Using Concept Maps to Encourage the Meaningful Interpretation of Immunology Facts and Processes

There is a substantial heterogeneity in concept map outputs, which is a good indicator of individuals' cognitive processing, difficult as that can be to interpret. For large enrollment classes, evaluation can be done in groups, with the understanding that the individual's processing of the content is not being assessed strictly in terms of the concept map outputs.

Instructors should reflect on how often and/or over what period of time concept maps should be assigned, constructed, and used. Similarly, they should weigh: (1) how much detail to require, (2) when to implement the concept map, (3) whether to use the map as a formative assessment, and (4) which types of rubrics to include and their detail. Additionally, instructors are strongly encouraged to consult straightforward resources such as those found in the references.  

It is very important to model an example in class early on to foster students' discernment of where to start and what relationships are relevant. As with other types of assessment, it is also important to have a clear and detailed rubric. Ultimately, it is also important to have a clear and detailed rubric. Ultimately, concept maps are useful for spotting misconceptions in the classroom and quickly re-tooling the presentation of content. Students have commented that this is a helpful exercise, with some applying it to other coursework.

Finally, concept maps are a rich data source for those interested in educational research. Such a coding project is underway on the part of graduate students in my lab in connection with a physiology course for pre-nursing students.

Acknowledgments

Emily A. Ryan and Alexandrea A. Vita, doctoral students working diligently on the aforementioned research project, have brought to my attention some of these resources.

References

6. www.drawio.com (by Kingsley Ltd.). This free, high-quality, web-based diagramming resource plugs into Google Drive, OneDrive, or syncs locally to a hard drive.