

# **Developing Online Privacy Education Tools with Inputs from the Crowd**

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## **Abstract**

In this talk, we introduce an ongoing NSF-funded research project that is also related to IS education. Online social networking communities have undergone an explosion in recent years, as both the kinds and numbers of sites have grown and their memberships have increased. This has led to the proliferation of personal data revealed by users of online communities, which presents a variety of privacy risks. Although these risks apply to individuals of all ages and backgrounds, younger users have been the primary focus of most academic research regarding online privacy and safety. This focus is justified as many young users still know little about online privacy even though their awareness of online privacy has increased. Due to the fact that most existing cybersecurity education tools are either too technical or impractical for young users, there is a need for new, effective online privacy education tools.

To develop such education tools with high level of usability and effectiveness, we tap into the ideas of online crowds. We believe inputs from online crowds are useful because they can very well be the users of the tools. Specifically, we designed a prototype of an educational game. In the game, players are presented with social media posts, each one having some privacy issue. Then the game will show multiple choice questions related to the posts such as what privacy issues the posts have and how to fix the problems. We used inputs from crowd workers on Amazon Mechanical Turk (AMT) in two ways. First, we collected problematic social media posts from AMT workers and used these posts in the game. Second, we collected ideas on reward strategies, i.e., how to give players points after they answer the questions and how to motivate people in the game. To enhance the creativity of ideas, we further let some AMT workers evaluate the ideas and accordingly identified the most original ideas and the most useful ideas. These two groups of ideas were given to another crowd to be combined. Our research shows that this idea combination method led to some ideas that are both highly original and highly useful, judged by the crowd.

In the next step, our researchers will evaluate these crowd ideas and implement the best ones in the game. Therefore, the final version of the game will be the results of crowd-expert collaboration. Then the finalized game will be evaluated by online crowds and college students. We want to seek feedback and suggestions for related topics, including gamification of education tools, approaches for evaluating educational games, and increasing the impact of this research.