Learning at the Seafloor, Looking at the Sky:

The Relationship Between Individual Tasks and Collaborative Engagement in Two Citizen Science Projects

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Research Setting & Perspective

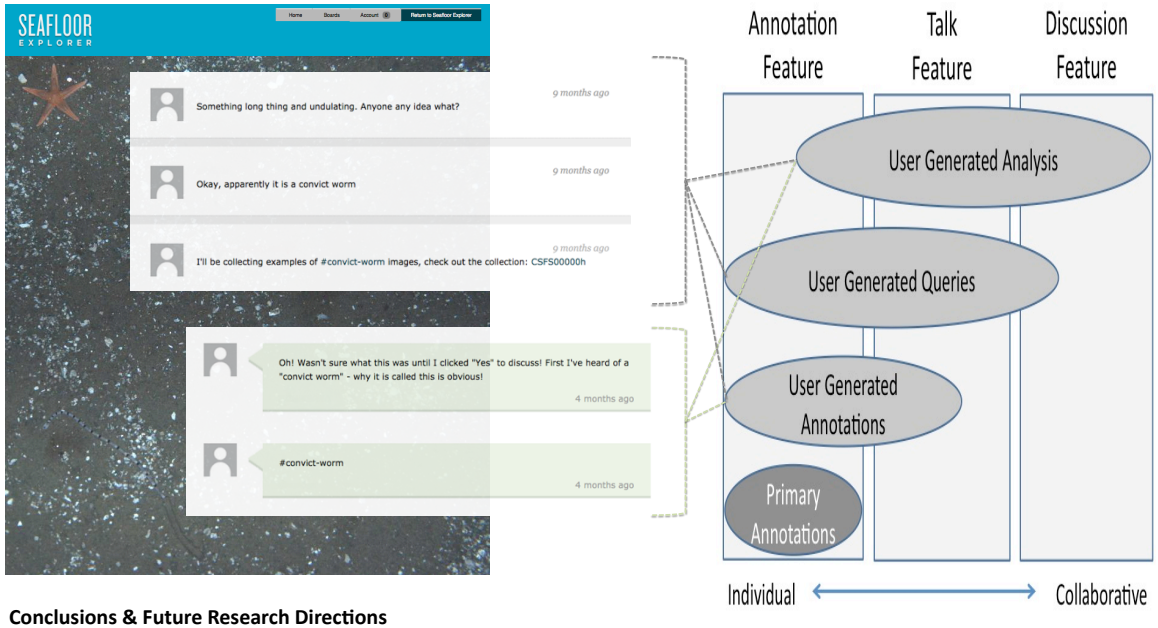
Until recently, research investigating citizen science projects has conceptualized learning as an outcome of individual participation. Expanding on previous research, we draw on the notion of learning from Lave & Wenger's (1991) theory of legitimate peripheral participation to explore the relationship between emergent forms of individual and collaborative learning in two Zooniverse citizen science projects: Seafloor Explorer (SE) and Planet Hunters (PH).

Methods

This poster summarizes preliminary findings from an action research project working to improve learning and motivation in a collection of online citizen science projects. Data for this project was generated through online participant observation (Hine, 2000) and trace ethnography (Geiger & Ribes, 2011) and has recently been supported and extended through interview data. Based on our analysis we identify four types of participant activities that emerge within the PH & SE projects (See Figure). Aside from primary annotation, the three remaining activities can be performed as either individual or collaborative practices.

Analysis & Findings

During each of the four activities, participants leave various types of traces of their engagement. For example participants within both of the studied projects use hashtags (a # sign preceding a word or phrase; e.g., #fish) for a variety of functions. Hashtags are left in comments to draw attention to specific characteristics in data objects. When left in data object comments the hashtags are also used as keywords that can then be searched to retrieve all data objects marked with the same hashtags. Although not every participant engages in hashtag activity, we find that the practice of hashtagging is indicative of learning how to participate within the community.



Conclusions & Future Research Directions

Empirical analysis of hashtag traces highlights the relationships between individual and collaborative learning and amongst the four identified activities presented in the model above. Findings suggest that individual and collaborative activities are both emergent and entangled, emphasizing the need for continued investigation into the complex relationship between different types and levels of learning. Moving forward, we plan to analyze how hashtags function within a larger sample of online citizen science projects, specifically exploring how hashtags contribute to situated scientific practices and science literacy learning. Additional research explores the impact and qualities of traces of participant activities on new volunteer participation and contribution to online citizen science projects.

References

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