

Summary

The dissertation was developed as part of the implementation of the "Industrial Doctorate" program of the Ministry of Education and Science, SWPS University of Social Sciences and Humanities and Copernicus Science Center, 2018-2022. It consists of two integrated parts – research and implementation. The research objective of this doctoral dissertation is to identify factors influencing the use of methods that develop future competencies (such as collaboration, communication, critical thinking, among others) by teachers. The implementation goals of the doctoral dissertation involve the creation of tools for the transfer of practices that develop future competencies in students from non-formal to formal education, as well as the testing and evaluation of the developed tools. The main research questions include: What influences the adoption of practices that develop future competencies by teachers in the teaching and learning process of students? and What conditions are prerequisites for the transfer of practices that develop future competencies from non-formal to formal education?

The research part of the project was founded on the ontologies of sociologists, standing for the interpenetration of the interplay between structure and agency: Pierre Bourdieu, Anthony Giddens and Margaret Archer. The basic theoretical framework adopted in the dissertation is Archer's theory of morphogenesis, recognizing the individual's reflexivity as a mediating mechanism between structure and agency. In our research, a mixed strategy was applied using quantitative (CAWI technique, diagnostically) and qualitative methods (expert workshops, IDI, observation, shadowing). Also used were foundational data (TALIS 2013, Orange 2021) and conclusions from reports on the desired directions of change in Polish education (Federowicz 2015, Hausner 2020). The research allowed to develop the ways of transfer through the bottom-up activities, as the example of practices of experienced educators and in cooperation with the educational institutions promoting science and as an experimental learning and the application of the scientific method.

The implementation, applied part of the dissertation outlines the network model and tool prototypes, as well as the implementation procedure. The conceptual and implementation model represents the Young's Explorer Club (YEC) program community of primarily club mentors and YEC experts and their social environment. The community functions in a community based interaction blending individuality and partnership relying on

the experience of its members, their rapport and potential for dialogue. The transfer tools developed as part of the implementation, i.e. the projects that foster the competencies of YEC mentors both as teachers and educators and disseminate the program, utilize most of the elements of the model to affect the change in school from an organizational relation to a community relationship as it applies to the community. Above all, they are assigned to activate the reflexivity of potential change agents i.e. club mentors and other agents to produce morphogenesis in formal education. The YEC program network examined in this dissertation, as such, is not the subject of research, but is envisioned as an ideal type in Max Weber's terms.

The transfer tools include: YEC Regions – a grant competition for YEC regional partners for an initiative supporting YEC mentors. Within the framework of regions, by the end of June 2021, 3 educational conferences, 4 sub-regional meetings, a science picnic, a competition for the best club in Wielkopolska region were held, and 2 research projects were implemented. A total of about 1,500 people participated in the above activities. YEC Experts – a series of webinars conducted by regional partners of the YEC program. There were 9 webinars, attended by 395 people. YEC Champions – a competition for a champion club, a source of experience sharing and inspiration. 6 winners in the competition were selected, and a 15-minute film was produced about their activities. The film demonstrated the impact of the mentors and club members on the local community – businesses, cultural institutions and parents, which provides the basis for the transfer. The YEC Researchers – the educational project for teachers in Mazowsze region aimed at developing the future and research competencies of club members, introduced in a hybrid form, was the last implemented tool. It involved 12 clubs, with a total of 110 participants.

The focus of the research involved the YEC program and the teachers involved, while the implementation is premised on the transfer of practices of educators leading clubs from extracurricular activities to the school environment within the YEC community. However, the transfer model created in the research project and developed on the basis of Margaret Archer's theory of morphogenesis (Archer 2013) is universal and may be applied to any community of educators striving for change. It stipulates the essential requirement that the agents of change, who are committed, reflective teachers, be supported by school leaders, parents and a broad coalition of institutions and experts advocating for education.