MultiNets: Designing Crowdsourcing Platforms to Scaffold Collaborative Learning for Solving Complex Problems

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A Cyberlearning Proposal
NatureNet
ACES – a community context for crowd sourcing

ACES – A community for citizen science activities
Crowd Sourcing Design

- Crowd becomes stakeholders in success of project
- Increase motivation to participate in citizen science
MultiNets

• Primary Objective: understand how to design and leverage crowdsourcing technology as a way to scaffold collaborative learning around complex problems.
• The project will transfer and generalize crowdsourcing affordances from NatureNet to guide collaborative learning for undergraduate students engaged in complex problem domains.
• The project will provide exemplars of the kind of scaffolding that will assist those using crowdsourcing in other learning environments to be successful.
Scenarios

- **CompSciNet**: Formal learning in a structured undergraduate computer science class at the University of Colorado, Boulder. The students in this environment will work on complex big data problems concerning human computer interaction (HCI).

- **SocioTechNet**: Semi-formal learning in a project-based undergraduate living-learning program on Science, Technology, and Society at the University of Maryland, College Park. The Engineering and Computer Science students in this environment will consider a complex sociotechnical problem of where to place a metro line on campus, guided by their instructor.

- **SustainableCampusNet**: Informal learning and sharing in a common area frequented by undergraduates at the University of North Carolina, Charlotte, that invites students to engage in spontaneous learning and sharing that allows them to build on and use the knowledge and skills from their structured learning in courses. The students in this environment will engage in complex problem solving with a focus on promoting sustainability on campus.
Research Questions

• **RQ1**: How do the affordances of crowdsourcing behavior and technology design help students to engage in forms of collaborative learning with peers that beneficially leverage the diversity of the community?

• **RQ2**: How do different groups of learners reappropriate the same basic technical infrastructure to serve their learning needs and how do learners move between the platforms and integrate their learning experience?