AppendiceTABLE A1. Empirical design

Country	Language	Date	Aim	Methodology	Sample	Main Variables	Measureme	nt Main Findings
India	English	2019	To find out if Nitro Typing improves mechangraphy skills in a group of students.	Mixed. Quantitative and Qualitative research	30 students of first year Fashion Designing and Garment Technolo gy course.	Assessment,Lea rning strategies and Role of the teacher	Ad-hoc question naire	Learners reported that they were able to increase their typing speed because of the motivation the game provided them.
USA, Russia and Latvia	English	2016	The main objective is to develop a web application for teaching foreigners to understand casual fluent speech	Mixed. Quantitative and Qualitative research	40,000 users registered in the system	Number of active users	S	Online systems allow effective spoken language skills exchange, given there are many users available in the system and willing to participate in the process as both teachers and students.
Spain	English	2021	To analyze the user experience in a gamified virtual environment of	Descriptive research	10 (5 male and 5 female) volunteer specialist	Aspects that provide better interaction, experience,	question naire pre and	The users engaged in VR, tend to test the consequences of their actions rather than maintaining safety. Textual

			risks using the HTC Vive head- mounted display		s in risk managem ent/archit ecture/en gineering	perception and memory	acce	nal variables are not essed when users are d with the stress factor of time
Germany	English	2016	To present a novel way of oral language training by embedding the English as a foreign language (EFL) learning process into a generic 3D Cooperative Virtual Reality (VR) Game.	Mixed. Quantitative and Qualitative research	26 participan ts between the age of 12 and 34	Motivation,Attitud e towards the Game,Communi cation Quantity and Language Quality	Ad-hoc questionnaire and language analysis	This evaluation proved that playing Haunted is both motivating and interesting for language learners which leads to the conclusion that it contributes to a comfortable learning atmosphere for the players.
Portugal	English	2021	To explore gamification tools in services and higher education environments and their role in creating student engagement.	Qualitative research	91 undergrad uate students	Motivation, interest, engagement	Ad-hoc questionnaire pre and post experiment and Meaning Cloud	The gamification approach contributes to increasing participants' engagement through of use of Kahoot tool

Cyprus	English	2020	To examine the intrinsic motivation of parents by using gamification and their effects on their communication	Mixed. Qualitative, quantitative	(N=48) 25 parents in the control group and 23 parents in	Intrinsic motivation, feelings, communication with their children about gamification	Semi- structured interview form and SPSS 23	Gamification was an education full of excitement and curiosity and that parents were always excited to learn new things
			with their children		the experime ntal group	education and learning environment		There was a difference in the communication between parents and their children through gamification education and the integration that they had learned with this education in daily life and been motivated in this way.
United States	English	2021	To develop an organization from scratch using organizational communication theory and concepts	Qualitative. Discourse analysis.	Groups of 3 or 4 students	Motivation, communication, creativity, undertaken,	Discussion groups	Student feedback shows high satisfaction with the use of gamification strategies and an increase in retaining the material.

Taiwan	English	2020	To analyze whether the application of gamification to website design could improve the effective communication of website	Mixed. Quantitative and Qualitative research	88 Grade 10 students of Lizen High School	Pleasure, Engagement and Satisfaction	Task questions, system usability scale, online questionnaire and retrospective thinking aloud	The "gamification incorporated website" could not promote the usability of websites, while learnability, pleasure, engagement and satisfaction are enhanced. Applying gamification to websites could enhance communication efficiency.
Spain	English	2019	To design a web- based tool adapted to smartphones for partner notification of STIs among youth who are 16 to 24 years old	Mixed. Quantitative and Qualitative research	416 between 16-24 years old	Yield of early diagnosis and treatment of those exposed and infected, acceptability, barriers, and preferences for partner notification.	Simple Web- based intervention, game Web- based intervention, and control	Expected results include an increase in the yield of partner notification early diagnosis and treatment among youth using Webbased interventions compared with those receiving the traditional advice to notify, and a description of sexual networks among