What Do Ancient Languages and Programming Languages Have in Common? "CACTUS", An Integrated Approach for Teaching Latin in High Schools

Ginevra Martinelli, Annalisa Puligheddu

Istituto Salesiano S. Ambrogio Opera Don Bosco, Milano

Abstract

Once revered as the pride of Italy's education system, high schools teaching ancient languages are now witnessing a gradual decline in enrollment, dropping by 2.4% between 2022 and 2023, as reported by the Ministry of Education. This decline can be attributed to the perceived complexity of these subjects and the belief in their limited practical value. To address this trend, we launched the project "CACTUS" with a dual purpose: to reignite the appreciation for Latin studies and equip students with the necessary skills to approach this ancient language with confidence. We assembled a group of 10 high-school students who struggled with learning Latin and took a novel approach by not simply revisiting grammar rules or reiterating exercises but by helping them rediscover Latin from the point of view of its inherent logic. In this regard, introducing basic programming languages played a pivotal role in illustrating the importance of syntactical regularity and nurturing the mental flexibility needed for Latin-to-Italian translation, a task often viewed as the biggest hurdle by Italian students. By comparing initial and final assessments, we observed a notable improvement of over 38% in translation skills, alongside a comprehensive enhancement across all evaluated domains. The significant progress made by students underscores the project's efficacy in revitalizing Latin education, while also emphasizing the potential of Latin studies to enhance students' cognitive abilities, paving the way for the development of generations of critical, adaptable and analytical minds.

Keywords: Cognitive Skills, Education, Integrated Teaching, Logic, Programming Languages