

# Use of Ergotherapy Elements in the Development of Social Competencies of Practical School Pupils

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## Abstract

The paper analyses the possibilities of using ergotherapy elements in the development of social competencies of pupils with mental disabilities in practical school, as part of vocational-practical and elective subjects. In its conception, ergotherapy offers many innovative approaches, methods and work techniques that can be used in a practical school in the development of pupils' social competencies and their socialization. The aim of the paper is to verify the possibilities of using ergotherapy elements, their effectiveness and suitability in the development of social competencies of pupils with mental disabilities in practical school. This paper informs about its real contribution to the education of students with mental disabilities and about its use in special educational practice. Several methods have been used in the research. The main research method was the experiment. The research confirmed the hypothesis of a positive contribution of the use of ergotherapy elements in the development of social competencies of pupils with mental disabilities in practical school.

**Key words:** Occupational therapy. Activity therapy. Social competencies. Mental disability. Practical school.

## 1. Introduction

In recent years, various types of therapies and therapeutic approaches that help meet the goals of the branch, especially in terms of improving the quality of life of people with disabilities and reducing the side effects of individual disabilities, have begun to expand and use in special education.

Therapies in special pedagogy are systematic, purposeful, and formative. We can see a great expansion of therapeutic directions in the world since the 19th century, within the framework of improving the quality of care for people with disabilities. However, due to historical contexts, therapies in Slovakia have not been used in special pedagogy for decades rather than used. At present, therapies begin to be among the most popular and promoted methods and approaches. Most of the authors and their publications deal with the possibilities of using ergotherapy in the field of medicine, especially in the rehabilitation of people with physical disabilities (Švestková, 2013; Kondziolkova, 2013; Bursová, 2016), or in the field of social work (Kuzyšin, 2014). Several authors agree that ergotherapy and its elements can be used in other areas, not only in medicine or social work, but also to a large extent in various types of disabilities without age restrictions. They emphasize that human being is an active being and it is given to man from his birth, and it is a part of it through his all life. They draw attention to the fact that this activity corrects and improves not only the disabled part of the body but also it improves the mental well-being of the person and thus the person becomes a functional part of society again, his socialization takes place. In addition to medicine, these possibilities are used mainly by special pedagogy (Krivošíková, 2011; Müller, 2005). However, these are all more general information, statements. We have not often encountered the specific influence of ergotherapy elements on the development of social competencies of pupils with mental disabilities when using them in practical school in the Slovak professional literature. We therefore see this fact as an opportunity to address this issue in research.

Ergotherapy as a working and acting therapy is very often used for people with mental disabilities for which a treatment program is being developed and also an individual that respects their health status and type of disability (individual educational program) (Dudek, 2008). In the educational process for pupils with mental disabilities the group ergotherapy with an individual approach to students is applied. It is not an individual occupational therapy in the full sense of the word, as the therapy is carried out here by a teacher and not by a professionally trained worker (ergotherapist). In group occupational therapy here is the activity carried out with the aim of developing a certain area and certain abilities and skills (Gúth, 2004).

In the case of mental disabilities, we use to achieve ergotherapeutic goals mainly:

- manual craft activities (working with textiles, wood, natural materials, paper, metal, etc.);
- training in practical life (housekeeping, training in specific concrete practical procedures for solving certain life problems).

Ergotherapy is also meaningfully used in the leisure activities of students with mental disabilities. In this case, activities and techniques are selected that can amuse the pupil and at the same a benefit and the overall activation (Müller, 2005; Pipeková, Vítková, 2001).

The aim of introducing and using ergotherapy elements in the learning of pupils with mental disabilities should be reeducation, resocialization, personality integration,

creativity development, empathy training, communication unblocking, self-control, compensation of intellectual and physical deficits and cognitive functions.

In education with the use of ergotherapeutic elements, we started from the concept of ergotherapy where the basis is an active activity, which is emphasized in the field of special pedagogy. It takes the form of action therapy, which focuses primarily on the process and not on the final product. This concept was also used in the introduction of ergotherapy elements into education, with emphasis on the development of students' social skills.

In our research, we focused on the use of ergotherapy elements in the subjects of *foodpreparation and nutrition and auxiliary work in the kitchen*, with an interdisciplinary relationship to other vocational-practical subjects according to the educational program for practical school.

Based on the ergotherapy process [9], the teaching process in these subjects was modified to maintain the requirements for it in terms of didactics. So that it meets all the expectations arising from the education process, taking into account the needs of students.

## **2 METHODOLOGIES**

### **The problem of research**

The education of practical school pupils should prepare them for life in society within their possibilities, considering their disability. The role of the school is therefore to find suitable and effective methods to achieve these goals. At present, the special pedagogy uses many methods from the field of various types of therapies, especially in the field of development of social competencies. Occupational therapy has several elements in its concept, which can be used as support in the development of social competencies of students with mental disabilities in practical school. Our research seeks to determine the effectiveness and suitability of these ergotherapy elements. We therefore formulated the research problem as follows: Is the use of elements of ergotherapy beneficial for the education of students with mental disabilities?

### **Aim and tasks of the research**

The aim of the research is to verify the possibilities of using occupational therapy elements, their effectiveness and suitability in the development of social competencies of pupils with mental disabilities in practical school.

Tasks arising from the objective of the research:

- to study professional literature in relation to research,
- to find and select a school whose pupils will form a sample of experimental and control groups,
- to compile a record observation sheet,
- to process the data obtained through quantitative and qualitative analysis,
- to draw conclusions and recommendations for special educational practice.

## Research hypothesis

**Hypothesis:** Appropriate use of ergotherapy elements in the education of pupils in practical school helps to increase and develop their social competencies.

## Hypothesis operationalization:

In the classroom where ergotherapy elements are used, higher values will be measured in positively perceived categories: *help among pupils, cooperation and participation in tasks, friendly behaviour among pupils*, than in the classroom where occupational therapy elements are not used in education.

In the classroom where ergotherapy elements are used in education, there will be lower values of negatively perceived categories: *hostile behaviour, stuttering, ridicule and friction*, than in the classroom where ergotherapy elements are not used in education.

## Concretization of monitored categories:

Friendly behaviour expresses all phenomena between pupils, as well as between pupils and teachers, which are friendly. Involving pupils in working together is recorded in the category of participation in tasks. The category of *ridicule, friction, hostile behaviour, stuttering*, notices the negative interactions between pupils. Cooperation expresses whether pupils know how to cooperate on a given task.

Observations were made during the food preparation and nutrition classes. The categories were assigned commas and frequency in the observation sheet.

The aim of the observation was to find out whether there is a difference in the individual categories before and after the introduction of ergotherapy elements into regular education.

## Characteristics of the sample group

The research took place in two classes of a practical school.

The selection criteria were:

1. It had to be a school attended by the pupils from the wider area.
2. It had to be for pupils with multiple disabilities and different variants of mental disabilities.
3. There had to be at least 6 students in the class.

Twelve students were involved in the research. Six in the experimental sample and six in the control sample (two classes).

## Research methods

In determining whether the Educational Program for Practical School for Lower Secondary Vocational Education allows the use of ergotherapy elements in education, we used the basic scientific methods associated with the study of documentation (analysis, synthesis, comparison, abstracting and generalization).

The main research method was experiment, because it can convincingly prove the causal consequences of special educational work. It can prove how one educational phenomenon affects another.

We processed the obtained data using statistical methods. We present the observation sheet in the form of a table, which we used in the observation.

**Table 1 Observation sheet**

Help among students	
Cooperation	
Participation in the performance of tasks	
Friendly behaviour among students	
Hostile behaviour	
Stuttering	
Mock	
Friction	

*(Source: own processing)*

### **Statistical processing of research results**

The data obtained from the observations were processed in Microsoft Excel. The median calculation function was used. These data were processed into tables. Through research, we have tried to confirm or refuse the established hypothesis that the appropriate use of ergotherapy elements in the education of pupils in practical school helps to develop their social competencies.

### **3 EVALUATION OF STRUCTURED OBSERVATION RESULTS**

We paid the main attention the structured observation in this research. Below we present the results of the observation and verify the validity of the hypothesis.

The observation records were processed into the following tables and graphs. The numbers in the table show the number of lines in the observation sheet.

In the experimental group of pupils, the data 1A, 2A, 3A, 4A are measured in lessons without the use of ergotherapy elements. The observation was carried out in the first year of pupils 'study at a practical school, in October and November, in the school year 2018/19. Data 1B, 2B, 3B, 4B and 1C, 2C, 3C, 4C are, in an experimental group of students, the values measured in lessons using ergotherapy elements. Recorded observations were made twice (B, C) for four lessons. The first in March and April in the school year 2019/20 and the second verification in October and November in the third year of study in the school year 2020/21.

Continuously with the experimental group there were also made observation in the control group of students. There, all observation data were obtained in lessons without the use of ergotherapy elements and served as control data. At the end of the research, they were processed into tables and graphs for comparison with the results of the experimental group of pupils.

The following tables and graphs are used measured and processed categories: Mocking, Hostile Behaviour, Lust, Friction, Participation in Tasks (expresses pupils 'willingness to cooperate as determined by teacher), Cooperation (expresses spontaneous cooperation of students), Help among pupils (expresses one-time help of students provided to a classmate), Friendly behaviour among students.

The processed results of the observations confirm that education, which included ergotherapy with its procedures and techniques, was more effective in reducing negative behaviour in students (teaching - mockery, hostile behaviour, stuttering, friction) and more effective in increasing positive behaviour in pupils (participation in tasks, cooperation, help among students, friendly behaviour among students). The results are positive in both observations in the experimental research file, where ergotherapy procedures were used (Table 3 - B, C; Graph 1 - observation 1; 2).

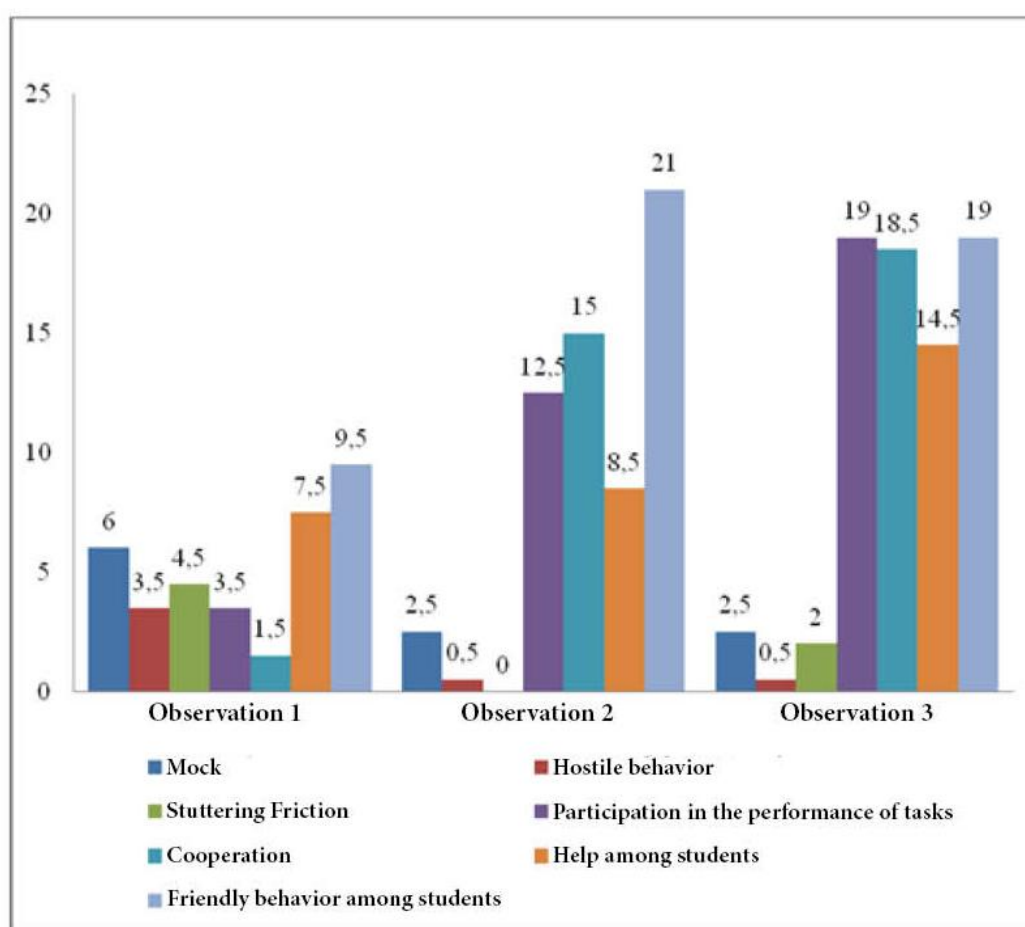
Slightly discrepancies in some categories were noted in observations B and C. In observation C, the median in the negative categories increased slightly. We see the reason for this in the longer separation of some pupils from each other, disruption of the daily routine and activities, which in connection with the personality and disability of individual pupils manifested itself in these categories. However, in both measurements, higher values were measured in the positive categories. This is due to the use of ergotherapy elements in education in the form of techniques and procedures. We perceive this as the result of three years of cooperation work between teachers, health counselling staff and students.

**Table 2 Verification of the hypothesis by the method of observation in an experimental group of students**

Categories	Mocks	Hostile behaviour	Stuttering Frictions	Participation in the performance	Cooperation	Help among students	Friendly behaviour among
Observation 1A	7	4	6	4	1	10	11
Observation 2A	6	5	4	3	0	9	10
Observation 3A	6	2	4	3	2	6	9
Observation 4A	4	3	5	5	2	3	8
<b>Median</b>	<b>6</b>	<b>3,5</b>	<b>4,5</b>	<b>3,5</b>	<b>1,5</b>	<b>7,5</b>	<b>9,5</b>
Observation 1B	3	1	0	12	10	10	20
Observation 2B	2	2	1	12	15	9	21
Observation	3	0	0	13	15	8	21

3B							
Observation 4B	2	0	0	14	17	8	23
<b>Median</b>	<b>2,5</b>	<b>0,5</b>	<b>0</b>	<b>12,5</b>	<b>15</b>	<b>8,5</b>	<b>21</b>
Observation 1C	3	1	2	20	15	15	15
Observation 2C	2	0	2	15	18	15	19
Observation 3C	3	0	2	18	21	14	19
Observation 4C	2	0	1	20	19	14	22
<b>Median</b>	<b>2,5</b>	<b>0,5</b>	<b>2</b>	<b>19</b>	<b>18,5</b>	<b>14,5</b>	<b>19</b>

(Source: own processing)



**Graph 1 Graphical representation of observation results in an experimental group of pupils**(Source: own processing)

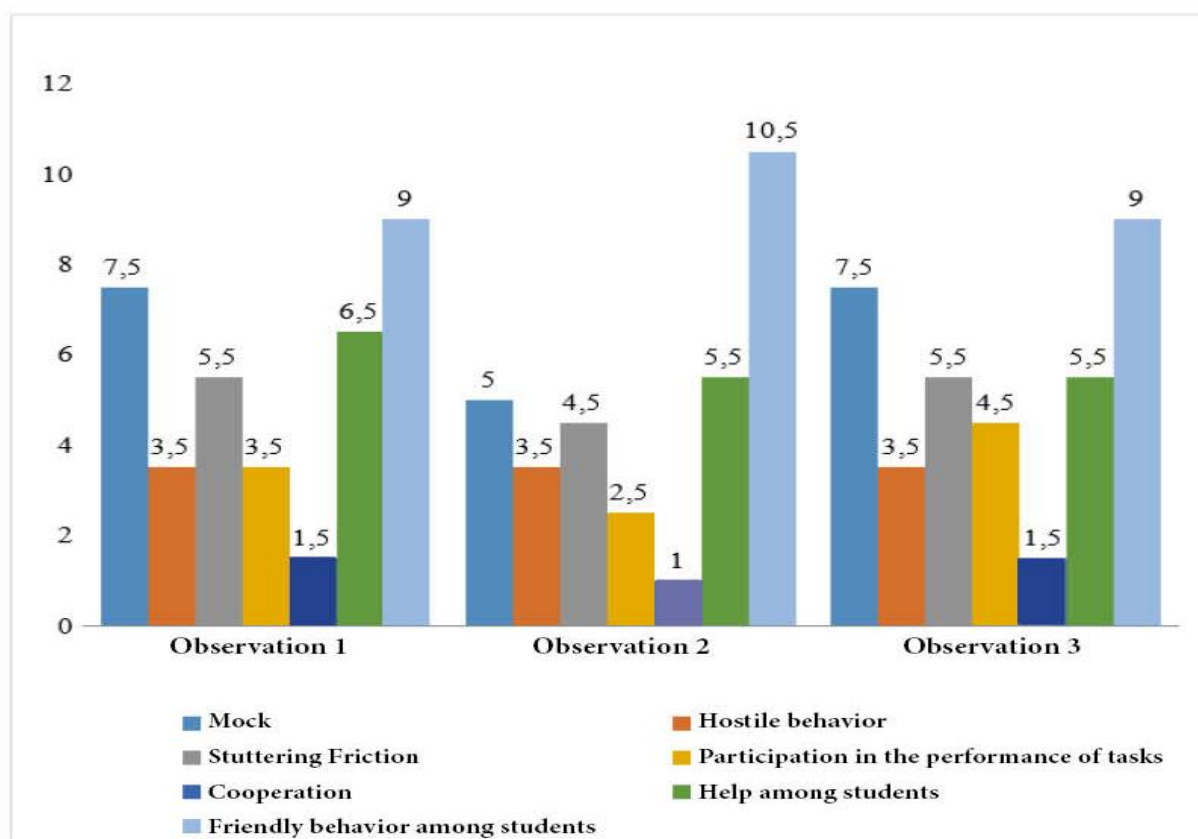
The results of the research, which we carried out in the verification research file in parallel with the research in the experimental research file, have fluctuating values and in comparison, with the experimental research file they did not improve significantly from the beginning of the study to its end. We present detailed results processed in the following table and in the graphical display. The only one measured value that improved in the output observation was the participation in completed tasks. We see this in the fact that the students were competitive, and everyone wanted to get involved to activity because his classmate got involved, too and he didn't want to be worse. These were boys who performed in front of classmates and teachers in this way. As suddenly there was no impulse in the form of a competing classmate in the lesson, the activity in this measured category was decreased. The research carried out in both observed groups confirmed that the use of ergotherapy elements increase the social skills of pupils. The output measurements confirmed that the positive values measured in the experimental research file were not only the result of a classical educational effect on the pupils within their education.

**Table 3 Verification of the hypothesis by the method of observation in the control group of students**

*(Source: own processing)*

Categories	Mocks	Hostile behaviour	Stuttering Frictions	Participation in the performance	Cooperation	Help among students	Friendly behaviour among
Observation 1A	8	4	6	4	1	9	9
Observation 2A	7	5	6	3	0	7	10
Observation 3A	8	2	4	3	2	6	9
Observation 4A	4	3	5	5	2	4	8
<b>Median</b>	<b>7,5</b>	<b>3,5</b>	<b>5,5</b>	<b>3,5</b>	<b>1,5</b>	<b>6,5</b>	<b>9</b>
Observation 1B	5	4	5	3	0	7	12
Observation 2B	5	4	4	2	0	6	11
Observation 3B	5	2	5	2	2	5	10
Observation 4B	4	3	4	4	2	2	9
<b>Median</b>	<b>5</b>	<b>3,5</b>	<b>4,5</b>	<b>2,5</b>	<b>1</b>	<b>5,5</b>	<b>10,5</b>
Observation 1C	8	4	6	4	1	9	9
Observation 2C	7	5	6	3	0	6	10
Observation 3C	8	2	4	3	2	5	9
Observation 4C	7	3	5	5	2	3	7
<b>Median</b>	<b>7,5</b>	<b>3,5</b>	<b>5,5</b>	<b>4,5</b>	<b>1,5</b>	<b>5,5</b>	<b>9</b>





**Graph 2 Graphical representation of the results of observations in the control group of students**

(Source: own processing)

For a better opportunity to compare the results of both examined files, we provide a comprehensive overview of the results in the following summary table. The “Median a” values are the final values of the experimental file of pupils. The “Median b” values are the final values of the control file of pupils.

**Table 5 Comparison of the results of the observation of the experimental group of students with the results of the observation of the control group of students**

Categories	Mocks	Hostile behaviour	Stuttering Frictions	Participation in the performance	Cooperation	Help among students	Friendly behaviour among
Median 1a	6	3,5	4,5	3,5	1,5	7,5	9,5
Median 1b	7,5	3,5	5,5	3,5	1,5	6,5	9
Difference	1,5	0	1	0	0	1	0,5

<b>Median 2a</b>	2,5	0,5	0	12,5	15	8,5	21
<b>Median 2b</b>	5	3,5	4,5	2,5	1	5,5	10,5
<b>Differenc e</b>	<b>2,5</b>	<b>3</b>	<b>4,5</b>	<b>10</b>	<b>14</b>	<b>3</b>	<b>20,5</b>
<b>Median 3a</b>	2,5	0,5	2	19	18,5	14,5	19
<b>Median 3b</b>	7,5	3,5	5,5	4,5	1,5	5,5	9
<b>Differenc e</b>	<b>5</b>	<b>3</b>	<b>3,5</b>	<b>14,5</b>	<b>17</b>	<b>9</b>	<b>10</b>

The hypothesis was confirmed by realised research in the form of observations, as evidenced by the values obtained by the experiments. We can state that the elements of ergotherapy used in education in this direction have improved the social competencies of pupils. However, these claims cannot be absolutely generalized. More and longer-term research would be needed.

Research in the form of structured observation confirmed the hypothesis that in the classroom where ergotherapy elements are used in education, higher values will be measured in positively perceived categories: help among students, cooperation and participation in tasks, friendly behaviour among students, as in lessons without the use of occupational therapy elements. Also, in the classroom where ergotherapy elements are used in education, there will be lower values of negatively perceived categories: hostile behaviour, stuttering, ridicule, and friction than in the classroom with regular education.

Practice and research results have confirmed that elements of the ergotherapy concept ("philosophy") expand the possibilities of methods and techniques used in the education of pupils in practical school during their socialization. After the introduction and long-term use of ergotherapy elements in the educational process, all measured values showed positive numbers in their influence on the development of pupils' social competencies.

Based on the obtained research results, it was shown that the use of ergotherapy elements in subjects focused on practical activities has a positive impact not only on physical correction, manual skill, but also on strengthening and development students' social competencies.

As the use of ergotherapy elements in education practice has proved to be a suitable method, we recommend observation the following principles that are suitably combined with ergotherapy elements based on the "ergotherapy philosophy".

### **Recommendations for special pedagogical practice:**

1. *To create a good atmosphere in the group* - Education activities should take place in a playful, pleasant atmosphere to strength the sense of fellowship, to allow the self-

knowledge, to get to know others, to improve communication, so to contribute to the enriching experience of pupils.

2. *Emphasis on the course of action* - Attention needs to be focused on the course of action and the achievement of sub-objectives. We do not distinguish between good and bad. Everything is needed to be received positively. The teacher should encourage the pupil, advise him, to show and allow the pupil to manifest him by own activity.

3. *Sufficient motivation* - The role of the teacher in this way of work is to create a pleasant working atmosphere, good mood. It is also important to motivate pupils. It is appropriate to use music, games, photo documentation of activities, etc.

4. *Flexible plan* - The teacher should be able to flexibly change the plan according to the situation and to improvise.

5. *To create the suitable conditions* - It is important that pupils have a suitable space, peace and work in the educational process and are not unnecessarily disturbed by anyone and anything from the outside.

6. *An adequate interpersonal communication* - It is necessary to communicate with pupils about activities so that they realize what they did, how they did it and what they experienced during the work. Talking about work experiences it increases a self-concept because pupils learn to appreciate and accept their abilities based on how others accept their work. It is important what the pupil thinks and says about his work, but the observations and comments of other pupils also have a certain meaning. We should never force a student to talk about his work. At the end of the education process, we can talk together with pupils about how they liked the work, what it evoked in them, how they felt, etc.

7. *A functioning family* - The teacher should become a functioning part of the school. He is an authority based on his activity and behaviour. He is a partner in the activity. Relationships in a functioning family are a model.

8. *Closing point* - The teacher should realize that the end of the lesson is as important as the beginning. To put a dot behind the teaching process, so to speak. To create some final ritual. For example, to take a picture as the result of mutual pupils work or some individual work.

9. *A thorough preparation* - The teacher should thoroughly know the health status of the pupil and his current mood. This requires studying the student component (Proposal) as well as communication skills, with the ability to evaluate the information correctly.

10. *Three-way cooperation* - The teacher should also come out the recommendations and information gained during the cooperation with experts and the pupil's family.

#### 4 CONCLUSION

Through the research, we have confirmed the existing knowledge about ergotherapy, which is a means for pupils with mental disabilities to improve their physical and mental competencies. It allows them to develop their personality and thus helps them in the process of socialization. Therefore, its elements should find their absolute place in the curriculum, especially in vocational and practical subjects in the practical school. Of course, it is necessary to have enough qualified teachers who would be able to use this

potential of ergotherapy in the development of social competencies in students with mental disabilities. Previous practice has confirmed that the ergotherapy concept as part of the subjects in the mentioned field, in the form of using its elements, helps the overall development of personality, it has a positive effect on concentration, communication skills, positive thinking, it supports creativity and especially social competencies of pupils (Dudek, 2009). We believe that it is necessary to integrate these ergotherapy elements into teaching in practical school as part of education.

## References

1. Bursová J. (2016) Values and their Significance in Human Life. In: *Zeszyty naukowe* [textový dokument (print)] . – 1. vyd. – Roč. 30. – Ostrołęka (Poľsko) : Ostrołęskie Towarzystwo Naukowe, 2016. – ISSN 0860-9608, s. 397-402
2. Dudek M. (2008), *Wokół etyki niesienia pomocy psychologiczno-pedagogicznej*. (w:) *Annales. Etyka w życiu gospodarczym*. Wydaw. Salezjańska Wyższa Szkoła Ekonomii i Zarządzania, Łódź , t. 11, nr 2, s. 45-52. ISSN 1899-2226.
3. Dudek M.,(2009), *Nieprzystosowanie społeczne dzieci z ADHD*, Wyd. UKSW, Warszawa, ISBN 978-83-7072-545-7
4. Gúth A.(2004), *Vyšetrovacie metodiky v rehabilitácii pre fyzioterapeutov: učebnica určená pre fyzioterapeutov, rehabilitačných pracovníkov, rehabilitačných asistentov a iných študujúcich v oblasti rehabilitácie*. Bratislava: LIEČROH Gúth. ISBN 80-88932-13-0.
5. Jelínková J., Krivošíková M., Šajtarová L.(2009), *Ergoterapie*. 1.vyd. Portál, Praha, ISBN 978-80-7367-583-7.
6. Kondziolkova J.(2013), *Ergoterapie v klinický choborech pro studenty se spec. potřebami* 3. Ostravská univerzita, Ostrava, ISBN 978-80-7464-430-6.
7. Krivošíková M.(2011), *Úvod doergoterapie*. 1. vyd. Grada, Praha, ISBN 978-80-247-2699-1.
8. Kuzyšin B.(2014), *Najvyužívanejšie formy expresívnych terapií v sociálnych službách na Slovensku – deskriptívna štúdia*. In: Sociálna a duchovná revue. Roč. 5, č. 2, s. 52-56. ISSN 1338-290X. [online]. [cit. 2020-05-31]. Dostupné na internete: <https://www.prohuman.sk/files/ZBORNIK-NSEC-2014.pdf> 31.5.2020
9. Müller O.(2005), *Terapie ve speciální pedagogice*. Olomouc: UP. ISBN 80-244-1075-3. 2005.
10. Müller O.(2005), *Terapie ve speciální pedagogice*. UP, Olomouc, ISBN 80-244-1075-3.
11. Pipeková J., Vítková M.(2001), *Terapie ve speciálně pedagogické péči*. Paido, Brno, ISBN 80-7315-010-7.
12. Švestková O. (2013), *Ergoterapie*. Univerzita Karlova. Praha, ISBN 978-80-260-4101-6.