Reviewer's report

Title: Motivational component profiles in university students learning histology. A comparative study between genders and different health science curricula

Version: 1 Date: 17 July 2013

Reviewer: Sevgi Turan

Reviewer's report:

- Major Compulsory Revisions

1. Background: A more thorough review of the literature will help set the background of the research problem. The importance of the motivation on learning has been reminded several times throughout the background section of article. However the components of the motivation based on theories should be explained more. There is no description of the components of motivation that authors used.

The background section should be structured with theory and earlier studies on research questions. The study was aimed to investigate gender difference and relationship with achievement. Therefore the literature about that should be added in background section to explain problem situation of research.

The research questions should defined clearly at the end of the section.

2. Methods:

Instruments: Science Motivation Questionnaire II were used. Therefore the pschometric properties (relaibility and validity) of the scale should be reported. Is the scale used original language or adopted?

Information about components of the items (how many items included, any inverted items, how the score of components calculated) should be added.

It is expected to write items based on the rules of writing items while developing the original scale. It is not clear why the author needed to chance sort of items, and sentences.

It was reported that the word “science” was changed with the word “histology” in the questionnaire. I think some of the word did not need to change. For instance in item 25 “histology problem-solving skills”.

Statistical analysis: The reason of the statistical analysis might be explained. Why was Mann-Whitney U test preferred instead of parametric one? Why was Mann-Whitney U test preferred to compare different curricula instead of variance analysis?

Additionally the implementation process of the study (when were the questionnaire administered) should be explained in the method section. As the instruction might have an effect on motivation, brief information about instruction process, methods used should be added in the method section. The design of the study should be written.
3. Results: The first paragraph of the result section should be summarized. Result of the correlation might be presented with a table to reported values of correlation coefficients.

4. Discussion: The information in the second paragraph should be given in the background and method section.

The satisfaction described as a component in the third paragraph of the result section. But results have not included this component. The description of the component should be reviewed.

The discussion section should be re-written based on the literature on self-efficacy, achievement motivation, control of learning.

Limitation of the study should be discussed.

- Minor Essential Revisions
  none
- Discretionary Revisions
  none

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

none