Measuring Students Epistemic Understanding of, and Beliefs About, Political Media

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Abstract: Media, information, and critical literacy have long been viewed as key to developing informed and active citizens. However, there has been little focus in civic education on developing young peoples' epistemic understanding of media used in politics or personal reflections on their own role in this media culture, both of which are key to effective youth engagement with politics in the media age. Quality models for measuring students' abilities to perform in these areas are virtually non-existent. Here we describe our measures of epistemic understanding of political media and self-efficacy for political engagement.

Introduction and context

Political and civic actions today occur as often through social media networks and commercial media as they do on the streets or in the voting booth. Further, the self-curation of information through social media and traditional media selection, the so-called "filter bubble" (Iyengar & Hahn, 2009; Pariser, 2011), has contributed to the effectiveness of propaganda, disinformation campaigns, and the rise of "fake news."

Numerous programs are currently attempting to address the recent "fake news" crisis in news literacy and civic online reasoning (e.g., McGrew, Ortega, Breakstone, & Wineburg, 2017). None of these models factor in the social or political contexts of how and why young people engage with particular sources in the first place – nor do they focus on young people's abilities to effectively take political action in the contemporary political environment. Here we describe our attempts to measure epistemic understanding of political media and their skills and self-efficacy for engaging in political action through media. We do this within the context of our Virtual Internship (VI) simulation, PurpleState Solutions. In PurpleState, students play the role of interns at a political communications firm to engage in developing skills and knowledge for democratic and media education. VI's are designed using the epistemic game model (Shaffer, 2006a, 2006b) to develop expertise in an environment modeled on communities of professional practice. In the VI, students learn political communications concepts and then design a media campaign for a special interest group to PurpleState voters for or against a proposed ban on hydraulic fracturing or "fracking" in Virginia (USA).

Measures

The open-ended measures of knowledge of the issue and epistemic understandings of political media and political media strategies were used in pre and post-questionnaires in all three iterations of the simulation in Virginia and Wisconsin (n=103 total) for this design-based research project. These measures were used to examine changes in participants' epistemic understandings of political media and role of media in politics and their ability to apply the media strategy they learned to a different but related context (near transfer). Open-ended tasks, such as evaluating different forms of political media, illustrated participants' understandings of how media is used to strategically persuade voters (e.g., use of evidence, persuasive techniques), and their epistemic understanding of political media.

The relationship between knowledge of the issue, why it is controversial, and having confidence in both their knowledge of the issue and confidence in being able to take action that is meaningful provides strong evidence that participants will be more likely to engage in the future (Levy, 2011). Therefore, we were also interested in studying the impact of the simulation on the participants' self-efficacy for political engagement (e.g., Levy, 2011; Morrell, 2005; Zhang, Torney-Purta & Barber, 2012). Over the three iterations we adapted previous scales of measures for self-efficacy for political engagement that better reflect the nature of political engagement represented in the current political context, and the rise of participatory media culture in general, as well as to align with the simulation (Chinn & Buckland, 2011).

Measures of issue knowledge and political media strategy transfer

Open-ended tasks were scored and showed significant increases among participants at each iteration (n=103) in their understanding of the issue, why it was controversial, and in their ability to apply media strategy to a new local policy issue. For example, we asked participants "Why is the use of the fracking process considered a controversial public policy issue in the US?" to assess their understanding of different perspectives on the issue.

In order to understand the media strategies used in the VI and their ability to transfer these strategies to a similar problem, we asked participants what media strategy advice they would give someone running for state office.

Measures of epistemic understanding of political media

We were interested in particular in participants' abilities to analyze political media utilizing political communications concepts (e.g., persuasive techniques) and in the behaviors related to epistemic understandings of political information. Two items in particular were used. The first is a series of items asking participants to analyze a political ad for its intended audience, message, and persuasive techniques used. The second is a social media post from a political group that includes polling data for how citizens of Maryland viewed the issue of fracking. This item asked students to evaluate the information it contained, as well as to identify and provide a rationale for their actions if they were to see this post in their social media. They first provided a ranked order of options (e.g., ignore, seek out corroborating sources, analyze the organization), and provide a rationale for why they made these choices. This item in particular gave us a sense of their epistemic aims with political media.

Measures of self-efficacy for political engagement

After utilizing commonly used measures for self-efficacy for political engagement (e.g., Levy 2011) for the first iteration of the VI, we realized that these items needed to be adapted to reflect contemporary political engagement and to better align with the simulation. In adapting the self-efficacy items for this study, we followed Bandura's (2006) recommendations on constructing self-efficacy items. Students' confidence for being able to engage politically was measured before and after participation in the Purplestate VI using a 10-item instrument [$\alpha=.89(t0)$, $.95(t3)$]. The tasks identified for civic engagement centered on: (1) discussing political issues and constructing good arguments (e.g., "how confident are you that you could construct good arguments about political issues?"); (2) critically navigating digital media spaces that contain political messages (e.g., "how confident are you that you could use social media to effectively communicate about controversial political issues?"); and (3) taking some sort of political action (e.g., "how confident are you that you could do something to get local officials to address a problem?"). These items do not comprise a comprehensive list of civic engagement activities. However, these 10 items were identified because they align with the central activities of PurpleState.

Discussion and implications for future research

If students are knowledgeable on controversial issues, understand why it is controversial, and feel confident about their understanding of the issue, there is a greater likelihood that they may be able to effectively take action on that issue (Levy, 2011). The measures developed here serve as a model for developing and adapting measures of epistemic understanding, self-efficacy, and behaviors related to contemporary political engagement and information literacy. They provide an update to traditional measures and a methodological example of how to develop measures that tightly align with a particular curricular intervention as part of a design-based study. Finally, these measures go beyond simple strategies for evaluating information common in the current news literacy approaches to understand young people's capacity for engaging in the contemporary and complex political environment.

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