How knowing the purpose of mapping changes the map and the mappers themselves

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This abstract was accepted to the Academic Track of the State of the Map 2019 Conference in Heidelberg after peer-review.

The opportunity presented through the YouthMappers network of chapters to engage university students in authentic, open humanitarian mapping raises important questions about how to guide the quality and productivity of volunteer spatial contributions while providing a valuable learning experience. It presents the unique chance to pique new mappers' interest, satisfaction, and confidence in spatial technologies in particular, and technology in general, as well as pique their interest in the people and places served by the humanitarian mapping projects. Our study explores the importance of sharing authentic contextual information about the purpose of the humanitarian mapping task [1].

Two groups of beginner mappers were given mapping tasks, with only one group being provided details on the purpose. Comparisons were made on their respective performance and changes in affective response to series of questions about technology, education, good citizenship, and empathy. Measures of the quantity and quality of spatial data produced, of their respective levels of interest, satisfaction, and confidence in technology, and affective responses before and after mapping show the relative effects of contextual information. Given our long-term aim of improving understanding about the experiences of new mappers who volunteer for humanitarian tasks, the results of this study are insightful about productivity, quality, and motivation [2] of students. Our findings indicate that purposeful, open humanitarian mapping [3] might help shift the difficult process of learning new technologies from a negative to positive affective experience, and potentially transfer authentic learning [4] activity focus from tools to context, an essential step toward achieving higher level learning objectives. These approaches may also even inspire students' future orientation to give back to society as productive, good citizens as well as spark their interest in geospatial technology careers.

With respect to mapping productivity and quality, knowing that the purpose of mapping is for humanitarian needs seems to make no difference in actual observed performance of beginners, except that some mappers with contextual information may introduce more types of errors. This finding suggests that a triage approach to training new mappers might be a novel strategy for organizers of humanitarian mapping campaigns to quickly assess the very different abilities of new volunteers, then pay greater attention to improve performance of those who need it most, to optimize overall production and quality.

Solís (2019). How knowing the purpose of mapping changes the map and the mappers themselves
In: Minghini, M., Grinberger, A.Y., Juhász, L., Yeboah, G., Mooney, P. (Eds.). Proceedings of the Academic Track at the State of the Map 2019, 39-40. Heidelberg, Germany, September 21-23, 2019. Available at https://zenodo.org/communities/sotm-2019
DOI: 10.5281/zenodo.3387729


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The fact that the performance perceptions of the informed group were much higher, yet their actual metrics showed little difference compared to the control group, it is imperative to seek ways to overcome what we term “The Do-Good” effect: Humanitarian mapping volunteers may believe they are doing well just because they are doing good. Strategies to combat this tendency should be sensitive to maintaining newcomer enthusiasm while paying attention to quality control through real-time validation and positive feedback.

Perhaps the clearest outcome from this study are the extremely strong results related to positive introduction of mapping technologies, even to students who are not inclined to be enthusiastic about technology in general. Merely performing the mapping activity helped all participants, including the control group, to better understand what mapping technologies are. When performed in the context of something as compelling as humanitarian mapping, the effect is even more profound. This finding suggests that humanitarian mapping may be one creative way to interest students in science and technology fields in general, whether or not they ultimately plan to focus on geospatial fields. Incorporating humanitarian mapping exercises in a variety of interdisciplinary experiences could strengthen educational goals of raising interest and motivation for STEM (Science, Technology, Engineering and Mathematics education).

These early results suggest that technical mapping activities offer a means to support affective learning toward good citizenship, giving back, and an empathic interest in the lives of others. For those who were provided contextual information about the humanitarian mapping task, they were significantly more likely to find it important to plan for being a good citizen while in college and for giving back to society. Mappers who were informed of the humanitarian purpose of their activity reduced the tendency to become generally less empathic from the stress of learning a new technology. Their interest in the feelings of other people may be an important place to start to leverage the growth of online mapping technologies to teach about human geography, place, and people within the framework of international humanitarian mapping.

Acknowledgements

The United States Agency for International Development supports the YouthMappers program through a grant from the USAID GeoCenter Award #AID-OAA-G-15-00007. Views expressed in this document do not necessarily reflect the policies and viewpoints of the agency or its employees. Founding partners are Texas Tech, George Washington University, and West Virginia University. Dedicated to the memory of James Eshun, Cape Coast University, Ghana.

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