Reviewer’s report

Title: On line clinical reasoning assessment with the script concordance test: results of a french pilot study

Version: 1 Date: 21 June 2006

Reviewer: Carlos Brailovsky

Reviewer’s report:

General

This paper describes a study on the feasibility, reliability and validity of the Script Concordance Test that is implemented via the Web to assess clinical reasoning of groups of French urologists. The problem is clearly stated and well defined. The authors show the direction and the research goals well.

The methods are relatively simple and well described. The details and data provided allow the possibility to replicate the work given the access to the technology utilized.

The collected data appear well controlled and the number of candidates that sat the test is acceptable for performing the statistics analyses presented. However, I have some concerns that I will list in my comments for Compulsory Revision.

The authors have shown that it is feasible to set up a system to use Web sites for SC tests. This is a good point.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The discussion is well written. However, I do not agree with one of the major conclusions. The authors suggest that the results showed a trend in the increase of the mean of groups with different clinical expertise (Table 3). When we look at the results presented in this Table, we do not see any trend. Three out of four groups perform in exactly the same way. It is not necessary to analyze the results statistically to see that there is no difference among groups. The students’ performances show statistical differences compared to the urologists and chief-residents, but not when compared to the residents. Even if the authors try to explain these results by the size of the samples, they cannot support their suggestion that there are trends. Furthermore, the authors mention that the global correlation of scores with levels of training observed supports the instrument construct validity. However, they did not present any kind of results where this was demonstrated.

I am not certain how the Cronbach alpha is calculated. To be able to interpret this coefficient, items must be mutually exclusive. But in the Script Concordance Test, even if they are independent of each other, are not independent of the domain of each clinical vignette. So, it is conceptually wrong to use the items as units of analyses but it is necessary to use the vignettes as units of analyses. The authors do not explain how they analyze their results; I suppose that they have used the items instead of the vignettes. The population under study is heterogeneous. The students’ results are lower than those of the other groups. This can increase the alpha coefficient artificially, making its interpretation hazardous.

Finally, the example given in Table 2 is not very convincing in supporting the model of clinical reasoning. In fact, three items look as if they were from a MCQ and do not need the vignette to be answered. This was confirmed by two urologists that I consulted. I hope that the other vignettes and items used in the project behave differently. I would like to know if all the vignettes were similar. If not, I think that another example will be better.

Before the paper could be accepted for publication I would like to see modifications based on my comments.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author...
can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

I declare that I have no competing interests' below.