

Revised Selected Papers

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Michele Della Ventura, *editor*

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Michele Della Ventura
Editor

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Preface

This volume of proceedings from the conference provides an opportunity for readers to engage with a selection of refereed papers that were presented during the International Conference on New Music Concepts and Inspired Education. The reader will sample here reports of research on topics ranging from mathematical models in music to pattern recognition in music; symbolic music processing; music synthesis and transformation; learning and conceptual change; teaching strategies; e-learning and innovative learning. This book is meant to be a *textbook* that is suitable for courses at the advanced undergraduate and beginning master level. By mixing theory and practice, the book provides both profound technological knowledge as well as a comprehensive treatment of music processing applications.

The goals of the Conference are to foster international research collaborations in the fields of Music Studies and Education as well as to provide a forum to present current research results in the forms of technical sessions, round table discussions during the conference period in a relax and enjoyable atmosphere.

36 papers from 16 countries were received. All the submissions were reviewed on the basis of their significance, novelty, technical quality, and practical impact. After careful reviews by at least three experts in the relevant areas for each paper, 12 papers from 10 countries were accepted for presentation or poster display at the conference.

I want to take this opportunity to thank all participants who have worked hard to make this conference a success. Thanks are also due to the staff of “Studio Musica” for their help with producing the proceedings. I am also grateful to all members of Organizing Committee, Local Arrangement Committee and Program Committee as well as all participants who have worked hard to make this conference a success.

Finally I want to appreciate all authors for their excellent papers to this conference.

April 2019

Michele Della Ventura

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Emotions and Foreign Language Learning: A Mysterious Relationship

Jana Kamenicka, and Zdena Kralova

Department of Language Pedagogy and Intercultural Studies
Faculty of Education, Constantine the Philosopher University in Nitra, Slovakia
jana.kamenicka@ukf.sk, zkralova@ukf.sk

Abstract. The paper deals with the role of emotions in learning, specifically foreign language learning, and provides an outline of the most relevant concepts and theories in this field focused on positive psychology and neuroscience. The aim of this paper is to disclose how emotions affect learning and remembering and how to use them in order to support learning.

Keywords. Emotions, foreign language, learning, research.

1 Introduction

Have you ever considered there is a bit of mystery going on when learning? What if the mystery is in your brain? And what if the mystery is your body itself?

All learning stands on two powerful pillars – cognitive and affective [1]. Though emotions were recognized as equally relevant in learning as reasoning decades ago [2], the research attention of methodologists is still paid mostly to cognition. However, emotions are the “primary human motive” [3] crucial to life, and learning would be hardly possible without them. The educational sciences thus need the assistance of psychology and neuroscience to help understand and manage the complex and dynamic process of learning.

2 Positive psychology

Positive psychology focuses mainly on “increasing positive emotion, engagement, meaning, positive relationships, and accomplishment” [4]. However, its aim is not to deny or ignore the darker side of human lives. Positive psychology is more a complementation of the previously dominating emphasis of psychology on the study of problematic areas, risk factors, negative phenomena and disorders, as the favourable aspects and positive personal traits were too often overlooked [5]. However, it was Frederickson [6] who brought in the concept of positive emotions, such as happiness, joy and enthusiasm. When it comes to happiness, according to Seligman [4], it does not mean mindless thrill-seeking laughing all the time in positive psychology [7]. Seligman [4] recognises three levels of happiness:

1. Pleasure – as positive emotional response which flows from experiences.

2. Engagement – as the fact of having positive relationships and living in harmony with an individual's surroundings.
3. Meaning – as being a part of a larger cause and contributing to society.

Positive psychology also deals with the phenomenon, which occurs when people are completely immersed by their actions. In such a situation, they forget even hunger, discomfort and fatigue completely. Moreover, they do not show interest in anything else until they finish their work. Such a situation is called an 'optimal experience' or a 'flow'. (The term 'flow' was coined by Csikszentmihlayi [8]). To draw attention to the educational process, it is closely linked to everyday experiences in classes.

By bearing in mind the "feeling good" of learners, as the positive psychology emphasises [4], foreign language classes can be easily turned to a pleasant experience both for teachers and learners. Although it is not always possible due to several factors which might influence the educational process in a negative way (e.g. learners' personal problems, uninteresting content of the curriculum, teachers' personal problems, the environment and technical equipment), under the optimal circumstances, the educational process could bring joy, contentment and satisfaction instead of boredom, suffering and satiety.

This provides a great potential for creativity and originality and delivering positive experiences. And what is more, if learners are so immersed by their activity that they cannot or do not want to stop, the flow experience has been delivered to them. This works as a 'Post-it note' [9] in our brain and helps retrieve the information, for instance, new vocabulary in a foreign language context, even after a long period of time, as the neuroscientists agree. That is why the aim of foreign language teachers should be making learning more enjoyable to learners and 'hooking them' in such a way that they will be looking forward to every new piece of information – because it makes them curious and brings them joy.

3 Neuroscience

Several studies [e.g., 10, 11], showed that parts of the brain, such as amygdala, hippocampus and limbic systems, together with neurotransmitters (e.g., dopamine, serotonin, norepinephrine and endorphin) play a significant role in the control of happiness. In the theory of learning it is thus inevitable to follow the neuroscientific insights on issues such as attention, motivation, engagement, developmental change, character formation, learning disorders, logical processing, emotion, and sensory input. According to Kelly [10, p. 80] thanks to neuroscience "*we are finally becoming able to take that huge spotlight off the English language itself, as informed by Linguistics, and shine it on a previously dark area: what is happening inside learner*" which provides a more complete picture of how things happen in the brain.

In order to help our memories persist longer, we should try to unleash the so called emotionally charged event (usually called ECS, an abbreviation for emotionally competent stimulus). According to Medina [12], a molecular scientist, this is the best-processed kind of external stimulus ever measured. As he claims, when compared to neutral memories, emotionally charged events persist longer in our memories and are recalled with greater accuracy. He emphasises that this is caused by the amygdala located in the prefrontal cortex of our brain. Specifically, it is affected by the neurotransmitter dopamine that is

used by amygdala similarly as an office assistant uses ‘*post-it notes*’. According to Fredrickson [6, p. 140] “*when the brain detects an emotionally charged event, the amygdala releases dopamine into the system. Because dopamine greatly aids memory and information processing, you could say the Post-it note reads ‘Remember This!’*”. In other words, when we make our brain put a chemical ‘post-it note’ on a certain piece of information, that information will be processed more robustly.

4 Emotions

Something mysterious going on in our bodies when learning has been mentioned in the introductory section of this paper. The interface of positive psychology and neuroscience in the educational context helps understand this mystery called emotion.

According to Sanchez [13], there are two factors that have a strong influence on whether the brain pays attention to incoming stimuli:

1. whether the information has meaning,
2. whether the information has an emotional component or hook.

Thus, emotional arousal occurs when several structures in the ‘unconscious part’ of the brain determine that a stimulus is important [13]. This is very important to bear in mind when trying to incorporate emotions into foreign language classes.

According to Petlak [14], the rationality and emotionality of the teaching method lies in the fact that the content of the curriculum should be mediated not only in accordance with the scientific knowledge, but also in order to attract the learners’ attention. By being emotionally impressive, it should make them emotionally captivated. Appropriate emotionality not only fulfils the motivational role, but also affects the emotional side of education. This can be done by linking the content of curriculum to real life situations, varying education by problem-solving, applying learners’ knowledge to the context of real life and so on. The teacher should strive for learners to have a certain emotional experience by exposing them to interesting images, incorporating films, music, impressive descriptions, etc., into the educational process. Such emotional experiencing contributes not only to the learners’ development, but also positively affects long-term hold of the subject in memory [15].

A helpful way how to grab the learners’ attention and help them with remembering even a long time after the presentation of the content is over, is delivering ‘jaw-dropping’ moments. This means delivering a shocking, impressive, or surprising moment which is so moving and memorable that it grabs the listeners’, or rather, learners’ attention immediately [9]. Why does it work? From the neuroscientific point of view, such moments create an emotionally charged event. As Gallo [9, p. 136] emphasises, it is “*a heightened state of emotion that makes it more likely your audience will remember your message and act on it*”.

For instance, telling a story can create such a moment. With the emphasis on emotionally competent stimuli, in 1986, George and Schaer [16] found that kindergarten children recalled prose content significantly better when given by storytelling than other means, including television. Oaks [17] compared retention of information from traditional lectures and storytelling. He tested the learners – right after the lecture or hearing the story,

then three weeks later and then five weeks later. He found out that even after five weeks, twice as many people in the ‘story group’ could still remember the key points. Several other researches were conducted – all with similar outcomes.

Neuroscientists agree, the novelty can be the answer, too. It is the most effective way, how to capture someone’s attention [9]. According to Pradeep [18, p. 29], “*novelty recognition is a hard-wired survival tool all humans share. Our brains are trained to look for something new and brilliant, something that stands out, something that looks delicious*”.

As the brain loves humour, we can give our audience something to smile about. According to Gallo [9], humour lowers defences and makes our audience more receptive. The fact that it makes us seem more likable can be helpful for us in educational process. In fact, people are more willing to do business with or support someone they like. Thus, if it works with businessmen, it would be worth trying during the EFL classes, too.

To add, concerning the action research we conducted [19], confirmed these findings. We implemented the techniques with the emphasis on learners’ engagement and emotional experience, when teaching EFL to teenagers. Hence, we used stories in various contexts – i.e. personal story, story-re-telling as a mnemonic device, story in a chant and story as a digitale. Our findings confirmed the assumptions that emotional engagement makes learning more comprehensible, enjoyable and fun. Furthermore, they also showed that learners experienced positive emotions and felt strongly motivated. The most significant finding of our research was the fact, that emotional engagement as the part of education suits all three types of learners, i.e. visual, auditory, kinaesthetic [20]. To sum this up, as Tokuhama-Espinosa [21] implies, it is impossible to separate emotions and reasoning in the brain. Thus, in order to help our brain to remember information, it is beneficial to use teaching techniques in a way that they bring emotions.

5 Conclusions

In conclusion, we would like to emphasise the importance of application of both pillars of learning – cognitive and affective. When we understand them, they will lead us to understanding the mystery beyond learning, which is called emotions. As our body cannot ignore them, they are a perfect channel via which we can “broadcast” the information straight to our brains.

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This book presents a collection of selected papers that present the current variety of all aspect of music research, development and education, at a high level. The respective chapters address a diverse range of theoretical, empirical and practical aspects underpinning the music science and teaching and learning, as well as their pedagogical implications. The book meets the growing demand of practitioners, researchers, scientists, educators and students for a comprehensive introduction to key topics in these fields. The volume focuses on easy-to-understand examples and a guide to additional literature.

Michele Della Ventura, editor

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