

# Developing students' learning strategies with the support of the intervention programme and involving parents

Krista Merilo<sup>a1</sup>, Eve Eisenschmidt<sup>b</sup>, Eve Kikas<sup>c</sup>

<sup>a</sup> Saue Gymnasium

<sup>b</sup> School of Educational Sciences, Tallinn University

<sup>c</sup> School of Natural Sciences and Health, Tallinn University

## Summary

The National Curriculum for Estonian Basic Schools expects teachers to develop pupils' learning competences and create the necessary conditions for their development (the Government of the Republic of Estonia, 2020). To be an effective learner, it is necessary to have a good knowledge of different learning strategies and be able to adaptively implement them in different situations (Boekaerts, 1999). The deliberate use of learning strategies supports students' self-regulation as the learner consciously plans and manages his or her learning. Self-regulated learning is not an inborn talent. It means that self-regulation has to be developed as any other academic skill (Zimmerman, 2002). The systematic and targeted use of learning strategies distinguishes the self-regulating learner from other learners (Zimmerman, 1990).

In the classroom teachers use too little of the methods necessary for the development of self-regulating learners and the related learning competencies (Zimmerman, 2002; Vandeveldel et al., 2012). Even one earlier intervention that was aimed to increase the awareness of different learning strategies and promote their implementation did not show the expected results among students (Hennok, 2019).

Several studies have confirmed that the academic achievements of the students whose parents support their studies are better (Cabus & Ariës, 2017; Cotton & Wikeland, 1989; Cox, 2005; Fantuzzo et al., 2004). However, parents do not often understand the extent of their influence on their children's education.

This study is based on action research that was carried out among third-grade children and parents in one school.

---

<sup>1</sup> Saue Gymnasium, Nurmestalu 9, Saue, Harjumaa, 76506 Estonia; kristamerilo@saue.edu.ee

The aim of the study was to examine how systemic guidance changes students' awareness in applying learning strategies, and how the pupils' and parents' awareness of learning strategies are related after intervention.

The following research questions and hypotheses were established:

1. How does the pupils' reported use of learning strategies change over a four-month period in cases where the intervention programme is applied, and whether there are differences between the intervention and the control group results? The hypothesis states that before the intervention there were no differences between the pupils in the intervention and control groups, but after the intervention the pupils in the intervention group reported using the effective strategies more than pupils' in the control group.
2. Does the ranking of the learning strategies change during the intervention period, and are there any differences between the intervention and the control group results? The hypothesis states that before the intervention there were no differences between the pupils in the intervention and control groups. However, after the intervention, the intervention group pupils would rank effective strategies higher than pupils in the control group.
3. How does the parents' awareness of learning strategies change during the intervention period? The hypothesis was that parents' awareness of effective strategies would improve.
4. How was the parent's assessment of the learning strategies related to pupil's ranking? The hypothesis was that the higher parents value effective learning strategies, the higher the pupils value effective strategies.

The study involved third-grade pupils in two regular classes in one school. Pupils in one 3rd grade (hereinafter "intervention group") ( $n = 24$ ) took part in the programme "Learning with meaning" (Kikas & Soodla, 2019), while the second class (hereinafter "control group") ( $n = 25$ ) did not participate in the intervention. All students were subjected to pre- and post-testing to assess their ability to use effective learning strategies and their awareness of effective learning strategies.

The parents of the pupils in the intervention group ( $n = 22$ ) were also involved in the intervention to raise awareness of learning strategies. A preliminary survey was carried out among the parents to study their awareness of learning strategies. A similar survey to identify a possible change in learning strategy awareness was also carried out after the intervention. During the intervention period, conversation groups with parents were organised to talk about learning strategies.

The results of the study were analysed with the data-processing programme Statistica 64. Before processing with a data processing programme, the results of the tests performed with pupils in the environment of the Information System of Exams and the replies to the questionnaires completed by the parents were encoded in a format suitable for the data processing programme. For data analyses, a Chi-square test was first carried out on the pre-test results of the intervention group and the children in the control group. A t-test of independent samples was also carried out to determine whether the two groups were comparable. Descriptive statistics were used to record the results of the pre and follow-up tests. For the evaluation of changes to the intervention group's, control group's and parents' results in the pre and follow-up tests, the t-test of dependent samples was used. In order to assess the possible relationship between parent's and child's assessment changes, the correlation analysis was used.

The study results show that after four months of intervention, the intervention group's children evaluate effective learning strategies significantly higher than before the intervention.

The hypothesis that the children who have participated in the intervention programme are using more effective strategies was not confirmed. Namely, the children still preferred to use mechanical repetition after the intervention.

The hypothesis that the parents' awareness of effective learning strategies will improve was partly confirmed. The study revealed that the parents valued elaboration higher than learning by heart even before the intervention.

When analysing the relationship between the pupils' and parents' outcomes, the results showed a strong link in the follow-up assessment with less effective strategies. If the parent preferred a less effective strategy in the post-intervention phase, then his or her child was likely to appreciate a less effective strategy after the intervention.

The study showed that short-term intervention significantly changed the pupils' evaluation of learning strategies and increased the use of effective learning strategies. Although there was no change in the parents' evaluations of learning strategies after the intervention, the parents preferred more effective strategies to address the challenges, thus increasing the awareness of the parents.

*Keywords:* students, learning strategies, action research, self-regulated learning, parents