

Review of: "Creative Learning of Computer Science of Computer Science Professionals: Case University of Matanzas"

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Potential competing interests: No potential competing interests to declare.

Comments: Interesting research topic; however, it still needs a lot of work. I may not have mentioned everything below, but it does need a lot of your attention.

Although I am not a native speaker, this paper needs proofreading: punctuation, grammar, revision of sentences for clarity, structure, etc...

Try to stick to either for consistency; for example, "characterisation" or "characterization", "individualized" or "individualised", "realization" or "realisation", "personalization", etc...

Is this a single or two-part word? "given ness" or "givenness"

"Affording to Mitjans Martínez (2013a)," do you mean "according"?

In the abstract, a questionnaire **"was used"** to diagnose creative learning in computing. The questionnaire **"will be administered"** to 66 final-year students enrolled in the academic year 2022. Was the questionnaire administered, or is it yet to be administered? This is just one example. The whole paper needs review.

Your paper also fluctuates between "computer science" and "computing." Choosing one term and sticking with it throughout the document would improve consistency.

You use the words "Computer Science," "Information Technology," and "Computer Engineering." These are all different. Does the author mean the study was conducted in the School or Department of Computer Science at that university? A School or Department of Computer Science can have a Computer Science strand, Information Technology strand, and Computer Engineering strand, for example. Or are you using those three interchangeably?

You did not provide clear definitions or distinctions between these three fields. This lack of clarity could lead to confusion because, while related, they focus on different aspects of computing, technology, and engineering. It could also lead to misinterpretation of the findings or question the applicability of the conclusions. So, I suggest you clarify the scope of their study by explicitly defining how you are using these terms and if you are focusing on one particular field or discussing aspects common to all three. If you are using them interchangeably, then provide a rationale. The study needs a clear context.

Not sure whether the authors forgot to remove any duplication when improving the first version. There is a lot of repetition throughout the paper, making it difficult to follow. Just a few examples:

“Computing has had a significant impact on all aspects of human life in recent years through technology...”

“A project is an organizational form of generating new ideas in the form of computer technology and solutions to problems...”

“The incorporation of the latest IT achievements...”

These are just a few examples.

Improve transitions for a more logical flow of arguments because some sections jump between topics without clear transitions or logical connections. Moreover, including subheadings will enable the reader to clearly define the subsection topics. At the moment, this is very challenging. Some of these sections seem disjoint. The logical flow is lost somewhere. This made it difficult for me to follow the arguments. For example, you jump between topics such as the importance of creativity in computer science, project management, interdisciplinary teams, and project-based learning without clear transitions. Make sure each section flows logically into the next by using transitional phrases that connect the dots between, another example, the emotional aspects of learning, the challenges of integrating subjects, and the stages of creative learning development.

You cite several studies (e.g., González-Hernández, 2013; Haq et al., 2019) without summarizing their findings or explaining how they directly support the paper's arguments.

For formulas, clearly explain the variables and their roles before using them in the formulae for comprehension. Every statistical method has its limitations, and you mention some. You could include a subheading for clarity. For example, subheadings for each major component (e.g., "Questionnaire Design," "Curriculum Context," "Hypothesis," "Analytical Approach")

Throughout the paper, you have many concepts and terms that are not clearly defined and can be confusing for anyone who may not be familiar. For example, “creative learning,” “subjective social meanings”. You also mention concepts such as “informatics technology production,” “Science Technology Park,” and “software factory model,” etc..... without sufficient explanation.

You have statements that lack supporting evidence. Just one example: for “a fundamental contradiction in computer science: while seeking a general methodology or framework, each computerization project is unique,” you should provide specific examples or references to the literature.

In your discussion, explicitly compare and contrast your findings with the studies you cite. For example, when you discuss the ambivalence towards mathematics, you could detail how your findings align or differ from Hernández et al. (2020) and explore possible reasons for these similarities or differences. In brief, you should explore and explain potential contradictions or unexpected findings in more detail to provide additional insights into the complexities of creative learning

in computer science education (if the focus is really in CSE).

Implications for teaching practice. How could your insights inform changes in curriculum design, teaching strategies, or professional development for educators to foster creative learning?