

DISCOVER EDUCATION ARTICLE REVIEW CONCEPT

Manuscript Title: **Journal Club as a Teaching-Learning Strategy: A Case for Plant Genetics Lectures During the COVID-19 Pandemic**

The manuscript is considered an interesting university educational proposal to address the situation caused by the pandemic, it gives an account of a process carried out with university students and allows us to glimpse an established methodology. In general terms, the manuscript has a clear and easy-to-read structure, which allows the reader to follow the ideas. The authors make the methodological development clear and, in general terms, describe an analysis process that allows them to infer some aspects about the development of the proposal throughout the two semesters of application.

However, there are some points that must be considered in terms of both format and content that will surely improve the quality of the manuscript.

- In the first part of the manuscript, a review of the summary should be made in terms of its structure and main idea. Furthermore, it is important to point out the importance of the use of acronyms in the development of the texts, since the keywords contain it places an acronym that has not yet been presented by the authors and we readers have no idea what CMSLTA means, but only until the theoretical framework is presented. On the other hand, it is important that the keywords used in the text be reviewed, since there are some terms that are not properly suitable to be used as keywords, especially thinking in terms of indexing the paper in the future; Words such as Sci-hub or Zotero are not terms that can be considered key-words.
- In the introductory section, it is worth highlighting the fact that the world situation that occurred due to Covid-19 is mentioned, in addition to a brief approach to the concept of Journal club as well as its history; however, the situation for which the teaching model is proposed is not clear, that is, there is no problem statement that allows us to show what was the situation that triggered the research proposal, and on the other hand, the characteristics of the community of learning.
- Regarding the conceptual framework, it should be noted that although some of the terms that are considered "cross-cutting" to the research proposal are defined, there is no evidence of a relationship between one and the other and their relevance or applicability in the developed process. This conceptual framework is more similar in nature to a "glossary", since it does not articulate in any way the concepts that are presented. It is recommended that there be a greater articulation of these concepts with the development of the experience that is being related in the manuscript.
- Regarding the part of pedagogical skills in science education, it is necessary to consider what is the objective (in terms of the development of research) of talking about the pedagogical skills of university teachers, and not the development of skills by teachers' students, since the focus of the experience was precisely with the students and not with the professors. If so, we would have to talk about the teachers' TPACK (Technological Pedagogical Content Knowledge), and this materializes in another type of research and consequently other results. Therefore, it is recommended that if you

are going to mention something about skills, it should be about the skills that students develop with the experience that is being reported.

- In the methodology, it allows us to glimpse a population and a context that until now had not been exposed in the entire manuscript, it gives an account of a clear methodology and established times for the development of the proposal. However, some issues arise regarding the validity and reliability of the instruments mentioned; firstly, on a survey and then on an objective rubric, instruments with which the progress of students in terms of their production is monitored and evaluated. In all educational research, and of a qualitative nature, it is necessary to carry out a validation process of instruments such as surveys, questionnaires, scales, etc., because the aim is to have the highest level of reliability in the research.
- For the results section, it is worth referring to them in two parts, the first about the results presented in the frequency of words, although a process of systematization of the information collected in the applied instrument is carried out, a process of expansion of the These, that is, some aspect of these results is not expanded upon in the discussion section, which makes the reader ask, and what was the objective of doing this? Since if they are not subsequently considered as a factor in the analysis of the investigative process, I consider that there is no need for them to be presented as results.
- The second part of the results, regarding the progress in the grades of the essay, there is no clarity about how the process of evaluation and measurement of said progress was carried out, beyond the two graphs that apparently show a “progression”. However, there is no clarity as to how this type of progress could be evidenced. What aspects were considered to “measure” this progression? And if a scale was used, was it constructed by the research team? Or was it taken from someone else? Was it a methodology adapted from another research? With an essay is it possible to develop critical skills and professional empowerment? All these doubts arise from the fact that there is no clarity regarding the way in which the process was carried out and the inferences that are placed in the discussion part.
- It is important to point out that in the discussion section some statements are made that are not supported by the development of the research, such as the development of critical skills, reading skills and analytical skills, since, as mentioned above, they do not. There is evidence in the manuscript that this has been measured in some way, either in a pre-test post-test application process or at a level prior to the Journal Club experience and after the experience. Without this, these types of statements are not supported by evidentiary facts.
- Finally, it is recommended to review the English throughout the manuscript, since some problems are evident in terms of grammar and the use of technical vocabulary, as well as in the conjugation and use of some phrasal verbs.