ICED 2020 proceedings:

Using "escape boxes" to promote constructive learning and positive thinking

Ayelet Shvalb

Afeka Tel Aviv Academic College of Engineering
Israel

Tal Harshoshanim

Orot Israel College of Education
Israel

Abstract

Future oriented pedagogy deals with changes in learning and adaptability to them. Awareness of a personal resource pool, the ability to recognize task-specific strengths and constructive learning are all important components here and can assist in training learners in the 21st century. Our premise is that people use their personal strengths to perform tasks, but they do so subconsciously. The purpose of this paper is to examine how raising awareness of strengths, expanding the personal resource pool and consciously selecting strengths for a specific task – "escape boxes" – can improve both learning itself and the learning experience. The study used Switzerland-themed "escape boxes" that suited the ICED 2020 convention, which was cancelled due to COVID-19. Our study shows that learning through "escape boxes" and awareness and selection of task-specific strengths improve learning and the learning experience.

1   Introduction

The world around us changes frequently; and it has turned into a place where knowledge is vast and available to all. In order to remain relevant, educational institutions are obliged to make changes to accommodate learning in modern life. Skills such as creativity, innovation, critical thinking, accountability and leadership must be integrated into 21st century pedagogy (Scott, 2015).

The Israeli Ministry of Education recently developed a "future oriented pedagogy model" to foster the development of graduates who can successfully face the challenges of the changing reality of the 21st century using their knowledge, skills and values. This model is based on research regarding the future and assumes that education is affected by the external reality in which it operates, and for which students need to prepare (Morgenshtern et al., 2018).

Seligman claims that one of the most fundamental premises in positive psychology is that once we perceive ourselves positively, we will act accordingly. Awareness of our internal resources and strengths allows us to face different challenges. The term "strengths" is commonly used in the literature to address positive fixed traits. An individual who acknowledges their inner resources and implements them will achieve optimal results (Seligman, 2018).

Every person has a resource pool. However, if one is not aware of the resource pool, it becomes less efficient, and poorer. Awareness of the resource pool will help to increase its efficiency, by amplifying the resources and in making them more accessible (Hobfoll, 2011).

The participants in the study were Israeli lecturers from different disciplines, who chose to participate as part of a teaching improvement training program. The first exercise enabled participants to overcome two obstacles which usually lead to failure in task performance: lack of awareness of one's own strengths, and poor compatibility between the required strengths and the specific task at hand. The participants were asked to select three people who they admire and to write down the traits they value in each of them. The traits that came up repeatedly were strengths possessed by the writers. Their ability to recognize these traits and value them means they possess the traits themselves. The participants were then asked to search for proof of existence of the traits in their own lives.

At the end of the exercise, each participant had assembled a personal resource pool, some of it familiar and some of it new. At first, the participants struggled to accept the new resources, but after personal introspection they accepted them. They declared that it was interesting and inspiring to learn new strengths in themselves, something they would not have done without the exercise.

2   Discussion

After expanding their personal resource pools, the participants were briefed on the next stage in the research: learning general knowledge about Switzerland through "escape boxes". The participants were asked to select three strengths from their resource pools which could serve them in the learning task. They chose resources that matched the essence of the task, such as the ability to cooperate, flexibility etc.

The rationale behind this is that the ever-changing world presents learners with new challenges. The resources that are automatically selected for learning are no longer as useful as before. Learners must match the required resources to the specific task at hand. Those who are flexible in selecting their resources, while being aware of as wide a range as possible, will be able to adapt to the current education system (Morgenshtern et al., 2018).

"Escape boxes" are a current learning method which can be adapted to different age groups and fields of knowledge for practice, memorization, assimilation, or to build familiarity with new content. The method involves a competitive group-based game, which uses the advantages of escape rooms and brings them into the classroom (Veldkamp et al., 2020). "Escape boxes" are becoming increasingly prominent in the education system, at all ages and in various disciplines.

The game presents a competition between groups where they must answer challenging and diversified riddles; the first group to complete the challenge wins the game. The game has several locked boxes. The minute the participants are able to solve the riddle and find the correct (3-digit) code to open the lock, they can move on to the next level, which involves a more sophisticated box. Hints regarding the solution are found both inside and outside the boxes, and it takes creative thinking to notice them. As opposed to escape rooms, here it is recommended to use any available tool, even online searching. The game integrates several learning styles in one task to get the participants out of their comfort zones, facilitate creative thinking and promote methodical work – while cooperating with the rest of the group, using the group's strengths and even increasing the mental strength of its members.

In a second part of the workshop the participants were randomly divided into 4 groups of 4-5 people. Each group was given a game kit on Switzerland. They were then given a general explanation regarding the number of tasks, the boxes and how to move from one task to

another (as previously explained). The riddles selected for the activity addressed various aspects of Switzerland and involved arranging historical events on a timeline, sorting cards into categories, assembling a 3D puzzle of a map of Switzerland and solving a general knowledge crossword puzzle (see images 1-4).

At the end of the workshop there was a meeting of all the participants, which was documented and analyzed by verbal feedback. The analysis showed that the participants enjoyed the activity immensely. They reported that they had acquired new knowledge on Switzerland. They felt that the small number of participants in each group allowed them to feel included and able to express themselves. Competitiveness was more dominant between groups, while within them there was full cooperation. This cooperation reflected reality, where we are required to cooperate with our colleagues and maximize everyone's personal abilities. The preliminary activity, where the participants were required to reveal their strengths, emphasized their variety of options, and sometimes even unearthed forgotten strengths. They believed that this teaching method was like a support group in which students could feel comfortable experimenting without fear of failure, and desired to use the method in their own courses.

Alongside these advantages, however, the participants raised concerns about their ability to create their own "escape boxes".

3   Conclusions

Our first conclusion is that learners must be trained to examine the tasks they face, and to search for the proper resources in their resource pool. Second, constructive teaching tools are necessary in today's reality, to keep teaching relevant in the eyes of the students. It is important to use diversified tools and to adapt them to different teaching disciplines. Third, learning through "escape boxes" enables all participants to express themselves in their own ways, and thus maximizes their cooperation. The fact that "escape boxes" can be adapted to any level and any area allows innovation in the traditional teaching process, which makes this tool particularly attractive.

We regard awareness of strengths to be of great importance in higher education, and suggest that the "language of strengths" should be implemented in all academic institutions, via theoretical and practical training programs for all lecturers.

Acknowledgements

References

Hobfoll, S. E. (2011). Conservation of resources theory: Its implication for stress, health, and resilience. In S. Folkman (Ed.), Oxford library of psychology. The Oxford handbook of stress, health, and coping (pp. 127-147). Oxford University Press.

Morgenshtern, O., Pinto, I., Vegerhof, A., Hoffman, T., & Loutaty S. (2018). Future-Oriented Pedagogy 2. Trends, Principles, Implications and Applications. Publications Division, Ministry of Education. Retrieved in July 5, 2020 from: https://edu.gov.il/minhalpedagogy/mop/pedagogy-disign/Pages/Future-Oriented-Pedagogy.aspx

Scott, C. L. (2015). The futures of learning 2: What kind of learning for the 21st century. Education Research and Foresight Working Papers (pp. 1-14). UNESCO.

Seligman, M. E. (2018). The hope circuit: A psychologist's journey from helplessness to optimism. Hachette UK.

Veldkamp, A., Daemen, J., Teekens, S., Koelewijn, S., Knippels, M. C. P., & van Joolingen, W. R. (2020). Escape boxes: Bringing escape room experience into the classroom. British Journal of Educational Technology.