

Teachers' Preferences on the Issue of Segregation of Gifted Pupils in Czech Educational System

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Abstract—The issue of inclusion - segregation in the current Czech educational system is highly actual due to changes in legislation. It applies primarily to pupils with special educational needs, but it should also apply to pupils with giftedness. The paper presents chosen results of an exploratory survey that was carried out on a convenience sample of 1101 Czech teachers working in lower secondary education (ISCED2). The rate of teachers' agreement with segregation of gifted pupils in the education system was monitored during this investigation. A validated questionnaire of our own design was used for the purpose of this investigation. The results were compared across groups of teachers in terms of selected variables. Results show that 36,3 % of teachers incline to segregation (rather than inclusion) of gifted pupils. Teachers who are not educated in this field and have no experience in teaching gifted pupils tend to support their segregation more in comparison with other teachers. Teachers of specialized schools for gifted pupils paradoxically agree with segregation to a slightly lesser extent than teachers from traditional schools, but they also manifest the most hesitant attitude in this issue. Preferences for segregation of gifted pupils are not related to attitudes toward gifted pupils or teachers' self-evaluation in terms of care for the gifted. Investigation indicates that the issue of education of gifted children and their inclusion in the educational system needs more space within the further education of teachers.

Keywords—Educational system, evaluation, gifted pupil, inclusion, segregation, teacher.

I. INTRODUCTION

THE issue of inclusion in the Czech educational system is currently highly topical due to legislative changes introducing inclusive measures for all levels of local education in 2017. Of course, it should be considered a long-term trend with integrational and inclusive measures gradually having become commonplace in schools. However, this issue is usually associated with such children who are generally addressed as pupils with special educational needs, by which we primarily mean those with learning disabilities and behavioural problems, and those medically or socially handicapped. But it is not always taken into account that gifted children have special needs as well.

This paper is concerned with a discussion on inclusion and segregation (the opposite of the former) of gifted pupils in the Czech educational system. The giftedness is an individual's ability in a selected area valued by the socio-cultural environment, which is more developed in terms of both quantity and quality compared to their peers [1]. According to Porter [2], these definitions could be more specific by comparing different perspectives on the issue. These

encompass, for example, liberal and conservative views (difference in the quantity estimate of gifted people in population), one- and multi-dimensional (given by the number of criteria to identify gifted pupils), the definition of potential and the actual performance. Our view on giftedness is based on multi-dimensional liberal definitions and is focused on intellectual ability. By the term "gifted pupil" we mean not only one diagnosed by a pedagogical-psychological counselling centre but also one not yet diagnosed but already displaying intellectual giftedness during classes. Gifted pupils are characterized by attributes expressed in cognitive or socio-emotional spheres, such as having a higher level of logical and creative thinking, different working pace, perfectionism, sensitivity, and multipotentiality [3]-[6]. It is crucial to notice these characteristics and their consequent expressions and to create convenient pedagogical and educational settings to support them. Therefore, the education of gifted pupils needs to be individualized and differentiated.

Integration and segregation are the two basic organizational forms of education for gifted pupils. Segregation is based on the belief that each child who is remarkably different from his or her peers in a certain way should be, for his or her own good, placed into a special school or class in which a homogeneous part of the population in relation to natural abilities is concentrated. When integration is used, a gifted child stays in his or her original school and the teacher provides special curriculum to him or her [7].

According to Clark [8], the pure form of segregation is represented by special boarding schools, but also specialized classes in traditional primary schools. Combined education encompasses special classes in which a part of education takes place in a regular class, and also regular classes in which part of education takes place in a higher grade, or is provided by a specialist teacher or other expert on a given field of study. Integrated education, as mentioned above, takes place in regular integrated classes. In school systems, we usually encounter coexistence of the two basic forms with one predominating in a given culture, or their combination, embodying compromise between the two opposites.

Both variants possess advantages as well as disadvantages. Predominance of one type in a given country or culture depends on a variety of factors, such as the tradition of educational system, the extent of teacher's authority to adapt the curriculum, the type of training for teachers, availability and existence of educational materials, existence and specialization of a pedagogical-psychological counselling centre [9].

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Segregation is mainly spread in the USA where the first special classes for gifted children were established in the early 1940s, based on the results of empirical experiments carried out by Hollingworth [10]. The tradition of segregated educational setting in the USA is still alive today. Europe traditionally leans towards the other variety. In the late 1970, the concept of integration in education of gifted children started to spread worldwide [11], while the turn of both the 20th and 21st centuries is marked by the attempt of practical application of integrative approach. The current approach to education both in Europe and worldwide leans away from the concepts of integration discussed in the between the 1970s and 1990s: it is instead in favour of providing nurture and support of children's needs and eliminating barriers in favour of learning of all children. Today, in accordance with this approach, the terms inclusion and inclusive education tend to be used in official documents, unlike the formerly used term "integration" [12]. Inclusive education is currently one of the most discussed phenomena, slowly becoming part of raising practices and education of gifted children.

Let us discuss factors influencing integration and segregation of gifted pupils. Deciding on the most suitable education form for a gifted child is overly complicated. A number of criteria need to be kept in mind concerning not only the pupil him- or herself, but also the teacher, the founder of a given school, or school system in a given country. As far as pupil's individual criteria are considered, in order to determine one's talents in all levels including social skills, complex diagnostics of his or her talents need to be done by a pedagogical-psychological counselling centre. What is crucial in this case is age (integration is recommended in younger school ages), along with the type of one's talent (segregation is recommended for intellectual giftedness), and a level of giftedness (with segregation recommended for the highly gifted). [13] Although it might be facing disapproval from current approaches, segregation of gifted pupils is undeniably beneficial. Teachers work with gifted children in a special class, which means a lower number of children in class, the education is designed for growth of one's talents, and the teachers are qualified for working with the gifted. Often, there is a teaching assistant in the classroom. Such schools are still present in the educational system, with highly gifted individuals, often both exceptional or underachievers applying. On the contrary, in traditional schools, the gifted do not need to be diagnosed. Only children remarkably overachieving in some fields of study gain some attention, as they are, for example, encouraged to join various competitions which we do not consider to be an optimal approach to the gifted.

II. IMPLEMENTATION OF THE SURVEY

The study is based on research among teachers, realized via questionnaire survey. Given the fact that there is no platform for selection of subjects for the research, the teachers were selected on the basis of their own statements, with 84% declaring that they work with gifted pupils or have had such experience in the past. For comparison, the teachers who did

not claim such experience were kept in the research group and only showed their interest in the issue by their involvement in the research.

The research group numbered 1,101 teachers (18% men, 82% women) working in ISCED2 level (lower secondary education). In this level we were focusing on traditional elementary schools, elementary schools with specialization on education of gifted pupils, and also 8- or 6-year grammar schools (víceletá gymnázia in Czech) which traditionally specialize in education of intellectually gifted pupils. Thus, the teachers who work with inclusive approach are represented by traditional elementary schools, while specialized schools and grammar schools represent teachers working with segregation separating gifted pupils and offering specialized guidance. Also, the teachers were asked about their previous training on the issue.

The answers were put into three categories in ascending order, starting with no training, following with completion of one or more courses in the scope of continuing teacher education and ending with the training on the same level as continuing teacher education, but also in the scope of university education (which usually offers specialized classes dealing with this topic). Surprisingly, it was revealed that almost half of the group, according to their own statements, did not undergo any type of training related to the issue. In relation to the focus of the questionnaire survey, the research group deviates from the norm found in the population mainly because of the fact that it includes 84% ratio of subjects with experience in working with the gifted. However, their statements are deemed crucial for the study.

Regarding length of professional experience, there were established only two categories: under 20 years of experience, and more than 20 years of experience. In the course for analysis, it was found that length of professional experience does not play a major role in terms of preferences regarding segregation or integration of gifted pupils. Table I can be seen for more information about the research group. The research group summary is to be found in Table I

TABLE I
BASIC CHARACTERISTICS OF THE RESEARCH GROUP

Monitored characteristics		n	%
Gender	Male	201	18.3
	Female	900	81.7
Type of school	Traditional primary school	869	78.9
	Specialized primary school with a programme for gifted pupils	114	10.4
	Lower grade of 6- and 8-year grammar school	118	10.7
Education in the field of guidance of gifted pupils	None	545	49.5
	CTE	507	46.0
	CTE and UNI	39	3.5
Experience with teaching of gifted pupils	Yes	922	83.7
	No	178	16.2
Length of practice	≤ 20 years	464	42.1
	> 20 years	637	57.9

Note: CTE = continuing teacher education; UNI = university education containing training in the guidance of gifted pupils.

The questionnaire used in the survey was of our own design. In the scope of the study, only selected data from the survey are pointed out: primarily, the already mentioned demographic characteristics in relation to attitude towards segregation of gifted pupils in the Czech educational system. This is the original wording of the crucial item in the questionnaire (in this particular case, the variable depends on context): "If it is possible, gifted pupils should be educated in segregated settings (in selective school and school for gifted pupils)." This item was rated on a scale of 1-5 by the subjects, expressing the rate of their approval, from I strongly agree, I agree, I don't know, I disagree, up to I strongly disagree. For the analysis, both approving and disapproving answers were kept together, while the neutral answers were set aside because it seemed appropriate to leave such answers in their original version without amalgamating them with the rest (there should have been an option to answer neutrally, such as "I don't know" or "It's not my concern," in the items which are politically or personally problematic, according to, for example, Chráska, Kočvarová [14].).

III. RESULTS

As already proposed, the analysed item is quite problematic, since the current approach of education policy in Czech Republic unequivocally leans towards inclusion, especially in terms of legislation. Thus, teachers are expected to adopt a positive and politically correct attitude regarding this matter. However, in practice, a variety of opinions is heard, often opposing inclusion, regarding it as unrealistic and non-functioning. Some teachers and psychologists specializing in the issue even support segregation of pupils with special educational needs (including the gifted individuals), since it appears to be more practical and realistic due to the lack of financial resources to provide teaching assistants in classes, with schools lacking both material and organizational facilities for realization of inclusive endeavours. Since its establishment, the inclusive approach has not, in any case, had much impact yet; neither has it caused any remarkable changes in the system, and parents are still free in their choice in deciding on which type of school at which they register their children. So, it is still a matter of discussion rather than an actual situation. In historical context, there are obviously negative connotations to the term segregation, so it could easily evoke rather negative reactions itself; however, it was necessary to ask the question clearly.

The overall results show that 36.3% of the respondents agree, while 47.7% disagree, and 16.0% are neutral. 84.0% expressed their preferences, both approving and disapproving, which proved that they are capable of forming rather specific opinion towards the issue. In this context, the remaining percentage of neutral responses (16.0), is considered to be rather low. The most important indicator is the 36.6% ratio of positive replies, which is more than one third in favour of segregated educational settings. Thus, we assume that should the implementation of inclusive approach in the Czech educational system be successful, even in case of gifted pupils,

more attention will be needed towards training of teachers and discussion with this community.

This could be also supported by the fact that 49.5% of teachers still lack training regarding this issue (as shown in Table I). In terms of both continuing teacher education and university education, the issue was encountered by only 3.5% of the subjects; the rest completed at least one course.

Focusing on the differences in the answers influenced by documented demographic characteristics of subjects, we can see some interesting items in the output. Looking at the highlights of the results demonstrates that the most remarkable differences in the approval-disapproval ratio, ignoring the neutral ones for the moment, can be found among the teachers with the highest level of education. On the basis of such results we assume that a higher rate in training in the field of guidance of gifted pupils will lead to a more accepting attitude towards inclusion among teachers (and, thus, disapproving of segregation). Other interesting findings can be seen in the group of subjects working in 6- and 8-year grammar schools which traditionally segregate gifted pupils from the rest of the population attending elementary schools. Paradoxically, the lowest rate of segregation approval (29.7%) comes from these teachers. At the same time, this group proves to be the most neutral in their attitude (22.9%), as if they were aware of their complicated position regarding the topic (there have been long-term tendencies to eliminate this type of school, as mentioned in a white paper from 2001).

In comparison with grammar school teachers, the higher rate of segregation approval can be seen, again paradoxically, among traditional elementary school teachers (37.2%). The last item from the output we consider interesting refers to results of the portion of teachers with no experience in guidance of gifted pupils so far, showing the highest ratio of segregation approval in comparison to the rest (47.2%). This probably demonstrates the group's concerns about the high requirements which working with gifted pupils demands.

As far as all observed variables are concerned, we can say that segregation approval (based on the overall diameter of results now) can be seen mostly in women, teachers with no training in the field of guidance with the gifted, those with no professional experience with gifted pupils, those with longer professional experience, and those working in schools specialized in guidance of gifted pupils representing mostly the segregated method.

Table II illustrates the summary in the form of exploratory data analysis. Besides the proportional rates for positive, negative, and neutral answers, we also present Table III, in which diameter and SD can be found, were established on the basis of rates on the scale of 1 to 5. These can be found interesting primarily for the comparison of various groups found among the respondents.

The questionnaire survey observed other variables which could be applied to the segregation of gifted pupils. These were about general attitudes towards gifted pupils, as well as the teachers' self-evaluation in regarding their ability to guide such pupils. These variables were drawn up into scale index. As, however, it showed that the variables did not correlate

with the answer on the observed item (the correlation coefficients are close to zero in all cases), these results are not presented in the paper.

TABLE II
SUMMARY OF DESCRIPTIVE RESULTS: RELATIVE FREQUENCY OF ANSWERS IN THE QUESTION OF APPROVAL OF GIFTED PUPILS SEGREGATION IN THE EDUCATIONAL SYSTEM

Observed variables		Disagree %	Agree %	Neutral %
Gender	Male	54.2%	31.8%	13.9%
	Female	46.2%	37.3%	16.4%
	None	44.4%	37.4%	18.2%
Education	CTE	49.7%	35.7%	14.6%
	CTE and UNI	66.7%	30.8%	2.6%
Experience with teaching of gifted pupils	Yes	49.6%	34.3%	16.2%
	No	37.6%	47.2%	15.2%
Length of practice	≤ 20 years	49.8%	35.3%	14.9%
	> 20 years	46.2%	37.0%	16.8%
	Elementary school	48.0%	37.2%	14.8%
Type of school	Specialized elementary school	45.6%	36.8%	17.5%
	Grammar school	47.5%	29.7%	22.9%

Note: CTE = continuing teacher education; UNI = university education including training in the guidance of gifted pupils.

TABLE III
SUMMARY OF DESCRIPTIVE STUDY: MEANS AND DETERMINATIVE DEVIATIONS IN ANSWERS IN THE QUESTION OF APPROVAL OF GIFTED PUPILS SEGREGATION IN THE EDUCATIONAL SYSTEM

Observed variables		Mean	SD
Gender	Male	2.63	1.29
	Female	2.87	1.25
	None	2.87	1.26
Education	CTE	2.80	1.25
	CTE and UNI	2.49	1.35
Experience with teaching of gifted pupils	Yes	2.77	1.25
	No	3.10	1.28
Length of practice	less than 20 years	2.79	1.27
	more than 20 years	2.85	1.25
	ES	2.83	1.27
Type of school	SES	2.86	1.25
	GS	2.75	1.22

Note: Higher means imply higher rate of agreement with segregation of talented pupils.

CET = continuing teacher education; UNI = university education including training in the guidance of gifted pupils.

IV. DISCUSSION

This study focuses on teachers' preferences regarding education of gifted pupils, drawing on the data from previous studies concerning the issue. The study concerned with teachers' attitudes towards giftedness focuses primarily on capturing overall attitude regarding gifted pupils and their education (positive and negative attitudes), detecting basic preferences in choice of teaching approach (in, for example, relation to integration, segregation, acceleration), and the question of stability of observed attitudes and analysis of the

basic factors forming those preferences. [15]. On the basis of a number of studies about the attitudes of teachers from traditional schools, Bégin & Gagné [16] made a generalization that most teachers have a positive stance towards education of gifted pupils without being influenced by any preconceptions or myths.

If we focus on so-called "predictors of attitudes" towards the gifted, Bégin & Gagné [16] identified, while analysing dozens of studies on this issue, more than fifty variables influencing teachers' attitudes towards giftedness and education of gifted children. As far as the predictors are concerned, reappearing in a number of studies and in which the authors did not detected any significant methodological shortcomings, here we can find the concept called "person's self-perception as gifted." This means that teachers who perceive themselves as gifted have more positive attitude towards giftedness. Contact with gifted children on the regular basis, an advanced level of pedagogical competence in education of the gifted, participation in educational program about education of the gifted and the teacher's socio-economic status individual can be found among the other variables influencing attitudes to giftedness [15]. Personal experience was proved to be a factor of a positive attitude by already mentioned Bégin & Gagné [16] who named this factor as "contact with giftedness." Independent variables such as having a gifted family member, contact with gifted pupils or the perception of him- or herself as gifted were added among the factors. Gross [17] indicates that the lack of knowledge in the issue of giftedness often leads to formation of a negative stance towards education of the gifted. This implies that the important factor influencing teachers' attitudes towards the gifted is their previous training in this field.

Concerning the results we received, we can discuss them in terms of political ambiguity of the analysed questionnaire item. As reference books state, respondents tend to present themselves as socially acceptable [18], and thus avoid reacting on awkward questions [19]. Considering the research group, we should not generalize the output of the study, since it is purely an exploratory descriptive study.

V. CONCLUSION

In conclusion, let us sum up the results: approval for segregation is more likely to be found in women, teachers lacking the training in guidance of gifted pupils, teachers without professional experience with gifted pupils, teachers with longer professional experience and teachers from elementary schools specialized in gifted pupils representing mostly segregated educational approach. The observed differences are not remarkable in terms of factuality.

There are two most important conclusions to take away from this research. First, 36.3% of the respondents agree with segregation of gifted pupils. Even though the research group is not a representative sample of the population of teachers it can still be regarded as a relatively high number. We assume that it mirrors the contemporary situation in the pedagogical community which is, on one hand, motivated, but, on the other hand, also lead towards support of inclusion in education by

legislation, in spite of the fact that in practice their professional experience is inconsistent with this approach. Second, it shows that to support teachers' positive attitudes in favour of inclusion, and thus to eliminate support of segregation, could contribute to the widening of the offered capacity of education in this field. As is well known, professionals in various fields tend to be needlessly reserved regarding unfamiliar things.

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