

**Key words:** *neuroscience, brain plasticity, EEG-biofeedback, neural therapy, child with mental disability, brain damage, special education*

УДК 371.311:376.1-056.26

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## PEER LEARNING AS A WAY OF DEVELOPING AN INCLUSIVE EDUCATIONAL ENVIRONMENT

### ВЗАЄМНЕ НАВЧАННЯ ЯК СПОСІБ РОЗВИТКУ ІНКЛЮЗИВНОГО ОСВІТНЬОГО СЕРЕДОВИЩА

*У статті розглядаються можливості вдосконалення інклюзивного освітнього середовища, у якому виховується учень із синдромом Дауна. Наші висновки про переваги використання взаємного навчання/ репетиторство, створення спільних експертних груп у галузі інклюзивної освіти підтвердили претензії та висновки Європейського агентства розвитку спеціальної та інклюзивної освіти [3, 4, 5]. Практична значущість та перспективи використання взаємного навчання сприймається як унікальна можливість для досягнення кращих академічних результатів, а також можливість підвищити соціальний статус вихованців з обмеженими можливостями здоров'я, тому ми рекомендуємо це в якості ефективної стратегії інклюзивної освіти.*

**Ключові слова:** *включення, мейнстрім класу, учень із синдромом Дауна, репетитори навчання, кооперативні групи однолітків, ефективні інклюзивні стратегії, соціальний статус.*

The opportunity to be part of the class as an assistant of teacher, in which is educated a pupil with Down syndrome, constantly encourages our striving to create such an educational as well as experiential model of learning that would benefit for all concerned – pupil with Down syndrome, as well as his classmates. We realized the basic fact, that during the direct teaching there is not sufficient time to ensure that students have the opportunity to come into contact with one another, to observe at work, evaluate each other's endeavors, teach each other and learn from each other. It was also our aim to enable pupil with Down syndrome become an integral part of the collective experience and the looks of mutual cooperation with students what it is like to participate fully in a group of their classmates and acquire competencies for self-realization. Our goal was to create opportunities for learning in small peer groups and therefore we started implementing the concept of peer tutoring/learning in a small cooperative peer groups of pupil during preparation and doing homework in school clubs for children.

**Theoretical basis.** According to results of European agency for developmnet of special and inclusive education [2], process of inclusion depends mainly on the attitude of teachers to pupils with special educational needs, on their ability to enrich social relations beetwen classmates and their willingness to deal with differencies between pupils effectively.

Teachers need to acquire certain skills repertoire, experiences, knowledges, pedagogical approaches, adequate methods of teaching and time

for effective mediation of curriculum. One of the main aim of all participants of inclusive education is improving the academic performance of pupils through creation of function inclusive system, strengthening of the social competencies of pupils with special educational needs and positive changes in the attitudes of teachers, professionals and other students. Concept of peer tutoring/peer learning combines all of these attributes and we are convinced that with the proper management of pupils it is possible to prove its authenticity.

Findings concerning the study of literature and information acquired during our own classroom practices reveal five groups of factors that are effective within the inclusive education and which are appropriate to focus attention (in our case in particular, the potential uses of peer learning): 1. Cooperation between teachers and other professionals. 2. Cooperative learning/peer learning. 3. Solve problems by working together. 4. Heterogeneous groups. 5. Effective learning. The possibility of using natural cooperation between pupils is welcome and useful also in the process of inclusive education and contributes to the enhancement of mutual tolerance and acceptance of students.

According to [2, 7] it is pointed out, that the majority of pupils with Down syndrome educated in mainstream schools has its own customized program created. Students follow an Individual Education Plan and teachers encourage contacts among pupils with Down syndrome and their classmates. Within the class they occupy a central position, have the opportunity to practice social skills with their peers, and is mainly cooperative in peer learning. Most teachers of pupils with Down syndrome in mainstream schools are convinced that inclusion of these pupils for others is enrichment and also positively affects their social site. Parents and teachers generally seen mutual contacts of students with Down syndrome and their peers positively [2, 7].

**Objective of research.** The main objective of the research was to identify and describe the strategy, which is an effective tool for creating positive peer relationships in the process of inclusive education of pupil with Down syndrome. Another aim of research was the identification and description of specific processes of inclusive education of pupil with Down syndrome educated in a mainstream primary school.

**Research methodology.** In our case it was a qualitative research which, according to [1] can be compared to a circular cycle during which the beginning researcher enters the field with some anticipated, the current selection of cases in the sample, collecting data, the parallel analyzes and interprets. Compares individual cases among themselves and on the nascent analysis selects new cases and collects more data.

For the selection of a particular qualitative research approach, we decided for ethnographic research, because ethnography is characterized by means of information processing and its aim is to give a “thick” description, that describes in detail the life of a certain group of people. [1] refers to as ethnographic design

suitable for the study of schools, school classes, as well as the wider environment of education. It is based on terrain investigation, which consists primarily of observation, interviews and analysis of the various documents.

Our research consists from these partial areas:

Research questions relating to the education of a pupil with Down syndrome in mainstream schools:

1. Partial area: Pupil with Down syndrome – classmates

2. Partial area: Peer learning

3. Partial area: Inclusive specifics of education identified by the long and short term participatory observation

1. Partial area: Pupil with Down syndrome – classmates

Research questions:

1. What is the social status/position of a pupil with Down syndrome in class group?

We examined using sociometric test and demo version of program Walsh's Classroom Sociometrics [11].

2. How is perceived a pupil with Down syndrome by his classmates?

We examined through their statements to the instruction: "Imagine that I (name classmate with Down syndrome) do not know him/her. What do you like about him/her to say? How would you like him/her to be introduced?"

3. What factors influence social status of a pupil with Down syndrome?

We have attempted to identify those factors which his/her social status may weaken and reinforces, realization – content analysis of statements of classmates

2. Partial area: Peer learning

Since we have started the implementation of peer learning – peer tutoring, our concern was also to identify and name the factors that a pupil with Down syndrome and his/her classmates perceived as positive and as negative. For obtaining the necessary data we used semi-structured interviews with a pupil with Down syndrome and his classmates after each peer meeting. Pupils responded to simple questions related to the events of reflecting on peer meeting.

Research questions

1. What factors are perceived by a pupil with Down syndrome and his classmates as positive, reinforcing peer group? (Friendly atmosphere, slower pace of work, non-compete, calm, improving performance in teaching each other...).

2. What factors are perceived by a pupil with Down syndrome and his classmates rather as negative (noise, too many group members, classmates' mood, impartiality of a pupil with Down syndrome ...).

3. What kind of interaction can be seen during the peer group of a pupil with Down syndrome and his classmates, what is the specific form of assistance in the process of preparation for learning and doing homework?

In the early research was our job detailed observation, recording of events in the classroom (writing notes), detection rituals that help maintain a class group consistent while seeking also the possibility of joint activities that would allow active participation and opportunities for mutual communication between a pupil with Down syndrome and his classmates. Based on observations and conduct interviews with a pupil with Down syndrome and his classmates we believe the concept of peer learning can provide these opportunities.

**Ways of obtaining and evaluation of information.** All mentioned techniques for obtaining information – long-term participant observation, semi-structured interviews, analysis of products, sociometric test, we use them in our long-term engagement in the classroom where the education of a pupil with Down syndrome is organized. Consequently, in the case of the other two participants in the research, we used participant observations, sociometric test and semi-structured interviews.

**The selection of research participants.** In the research we focused on identifying and description of the specifics in the inclusive learning environment and because of that, we then adjust the selection of participants of the research. In our case, it was targeted selection of participants, because it allows us to choose the case that illustrates some characteristic or process we are interested in. Choice of targeted selection of participants requires us to critically consider the population parameters that interest us and are based on this consideration carefully selected sample case.

Participants:

Pupil with Down syndrome (current pupil of the 2nd year regular primary school), 24 his classmates (target: through sociometrie determine the current position of the pupil with Down syndrome in a class group, a mutual ties between him and his classmates), class teacher, assistant of teacher.

During participation in the class, we started to ask, if it is possible, through certain actions/activities positively affect relations between pupils with Down syndrome and their peers, in our case we have identified as the possibility – peer learning. Our partial order was to check the current status of other pupils with Down syndrome who are educated in mainstream school (one girl, one boy). Girl with Down syndrome who attends the second class of the classic urban housing estate school in Bratislava and the pupil with Down syndrome, which is in a fourth grade in a small village school in the village not far from Bratislava, in Malinovo. The choice of survey sample was intentional, targeted. This was not a random choice.

### **Research results and their interpretation**

#### **1. Partial area: Pupil with Down syndrome as part of a class**

Partial aim of the research work was to determine what effects social status of pupils with Down syndrome within their class in regular primary schools. Chapter provides an interpretation of the results of the sociometric

test carried out in three different educational settings and also their brief description:

1. Elementary School in Most pri Bratislave – the education of a pupil with Down syndrome in the border zone intellectual abilities, follows the educational program of regular primary schools, while also carried out long-term participatory observation, currently a pupil of the 2nd class.

2. Elementary School in Malinovo – the education of a pupil with Down syndrome with mild degree of mental disability. He has an individual educational program for variant A for special school, currently a pupil of 4<sup>th</sup> class.

3. Primary School in Bratislava – the education of a pupil with Down syndrome (girl) with mild degree of mental impairment, hearing impaired. She has an individual educational program for variant A for special school, currently pupil of 2nd class.

Conclusions:

1. The results of sociometric test in the school in Most pri Bratislave.

Based on the results of the sociometric assessment of the pupil with Down syndrome in the context of a class group it revealed that he has been the popular pupil. We think, that is one of the factors, that have and continue to have a positive impact on the enrollment of a pupil with Down syndrome and the status of his personality as popular, is also the possibility of implementing peer learning in school club for children (positive nominations/mutual positive nominations, he received just form members of the peer group), where he gets more space for the presentation of what he already knows and also to mutual friendships deepen ties even more.

As the first results of sociometric tests had very positive (pupil with Down syndrome received only positive nominations largely by classmates with regularly encountered in peer groups, we wonder how it fared results of repeated sociometric investigation – in particular the number and nature of the received nominations). First sociometric test we conducted during November 2014, the second test we conducted in late March 2015. In the following, we offer analysis and interpretation of our findings.

A pupil with Down syndrome in repeated sociometric test received three nominations positive, no negative. His position in the class group is p – popular. Compared with the previous sociometric test, his position retained, he received one nomination less positive than in the previous test. A possible cause could be his long-term absence from school and form peer group, as well as the changing preferences of individual pupils. The pupil received three positive nominations. An interesting and very pleasing for us was finding, that positive preferences as in the first sociometric test to a pupil with Down syndrome awarded 2 classmates, both the regular and permanent members of the peer group (the legitimacy of our previous assumptions on that positive peer groups

contribute to the positive image of the pupil with Down syndrome can be based on the results of repeated sociometric tests confirmation).

In the context of the conclusions of sociometric test, we added an extra dimension – the views of classmates to their peer with Down syndrome. We entered them simple instructions: “Try to imagine that (name of classmate with Down syndrome) I do not know, what you would say about him/her? What can you imagine, when I say his/her name?”

Here is one statement:

“David is very clever and very funny. A very good friend. Very well taught. He is able to run fast. I help him with learning”.

## 2. The results of sociometric test in the school in Malinovo

As shown by the results of the sociometric test, a pupil with Down syndrome has in the class group social position R – rejected. Based on the content analysis of interviews conducted with the classroom teacher, assistant of teacher and statements provided to us by individual classmates, however, it can be concluded that in the class he has created quality friendship mainly with 2 classmates (no. 2 and no. 1 in sociometric test). In statements actually dominated his cheerful nature, good memory, success in recitation contest. While pupils also show characteristics that are perceived as negative that sometimes disobeys, but also pointed out, that an appropriate way of guidance and explaining of behavior (mainly from assistant of teacher), can help him to be a full member of the class and a good friend. It is also necessary to mention the fact, that the prosocial behavior of pupils intensively leads class teacher (especially during the early community meetings on the carpet), but also an assistant of teacher.

## 3. The results of sociometric test in the school in Bratislava

Based on the results of the sociometric test, we found, that the pupil with Down syndrome – a girl, has within a class group social position R – rejected. This may be due to the fact, she is hearing impaired (she has hearing aids and other pupils often do not understand her).

In order to determine their perceptions of their classmate with Down syndrome, we put them at the end of the lesson one more assignment: “Try to imagine that (name of a classmate with Down syndrome) I do not know, what you would say about him/ her? What can you imagine, when I say his/ her name?”. In contrast to the first two cases, here mainly dominated negative statements. Here is one of them:

“Kate is almost always bad. Kate is almost never good. Kate is wrong to anyone. Kate for me is bad and good”.

The final summary of the partial area: Pupil with Down syndrome – classmates (as we have seen, each case is individual), we can say that the most important factors affecting the social status of the pupil with Down syndrome positive may include: a sense of humor, cheerful, friendly nature, willingness to learn, prosocial behavior, sensibility, willingness to lend school supplies, gently behavior.

In contrast, among the factors that negatively determine the social status of the pupil with Down syndrome (again fully individual), may be included: making grimaces, coarse manners (identified in the case of girl with Down syndrome), beating other pupils (identified in the case of a girl with Down syndrome), a misunderstanding of spoken language, slurred pronunciation, passivity towards requirements.

According to our observations, particularly and mainly afternoon activities at school clubs for children bring many opportunities for a pupil with Down syndrome and his classmates for learning manners and expressions of prosociality. Later, it is certainly reflected in the re-evaluation of the social status of the particular pupil.

## 2. Partial area: Peer learning

In the first year we generally implemented 43 peer meetings and when retrospectively evaluate their progress, we must clearly say, that the beginnings were sometimes challenging – particularly in terms of understanding the rules (eg. Not compete, work slowly and precisely. Here it is not important whether you are the first, second or last. When I finished, I will help others. We speak to each other with courtesy tone, treat each other gently and nicely ..), but the pupils gradually acquire from participation in the meetings some proficiency both in terms of controlling their behavior and it's manifestation. We believe that peer groups bring students a unique opportunity to learn from each other. They have the opportunity to acquire and develop not only academic skills but also social competences. Inclusive teaching is characterized by individualization and cooperation, fully sharing and this fact also applies in the context of cooperative peer groups.

**Summary.** Factors that pupils participating in peer groups mentioned as a disruptive: noise, too many participants in the group, unwillingness of some members of the group to work.

Factors that they do appreciated (it was also evident on conceptual maps) most often included: friendship, cooperation, listening, non-compete, teaching each other, calming, done homework. Mutual cooperation between pupils (according to observations): direct explanation of the curriculum, drawing shapes of letters/numbers (especially in the first year), inputting auxiliary questions, explanation of the calculation, search for other devices (numerical axes), repeat important information, affirming the understanding of issues. An important indicator that students genuinely cooperate with one another is the fact, that the group can mutually encourage every member of the group.

## 3. Partial area: Specifics of inclusive education identified by the long and short term participatory observation

Based on long-term participatory observation and two short observations we have formulated some specifics that we in the process of inclusive education of students with Down syndrome appear to be significant.

Likewise, we seek to participate in identifying the specifics of the views/information, which we have been mediated from semi-structured interviews with classroom teachers and teaching assistants. Individual specifics can be seen as recommendations for practice:

1. Initial presentation of a pupil with Down syndrome to teachers/other parents (video, power point presentation).
2. Introduction of an assistant of the teacher to other pupils (assistant is helpful to every pupil).
3. "Mrs. assistant interpreter is not ...",
4. A pair of classmates in a school desk is more than a pair of an assistant of teacher and a pupil with Down syndrome.
5. The same books.
6. Rituals and greetings.
7. Communication Workbook (write informations for parents).
8. Preparation worksheets for pupil with Down syndrome.
9. Allowing pupils with Down syndrome to write such a script that best corresponds to his/her graphomotoric skills.
10. Active creator, not passive recipient.
11. Creation of a portfolio of posters as a substitute for model of testing.
12. Integrating the processes of education in situations that require cooperation with classmates.
13. Create space for pupils to appreciate the success of one another (to allow them to applaud the success classmate during lesson – it immediately appreciate).
14. The use of alternative and innovative methods of education for pupils with Down's syndrome.
15. Participation of pupils with Down syndrome in all activities organized by the school.
16. Assistant of a teacher does not speak for the pupil with Down syndrome.
17. Encourages and rewards ("I appreciate that ...").
18. Be patient and optimist.

**Conclusions.** Inclusion as a philosophy of respecting the pupil's uniqueness, creates environment for learning of all participants approached this process with the maximum degree of innovation, taste, enthusiasm and optimism. The concept of peer learning combines all of these attributes and we are convinced, that with the proper management of pupils proving its authenticity be of interest to them to make way for it that each participating also fully involved and thus had the opportunity to actively influence its position within the class group. The legitimacy of our claims, we managed to confirm and prove on the basis of the results of the sociometric test in which a pupil with Down syndrome who is a member of peer group gained repeatedly the status of popular pupil, which was for us very encouraging and motivating for further work and coordinating peer meetings. The results of our research objective, however, due to low numbers of research participants cannot be generalized. However, we expressed the belief that the concept is really an effective strategy, which would be appropriate to do wherever it raises the need for access to education of students, not only mentally impaired, but any other people, but also to pupils intact, with a certain amount of innovation and creativity and where for objective to transform students from passive recipients to active creators of the learning process. We are equally convinced,



that the peer learning can be seen as a form of prevention of bullying because the elements of pro-social behavior are a natural part of this process.

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## РЕЗЮМЕ

**Ванчова А., Шулкова В.** Взаимное обучение как способ развития инклюзивной образовательной среды.

*В статье рассматриваются возможности совершенствования инклюзивной*

*образовательной среды, в которой воспитывается ученик с синдромом Дауна. Наши выводы о преимуществах использования взаимного обучения/ репетиторство, создание совместных экспертных групп в области инклюзивного образования подтвердили претензии и выводы Европейского агентства развития специального и инклюзивного образования [3, 4, 5]. Практическая значимость и перспективы использования взаимного обучения воспринимается как уникальная возможность для достижения лучших академических результатов, а также возможность повысить социальный статус воспитанников с ограниченными возможностями здоровья, поэтому мы рекомендуем это в качестве эффективной стратегии инклюзивного образования.*

**Ключевые слова:** *инклюзия, мейнстрим класса, ученик с синдромом Дауна, репетиторы обучения, кооперативные группы сверстников, эффективные инклюзивные стратегии, социальный статус.*

### SUMMARY

**Vancova A., Sulkova V.** Peer learning as a way of developing an inclusive educational environment.

*The main topic of the paper is focused on the possibilities of improvement of inclusive educational environment where is educated a pupil with Down syndrome. Through longitudinal participative observation (2 school years) and ethnographically oriented research, we identified as a useful tool for this aim-creating and improving opportunities for his active participation and learning, peer tutoring/ learning and his participation in the cooperative peer group, which is organized during afternoon activities in school club of pupils. During his participation in the cooperative peer group he is doing his homework together with his classmates. If pupils have a problem, or they do not understand task request, we are there for offering an assistance and supervision. During these activities every pupil in the cooperative peer group has an opportunity to teach each other, help each other with homework. Our findings about benefits of using peer learning/ tutoring, creating cooperative peer groups in the inclusive education, confirm claims and conclusions of European agency for developmnet of special and inclusive education [3, 4, 5]. Another important tool, we used to applicate during learning in peer group, is Mediated Learning Experience based on Feuerstein Instrumental Enrichment [6]. We believe, that the way of mediation of knowledge is the base for creating pupil's active approach to learning ant this is one of the aims of organization of cooperative peer groups [10]. According to findings of researches focused on academic achievements and social status of pupil with Down syndrome educated in the mainstream classroom [2, 8], which describe peer learning as an effective strategy in both sides of education (achievements, social status) we decided to verify this through sociometric test. The test included two positive questions (1. With whom would you like to sit in the school-desk? 2. Whom would you invite to your birthday party? and one negative question (3. Whom would you not invited to your birthday party?). Pupils should write 3 names of classmates into each question. Results of sociometric test in the class, where was educated pupil with Down syndrome and where were peer cooperative groups organized regularly, shown his social status as a popular. The same result we gain in the repeated test. The main finding: pupil with Down syndrome received only positive nominations and these nominations awarded classmates who were participating in cooperative peer group regularly. Practical importance and prospects of the use of peer learning is perceived as a unique opportunity for achieving better academic results and as well as a possibility to improve the social status of pupils with disabilities, so we recommend this as an effective inclusive strategy.*

**Key words:** *inclusion, mainstream class, pupil with Down syndrome, peer tutoring/learning, cooperative peer groups, effective inclusive strategy, social status.*