INPLASY PROTOCOL

To cite: Tumbula. Systematic review on the determining factors of school failure in the 1st year of engineering degree courses in Angola. Inplasy protocol 2022110111. doi: 10.37766/inplasy2022.11.0111

Received: 21 November 2022

Published: 21 November 2022

Corresponding author:
Samuel Tumbula

samuel.tumbula@ucan.edu

Author Affiliation:
Universidade Católica de Angola

Support: **Own financing.**

Review Stage at time of this submission: **Preliminary searches.**

Conflicts of interest:
None declared.

Systematic review on the determining factors of school failure in the 1st year of engineering degree courses in Angola

Tumbula, S[1].

Review question / Objective: **What are the determining factors of school failure in the 1st year of engineering courses according to the perception of teachers and students of higher education institutions in Angola?**
Condition being studied: **Our systematic review aims to analyze the determining factors of school failure in the 1st year of engineering courses (factors related to the teacher, student, higher education institution and educational policies).**
Study designs to be included: **Questionnaires/Scale, interviews, focus group, case and multi-case studies, observational studies, document analysis.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 November 2022 and was last updated on 22 November 2022 (registration number INPLASY2022110111).

INTRODUCTION

Review question / Objective: **What are the determining factors of school failure in the 1st year of engineering courses according to the perception of teachers and students of higher education institutions in Angola?**

Rationale: **The 1st year of higher education is a real challenge for many students from different social classes. There seems to be evidence that students fail more academically in the 1st year and as we move towards the end of the course, failures tend to decrease. This phenomenon is even more accentuated in engineering or exact sciences courses, which is why the aim of this study is to find out the factors that underlie this school**

failure in the 1st year of engineering courses in Angola.

Condition being studied: Our systematic review aims to analyze the determining factors of school failure in the 1st year of engineering courses (factors related to the teacher, student, higher education institution and educational policies).

METHODS

Search strategy: We will limit ourselves to using electronic databases. Therefore, we decided not to use manual search.

Participant or population: Studies involving professors who teach in the 1st year of engineering courses and students attending one or more curricular units of the 1st year of higher education.

Intervention: School failure in the 1st year of engineering degree courses.

Comparator: Perceptions of teachers and students.

Study designs to be included: Questionnaires/Scale, interviews, focus group, case and multi-case studies, observational studies, document analysis.

Eligibility criteria: Inclusion criteria:- The population includes, on the one hand, teachers who teach one or more curricular units in the engineering course, and on the other hand, students attending the 1st year of the degree in engineering; - It is intended to analyze the determining factors of school failure of students in one or more curricular units; - Articles with peer review; - All languages will be used in the selection of articles. Exclusion criteria:- Articles that do not have teachers and/or students of the 1st year of engineering as a study population; - Articles on the determinants of school failure in units will not be selected curriculum for other years of study other than the 1st year of engineering courses; - Articles that do not refer to the determining factors of failure will not be selected school in the 1st year of higher education; - Other topics will not be analyzed other than the determining factors of school failure in the 1st year of higher education; - Deletion of all gray literature; - Exclusivity of the research language.

Information sources: Google Scholar, Web of Science, Scopus and Eric.

Main outcome(s): - Determining factors of school failure in the 1st year of engineering courses related to the teacher, student, higher education institution and educational policies; - Perceptions of teachers and students about the factors of school failure.

Additional outcome(s): There are no other outcome(s).

Data management: Copyrights will be respected in direct and indirect citations and duly licensed software will be used for data management.

Quality assessment / Risk of bias analysis: For the evaluation of the methodological quality of the scientific articles to be selected for the systematic review of the literature, we will use the tools of Downs and Black (1998) with 27 items and five parameters, namely:
a) Form of reporting the results;
b) External validity;
c) Internal validity;
d) Confounding factors;
e) Power of the study.
Knowing that the score goes from “one (1) or zero (0)”, corresponding, in this case, to the absence of the criterion.

Strategy of data synthesis: In a 1st phase we will select the articles of interest for the subject matter of the systematic literature review for the extraction of data through a formal narrative synthesis. The most relevant data on the determinants of school failure in the 1st year of engineering courses will be used, taking into account four dimensions, namely, the teacher, the student, the higher education institution and educational policies. Much of this data can be presented in graphs and/or synoptic tables. On the other hand, our systematic

literature review will assume the PRISMA standard as a global strategy, mentioning the keywords, the search equations resulting from the defined keywords and combined with the wildcards and Boolean characters, the search strategy (bases data used) and inclusion and exclusion criteria for selecting articles.

Subgroup analysis: Nothing planned.

Sensitivity analysis: We respected all questions related to research ethics in analyzing the data and writing the systematic literature review.

Language restriction: No language restrictions.

Country(ies) involved: Angola.

Other relevant information: Search equation based on the previous keywords:
"school failure*"
"school failure" AND "university education"
"school failure" AND "higher education"
"first year of engineering"
"school failure" AND "first year of engineering"
"school failure" AND "perceptions of teachers and students"
"school failure in higher education" OR "school failure at university"
("academic failure" or "school failure") AND ("higher education" or "university education")
("first year of engineering" or engineering)
"Best F*" AND "school failure"
Leandro Almeida*
("Leandro Almeida*") AND ("academic failure" or "school failure")
Tumbula S*

Keywords: School failure, first year of higher education, engineering courses, teachers' perceptions, students' perceptions.

Dissemination plans: his systematic literature review will be published in an Indexed Magazine and may also be the subject of one or more conferences at higher education institutions and/or international congresses.

Contributions of each author:
Author 1 - Samuel Tumbula - The entire systematic literature review will be performed by a single author.
Email: samuel.tumbula@ucan.edu