

## Letter from the 2020 IEEE TCLT Early Career Award Winner

Ahmed Tlili, *Member, IEEE* 

In 2020, I was honored to be awarded the “Early Career Researcher Award in Learning Technologies.” It is presented annually to a leading early career researcher as an acknowledgement of the impact and significance of their research work in the area of Learning Technologies. My interest in scientific research and application started in 2009 when I took an online course about human’s personality and how it impacts their decisions, including the way they learn. Afterwards, I remember reading a lot of publications from famous researchers like Carl Jung to open my mind on different psychological theories and perspectives. Since then, I started being eager to know more about how to design different educational systems and approaches that could cater to the different students’ individual differences for better learning experiences and outcomes.

My first research started by investigating how personality differences within students can affect computer-based learning, through a comprehensive review of the literature. We have found that personality traits affect how students prefer learning content and learning approach like collecting information, communicating with instructor and peers, study behavior, acting and performing.

After that, since most research use self-report methods like survey to identify students’ differences (e.g., personality, learning style, etc.) and since these methods are subjective and participants can easily fake their answers, my research focused on designing an implicit method for modeling students’ personalities. In this context, we have collected and analyzed students’ interaction data in a newly designed educational role-playing game to identify their personalities. This game included different scenarios that can stimulate students to invoke their personalities. For instance, extrovert persons are more risk takers than introvert persons. Based on this, the game provided two different paths, one is written on it “danger” and the other is written on it “safe”, and we let the students choose the path to take. The accuracy of our approach was compared to a reliable instrument, the Big Five Inventory, and the accuracy was high.

Since educational games yield highly interactive and massive traces of students’ in-game behaviours, and since researchers have stated that educational games without analytics are like black boxes that barely offer meaningful clues to students’ learning process during their play, our research further focused on incorporating Learning Analytics (LA) to provide teachers and students more insights about the learning process and achievements.

With the emerge of the “gamification” concept in education, our research then shifted to investigate how different individual differences could impact students’ perception towards different game elements in a gamified course. Interestingly, it is found that educational gamification should also be personalized according to students’ personalities and gender.

Combining educational psychology and technology together is a very interesting field, however we are barely scratching its surface, as there are a lot of research directions and paths that are worth being

discussed. We strongly encourage researchers to put more efforts on this topic and share with us their findings.

One quick note for those young researchers out there, please take the research journey as an adventure rather than a job; be open to embrace new knowledge, meet new people and have fun! Conferences are the best place to start from. If you also find any article of other researchers online and you are interested to ask about something related to it, please do not be shy to send them an email and ask for whatever you need. Research is about discussion and exchanging thoughts and visions; *In mathematics,  $1+1 = 2$ , but in research  $1\text{ idea} + 1\text{ idea} = \text{thousands of ideas}$ .*



**Dr. Ahmed Tlili** is the Co-Director of the OER Lab at the Smart Learning Institute of Beijing Normal University (SLIBNU), China. He has been awarded the IEEE TCLT Early Career Researcher Award in Learning Technologies for 2020. Dr. Tlili is the Editor in Chief of the Springer Series Future Education and Learning Spaces. He also

serves as the Associate Editor of the IEEE Bulletin of the Technical Committee on Learning Technology, and the Journal of e-Learning and Knowledge Society. He is also an expert at the Arab League Educational, Cultural and Scientific Organization (ALECSO). Dr. Tlili is the Co-Chair of IEEE special interest group on “Artificial Intelligence and Smart Learning Environments” and APSCE’s Special Interest Group on “Educational Gamification and Game-based Learning (EGG)”. His research interests include open education, game-based learning, educational psychology and artificial intelligence.

Received June 8, 2021, Accepted June 9, 2021, Publish online June 27, 2021.

Ahmed Tlili, Smart Learning Institute of Beijing Normal University, Beijing, China (e-mail: ahmedtlili@ieee.org).

This work is under Creative Commons CC-BY-ND-NC 3.0 license. For more information, see <https://creativecommons.org/licenses/by-nc-nd/3.0/>