ECQEMC 2021
The Fourth Annual International Symposium "Education and City: Quality Education for Modern Cities"

MOSCOW COMPETENCE OLYMPIAD AS AN ELEMENT OF EDUCATION FOR A YOUNG MUSCOVITE

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Abstract

The article presents psychological and pedagogical peculiarities of preparation and organization of procedures for involving adolescents in participatory design of urban development processes. Using the example of the 3-day competence test "Moscow Competence Olympiad", the possibility to ensure the quality of co-design through short-term intensive project-analytical sessions is investigated. Special attention is paid to the specifics of setting an educational task for the participants of the event, which performs the function of adapting complex material, providing higher accessibility to the problems of urban development for adolescents. The method of the research was an ascertaining experiment, which, from 2019 to 2021, involved more than 500 students of 8-11 forms of schools from 12 districts of Moscow, 14-18 years old, who took part in the Moscow Competency Olympiad in Management. The research showed that it is possible to effectively involve adolescents in the process of co-design of urban development processes that require high level of theoretical equipment and analytical abilities from decision-making subjects. The key means of involvement can be an educational task which adapts the problematic of urban development in the format of a search and analytical task which requires collective-distributed activity in the group work format.

Keywords: Adolescence, competence-based approach, children's participation in decision making, open education, participatory approach in education

1. Introduction

1.1. Pedagogical practices as a tool for urban development

A resident of the capital city must have a number of skills and competences which both increase his/her own chances on the labor market and promote the competitiveness of the metropolis in general. Competitive position of Moscow, comfort of the urban environment and general quality of life in the capital directly depend on the level of development of the city's human potential and the degree of involvement of urban residents in the process of solving municipal problems, as indicated by a number of international studies conducted as part of the building of city rankings (Galal et al., 2016; Kearney, 2021; Marco & Ni, 2020; PWC, 2017). Almost every such study suggests that educational practices influence urban development from two perspectives. First of all, the presence of well-known and well-established educational organizations in a city has a positive effect on the influx of young talent and the overall fame of the city. Thus, the brands of educational organizations contribute to the overall image of the city. Another point is related to the fact that education can have many indirect effects on urban development through the provision of quality results. Such results include various socially significant projects implemented by educational organizations, including research, which are conducted by HEEs for the city's needs. But by no means unimportant are the results, which are expressed in the personal qualities of students, which are formed at different stages of the educational path. Taking this type of results into account at the level of specific knowledge and competences of urban residents in the context of research aimed at urban development is extremely difficult. The more generalized these results are, the more difficult it is to identify their connection with the processes of urban development. Higher education organizations are more often considered within this context, as they are closely connected with the urban labor market and have greater economic independence in contrast to educational organizations working in the field of primary and general education.

General education is also taken into account in international studies of cities, but more often its evaluation is limited to criteria of general importance. The indicators of quality assurance in the context of national evaluation systems and the positions demonstrated by educational systems in international research programs such as PISA or TIMSS, are taken into account. But it can be assumed that educational practices have a rather significant impact on the picture of the city's future already at an early stage. Already at the stage of schooling young people need to acquire a certain level of urban literacy, be able to make a forecast of the city development (and at the same time to form their own image of the future in the metropolis), be competent in solving problems of urban development, have experience of teamwork, clear self-determination and a formed civic position.

Many kinds and types of modern learning activities can be directly or indirectly connected with the problems of urban development. The educational outcomes that the PISA researches aim to test are relevant in the context of urban life. For example, functional literacy and its individual components imply the ability of students to apply the acquired knowledge in practice and in the context of life situations, which is often reflected in the essence of the tasks offered in the research. The desire of educational systems to shape students' soft skills is largely related to the need for more effective inclusion of young people in urban practices and communities. The project-based method of learning has also not ceased to

be popular. In adolescence, students often develop projects aimed at solving the social problems of the city where they live. And we should also not forget about the practice of self-management in schools and social practices, which are also carried out on the basis of children's public associations. At the first consideration of these areas of pedagogical activity we find a large number of points of contact with the urban environment, both at the level of educational content and at the level of the conditions in which the educational process is carried out. However, such practices only acquaint students with urban problems and contribute to their immersion in the process of more in-depth study. But whether these practices are an effective means of solving urban development problems and what indicators shall be used to establish their effectiveness in this regard are open research questions.

1.2. Engaging Adolescents in Co-Design Practices

Contemporary urban sociology and urban studies often resort to methods aimed at involving urban residents in the process of solving urban development and planning problems. These methods are most often summarized by the notion of participatory design, which implies the active participation of city residents in the development of urban projects of different orientations (from architectural to political). The origins of the idea of participatory design can be found in the concept of tactical urbanism, which is based on civic consciousness and the striving of urban residents to change their environment themselves (Lydon & Garcia, 2019). However, the issue of involving children in such processes remains debatable. On the one hand, we can assume that children do not have enough life experience and knowledge to recognize their competence in making managerial decisions at the level of urban development. On the other hand, children are also fully legitimate participants of urban life who use the infrastructure and urban services. At the same time it is advisable to discuss a certain age - adolescence - when inclusion in socially significant activities can play a key role both for self-determination and for further development of the environment where the process of growing up takes place.

International practice shows that involving children in decision-making processes positively influences the development of infrastructure and urban environment, but the experience of implementing such initiatives is not generalized enough (Lansdown, 2019; Percy-Smith, 2018). There are also fairly well-known attempts to describe tools for assessing children's participation in this kind of design and to highlight peculiarities of dialogue with children when developing urban projects in the field of architecture and urbanism (Birch et al., 2017; Kranzl-Nagl & Zartler, 2010; Shamrova & Cummings, 2017).

Most often children are involved in any decision-making process related to the physical environment. As a rule, these are projects in the field of architecture, design and infrastructure. The involvement of children in the process of designing playgrounds can be considered as the most famous. Co-design practices within the boundaries of the school are becoming more and more popular, which positively influences the formation of the school community and students' responsible attitude towards the school space (Sanoff, 2017). This approach to the design of the educational space of the school is also implemented in Russia (Ivanova & Barsukova, 2020). It is worth noting that at the school level, practices are being developed that also include children in the design of learning content and other elements of the educational space, not limited to the physical environment (Ostroverkh & Tikhomirova, 2021).

Recent studies indicate not only that children's involvement in the processes of designing public environments has a positive effect on the effectiveness of decisions made, but also that this approach has a formative effect on children themselves. This is especially important during adolescence. The authors of the aforementioned works note it separately, referring to the hypothesis of Polivanova, which consists in the fact that the leading activity in adolescence is the activity of designing, promoting the formation of independent authorial action (Ostroverkh & Tikhomirova, 2021; Polivanova, 1998). Considering what types of practice-oriented educational outcomes we expect from adolescent students, it is worth focusing on those practices that include students in this age category in a larger problem field that extends beyond the boundaries of the school space. In this sense, co-design, which includes adolescents in the work on city-level problems, is seen as a practice of effective self-determination that supports local identity in an activity-based approach

2. Problem Statement

In spite of the fact that we see a rather intensive involvement of children in the processes of making real managerial decisions, still it does not concern all levels of managerial reality. Co-design in the work on the transformation of the physical environment can indicate that children are quite effectively involved in the processes of decision-making, where the empirical experience and knowledge acquired by them in the framework of user interaction with the environment is sufficient. But where decision-making is already dependent on analytical abilities and a sufficient level of mastery of specific theoretical knowledge, the debatable status in relation to the competence of adolescents is reasserted. For example, can we afford to involve adolescents in the economic planning processes of a city or even a school? This is a question with no definite answer. However, project activities at the adolescent level often require students to have real and socially meaningful projects that could lead to any noticeable effects for the city. The pedagogical importance of this aspect is not in doubt, but the effectiveness of pedagogical measures aimed at achieving the corresponding newly formed structures remains poorly predictable so far. Perhaps this is due to the lack of sufficient involvement of adolescents in higher-level decision-making processes, which does not give us an opportunity to observe the result in an active form.

The experience of children's co-designing of the physical environment shows that the problem of low level of competence and poor empirical experience of children can be solved by organizing special pedagogical conditions. Such conditions, firstly, should adapt the real problem in a certain way, transferring it into the category of an open training or educational task. Secondly, such co-design must involve the creation of a specific communicative environment that will recognize children as an independent social group. It is also obvious that co-design at high levels of management decisions requires the involvement of appropriate decision-makers, who are usually representatives of the executive branch or business. Herein lies the other side of the problem, which is already related to the direct involvement of these positions in the co-design process. Thus, the problem of co-participation concerns not only the thought-and-activity-based ability of adolescents to participate in these processes, but also the organizational ability of the relevant structures and organizations that make decisions about urban development.

As an optimal form of such a versatile involvement of subjects we see a short-term competitive procedure aimed at evaluating the design and analytical abilities of adolescents, which they could apply in relation to certain open problem situations related to urban development processes. Such short-term procedures are usually conducted in intensive session environments and should act as an alternative to the traditional project competitions. In the intellectual tests we are considering, the emphasis is not on the result of the design work itself, but on the design process, which should develop in the course of the event. In this article we will consider such a format as a competence-based test (Glukhov, 2016). Thus, we will talk about the form of involvement of adolescents in the design process, which is more important and appropriate in the framework of co-design issues. From our point of view, traditional design work competitions that focus on participants' defense of their projects in front of a jury, commission, or experts do not provide such an opportunity, leaving the process of conception, development, and project communication outside of the event.

3. Research Questions

The hypothesis of the research was that 14-18 years old students are able to quickly engage in the process of researching and making rational proposals in relation to issues of major metropolitan city development. Also relevant to our research group was the hypothesis related to the formative effect that such a procedure can have. As a competence test, the event can be presented as a methodology of formative assessment, which through the inclusion of adolescents in the cycle of preparation and development of city-level management decisions will familiarize them with the activity essence of this process.

4. Purpose of the Study

The research objective was to test the Moscow Competence Olympiad as a means of involving Moscow adolescents in co-design of urban development processes that require a high level of theoretical equipment and analytical abilities from decision-making subjects.

5. Research Methods

The method of the research was an ascertaining experiment, which, from 2019 to 2021, involved more than 500 students of 8-11 forms of schools from 12 districts of Moscow, 14 - 18 years old, who took part in the Moscow Competency Olympiad in Management.

The Moscow Competence Olympiad in Management is an educational project aimed at developing urban literacy and managerial competencies using the material of historical analysis and forecasting Moscow development. The Olympiad introduces modern school pupils to real problem material with no unambiguous and precise solutions through intensive and game-technical educational formats. The main idea of the supposed events is to synchronize self-determination and images of professional future of young people with competitive images of the future development of Moscow, which can potentially contribute to the development of the local government institute of the capital, formation of active and socially responsible urban residents.

The participants went through a 3-day intellectual contest, which implied group solving of open problematic tasks. Also, the program of the event implied daily expert lectures, which were supposed to act as an additional expert-information resource for the participants in solving the tasks assigned to them.

In preparing for the ascertaining experiment, we decided to place emphasis on the most principled elements of the event for co-design:

- students formed working groups, the composition of which remained throughout the Olympiad; the groups were formed on the basis of students' interests in accordance with the sphere/area of activity that attracted them as promising for their own professional development (for example, "medicine", "business", "industry", "ecology", etc.)

- open problematic tasks were put before the groups, which created for students a situation of a gap and deficit of information, thus forcing them to search for information independently, to find ways of its application and interpretation; the model of open problematic tasks also acted as a subject of experiment, as it was to promote the involvement of students in the problems of urban development, which led to an annual rethinking of the model of the problematic task;

- we asked students to carry out self-assessment within groups according to pre-designed criteria; the key task of the intragroup self-assessment procedure was to provide monitoring of participants' activity within the group and to understand what variations in the Olympiad carry-out scheme influence the level of participants' involvement in the work;

- the lectures and the intermediate examinations of the participants' work results were made by the invited experts, who have teaching experience but mostly work as practitioners with rich experience in the urban development projects; this choice of experts was determined by the wish to be as close as possible to the representation of the decision-making positions in the area of the urban development; for the purity of the experiment, same experts were invited every year.

After the completion of each event, the participants were asked to reflect on and discuss the results, as it was important for us to understand what results they perceived as meaningful to themselves and whether the results could be used for further co-design procedures.

The task itself, which was set for the participants, had a decisive meaning for the stages of the ascertaining experiment.

The first option of the task was a set of cases, in which the participants had already formulated problems that had real analogs in the city of Moscow. The task of the participants was to work out proposals for eliminating these problems.

The second option of the problem was of an utterly open nature and was initially aimed at working out proposals for the development of that area of the city development which was established by the group for itself. Thus, the group had to identify the area of the city development, define the problems of this area which are relevant for the group, make the forecast of the area development for the next 5 years taking into account that the problem will not be solved in the nearest future and propose the project solutions to eliminate the designated problems.

The third option of the task had a mixed model. Participants formed groups independently and defined the areas of interest for them, but first of all they had to form a methodology of assessment of the

area they were interested in, to make a direct assessment resorting to independent search of all necessary information, to define the problem areas in the city development on the basis of the conducted assessment and to work out proposals on their elimination in the format of public initiatives, statutory acts or other expedient measures.

6.   Findings

The first two options of the task model (cases and the utterly open task) turned out to be the least appropriate in terms of the organization of co-design procedures. In the context of the case model, students leaned toward the search for knowingly correct and tested solutions, which were usually based on "everyday" knowledge. In the context of utterly open tasks, participants tried not to do extra work and to present social projects previously developed at school as solutions. The pedagogical problem of these projects was that they did not correspond to the scale of the required solutions, and experts' attempts to reformat and revise previously developed projects were not successful. Also, participants were not able to "merge" different projects into one within the group. All participants had different problems and specifics of the work done earlier and it was impossible to bring everything to a unified and organic agreement. This affected the overall group dynamics and the intragroup environment, as many participants felt resentful. It seemed to such participants that they were ignored, which we repeatedly noticed in the course of our reflexion. In this sense, the second task model demonstrated the lowest rate of participant engagement. According to the results of the intragroup evaluation in the events built around the second task model, the proportion of participants who stopped working (or showed minimal activity) by day 3 of the event was 32%. For events built around the third type of task, the proportion of participants who stopped working (or showed minimal activity) by day 3 of the event was 10-15%.

A Type 3 task implied a greater emphasis on research. The necessity of building a model for rating and evaluating the area of city development turned out to be successful in the fact that its execution had a formative effect on participants: through the selection of properties, parameters, and criteria important to the group, a clearer objectification of the city as a structure (at least, its individual elements that correspond to the area chosen by the group) is produced. Participants noted that in a short period of time they had to study large amounts of previously unfamiliar information related to statistics and scientific research; get acquainted with the relevant resources and learn a little more about the situation in the city. It is worth noting that the degree of final structured information, which participants had to study independently, could not be reliably measured and assessed yet. In the third model of the task, participants retained the feeling of performing an independent search and thinking action, but at the same time they received more instructions and felt more support.

The most popular problem areas that participants chose for their groups were: ecology, transportation and logistics, education, urban infrastructure, media, tourism, historical monument preservation and cultural heritage, art, social policy, leisure and entertainment.

The participants also noted that they would like to have an opportunity to present their developments to those structures which are ready to support the developed design solutions, which indicates a direct and reflexive demand for co-design on the part of high school students. In this context, it is also important to record that the second model of the task as a result of group work had more creative

and innovative developments, which to a greater extent brings the Olympiad closer to the format of public discussion in terms of the nature of communication. However, the degree of feasibility of such ideas is rather low in the total number. The third model of the task provides more analytically grounded proposals, which to a greater extent can act as a basis for discussion and organization of the communicative space, which by nature is more drawn to the format of the forum.

7. Conclusion

The research showed that it is possible to effectively involve adolescents in the process of co-design of urban development processes that require high level of theoretical equipment and analytical abilities from decision-making subjects. The key means of involvement can be an educational task which adapts the problematic of urban development in the format of a search and analytical task which requires collective-distributed activity in the group work format.

It is possible to record the initial emotional and activity involvement of Moscow school pupils in the problems of urban development, which is formed before they get to the Moscow Competence Olympiad. However, the participants clearly lack fact-based information in the field of the problems they are interested in. Therefore, the co-design procedures should include an analytical stage, which implies additional consulting work on the review of various information, analytical, statistical and scientific sources of information. The analytical stage also allows partially objectifying such a complex sociocultural object as a metropolis, to form more reliable grounds for working out proposals on urban development.

In this sense, co-design of complex management processes is possible with the participation of adolescents, but a number of mediating measures must be envisaged: mentor support must be organized, frequent contact with experts who provide verification of fact-based information studied by participants must be provided, and the co-design process itself must be deployed in time. Intensive competitive event in the format of competence Olympiad can be considered an acceptable procedure, but the need to achieve formative effects within it reduces the reliability of the final result. This suggests that either it is necessary to provide more days for the procedure, or to carry out the procedure several times a year.

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