

## Player profiles in the gamification of engineering education: statistical analysis

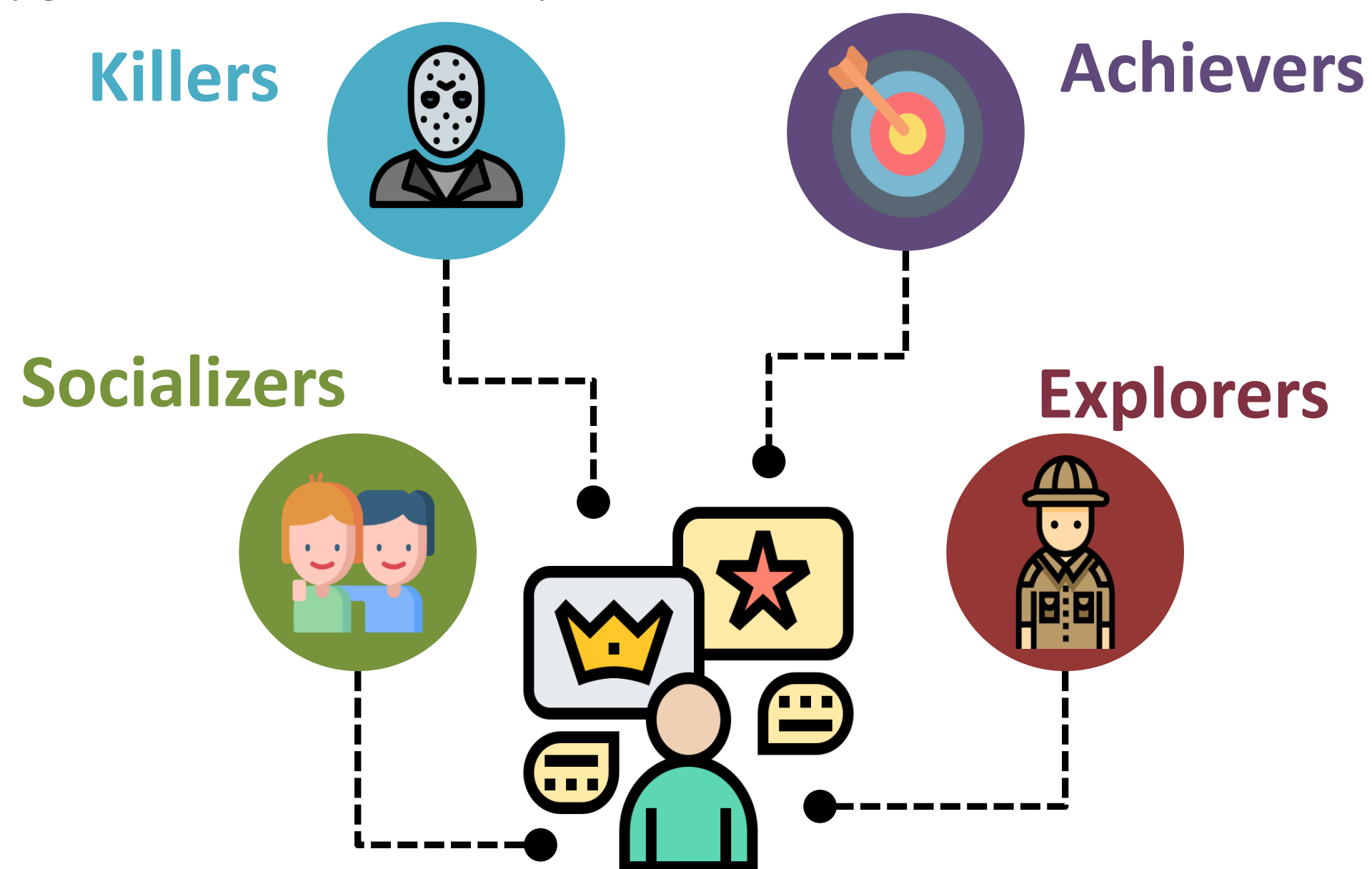
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### INTRODUCTION & AIM

The growing demand for professionals with high digital skills and the increased use of computerized learning environments, especially after the COVID-19 pandemic, have driven universities to seek new methodological strategies to enhance student motivation and learning. Specialized studies confirm that gamification increases the motivation and engagement of engineering students.

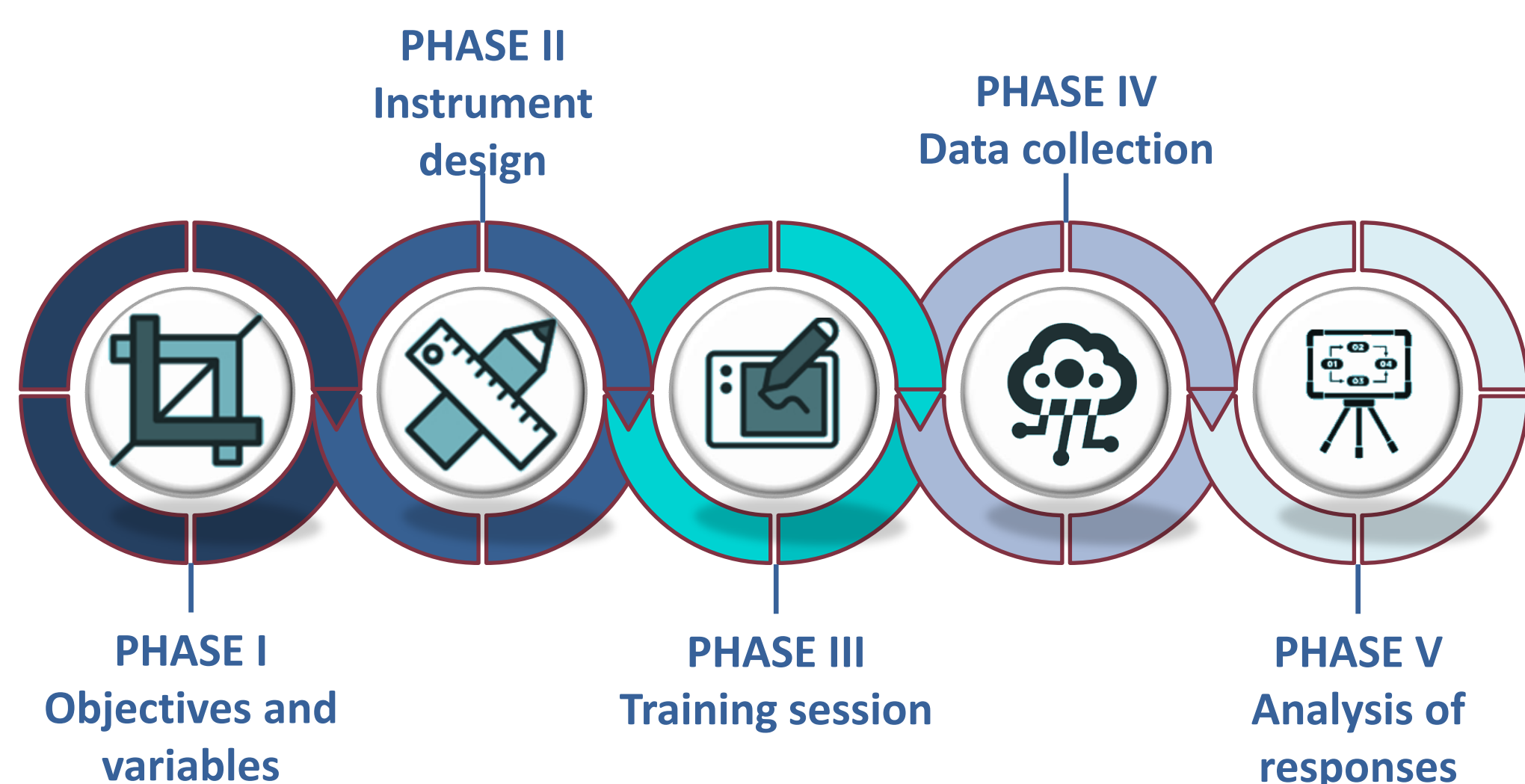
Gamification is known as the process of introducing game design elements into situations of a nongame nature. These game mechanisms allow interaction between users, called players, to achieve certain goals. The Battle's taxonomy is based on the user's personality traits and distinguishes four player profiles: (i) Killer, which is typical of players who seek the challenge of achieving victory over strong opponents; (ii) Explorer, who feels linked to the game to the extent that it provides them with something of interest that motivates them to continue playing; (iii) Socializer, whose main motivation is reached in the establishment of social relationships; and (iv) Achiever, typical of those who only get satisfaction from victory.



This article focuses on analyzing the different player profiles in gamification and which are considered most suitable for learning, using a sample of 532 university engineering professors in Latin America.

### METHODS

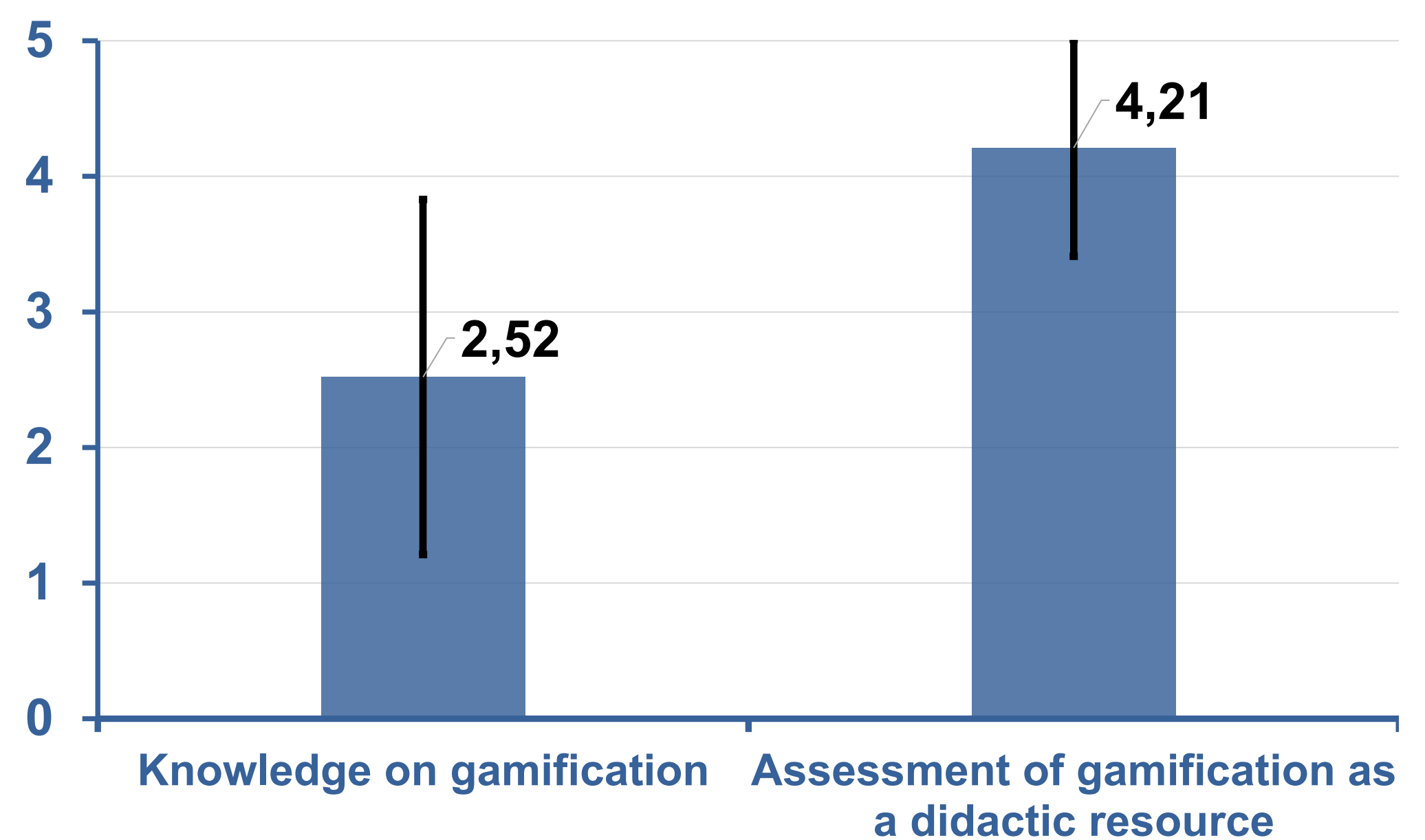
This article is quantitative research based on the responses of a group of Latin American engineering professors to a survey designed by the authors on the self-perception that the participants have about their own player profile and the one that, in their opinion, is more appropriate for learning. To this end, the following research phases were followed:



### RESULTS & DISCUSSION

#### 1) Knowledge and assessment of educational gamification.

The participants report having an intermediate-low level of knowledge about educational gamification (2.52 out of 5), although with a standard deviation (1.31 out of 5) that results in a coefficient of variation of 51.98%. This implies that there is a high gap in gamification knowledge among the participants. However, their assessment of the educational effectiveness of gamification in digital environments is high (4.21 out of 5), with a smaller deviation than the previous one.



#### 2) Player profiles with which engineering professors most identify and those they consider most conducive to learning.

University professors identify less with the Explorer profile, considering it the least conducive to learning. In contrast, they identify more with the Socializer profile and regard it as the best profile for facilitating learning. The Killer and Achiever profiles fall somewhere in between.



### CONCLUSIONS

- Engineering professors seem to be mostly Explorers, and they also believe that this is the best player profile for learning.
- Younger professors are mostly Killers. Older ones are mostly Explorers and consider this player profile as the most favorable for learning.
- In public universities, there is a higher proportion of Explorers than in private universities.
- The participating professors show intermediate or low levels of knowledge about the use of gamified digital environments but give high ratings to this didactic resource in engineering.