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IdeaMagnets: Towards Knowledge Building on the Open Web

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Problem Statement

Knowledge Building (KB) as a novel education paradigm is aligned with a societal drive to cultivate creative talents. Knowledge Forum (KF), a key KB technology, provides a sociotechnical environment for youth to carry on creative work with ideas as communities. However, as online participation of the youth continues to expand and diversify, we observe a need to strengthen KF's affordances in connecting two important discourse spaces: (1) the traditional KF space designed for classroom discourse, and (2) the Open Web space where youth read content, interact with peers, produce artifacts, and simply dwell. In other words, we need to meaningfully connect learner discourse in different environments to make KB discourse more personally relevant, engaging, and pervasive.

Project Goals and Advances

Grounded in the long tradition of Knowledge Building pedagogy, design, and research (Scardamalia & Bereiter, 2014), the IdeaMagnets project aims to extend KB discourse in KF into broader cyber spaces via web annotation (Ciccarese et al., 2013). The project's vision is to foster progressive KB discourse among youth on the broader Open Web and to make KB more pervasive and connected with the youth's online participation. Project goals include:

(1) Designing software features and coupling and pedagogical supports to bridge web annotation with KF; and

(2) Empirically investigating classroom discourse supported by the designed features and supports.

Over the past year, we have accomplished the first project goal through iterative co-design workshops participated by teachers, designers, and researchers. In this multimedia poster presentation, we will demonstrate current software designs of the IdeaMagnets tool implemented in KF (see Figure 1 for a glimpse).

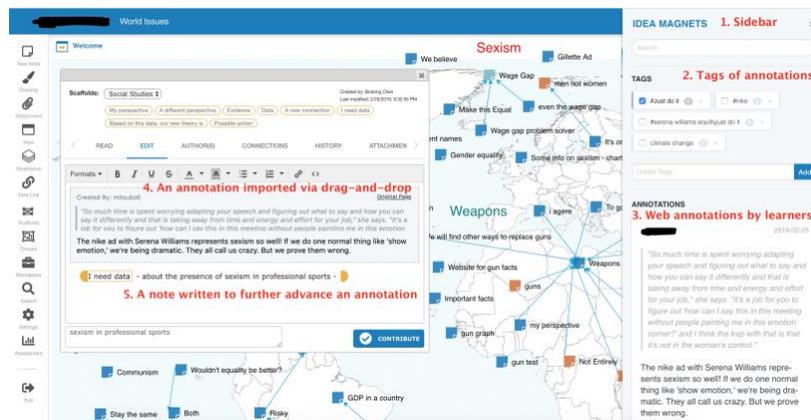


Figure 1. An illustration of the IdeaMagnets tool.

Next Steps

Classroom investigations are ongoing in science classes of two schools. Future design research will continue to enhance KF's capabilities in connecting with multimedia web objects and supporting multiple

representations of ideas. To this end, another ongoing project has already been launched to bring dynamic computational representations and artifacts into classrooms support KB discourse.

References

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