

Male Students' Separate Education

Shamil Sheymardanov¹

Abstract

The paper deals with application of separate education theory as a factor contributing to the increase in the level of the male students' training. The topicality of the paper is concluded in the fact that in the modern society the pedagogical concept of separate education is considered to be outdated. Alongside with that, some experiments in separate education do not appear to be a common structure in training of children and adolescents. The methods of the research were historical, statistical analysis and predictive methods. The objective of the paper was evaluation of social-pedagogical and structural-technological forms on directive teaching of males. It is shown that separate education by itself is to a large extent an innovation concept in the conditions of its application for over 40 years in a row. Each of the suggested training elements appears to be effective, but is not properly reflected in the current educational process. Together with that this effectiveness allows concluding that increase in the performance and level of training at separate education reaches by about 25-30% in all the scientific areas. The main challenge is how to integrate this concept into the current not gender-oriented educational process.

Key words: *process of training, separate education, gender approach, pedagogical principles, efficiency of training, level of training, educational process*

Introduction

Reformation of state policy in the educational sphere is considered an important way of support and development of social and gender equality. That is why both at the national-wide and at the local level of educational management, special emphasis is laid on gender-oriented programs. Especially significant role in their successful implementation are deemed to play experimental schools, to organization of which the government attracts such social partners as business-structures, social and religious societies. Generally, schools with some peculiarities in various regions seek for their own effective ways and forms of gender-based education. The prerequisites of its active integration into the general education institutions were formed in the second half of the 20th century, when discussion of important problems was on its peak regarding such concepts as 'coeducation', 'schools for both sexes and separate education', 'partially separate education', 'gender equality'.

¹ Sen. Lect, Kazan Federal University, pedagogshamil@mail.ru

The purpose of the paper is to consider the prerequisites of implementation of gender education in the conditions of education of males from 7th to 11th form in a male students' group of school boarding house No. 24 of the city of Nizhnekamsk (Russia) for their level of training.

Materials and Methods

The objective of the research was to define the influence of male students' education from 7th to 11th form in a male students' group of school boarding house No. 24 of the city of Nizhnekamsk (Russia) on their level of training.

With this purpose we heeded to solve the following problems: to study development of separate education in the system of general education, to analyze the factors influencing the level of the students' training, and to evaluate the influence of separate education of male students on their level of training.

The research is based on the definition of the main factors including separate education influencing the level of students' training and detection of the educational institutions among the Nizhnekamsk schools with equal conditions, influencing the level of training in comparison with school boarding house No. 24 for males. According to these factors defining the conditions for preparation to the Unified State Exam (USE) in mathematics and the Russian language of 10-11 form students, summary tables are composed for 2009-2010, 2010-2011 and 2011-2012 academic school years. The information from the summary tables was used for composition of profiles of the schools of Nizhnekamsk according to the factors influencing the level of students' training. Obtained data allowed defining the coefficient of correlation between the USE results and factors influencing them (using Pearson method). The table of the correlation coefficients revealed the most reliable factors used at sorting the schools for definition of the school maximally similar to school boarding house No. 24 for males over the last three years in two disciplines. Comparison of State Final Examination (SFE) and USE indicators allowed defining the influence of male students' education from 7th to 11th form on their level of training, research and creative projects. Priority is the use of complex assessment methods.

In accordance with the purpose and the tasks of our research, let us consider the way the corresponding issues are highlighted in the pedagogical literature. Coeducation, which means joint education of males and females in early 1980s was a progressive direction and provided

new opportunities for application of the principles of gender equality in school practice. However, coeducation as a general principle was not successful in the foreign states. As a result of refusal from it the chances of children in the context of their gender became less equal. The number of female schools was limited. Male schools existed with pure majors, while female – with philological. As school pedagogics should consider peculiarities of both sexes, this principle was made the basis for the concept of Fontana (2017a, 2017b). Palmberger (2016) notes that presence of females contributes to psychological climate in the group and to the educational process as well as to better mutual understanding between sexes. In the 1950s coeducation became the dominating model according to which education of males and females implied using the same methods, similar planning etc. In several years, after coeducation became widespread, quality of educational process in schools due to academic achievements of females was significantly improved.

The particular concern about gender problems of school education was provoked by the educational reforms implemented in 1960s focused on strengthening individual and differential approach to the primary school students of both sexes. The priority was the problem of gender discrimination in the educational and training process, carrying out gender inspection of textbooks. Primary school was exactly the center of integration of ‘gender approach’, because that time it was the only place where children from different categories of population could learn and spend leisure time together for several years (Vinogradov *et al.*, 2015). In 1980s under the influence of social organizations the coeducation became a topic for acute discussions: limitation of socialization and unequal chances of both sexes were criticized. Besides, some aspects of coeducation were also criticized, particularly status-hierarchical and polar division of the world in female and males activities, existence of gender stereotypes in education and training of both sexes. It was expressed, for example, in the fact that domination of males and excessive attention of females to them was perceived as something due, while modesty and unobtrusiveness of females remains unnoticed (Dee & Leišytė, 2016). Gender inspection of curricula and textbooks also evidenced the preferences of male world over female one, depreciation of interests, successes and experience of females. Sex differentiation strengthened this one-sidedness: females were supposed to develop proneness to learning languages, social and natural sciences, while males were supposed to develop technical and pure sciences (Cenoz & Gorter, 2016).

Considering objective shifts in the educational and training system of the last decades of the 20th century, Richter (1995) notes the necessity of step changes in implementation of gender approach implying principally similar educational and training process for both sexes, clear comprehension of the problem connected with the discriminatory role-based clichés in the learning material and teachers' behavior. Extension of educational opportunities for males considering modern tendencies in senior school will contribute to their future self-realization. The next highly important tasks are increase in social and political activity of males. Notably, over the last two decades in gender theory and practice a special attention is paid to the concept of 'reflexive self-education (pedagogics)' (Dror, 1995). In this case it deals with the gender-equitable coeducation aimed at personal development of young males and females, overcoming by youth the stereotypes, at equality of rights and opportunities for both sexes in their future lives and activities. Reflexive self-education is a structure of pedagogical process where the principles of gender equality are observed, gender stereotypes in the consciousness of students and teachers are smoothed which contributes to positive changes and reconsideration of many problems from the positions of gender.

Beginning since 1990s, the attention of the pedagogical society was again drawn to the problems of coeducation, and active participation of young males in the educational process. The adherers of coeducation were Perna, Milem, Gerald, Baum, Rowan, Hutchens (2006). Notably, this idea has been supported by Kaestle (2016), Smith (2016), Fontana (2017c, 2017d). Analysis of the corresponding scientific and pedagogical literature shows that training together with young males, young females achieve significantly better results in acquisition of humanitarian disciplines, but have lower performance in physics and mathematics. Young males are more interested in instrumental types of activities. Disadvantages of coeducation Lanahan (2017) sees in strengthening of gender stereotypes, some disdain towards gender specifics regarding the interests, inclinations, and behavior of children with different background, which, on one hand, predetermines insufficient determination of strategies and methods of education as well as oppose male and female students, often focusing on pedagogics, which limits personal development of the children of both sexes (Fontana, 2017e).

According to Milne (2012), young males and females will in no way refuse from coeducation. If they have different interests, it is only to the lessons of physical culture and biology. According to Greenway & Townshend (2001), schools of coeducation are characterized

by friendly, equitable relationships between male and female students. It is considered that due to interaction males will acquire positive traits peculiar to females (restraint, sensitivity), and due to their smoothing influence they will learn to respect women, while female students by communicating with males will release from excessive cowardice and will become less light-minded. If females and males are taught and educated separately, it will obstruct creation of family in future.

Richter (1995) strongly maintained the position of coeducation and training of both sexes, equal attitude and partnership not using term 'gender', which had not yet been introduced by that time. Despite some advantages of coeducation, teachers oriented at differences in interests and abilities of children of both sexes, constantly bring up the problem of separate education and thus separate training. At that, long discussions of 'pros' and 'cons' of current coeducational practice are closely connected with the solution of gender problems. In this context it is acutely criticized by Scott (2017), who notes that school in no way embodies the accomplishments of coeducation as a pedagogical idea and thus the program of cultivation of partner gender relationships. Such school is just a simple statement of a postulate of equal educational chances and opportunities for both sexes. A coeducation school provides formally equal opportunities both for the teachers and for the students (females and males). School still reserves the traits of the 19th century patriarchy, which do not respond to the modern social transformational changes in the education system; the main purpose of school still remains traditional method of knowledge transfer; acquisition by the children of both sexes of experience of practical and social behavior remains out of sight (Duffy & Gallagher, 2017). In the modern coeducational schools male and female students training together still remain opposite groups, which strengthens status-specific social behavior (Chuah *et al.*, 2016). Males are dominant, aggressive, convinced in the supremacy of their interests. They do not critically and seriously perceive their insignificant achievements in training and treat the opposite sex with indignity. It is also caused by the fact that formally common curriculum contains many hidden discriminating practices towards young males. Adherents of separate education and training provide the following arguments for it:

- opportunity of successful overcoming of consequences of the age crises provoked by inconsistency in development of males and females;
- certain convenience in the teacher's labor organization;

- higher academic performance in some disciplines;
- reasonability in application of the method for presentation of the material effective, first of all, for male students, which is an objective factor for more elaborate learning of exact sciences;
- decrease in aggression and adolescent depression, which ensures quieter behavior of self-assured young males and successful self-realization of young females in future career and family;
- formation of more positive self-esteem among the students of different ages.

Tight (2014) in the discussions regarding the problem of separate education draws attention to such positive moments of separate education as lack of competitiveness between male and female students as well as stable focus on learning of social sciences and technics. In scientific literature important issues of separate education are raised and interesting data is provided. Jurdak (2016) stated that in homogenous secondary schools up to 54% male students successfully learn naturalistic and technical disciplines. But the number of such students in the schools of coeducation is equal to 46%. Thus, the researcher finds opposite tendencies towards educational interests among the male students in the secondary schools and general academic schools with coeducation. This phenomenon is first of all explained by the fact that teachers may form certain gender mindsets too persistently, which decreases the interest to education of many male students. Thus, there are significant distinctions regarding the directivity of male and female students towards pure or humanitarian spheres of knowledge at separate education or coeducation. Moreover in the schools with coeducation male students look more passive, while female students appear to be more active and studious which leads to opposition of sexes.

Despite the above stated arguments the opponents of separate education nevertheless consider that it creates unequal conditions for development of both sexes, pointing at the fact, for example, that the volume of curricula in a series of disciplines, particularly, in mathematics, is significantly narrower for female students in comparison with males. Limitation of educational institutions of separate education is also seen in the fact that they do not provide the experience of communication with opposite sex; they orient children only on performing traditional social roles, which does not contribute to generation of creative atmosphere in the group. In general such educational practice contradicts to the global tendencies towards coeducation, which should gradually implement the principle of gender equality. As it was rightfully mentioned by German

scholar Ghosh (2017), the same opportunities in school for both sexes should be combined with the right of individual freedom and personal identity.

Despite the fact that in the modern environment practical teachers and especially research teachers are rather actively interested in gender problems, introduction of gender approach into the educational and training process in the school faces many difficulties (Yigit & Tarman, 2016). Among them are also those, which are connected with the sphere of the established teacher-student relationships (Tarman, 2012). We see the perspective of the further research exactly in the solution of these problems. For achievement of this objective we conducted the research on application of the principles of separate education in modern school.

Results and Discussion

In order to conduct the research we needed to define the main factors also including separate education, influencing the level of students' training, and to detect educational institutions with equal conditions influencing the level of training for comparison with the educational institutions for males. After detection of the school (schools) maximally similar to the educational institution for males considering the factors influencing the students' level of training, we assessed the influence of separate education of males on the level of their training. At other equal conditions, the difference in the USE results in mathematics and the Russian language of the educational institution for males and the detected school may be explained by the influence of separate education.

Certainly, frames of any research do not allow conducting elaborate investigation of all the factors influencing the level of students' training, that is why we were limited to the following:

- teacher: education, category, work experience in the discipline, experience of training graduates, duration of lessons;
- academic capacity of the student: number of hours in compliance with the educational institution curriculum, number of hours out of school component, number of hours intended for special courses and number of hours intended for the courses in the USE preparation;
- form: profile of the form, number of students;

- participation in knowledge-based events: Olympiads, conferences, festivals and competitions;
- separate education of the students.

The format of school boarding house as a factor influencing the level of training is not considered as at school boarding house No. 24 the males study only from 7th to 11th form, and it only provides the house is capable of placing only 7th form students, who go home on Thursdays, Saturdays and Sundays and for the nonresident students the number of whom does not exceed 15% out of the general number of their students. At non-school hours these children are provided with an opportunity to attend additional lessons only in the English language while the research defines the influence of separate education on mathematics and the Russian language.

So, at further sorting of the schools we based at the two following factors:

1. Number of students according to the curriculum and the number of hours of the school component.
2. Participation of the schools in the knowledge-based events. It mostly reflects extra-curricular activities of the educational institutions. Notably, the summary results are published and posted at the Web-Site. Availability and openness of this kind of information may influence the increase in the rating of the schools and lead to the tenders among children.

Considering the above listed conclusions we turned to this stage of sorting the schools in disciplines and academic years. The next task is determination of the school (schools) maximally close to the school boarding house No. 24 considering all the factors influencing the level of the students' training.

Comparison of the schools with the school boarding house No. 24 allowed us defining the closest educational institutions judging by three academic years and two disciplines: the Russia language and mathematics in school No. 22 and lyceum No. 35.

Notably, lyceum No.35 is the best educational institution of Nizhnekamsk according to a complex of factors, ratings and the USE results. The school boarding house No. 24 is the only educational institution for males in Nizhnekamsk. There is no separate education for males in the other schools of our city. For assessment of influence of male students' separate education on their level of training it is necessary to compare the USE results of the school boarding house

No.24 with the indicators of the above mentioned schools. Therewith, it is necessary to consider only the male students' results.

The difference of the USE results with the positive sign (except for the indicator in mathematics over 2009-2010 academic year) allows us to conclude that separate education of males contributes to their level of training. For more complete analysis of influence of this approach on the USE results it is necessary to assess the contribution of each school in dynamics. If the initial points of the SFE of male students are transferred into 100 point rating system and these values are taken as the reference point of the compared schools, while the male students' USE points are taken as the evaluation, then it is possible to assess the influence of the male separate education on their training level more elaborately.

The results of the research allowed us to make the following conclusions:

1. The male students' SFE results in mathematics of the school boarding house No. 24 are by 11.5 points lower; however the USE results are by 2.3 higher in comparison with the indicators of lyceum No. 35. Regarding its own progress the school boarding house improved its results by 11.1 points, while lyceum No. 35 worsened them by 2.6 points. Thus, influence of separate education of males on their level of training in mathematics can be assessed positively by 13.8 points.
2. The male students' SFE results in the Russian language of school boarding house No. 24 are by 3.6 points lower, while the USE results are 0.3 points higher in comparison with lyceum No.35. Regarding its own progress the school boarding house worsened the indicators by 9.1 points, while lyceum No. 35 worsened them by 13 point. Thus, influence of separate education of males on their level of training in the Russian language can be assessed positively by 3.9 points.
3. Influence of male students' separate education on their level of training in mathematics compared with the influence on the Russian language is by 3.5 times higher.

If to compare the indicators of the males from lyceum No. 35 with the mixed indicators of the school boarding house, then the following conclusions are possible:

1. If the SFE in mathematics was passed by the males by 1.9 points worse, then the USE was passed worse only by 1 point. Thus, by 11th form the male students approach the level of the females'.

2. If the male students passed the SFE in the Russian language by 3.7 points worse, then the USE results were worse by only 3 points. Thus, by the 11th form the males approach the level of the female students not as significant as in mathematics.

Therefore, the organization of separate education in general academic schools has its peculiarities and assessment of cause-and-effect relations provokes many problems. It provokes the necessity of consideration of many factors influencing the effectiveness of separate education. In this regard the necessity of further investigation of this problem, especially in the sphere of assessment of the students' separate education influence on their level of training. We took an attempt to study the tendencies of development of separate education in the global practice and evaluate the effectiveness of this approach. The existing contradictions in the results of multiple researches do not allow making firm conclusions about influence of separate education on the students' level of training. In this paper we assessed the influence of male students' separate education on their level of training. In order to conduct such research we defined the main factors, also including separate education influencing the level of the students' training, and detected the educational institutions with equal conditions influencing the level of training in comparison with the educational institutions for males students (school boarding house No.24 of the city of Nizhnekamsk).

Conclusions

According to the results of the research we have made the following conclusions:

1. Influence of separate education of males on the level of their training in mathematics may be estimated positively on 12.9 points out of 100 rating system, while in the Russian language it is 3.2 points. Thus, influence of separate education of male students on the level of their training in mathematics in comparison with the influence on the Russian language is 4-fold.
2. When comparing the indicators of the male students of lyceum No.35 with the mixed indicators of the school boarding house we found that by 11th form the male students reach the females' indicators. Moreover, their progress in mathematics is faster.

Thus, the hypothesis of the research has been approved. Education of male students from 7th to 11th form in the male group of the school boarding house really contributes to their level of training. It means that provided any other relatively similar conditions the male students studying from 7th to 11th form separately from females in the conditions of the school boarding

house No.24 showed higher indicators of training compared to the males studying together with females.

Assessment of male students' influence on their level of training in mathematics and the Russian language in dynamics was carried out over two years (the difference between the indicators of the USE and the SFE). For proper assessment of the investigated factor over the entire period of education from 7th to 11th form it is necessary to test the level of males' training for 7th form both at the experimental and at the control groups, as well as to expand the list of the factors.

References

- Cenoz, J., & Gorter, D. (2016). Translanguaging as a Pedagogical Tool in Multilingual Education. In J. Cenoz, D. Gorter, & S. May (Eds.), *Language Awareness and Multilingualism* (pp. 1-14). Cham: Springer International Publishing.
- Chuah, S. C., Razak, A. N. A., & Abdullah, H. (2016). The Effects of Gender-Separate Human Capital Composition on Technology Transfer and Absorptive Capacity. In M. A. Abdullah, W. K. Yahya, N. Ramli, S. R. Mohamed, & B. E. Ahmad (Eds.), *Regional Conference on Science, Technology and Social Sciences (RCSTSS 2014): Business and Social Sciences* (pp. 343-352). Singapore: Springer Singapore.
- Dee, J. R., & Leišytė, L. (2016). Organizational Learning in Higher Education Institutions: Theories, Frameworks, and a Potential Research Agenda. In M. B. Paulsen (Ed.), *Higher Education: Handbook of Theory and Research* (pp. 275-348). Cham: Springer International Publishing.
- Dror, Y. (1995). An alternative approach to classifying and measuring residential education and group care and treatment programs: Internal totality and community orientation as

separate components. *Child and Youth Care Forum*, 24(3), 195-208.

doi:10.1007/bf02128544

Duffy, G., & Gallagher, T. (2017). Shared Education in contested spaces: How collaborative networks improve communities and schools. *Journal of Educational Change*, 18(1), 107-134. doi:10.1007/s10833-016-9279-3

Fontana, G. (2017a). *Conclusion: Separate to Unite Education Policy and Power-Sharing in Post-Conflict Societies: Lebanon, Northern Ireland, and Macedonia*. Cham: Springer International Publishing, pp. 279-283.

Fontana, G. (2017b). *Formulating Citizenship Education Education Policy and Power-Sharing in Post-Conflict Societies: Lebanon, Northern Ireland, and Macedonia*. Cham: Springer International Publishing, pp. 159-191.

Fontana, G. (2017c). *Power-Sharing and Education Policy in Deeply Divided Societies Education Policy and Power-Sharing in Post-Conflict Societies: Lebanon, Northern Ireland, and Macedonia*. Cham: Springer International Publishing, pp. 23-59.

Fontana, G. (2017d). *Reforming History Education Education Policy and Power-Sharing in Post-Conflict Societies: Lebanon, Northern Ireland, and Macedonia*. Cham: Springer International Publishing, pp. 123-157.

Fontana, G. (2017e). *Inter-group Contact and Separation in Schools Education Policy and Power-Sharing in Post-Conflict Societies: Lebanon, Northern Ireland, and Macedonia*. Cham: Springer International Publishing, pp. 227-278.

Ghosh, R. (2017). No Schoolmaster: Aesthetic Education and Paedosophy. In *Aesthetics, Politics, Pedagogy and Tagore: A Transcultural Philosophy of Education* (pp. 41-133). London: Palgrave Macmillan UK.

- Greenway, G. M., & Townshend, A. (2001). Teaching of the Concept of Valid Analytical Measurement: Integration of Quality Assurance (QA), Issues or Separate QA Courses for Higher Education. In B. Neidhart & W. Wegscheider (Eds.), *Quality in Chemical Measurements: Training Concepts and Teaching Materials* (pp. 163-170). Berlin, Heidelberg: Springer Berlin Heidelberg.
- Jurdak, M. (2016). *STEM Education as a Context for Real-World Problem Solving Learning and Teaching Real World Problem Solving in School Mathematics: A Multiple-Perspective Framework for Crossing the Boundary*. Cham: Springer International Publishing, pp. 151-163.
- Kaestle, C. (2016). Federalism and Inequality in Education: What Can History Tell Us? In I. Kirsch & H. Braun (Eds.), *The Dynamics of Opportunity in America: Evidence and Perspectives* (pp. 35-96). Cham: Springer International Publishing.
- Lanahan, B. (2017). *Divided Education: Education in Ethnic Cylindeers Post-Conflict Education for Democracy and Reform: Bosnian Education in the Post-War Era, 1995–2015*. London: Palgrave Macmillan UK, pp. 71-86.
- Milne, C. (2012). Beyond Argument in Science: Science Education as Connected and Separate Knowing. In B. J. Fraser, K. Tobin, & C. J. McRobbie (Eds.), *Second International Handbook of Science Education* (pp. 951-967). Dordrecht: Springer Netherlands.
- Palmberger, M. (2016). Divided Education: Divergent Historiographies and Shared Discursive Practices. In *How Generations Remember: Conflicting Histories and Shared Memories in Post-War Bosnia and Herzegovina* (pp. 91-125). London: Palgrave Macmillan UK.
- Perna, L. W., Milem, J., Gerald, D., Baum, E., Rowan, H., & Hutchens, N. (2006). The Status of Equity for Black Undergraduates in Public Higher Education in the South: Still Separate

and Unequal*. *Research in Higher Education*, 47(2), 197-228. doi:10.1007/s11162-005-8886-2

Richter, I. (1995). Separate, unequal and diverse? On pluralism and integration in the German education system. *Prospects*, 25(3), 391-406. doi:10.1007/bf02333934

Scott, D. (2017). *Accounts of Education Systems, Teachers and Learners Education Systems and Learners: Knowledge and Knowing*. London: Palgrave Macmillan UK, pp. 21-40.

Smith, K. (2016). Functions of Assessment in Teacher Education. In J. Loughran & M. L. Hamilton (Eds.), *International Handbook of Teacher Education*, Vol. 2, (pp. 405-428). Singapore: Springer Singapore.

Tarman, B. (2012). Effective leadership in culturally diverse schools. *Energy Education Science and Technology Part B: Social and Educational Studies*, 4(2), 1103-1114.

Tight, M. (2014). Working in separate silos? What citation patterns reveal about higher education research internationally. *Higher Education*, 68(3), 379-395.
doi:10.1007/s10734-014-9718-0

Vinogradov, V.L., Panfilov, A.N., Panfilova, V.M., & Rakhmanova, A.R (2015). Integrated Educational Environment of the University and the School as a Basis for Practice Oriented Teachers Training. *Psychological Science and Education*, 20(5), 142–152.
doi:10.17759/pse.201520051.

Yigit, M. F., & Tarman, B. (2016). How do different ethnicities approach to the education system and differences in Turkey? *Italian Sociological Review*, 6(3), 339-353.
10.13136/isr.v6i3.119