Reviewer's report

Title: Enhanced virtual microscopy for collaborative education

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Reviewer: Friedrich P Paulsen

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The manuscript by Triola and Holloway deals with a virtual microscopy application that has been established at New York University School of Medicine two years ago. The authors describe first experience (two year experience) with the system at their medical school. The system is based on the Google Maps engine and is easy to use. The most interesting part of the manuscript is the description how the system was established and how it works as well as the evaluation how students and faculty dealt with the system so far. As this is the first article (to my knowlege) having established such a system and analysing this system for an open access comunity it it well worthy to be published. However, there are several points that should be addressed prior to publication (Major compulsory revisions):

1: The „background“ information given is relatively poor and adds nearly nothing new to that what is already known about virtual microscopy. Therefore, it should be reduced to about 15 lines. Just recently a nice review article was published by Paulsen et al. that gave really good background information. It would be enough to cite this and other articles. Moreover, the authors should be aware that there are also readers outside the US. Therefore, abbreviations like AAMC and the Howard Hughes Institute need much more explanation if used. In ideal case the authors should avoid country specific details. It is absolutely not clear to this reviewer what the authors want to tell with the last two sentences of paragraph 1. Also the statement „With the introduction of robust commercial systems, their use has become widespread throughout education“ is not correct. I agree that the number of medical schools that have established a VM offer increased dramatically during recent years, however, we are far away from a point where VM is widespread used throughout education at least if looking throughout the world. Most medical schools so far teach with conventional microscopes. Nevertheless, I absolutely agree with the authors that VM will be the future in teaching histology, histopathology and associated fields.

2: The evaluation of the authors system is very interesting. However, they only give very small insides. Please could you detail (if possible) also the following points:

• Analysis of how often, how long and when the system was frequented outside of the course periods. (This has partly been done).
• Analyses as to which specimens were particularly intensively used by the students.
• By “Tracking” (log-files) the portions of the pictures which have been particularly intensively viewed by the students specimens can be retraced in the respective or with other words what was of particular relevance to the student.

• Analysis of the extent to which histological specimens were being used in the framework of case presentations.

• Collection of evidence as to whether virtual microscopy may also be useful for other medical disciplines.

3: The paragraph about the examinations is less useful ans should be omitted. Only two student years are compared and populations in two different years might be very different. It would have been much more effective to compare different populations of the same cohort in one year or in both years.

4: The discussion section is not a discussion section but more a hymn on the authors system. Not even one citation has been discussed in this section although there is already a bulk of literature. Therefore, this sections needs to be rewritten.

Finally, I would congratulate the authors to a very nice VM application that works very easy.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.