



Michał Klichowski. *Learning in CyberParks. A theoretical and empirical study.* Poznan 2017: Adam Mickiewicz University Press. Pp. 266.

Michał Klichowski, an author of numerous texts about the use of the digital technologies in the learning process, has written another interesting book, which is a continuation of his research interests. The volume *Learning in CyberParks. A theoretical and empirical study* focuses on the question how CyberPark as spaces for technologically-enhanced outdoor activities can improve the quality of life of the contemporary human. It represents an innovative approach to learning in parks using Information and Communication Technologies. The issue of implementing them in green spaces to raise learning possibilities up until now has not been raised neither in Polish nor in foreign literature. Particularly valuable is that the book is based on empirical studies, which were part of a larger survey carried out by an international team of scientists from different disciplines. The work is characterised by great professionalism and at the same time clear explanations and practical nature. It should be emphasised, that this text is an important contribution to the global achievements of sciences, not only in the field of education, but also in social science, anthropology, urban planning and in many others.

This book has a clear structure, it is divided into two main parts: theoretical study and empirical study. Each of them comprises of three chapters. Chapters are preceded by a foreword written by Carlos Smaniotto Costa, acknowledgments, general introduction and background.

In the first part of the book the author shows theoretical background of learning in CyberParks. At the beginning he depicted concept of technology-enhanced learning, its history and the perspective of recent studies. It is clearly explained what technological solutions can be used in these spaces and how to influence students to facilitate the process of learning. This part also touches on a problem of lack of contact with nature, what leads to a lot of problems with health. Another mentioned reason why societies need CyberParks is a sedentary lifestyle of contemporary citizens. ICT implemented in green space therefore can be a motivator to change life and answer to the aforementioned problems. However, as Michał Klichowski claims, this combination of physical activity and cognitive activity – using ICT tools, at the same time, causes some negative effects, what is called dual-task cost. This concept suggests that such cognitive-motor interference can weaken both abilities. It's the general conclusion of these theoretical considerations are that learning in CyberParks takes the form of technology-enhanced outdoor learning. The great value of these

chapters is illustrated theory by many graphs, drawings and examples of newest research.

The second, empirical part of the book, is much shorter, but not less valuable, it presents two experiments, which were conducted with the use of mobile EEG. The first one was conducted under natural conditions, the second in laboratory conditions. They show that dual-task cost is present also in the context of CyberPark. Students during dual-tasks were more stressed and less focused, what led to weakening effects on both cognitive and physical tasks. This observation was the main reason why idea of CyberPark has been modified. Outdoors activities may be encouraged by ICT tools, but using an application should not require movement. The last chapter raises the question of effectiveness of learning outdoor and indoor. The result of comparing analyses presents a significant difference between them, much more effective is learning outdoor. On this basis the author suggests that, in designing CyberPark, beyond technological infrastructure it is necessary, to think about making sitting spots for using learning technologies.

This pioneering book should find a broad audience among education experts but it might be valuable reading for teachers and practitioners in urban planning as well. At the same time I hope that it is not the last step in improving public spaces as hybrid learning environments. Research should be continued in other areas of the city, not only in parks as a green space. It can have a big impact on citizens and their standard of living. The text probably has already inspired a lot of its readers to implement some of the ideas in their spaces, so we can expect that soon around us there will be created many CyberParks. I would like to conclude by highlighting exceptional innovation of this work, the great writing style and clarity of explanations. It is worth recommending to anyone who cares about the good of education and urban life. *Reading Learning in CyberParks. A theoretical and empirical study* can be a great intellectual pleasure.

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