



## Chapter 13

# Profile of Academic Use of Smartphones by Postgraduate Students in Manabí, Ecuador

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### ABSTRACT

*The digital transformation of graduate education in universities faces the challenge of adopting emerging technologies for ubiquitous learning. Therefore, the aim of this chapter was to characterise the profile of academic smartphone use perceived by postgraduate students in the field of education at the Technical University of Manabí (Ecuador). A quantitative methodological approach was adopted for the development of a descriptive research with a non-experimental cross-sectional research design, applying the “Questionnaire Smartphone and University. Student’s Vision” to 207 students. As fundamental conclusions, a growing trend towards the academic use of smartphones by postgraduate students in the field of education was corroborated, highlighting their perception of the potential for communication with other students and the teacher, as well as the ubiquitous access to information that this device possesses.*

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## 1. INTRODUCTION

The digital transformation of contemporary society is a product of the growing development of emerging technologies, among which mobile telephony stands out. These have led to the *smartphone becoming an* everyday tool in human life, especially among young people (Roig-Vila et al., 2020), recognising the impact of these devices for teaching-learning processes in Higher Education (Santos et al., 2021; Khan & Malik, 2021; Roig-Vila et al., 2021; Araiza-Vazquez et al., 2022; López-Noguero et al., 2023), and in particular postgraduate education (Lau et al., 2018; Chávez-Chuquimango & Gallardo-Echenique, 2020; Veytia-Bucheli et al., 2020).

In addition to the above, the number of mobile users worldwide is expected to be 7.49 billion by 2025 (Statista, 2023); and, in the particular case of Ecuador, the number of people who own a *smartphone* is 8.7 million Ecuadorians (INEC, 2023). This device is one of the most widely used academic devices, due to its potential for mobile learning through the development of various academic activities in contemporary education (Lötter & Jacobs, 2020; Salcines-Talledo et al., 2020; López-Noguero et al., 2023). Indeed, it generates new forms of interaction and communication, both synchronous and asynchronous, in formal and informal spaces (Veytia-Bucheli et al., 2020), as well as its ease of use and integration in various educational settings (Infante-Moro et al., 2019; Cabero-Almenara et al., 2020; Villena et al., 2020).

The published scientific literature shows that the *smartphone* opens up a range of mobile learning opportunities for higher education students: it facilitates their participation in various academic learning and professional practice activities, social connectivity and interaction with other teachers and peers, as well as quick and easy access to multiple content (Al-Harthi. et al., 2020; Khan & Malik, 2021). Other qualities that make the use of this device attractive to students are its benefits as a tool for synchronous and asynchronous communication and for managing their studies. These possibilities allow finding information quickly, browsing the Internet, accessing content in other languages, taking notes, reading articles and supporting teaching and learning tasks (Khan & Malik, 2021; Roig-Vila et al., 2021; Fuchs, 2022; López-Noguero et al., 2023). All this contributes to the development of students' personal skills for organisation, communication, responsibility, critical reading and writing, problem solving, engagement in class, increased interest in learning, collaborative work and self-assessment (Araiza-Vazquez et al., 2022).

However, despite all the potential described, the didactic use of *smartphones* in the university environment has not reached generalised levels, due to various aspects. On the one hand, teachers still do not integrate it as a useful resource, but rather perceive it as a distractor that compromises learning (Ariel & Elishar-Malka, 2019; Iqbal & Bhatti, 2020; Lötter & Jacobs, 2020; Criollo-C et al., 2022). And, on the other hand, students, despite recognising its advantages for information and

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