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Possibilities of enhancing school students' well-being: Evaluation of the effectiveness of integrative teaching programme

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Abstract. The aim of the research was to evaluate the effectiveness of the Integrative Teaching Programme in enhancing school students' well-being and in lowering their level of school's anxiety¹. In total, 608 students with different kinds of learning difficulties (aged from 10 till 19) from 17 schools from different administrative districts of Latvia participated in the implementation of this project. Participants filled out a specially developed questionnaire at the beginning and at the end of one school year. Among other scales integrated in Student's Questionnaire, students filled in a *School Anxiety scale* and *Student's well-being scale*. Results show, that after realization of the Integrative Teaching Programme, a significant decrease was found in the students' school's anxiety level, and significant increase in theirs' well-being level. Developed Integrative Teaching Programme is an effective tool for enhancing students' self-regulation ability, self-confidence, social competence etc. Development of these skills and interaction with teachers and classmates in creative, stimulating and free atmosphere can decrease school's anxiety and as result enhance students' subjective well-being which is a necessary step for integrating students with learning difficulties in normal school life.

1. Introduction

Learning, emotional and behaviour problems of school students and teenagers are one of the most researched aspects of schools' life. Inability to change the situation individually, feeling of helplessness, which students try to hide with behavioural violations, immurement as well as communication problems and other inferences which are initially caused and/or intensified by anxiety can evolve as student's cognitive and socio-psychological development problems. Usually, students with this type of problems take the lowest positions of the class' socio-psychological hierarchy. Often, along with learning difficulties, insufficient development of social abilities which interfere with forming social contacts

¹ This research is a part of the project "Development and Implementation of the Integrative Teaching Programme for Adaptation to the Social Environment for Students With Learning, Cognitive Function and Movement Disorders" sponsored by ESF and realized by the RTTEMA Scientific Research Institute of Pedagogy and Psychology (ESF Nr. 2009/0305/IDP/1.2.2.4.2/09-APIA/VIAA/122).

and friendship can be detected. Students get into an isolated environment and can become maladaptive². **Situations like this threaten students' well-being in school**³.

According to Lopes (2005), these kind of problems need to be corrected as a set. Often, each problem is approached independently from others and so impedes the creation and implementations' effectiveness of the psychological and pedagogical adjustment programs. Creation of an integrative teaching programme was based on this assumption.

Researches (Lopes, 2005; Kjøbli & Sørli, 2008 etc.) show several factors that could decrease students' behaviour problems: positive emotional climate in school; belonging to a religion; support from adults; support from family; having future plans; student's physical attractiveness and friendliness.

There are descriptions of several implemented adjustment programs in the scientific literature. For example, a program called "*The Early Intervention for Children at Risk for Developing Behavioural Problems*" was carried out in Norway. It was created to eliminate and correct problematic behaviour and to promote social competence of children up until age of 12 (Kjøbli & Sørli, 2008). The aim of the research was to check if using this program would allow decreasing the problematic behaviour occurrence and improving learning environment in middle school. The program was created based on recognition that the most effective interventions would be the ones that are based on evidence and they would be systematic. The ones that are specifically adapted to solve the problem situation in the places where they occur (for example, at home, at the kindergarten or at the school). It was concluded that, a year after implementation of the program, students' behaviour improved significantly and relationships between the students became sufficiently better than in the control group.

Kerr and Nelson (2006) suggested three possible approaches that are related to overcoming the social isolation: 1) improvement of student's social abilities; 2) peer mediate strategies; 3) self-regulation strategies.

During the process of implementation of Kerr's and Nelson's programme, the following elements were used: a) direct indication of the lacking social ability and providing possibilities to train this ability regularly; b) appreciation of successfully used abilities to maintain effectively replace the unwanted behaviour with sufficient one. This approach is often used with students that have internalized behaviour problems.

Peer mediation method is also widely used in such kind of correcting programmes, for example, in programme related to estimation and correcting the behaviour of socially isolated students (Christensen, Young & Marchant, 2007).

Killu (2008) created and carried out a program for students with special needs that have such behaviour problems that prevent their educational achievements. Killu specifies that school's staff have increased responsibility while carrying out this type of programmes. Correction programmes are carried out by a team of school's staff which evaluates student's behaviour, creates individual behaviour correction plan and procedures for carrying it out and monitoring.

Undoubtedly, the most effective is the complex correction that is carried out exactly at the place where the problem occurs. That is why student's parents are also included in the realization of the programme. For example, EICR (The Early Intervention for Children at Risk for Developing Behavioural Problems) has been created from several intervention modules: 1) teacher consultation module; 2) social ability instruction module; 3) mother's consultation module; 4) parents' social ability instruction module; 5) mother support group's module (Kjøbli & Sørli, 2008). The realizations of the above modules differ with the length of the lesson and intensity.

² Maladaptive behavior is a type of behavior that is often used to reduce one's anxiety, but the result is dysfunctional and non-productive (Frick et. al., 2005).

³ Well-being is connected with teaching and education, and with learning and achievements. Indicators of well-being are divided into four categories: school conditions (having), social relationships (loving), means for self-fulfilment (being) and health status (Konu & Rimpelä, 2002).

Table 1. The structure of the Integrative teaching programme for adaption in social environment school students with learning difficulties and/or cognitive and movement function disorder developed in RTTEMA Research Institute of Psychology and Pedagogy.

| Adaption in social environment (part A) | Improvement of cognitive processes (part K) | Exercises related to forming and harmonizing student's personality (part P) |
|---|---|--|
| A1. Leading of group processes | K1. Development of attention and concentration capabilities | P1. Music and movement |
| A1.1. get acquainted with group, development of group rules | K2. Development of the perception | P2. Colouring of mandalas |
| A1.2. group's amalgamation | K3. Memory training | P3. Movement elements |
| A1.3. maintaining positive atmosphere in group | K4. Training of thinking | |
| A2. Student and group's work goals, evaluation of results | K5. Language development | |
| A3. Promotion of learning and achievement motivation | | |
| A4. Student's Self-conceptions creation | | |
| A5. Self-promotion and awareness of internal resources | | |
| A6. Interpersonal skill development | | |

There are two opinions on how behaviour intervention plans or correction programmes should be created – with assistance of out of school specialists or with in school staff members. Often, plans for the change of behaviour are based on functional behavioural assessments (FBA – functional behavioural assessments; Ingram & Lewis, 2005). It has been concluded that although functional behavioural assessments (FBA) are widely recognized as the best practice in creation of effective behaviour correction programs for students with behaviour problems, there are no convincing evidence that schools' staff would have sufficient ability to carry out effective intervention. Group of researchers (Scott, McIntyre, Liaupsin, Nelson, Conroy, Payne & Carr, 2005) trained middle school teachers on how to use the FBA results to create appropriate correction plans. After that, school's interventions committee was established and carried out the created programmes. At the same time, three state wise FBA experts also carried out the same correction plan. Comparisons of the choice of correction's strategy between school's staff and experts demonstrated that school's staff members had a tendency to choose punishment and exclusion strategies more often, even though the instruction given before required to use these strategies only in a critical situation.

On the other hand, during the research with the aim to find out if middle school teachers were able to recognize the students with anxiety symptoms, Headly and Campbell (2011) concluded that, in general, teachers were able to recognize students with strong anxiety indicators although they had trouble distinguishing between students with average anxiety symptoms and severe phobia.

During the analysis of the mentioned opinions and based on experiences in working with students, it was decided to create integrative teaching programme in the Institute of Pedagogy and Psychology (RTTEMA) that would include school's teachers and support staff, regularly train teachers and support staff using the means of workshops as well as supervision groups.

Structure of integrative teaching programme

As was mentioned above, in the RTTEMA Institute of Pedagogy and Psychology, an Integrative teaching programme for school students with learning difficulties and/or cognitive and movement function disorder was developed to adapt them in social environment (see Table 1).

Table 2. Number of boys and girls involved in the project.

| Grade Sex | Comprehensive schools | | | Special schools | | | Total |
|-----------|----------------------------------|----------------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|-------|
| | 3 rd –4 th | 5 rd –7 th | 8 th –12 th | 3 rd –4 th | 5 rd –7 th | 8 th –12 th | |
| Boys | 77 | 100 | 86 | 19 | 41 | 12 | 335 |
| Girls | 62 | 105 | 57 | 9 | 30 | 10 | 273 |
| Total | 139 | 205 | 143 | 28 | 71 | 22 | 608 |

The programme was created so that teachers who are working in the selected schools could create their own activities, adjusting the offered themes and exercises for the appropriate age and development level of students. In the programme, three main parts were created: adaptation in the social environment (part A), improvement of cognitive processes (part K) and exercises related to forming and harmonizing student's personality (part P), as well as planning of themes and methods for a school year (Integratīva mācību metodika adaptācijai sociālajā vidē kognitīvo un kustību funkciju uzlabošanai, 2012a,b).

The programme requires teachers to start the integrative group work of each calendar month with the use of part A methods. Parts K and P can be used during the rest of the months with teacher's discretion based on the individual group. Teachers have to plan so that methods from all three parts would be used during any of weeks of the programme implementation.

It is described which subsections of the methods described in parts K and P should be used each month in the description of the programme. A weekly plan of possible usage of part K and P is given in the calendar plan of the programme.

The part A of the programme: adaption in the social environment – planning for the school year, includes the following three subthemes:

1. *Me and society*. Implementation time – from October till December. The aim of this section – to extend the referent group of students while showing ways how to improve oneself; to show and discuss how adaption happens in different social environments, including professional ones.
2. *Self*. Implementation time – January till March. The aim – student's Self-conception awareness, Self image creation, learning and achievement motivation actualization, developing of analytical thinking, interests and positive emotional attitudes creation towards learning.
3. *Me and group*. Implementation time – April till May. The aim – to provide student with the knowledge and practical skills for identification and development of the adaption process, cooperation with other group members in group, communication skill development and decision-making.

The above described project had many aims, and one of them was to lower students' school anxiety and to rise their level of subjective well-being. Our hypotheses were, that, as the result of participating in the integrative teaching programme, **H1**: students' subjective well-being will increase and **H2**: school anxiety will decrease.

Materials and methods

Participants

Students (aged 10 until age of 19) 17 different schools from different Latvian regions have participated in implementation of this project, in total 608 students (487 of them were from comprehensive schools and 121 from special schools). Detailed information of participants' distribution by sex, grade and school type is shown in Table 2.

All participants were children exposing different kinds of learning difficulties (based on previously made teachers' evaluation).

Instruments and procedure

At the beginning and at the end of one school year participants filled out a specially developed questionnaire. Among other scales integrated in Student's Questionnaire⁴, students filled in a *School Anxiety scale* and *Student's Well-being scale*. In both scales, evaluations were made using 3-point scale (3 – yes, 2 – rather yes, 1 – rather no, 0 – no). There are no reversed items in the scales. All items are short and easy for understanding, and suitable for children from 3rd till 12th grade. The scales are suitable for frontal and for individual diagnostics.

School Anxiety scale (Skolas trauksmes aptauja; Tiltiņa-Kapele, Škuškoviņa, Perepjolkina, 2010) is based on RCMAS (The Revised Children's Manifest Anxiety Scale; Reynolds & Richmond, 1978) and consists of 25 items. Principal Component Analysis with Varimax rotation indicated that there are 6 intercorrelating subscales forming one total superfactor (school anxiety in total). These scales are as follows: 1) Social anxiety, 2) Fear of negative evaluation and test anxiety; 3) Generalized anxiety; 4) Physiological symptoms of anxiety; 5) Learning anxiety and 6) Negative attitude toward school. The 6-factor model accounts for 49.74% of variance. Scores (total scale's score and every subscale's score) can range from 0 till 30 (to get the score one have to sum up marked points, divide the sum with number of items comprising the scale or subscale, and multiple the outcome with 10). Higher points indicate higher levels of anxiety. The scale show good inner consistency, Cronbach's alpha in different age groups for total scale ranges from 0.76 till 0.81 and for subscales from 0.61 till 0.82.

Student's Well-being scale (Skolēna labizjūtas aptauja; Tiltiņa-Kapele, Škuškoviņa, Perepjolkina, 2010) is a 10-item self report scale. A sample item: "*Usually I wake up in good mood*". Scores can range from 0 till 30⁵, higher scores indicating higher levels of subjective well-being. Principal Component Analysis showed a unidimensional nature of the scale. Cronbach's alpha in different age groups ranges from 0.73 till 0.88.

Results

In order to evaluate the effectiveness of the Integrative Teaching Programme in enhancing school students' well-being and in lowering their level of school's anxiety, we analysed differences between pre- and post-test scores by the means of t-tests for paired samples. Taking into account the wide range of ages of students who participated in the project and specifics of the school, during the analysis of the results, the overall participant group was split into subgroups based on school type – general or special school and grade level (3–4, 5–7, and 8–12).

In Figure 1, pre- and post-test mean scores of *School Anxiety scale* for the 3rd–4th grade students group from comprehensive and from special schools are shown. Statistical analysis revealed that in this age group statistically significant ($p < 0.01$) decrease was found in all aspects of school anxiety for students from comprehensive schools, and for almost all aspects (with the exception of "fear of negative evaluation and test anxiety" ($t(27) = -0.18$, $p > 0.05$) and "physiological symptoms" ($t(27) = 0.03$, $p > 0.05$)) for students from special schools.

Similarly, in Figure 2, pre- and post-test mean scores of *School Anxiety scale* for the 5th–7th grade subsample and in Figure 3 for the 8th–12th grade subsample from comprehensive and from special schools are shown. In both age groups statistical analysis revealed that statistically significant ($p < 0.01$) decrease was found in all aspects of school anxiety for students from comprehensive schools, and for almost all aspects (with the exception of "fear of negative evaluation and test anxiety" ($t(70) = 1.91$,

⁴ Student's Questionnaire consisted of 4 parts: 1) demographic and the personal information questions; 2) a questionnaire on the evaluation of the attitude of classmates towards the student; 3) School Anxiety scale and Student's well-being scale; 4) Learning motivation scale. Additionally, each student's ability to concentrate was tested at the beginning and at the end of school year, using the computerised test (Cognitron, COG, Schuhfried) from the Vienna Test System set.

⁵ Scoring procedure is the same as for School Anxiety Scale.

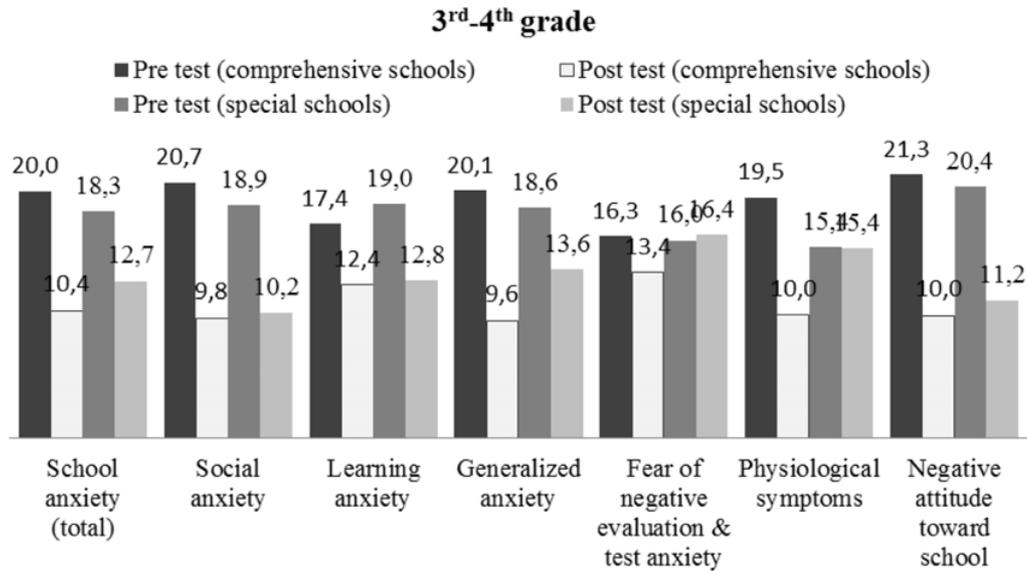


Figure 1. Pre- and post-test mean scores of School Anxiety scale for the 3rd – 4th grade students group from comprehensive and from special schools.

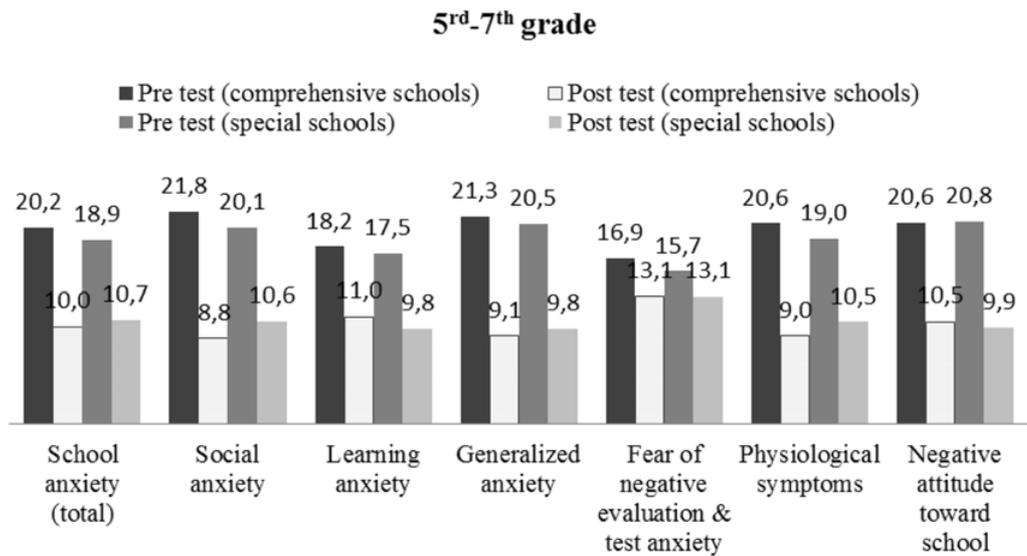


Figure 2. Pre- and post-test mean scores of School Anxiety scale for the 5th – 7th grade students group from comprehensive and from special schools.

$p > 0.05$) for 5th-7th subsample and $t(22) = 1.91$, $p > 0.05$) 8th-12th subsample accordingly) for students from special schools.

In Table 3 pre- and post-test mean scores of *Student's Well-being scale* and t-tests statistics for all three age subsamples from comprehensive and from special schools are shown. As one can see, in all subsamples, significant increase in subjective well-being mean scores was found.

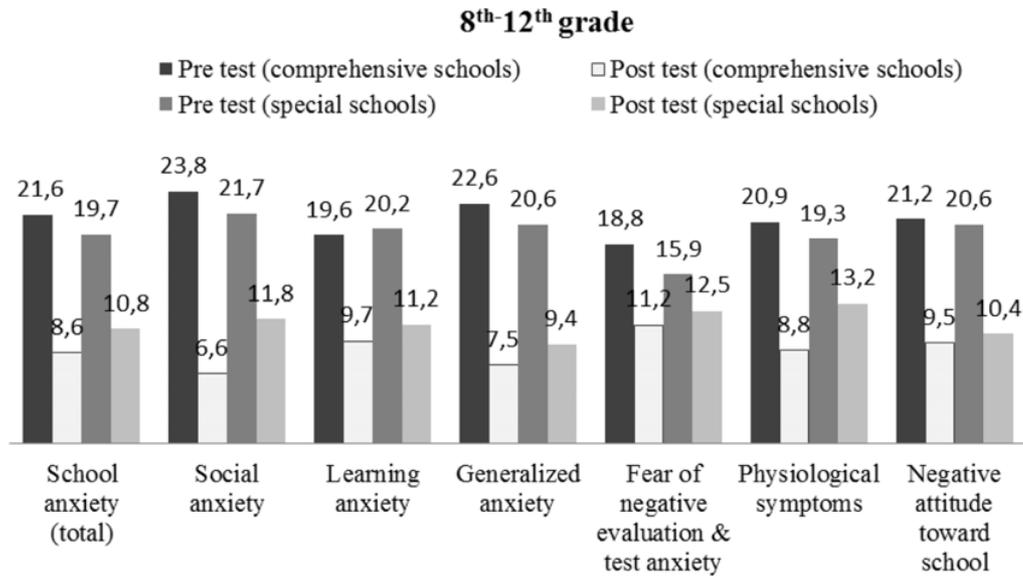


Figure 3. Pre- and post-test mean scores of School Anxiety scale for the 8th-12th grade students group from comprehensive and from special schools.

Table 3. Pre- and post-test mean scores of Student's Well-being scale.

| Subsample | Well-being | Comprehensive schools subsample | | Special schools subsample | | | |
|---|------------|---------------------------------|------|---------------------------|-------|------|----------|
| 3 rd -4 th grade | Pre-test | 5.99 | 5.29 | -22.48** | 4.88 | 4.52 | -13.93** |
| | Post-test | 24.29 | 5.69 | | 24.69 | 4.54 | |
| 5 th -7 th grade | Pre-test | 7.15 | 5.33 | -22.00** | 6.61 | 5.17 | -12.80** |
| | Post-test | 22.44 | 5.65 | | 22.10 | 6.34 | |
| 8 th -12 th grade | Pre-test | 7.43 | 5.09 | -20.24** | 7.32 | 5.31 | -5.91** |
| | Post-test | 22.63 | 5.01 | | 21.89 | 6.43 | |

Note: ** $p < 0.01$.

Discussion

Although statistically significant differences were not found in all subscales of School Anxiety scale, the trend of changes was very distinct – the results obtained from students who were involved in integrative teaching programme were significantly better (indicating lower levels of school anxiety). So, in general a conclusion can be made that the involvement in groups of integrative teaching programme reduced students' school anxiety and created behaviour models that helped them to cope with anxiety and to reduce it, as well as increases students' well-being in everyday life.

Any teaching situation with a specific learning task that the student should be able to complete according to his/her age, but which he/she cannot complete or completes with great difficulty can become a reason for anxiety. Recurrence of such situations can lead to student having fear of failure, shame and guilt, reduction of his/her self-esteem, decrease of learning motivation and in quality of learning. If such situations become an everyday phenomena then student can get angry, aggressive, start crying or to shrink into oneself.

While working in integrative programme groups, students' communication skills improve; conflicts and verbal or emotional aggression appear less. Emotional climate of class and school is formed more friendly and more supportive and that reduces tension and anxiety. Students' progress during the participation in the programme is not evaluated with grades; instead students' participation, interest and motivation are positively appreciated which in turn allows teachers to praise almost every student. Experience of positive emotions decreases psychological distance between teachers and students even in cases when teacher has implemented an authoritarian or authoritative leadership style before. In this case, it is a win-win situation as both students and teachers can benefit from it.

While working in integrative programme groups, the anxiety of students decreases, burnout syndrome of teachers decreases and the professional competence of teachers increases by practicing different leadership styles. It brings to assurance that students' capabilities and abilities are greater than they usually show in more traditional classes.

Conclusions

During the implementation of Integrative Teaching Programme developed in RTTEMA Scientific Research Institute of Pedagogy and Psychology, students' school's anxiety has decreased in all groups significantly, with exception of the one aspect of school anxiety – *fear of negative evaluation* which remain stable in the sample of students from special schools. The well-being indicators have increased significantly in all groups. To increase the effectiveness of the developed programme even more it is necessary to follow the example of colleagues (for example Kjøbli & Sørli, 2008) and create correction programmes which would include parents in implementation of the programme.

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