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(Book Review)

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Book Review

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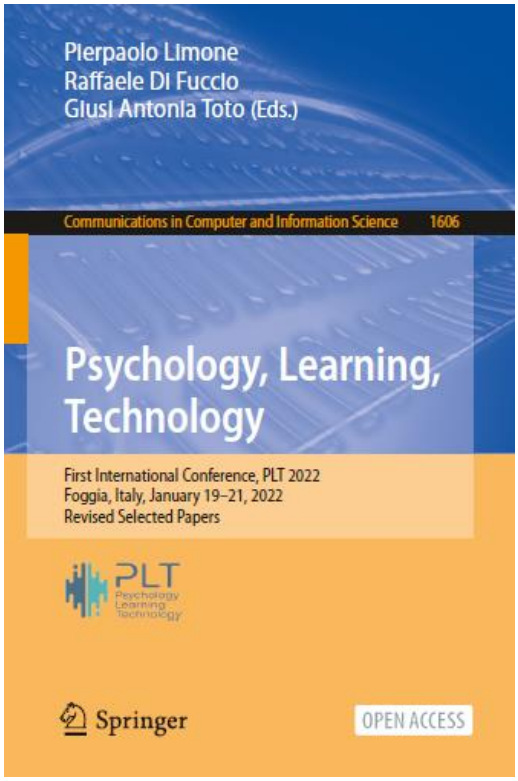

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Introduction

The nexus between psychology, education, and technology has attracted more attention in the last decade since we live in the cutting-edge technology era. Understanding the psychological foundations of these changes is becoming more and more crucial as a result of the numerous changes in teaching and learning methods brought about by the integration of technology into education which is also named Information Communication Technologies (ICT). To be able to keep the pace of the technology a need for changes occurred in the education field. Prensky (2010) argued that digital natives, people who grew up using technology, have different learning needs and preferences than digital immigrants, people who did not grow up using technology. He suggested that educators need to adapt their teaching methods to better engage digital natives. Much research has been conducted and books are written in this field throughout the years (Li & Ma, 2010; Warschauer & Matuchniak, 2010; Hattie, 2012; Mayer, 2014; Hawkridge, 2022). Further studies and some of the major discoveries in the psychology, education, and technology fields will be examined in this literature study.

In order to debate the most recent advancements and discoveries in the disciplines of psychology, education, and technology, the 15th International Conference on Psychology, Learning, and Teaching (PLT 2022) gathered together specialists and researchers from all over the world. The conference included a wide range of subjects, including, among others, encouraging the use of web-source assessment, remote learning, storytelling techniques, and the problematic usage of social networking sites by teenagers. With the help of this book, this study will examine the many themes and subjects covered, emphasizing the most intriguing and original concepts. By doing this, we hope to give readers a thorough review of the most recent findings and developments in the study of psychology, learning, and teaching.

Due to the COVID-19 pandemic, PLT 2022 was held in a mixed format in January 2022. The conference focuses on expanding scientific understanding and intervention approaches at the interface of education and psychology, which may contribute to the design and development of learning-supporting technology. The conference brought together scholars, practitioners, educators, and entrepreneurs to discuss relevant problems and accomplishments in the sector. As it was said in the book the meeting was free and accessible to anyone, and early career scholars were invited to apply.

It was also mentioned that PLT 2022 received a total of 23 submissions, while 13 papers were chosen for publication. The book is divided into four sections based on the sessions held during the three days of the conference. The first section is devoted to Lucia Mason's contribution and the sections that follow feature papers on unique intersections of psychology, learning, and technology, promoting learning and teaching solutions for the education sector, and empowering study attitudes.

Four articles detailing findings from the field of psychology are included in the second part, "New Intersections between Psychology, Learning, and Technology," and they cover topics from grieving as a result of COVID-19 to narrative techniques for digital storytelling. Five articles are included in the third part, "Apps and Innovative Tools: New Possibilities for School Learning/Teaching," which proposes new technologies and studies in the field of education, ranging from robotics to educational applications. The fourth and final section, "Empowering Study Attitude," compiles works on developmental psychology that take into account topics including well-being, orientation, and job-making.

Chapters

Chapter 1 **“Invited paper”**, is a co-work of L. Mason, A. Moe, M.C. Tornatora, and A. Ronconi (2022). “Promoting Web-Source Evaluation and Comprehension of Conflicting Online Documents: Effects of Classroom Interventions” The article addresses the significance of digital literacy abilities, specifically sourcing skills in the contemporary digital world. It was mentioned that students may now more easily

access a wide variety of information because to the internet's democratization of information, but it has also become more challenging for them to discriminate between trustworthy and doubtful sources. Deep comprehension of various documents requires the capacity to assess sources, particularly when confronted with contradictory material. Yet, research has revealed that primary and secondary school pupils, as well as undergraduates, frequently employ unsophisticated criteria to judge sources or don't analyze them at all. Despite its limitations, the study is important because it demonstrates the efficacy of two short-term treatments that may be used in the classroom to help students improve their source assessment abilities when working with many papers and digital documents. The study inferentially supports the proposition that improved learning may be achieved through either direct or guided instruction. The study's practical ramifications point to the need of teaching kids source assessment skills from a young age in order to develop into critical information consumers and rational thinkers in decision-making processes that have an influence on both individual and social life. When dealing with complicated socio-scientific topics, alternating one sort of intervention with the other can be a successful instructional method to sustain sources.

Chapter 2 **"New Intersections between Psychology, Learning, and Technology"** The second chapter of the conference book consists of three pieces of research. "The Motivation of Distance Learning in Universities since Covid-19 Outbreak" by Pierpaolo Limone and Giusi Antonia Toto; "Storytelling Practice in Sectors of Education, Psychology, Communication, Marketing: A Narrative Review" by Marco di Furia, Nicholas Nicoli, Özgür Yasar Akyar, and Martina Rossi; "Problematic Use of Social Networking Sites Among Adolescents in the Czech Republic Versus Offline Risk Behaviour and Parental Control" of Łukasz Tomczyk, René Szotkowski, Lazar Stoši´c, Jelena Maksimovi´c, and Milan Poˇcuˇca. The articles in this chapter mostly dwell on the use of technology and its effects on several facets of life, such as education, communication, and social behavior in common. All three papers also address the difficulties and dangers brought on by these technological breakthroughs, including the requirement for efficient preventative and educative measures.

As the first article, P. Limone and G. A. Toto (2022) show how the COVID-19 pandemic affected the educational field and how the constraints put in place to stop the virus's transmission led to the adoption of e-learning. M. di Furia et al. (2022) elaborate and highlight the advances in digital storytelling techniques over the past ten years, and have improved interpersonal interactions, cooperation, and interprofessional collaboration on a worldwide scale. The third article in this section belongs to Ł. Tomczyk et al. The focus of their study is on parents' contributions to minimizing problematic teenage usage of social networking sites (SNS) in the Czech Republic. The study used a triangulation of quantitative approaches to determine the phenomenon's scope as well as its risk variables and protective factors.

Chapter 3 **"Apps and Innovative Tools: New Opportunities for School Learning/Teaching"** and has three articles in it. "A Project to Promote English Learning in Primary School: "An English Island®" E-learning Platform" by P. Palladino et al. (2022), "Diligo 2.0: A Pilot Study for the Use of a Mobile App to Assess School Readine" by Diano et al. (2022), "Robot Assistive Therapy Strategies for Children with Autism" of G. D'Onofrio.

The first article focuses on "An English Island," a cutting-edge digital application that provides a range of English language teaching methods for elementary school students. The study compares pupils in the control and experimental groups' English language proficiency and cognitive ability. The second article, The "Diligo 2.0" mobile app, evaluates spatial and numerical cognition as essential components of school preparedness. The software assesses whether a user prefers to think quickly or slowly. In the study, use information gathered from a pilot study involving 44 students in two Italian schools is covered. The last one, Robot-Assisted Training (RAT) for children with Autism Spectrum Disorder (ASD) is the subject of the third

article. The objective of the study is to compare the repetitive and unhelpful behaviors, emotional states, and performance tasks between the experimental and control groups. Moreover, it seeks to create a robot that can run the Raven's Progressive Matrices exam, which is normally used to evaluate general human intellect.

The use of digital tools and technology in education to improve learning outcomes, evaluate cognitive skills, or aid people with particular needs is a theme shared by all three articles in this section.

Chapter 4 **"Empowering Study Attitude"** and it includes two articles in it. "Educational Digital Storytelling: Empowering Students to Shape Their Future" and "On the Perceptions of Online Learning Due to COVID-19 Pandemic. Case Study: University of Foggia, Italy".

Parola et al. (2022) discuss the educational uses of Education digital storytelling (EDS) and how it can be used to support career guidance. It also mentions a specific project, the NEFELE Erasmus+ project that aims to promote EDS as a tool for career intervention.

Del Gobbo et al. (2022), explore University of Foggia students' perceptions of emergency online learning during the COVID-19 pandemic. It discusses the challenges, opportunities, and emotional impact of online learning, and presents the students' preferences for a blended learning approach.

The common point between these abstracts is that they both focus on the use of technology in education. The first study discusses EDS as a technology-enhanced learning approach, while the Second study focuses on the transition to online learning due to COVID-19. Additionally, both abstracts mention the potential benefits of technology in education, as well as the need for more complex and integrated approaches to meet different learning needs.

Evaluation

The Role of Technology in Education

Throughout the past few decades, there has been a noticeable growth in the use of technology in education as it was mentioned before. This covers using computers, smartphones, and the internet. Research shown that technology can have a positive impact on student learning outcomes. (Villena -Taranilla et al., 2022). Moreover, Liu et al. (2022) claimed in their research that there is a positive correlation between teacher competence in online teaching, teacher resilience (TR), and perceived online learning outcomes. To be more specific, technology can be used to personalize instruction, deliver immediate feedback, and encourage student collaboration (Hwang & Wu, 2012). Moreover, experimental research on the use of learning styles in computer-based education supports the idea that learning can be improved by presenting materials that are in line with a student's specific learning style (Budhu, 2002; Pen et al. 2002).

Let's have a look at some of the articles given in the book;

- Promoting Web-Source Evaluation and Comprehension of Conflicting Online Documents: Effects of Classroom Interventions – Mason et al. (2022)
- The Motivation of Distance Learning in Universities Since Covid-19 Outbreak – Limone et al. (2022)
- A Project to Promote English Learning in Primary School: "An English Island®" E-learning Platform – Palladino et al. (2022)
- Diligo 2.0: A Pilot Study for the Use of a Mobile App to Assess School Readiness – Diano et al. (2022)
- Educational Digital Storytelling: Empowering Students to Shape Their Future – Parola et al. (2022)

- On the Perceptions of Online Learning Due to COVID-19 Pandemic. Case Study: University of Foggia, Italy

Among the articles given in the book, the articles above in the book can be counted in the category of "Technology in education" since their common point is the role that technology plays in the learning process.

The Role of Psychology in Education

The purpose of psychology in learning is to guide effective and efficient teaching approaches and to offer insights into how students learn and grow. Cognitive psychology, educational psychology, and developmental psychology are a few subfields of psychology that are pertinent to education. Psychology has long been a key discipline in education for many researchers and psychologists (Bandura, A. (1977); Dweck, C. S. (2008); Woolfolk, A. E. (2014); Mayer, R. E. (2014); McLeod, S. A. (2014)). Understanding how students learn and how to optimize the learning process is critical to effective teaching (Bransfal e al., 2000).

The development of learning theories is one of psychology's most significant contributions to education. Some of the theories can be counted as behaviorism, cognitivism, constructivism, and humanistic approach.

According to behaviorism, learning happens as a result of interactions between a person's behavior and their environment. In this theory, B.F. Skinner and Ivan Pavlov are important figures. According to cognitive constructivism, learning is an active process of building knowledge based on personal experiences and interactions with the outside world. Lev Vygotsky and Jean Piaget are important figures in this philosophy. Social constructivism, on the other hand, is a paradigm that places an emphasis on how social interactions and teamwork contribute to learning. It suggests that interactions between people and their social environment lead to learning. Lev Vygotsky and John Dewey are important contributors to this idea. These theories have been put into practice through the integration of technology in instructional design, resulting in increased engagement, collaboration, and interaction among learners. They also offer a framework for comprehending how kids pick up information and abilities (Ormrod, 2015).

The other two articles in the book are;

- Storytelling Practice in Sectors of Education, Psychology, Communication, Marketing: A Narrative Review – Furia et al. (2022)
- Problematic Use of Social Networking Sites Among Adolescents in the Czech Republic Versus Offline Risk Behavior and Parental Control – Tomczyk et al. (2022)

The articles given above are the ones I believe, fits this category of "Psychology in Education" best while analyzing the content in detail.

The Role of Technology in Psychology

The study of psychology has been significantly impacted by technology in a number of ways. The use of technology in therapy and mental health care is one of the most obvious areas of effect. With the rise in popularity and accessibility of tele-therapy and internet counseling, people may now get mental health treatments while relaxing in the privacy of their own homes.

Technology has also made it possible for novel approaches to data collecting and analysis in psychological research. For instance, researchers can employ eye-tracking technologies to explore visual perception, computerized assessments to assess cognitive ability, and virtual reality simulations to examine behavior in

controlled settings. Technology might potentially enhance access to mental health treatments by enabling people to obtain counseling services from anywhere in the globe. Furthermore, Education professionals can get real-time information on students' development using technology tools like cognitive assessment software and adaptive learning systems, allowing them to change their training accordingly.

As the last article in the book,

- Robot Assistive Therapy Strategies for Children with Autism - D'Onofrio et al. (2022)

And this is the one that belongs to the "role of technology in psychology".

The Intersection of Psychology, Education, and Technology
Growing attention is being shown in the areas of psychology, education, and technology. Using educational games is one method of enhancing learning through technology. These video games may be created to give pupils an enjoyable and interesting approach to learning new ideas (Shute, 2011). Furthermore, as can be seen in Adachi (2013) video games also help learners to get higher grades if the games are not fast-paced. Moreover, Wouters et al. (2013) conducted a meta-analysis of studies on serious games (i.e., games designed for educational or training purposes) and found that they can have positive cognitive and motivational effects on learners.

Adaptive learning systems are educational technologies that tailor each student's learning experience using algorithms and data analytics. These systems adjust to each student's learning preferences, academic standing, and degree of expertise to deliver individualized training and assistance. VanLehn (2011) explains that these technologies make it possible to customize each student's educational experiences in accordance with their strengths and weaknesses. Considering the importance of feedback, technology may also be used to provide students with immediate feedback, which has been shown to improve learning outcomes (Hattie & Timperley, 2007).

None of the articles in the PLT 2022 fit solely into this category. However, some of the articles can be seen as having an intersection of these fields, such as the article on digital storytelling, which involves using technology to enhance educational practices, and the article on social networking and adolescent behavior, which touches on both psychology and education.

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