factors in reaching and setting learning goals. L. Dam (1995), in her analysis of the interaction between different components of the learning process, points out the necessity to involve students in the process of selection of learning content and learning methods (Dam, 1995) in order to understand personal significance of the learning process. It is important, because the lack of ability of a student to recognize the personal significance of the learning process can be the reason for a low motivation (Bondarevskaja, 2000). The reason might be students` opinion that they learn because it is important for teachers, parents, etc. Thus, the process of learning is entirely dependent on factors like the proficiency of the teacher, positive attitude towards the student or, in some cases, the socioeconomic factors.

While the author of the *significant learning* taxonomy D. Fink (2013) highlights the negative attitude towards learning as an increasing problem (Fink, 2013), which might be the result of negative effects of mechanical memorization and a lack of connections with real life situations (Maslo, 2015, p. 30). Mechanical memorization and a lack of real life connections in the learning process do not

promote thinking processes, deep understanding and an independent desire to explore and research the learning content. Since reproductive methods, which are based on mechanical memorization, are still commonly applied as „students in Latvia in general are good at tasks and activities that require memorizing or acting upon a familiar situation. However, there is a clear lack in skills and experience facing unfamiliar situations, as well as a lack of team work skills and an inability to apply theoretical knowledge in the real life situations (Valsts Izglītības saturs centrs, 2017) and offering already „processed” information to students can only improve their ability to remember and reduplicate (Marlowe & Page, 1997, p. 9-11) and not to apply, analyse, evaluate and create.

It must be admitted that there is still a lack of the successful approach which could provide quality education for students with different learning needs, goals and interests as well as increase students` motivation and raise awareness of usefulness of learning in student`s personal life and in the life of a whole society, promote responsibility and implement approaches which highlight the correlations between the student`s individual goals and the goals set by official institutions.

In order to move towards the acquisition of competences, learning methods characterized by dynamic activities, problem-solving and reflection, become more relevant in the learning process (Weinert, 2001). One of these methods is debating, which also provides the opportunity for the students not only to be aware of and explore diverse issues/problems in science and society, but also to understand the significance of these problems in their personal lives.

The aim of the publication is: to describe pedagogical prerequisites for the promotion of self-directed learning and to assess the impact of self-directed learning component interactions on the process of goal achievement for students with and without experience in the process of debating.

The research methods used in the study include: the analysis of literature; data gathering method - survey; data processing and analysis methods (quantitative data processing with data mathematical statistical analysis and predictive analytics methods implemented through processing programs *Microsoft Office Excel 2010* un *SPSS (Statistical Package for the Social Sciences) v.22.a* logistic regression model was developed, the resulting logarithmic probability ratios calculated).

The components of self-directed learning

In order to implement self-directed learning, the learner himself must be open to change, to be fully engaged and focused, self-disciplined and self-directed (Zimmerman, 2001). The freedom of the individual to guide his learning process is also important because self-directed learning is authentic, different and unique

to every student (Savin-Baden & Major, 2004, p. 14). M.S. Knowles (1975) defines self-directed learning as the process in which a learner takes the initiative, identifies his own learning needs, sets goals, identifies available resources, selects the most appropriate learning strategy and evaluates learning outcomes (Knowles, 1975, p. 18). H.G. Schmidt (2000) is convinced that problem-solving is important in self-directed learning. He also highlights the role of the teacher in organizing students' cognitive activities, and at the same time he emphasizes the need for the student to lead his own learning and motivation to learn (Schmidt, 2000, p. 243). S. Naylor un B. Keogh (1999) emphasize the necessity to create a cognitive need, including stepping out of *the comfort zone* and highlighting a problem, as „learning occurs when a student is confronted with a new situation, creating new approaches and linking them with existing knowledge and understanding” (Naylor & Keogh, 1999).

Thus, the self-directed learning process can be viewed as a system of pedagogical relationships based on the students' learning activities. The need for positive change gains importance, especially in the learner's attitude towards learning. Analyzing important learning components in self-directed learning, it is revealed that:

- being aware of the common interests of himself and classmates, student can individually and collaboratively plan his own learning strategies and collaborate to complement each other's knowledge in the learning process;
- it is important to discover the relationship between intrinsic and extrinsic motives. Lack of motivation for students can occur due to the lack of values for successful, productive learning. Each student has his own individual understanding of the importance of learning and this is based on his or her values (Markova, 1983);
- belief is an important motivating factor: both the learner's belief that he can be a successful learner and the teacher's belief that he can guide the learner towards the learning goals. Attitudes are closely related to human actions or, conversely, inaction (Katz, 1960, p. 169), and negative attitudes towards the teacher, the learning area or context, and the learning process in general, can reduce the willpower that is an important prerequisite for a successful learning process;
- the objectives set can only be achieved through close interaction between the student, the school and society (Buckley, 1967) therefore, it is important for the student to answer the questions: What do I want to learn? and What do the others want me to learn? Thus understanding of individual and collective goals is raised, connections between

different goals are found and the learning process becomes personally meaningful;

- values are the strongest motives, e.g. responsibility for oneself and society as a whole, or, on the contrary, opposing one's own interests to the common interest of the whole society (Edwards, 2007).
- the main idea of reflection is not to find out what is right or wrong, but what has actually worked out or what should be done differently (Hattie, 2012);
- creating a cognitive need, including stepping out of the comfort zone and raising a problem, because „learning occurs when student is confronted with a new situation, creating new approaches and linking them with existing knowledge and understanding” (Naylor & Keogh, 1999).

The components of learning can be characterized within a specific framework of pedagogical relationships focusing on the necessity to develop learning strategies.

It can also be concluded that the interrelationship between the components of self-directed learning: responsibility, interests, goal setting, motivation, understanding of the application of knowledge, cognitive needs, positive attitudes, cooperation, beliefs, values and reflection become essential because:

- motivation contributes to both setting and achieving goals (Savin-Baden & Major, 2004);
- the achievement of goals is influenced by the interaction of different components and is achieved through close collaboration between the learner, the school and the community (Buckley, 1967); awareness of goals and self-confidence contribute to motivation (Savin-Baden & Major, 2004);
- the interest contributes to the students' motivation to learn and set learning goals (Harackiewicz & Hulleman);
- responsibility is important in achieving goals (Edwards, 2007); it is based on values that motivate people to act in a socially responsible manner (Wray-Lake & Syvertsen, 2011);
- belief is particularly important in the goal setting process (Borg, 2001); belief formation is influenced by family, culture, community, reflection, life experience, but the teacher is the creator of change in the learning process (Hattie, 2012). The teacher`s or student`s positive attitude towards the learning process can be facilitated by belief in the success of the learning process as well as positive feelings and emotions (Katz, 1960);

- the need for cognition stimulates the student's interest (Shhukina, 1988);
- values provide an understanding of the application of knowledge as well as an awareness of the importance of learning (Markova, 1983), students` values are largely determined by the family and the community, as the school is just a continuation of the formation process of student`s responsibility (Wray-Lake & Syvertsen, 2011).

After analysis of the theory, it can be concluded that understanding of the application of knowledge, beliefs, values, interest are important components of self-directed learning and the promotion of these learning components is clearly dependent on the professional competence of the teacher, the support of the student's family, friends and the society. It is also essential that the student is aware of the personal importance of the learning process. The presence of the components of motivation, responsibility and positive attitude to a large extent depends on the goals, beliefs, values, cognitive needs and interests of the learner. While the achievement of the goal in terms of learning outcomes (value dimension (Oliņa, France, & Namsone, 2018, p. 29); improvement of knowledge, skills and competences (Eurostat, 2016, p. 22; Deci & Ryan, 2000); active subject position (Maslow, 1954, p. 282)) influences all the components of self-directed learning that interact with one another. It must be admitted that self-directed learning can be fully realized through purposeful planning and implementing a student's learning strategy, which is a set of student's learning activities to achieve a goal (Pietersen, 2010).

Conducting and analyzing self-directed learning in the debate process

The debating method is successfully implemented in the learning process in different countries of the world, in formal and non-formal education. Applying the debating method in the learning process can lead to the development of competences as during debating problem solving, decision making, critical thinking, etc. have been developed (Brookfiel & Preskill, 2005).

To assess the impact of self-directed learning component interactions on the process of goal achievement of students with experience in the debating process, the survey (2017) was carried out. The survey included questions that can be aggregated on a Likert scale in numerical form (ordinate data) using the SPSS (Statistical Package for the Social Sciences) software for predictive analytics and statistical analysis. The survey results highlight that an important component of the learning process for 8th – 12th grade students (N=80) with different debating experience from different cities of Latvia (Liepaja, Riga, Iecava) is the achievement of goals, i.e. achievement of learning outcomes. The achievement of the goal depends on the interaction of different learning components (interests,

positive attitude of the teacher and the learner towards the learning process, understanding of the application of knowledge, beliefs, etc.). It was important to discover how changes in other learning components (analyzed: interest, motivation, understanding of the application of knowledge and positive attitude of the teacher) influence the achievement of the goals set by the learner. For this purpose, Ordinal Regression was used to create a logistic regression model and the resulting logarithmic probability relationship (logit). The data reveal that only two components - interest ($p = 0.042$) and motivation ($p = 0.035$) – of the analyzed components (interest, motivation, understanding of the application of the knowledge and positive attitude of the teacher) can reliably influence achievement of goals of respondents (see: Table 1).

Table 1 The Results of Ordinary Regression for Students with Debating Experience

<i>A component of self-directed learning</i>	<i>The ratio of the probability that the component will increase the achievement of goals, ROI</i>	<i>Confidence interval 95%</i>	<i>Statistical Reliability, p</i>
Interest	1,40	1,11-1,64	0,042
Motivation	1,74	1,20-3,02	0,035
Understanding of the application of the knowledge	1,17	0,95-1,92	0,633
Teacher`s positive attitude	1,32	1,04-1,63	0,542

It can be concluded that the understanding of the application of the knowledge and the positive attitude of the teacher have no statistically significant effect on the achievement of goals, and in the obtained model of ordinal regression only the interest (IA = 1.40) and motivation (IA = 1.74) influence the achievement of goals. Thus, with the increase in motivation for a 1-point Likert scale, the odds ratio (ROI) for reaching the goal would increase by 1-point Likert scale is “1.74” and the increase of interest in the 1-point Likert scale, the odds ratio (ROI) of reaching the target would increase by 1-point Likert scale is “1.40”.

To compare the impact of component interactions of self-directed learning on the process of goal achievement on students` with and without experience in the process of debating another survey (2019) (for control group- students without debating experience) was carried out. The analysis of survey identified the impact of the interaction of the self-directed learning components (analyzed: interest, motivation, understanding of the application of the knowledge and positive attitude of the teacher) on the achievement of the goals set by the students in the learning process. The respondents are the 8th-12th grade students (aged 15-20) of the research base school. Control group students provided answers to identically

formulated questions, which were included in the survey of the students with experience in debating. The findings reveal that achievement of goals, motivation to learn, and positive attitude of the teacher in the learning process are the highest rated components of self-directed learning by the control group.

In order to fully evaluate and compare the data from the debaters group and control group surveys, it was necessary to develop a mathematical model analogous to the students with debating experience survey data to predict how changes in the analyzed learning components affect achievement of the control group students. For this purpose, Ordinal Regression was used to make a logistic regression model and the resulting logarithmic probability relationship (logit). The analyzed data reveal that the achievement of the goals set by the students of the control group is credibly influenced by all four analyzed components: interest ($p = 0.003$), motivation ($p = 0.003$), understanding of the application of the knowledge ($p = 0.001$) and teacher's positive attitude ($p = 0.002$) (see Table No.2).

Table 2 The Results of Ordinary Regression for Students with Debating Experience

<i>A component of self-directed learning</i>	<i>The ratio of the probability that the component will increase the achievement of goals, ROI</i>	<i>Confidence interval 95%</i>	<i>Statistical Reliability, p</i>
Interest	1,37	1,15-1,62	0,003
Motivation	1,34	1,14-1,58	0,003
Understanding of the application of the knowledge	1,86	1,54-2,24	0,001
Teacher's positive attitude	1,99	1,59-2,50	0,002

The data reveal that all analyzed components have a statistically significant positive effect on the achievement of goals for the control group students, but the positive attitude of the teacher (ratio of the probability = 1.99) and understanding of the application of knowledge (ratio of the probability = 1.86) have the most influential effect. Interest and motivation also have statistically significant positive effects, but these effects are significantly smaller.

It can be concluded that it is the positive attitude of the teacher that is particularly important for the control group students (students without experience in the debating process) and insignificant for respondents with experience in debating.

Conclusions

1. Self-directed learning process can be characterized by intentional, purposeful and self-planned learning activities as well as a wide range of

- individual learning differences. The structure of self-directed learning process consists of interrelated and mutually influencing components: values, understanding of the application of knowledge, motivation, goal setting, confidence, responsibility, interest, attitude, reflection.
2. Students' learning process is influenced by a variety of interactions between internal and external motivation, e.g. the learning environment, their intellectual background and social background, their engagement and their pedagogical potential. Focusing on short-term (performance) goals, e.g. good grades in the test and the lack of professional competence of teachers are significant causes for the lack of students' motivation.
 3. Debating is an argument-based dialogue that provides detailed information and does not resemble everyday conversation. By implementing debating method in the pedagogical process, students can not only be aware of a variety of topical issues in science and society, but also understand the significance of these problems in their personal life.
 4. The survey reveals that for students with experience in debating, goal achievement is greatly influenced by individual interest and motivation. While students without debating experience are more influenced by the teacher's positive attitude, which even is more important than the student's own interest and motivation to learn. It can also be concluded that if the teacher's positive attitude towards the student decreased by 1 Likert scale item, the chances of reaching the goal in the learning process would also be reduced.

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