Young people, digital media and engagement: A meta-analysis of research

Online Supplement 1: Comparison of Meta-Analysis Articles

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This online supplement compares key meta-analysis articles in this field of research. The coding scheme in this article is distinct from these other studies, because it focuses on theories and debates within youth scholarship. Within the youth scholarship, time-use measures and negative effects are given some prominence (Filsinger & Freitag, 2018; Theocharis & Lowe, 2016; Twenge, 2017); non-political uses are expected to have positive outcomes (Kahne & Bowyer, 2018; Kahne et al., 2009), as part of schools of democracy theories; claims of slacktivism are intensified (Twenge, 2017); and the causal flow is assessed within the gateway versus spillover debate (Kim et al., 2016; Vissers & Stolle, 2014). The current meta-analysis offers a nuanced analysis, which is enabled by the large sample of studies in the database. The size of this meta-analysis is exceptional, as evidenced by a recent meta-analysis of meta-analyses studies in communications (Rains, Levine, & Weber, 2018). These meta-analysis studies include, on average, 50 studies (Rains, Levine, & Weber, 2018), whereas this study includes 106 studies.

The table below outlines the coding scheme used in other key meta-analysis articles in this field of research. Each of these works offers a distinct contribution to the literature, but they pursue different research questions. Boulianne (2009) does not include any student or youth-focused studies. All the studies are of the adult population. The piece is focused exclusively on American studies. Given the explosion of studies on digital media and participation, the piece is also rather dated, as it only included studies published up to 2007 (with data collection up to 2005). While much of the research at the time of writing was focused in the United States, there has been a lot of research conducted and published since then, including a significant body of
international scholarship. Boulianne (2009) does not test causal direction given the lack of longitudinal studies at that time, but mentions in the Discussion that there are differences in modeling choices and assumptions about causal flow that merit further investigation. She writes, “further research should explore a two-way causal process, because the significance of the relationship seems to differ depending on whether the relationship is modeled as Internet use causing engagement or vice versa” (Boulianne, 2009: 203). The meta-analysis in this paper builds on this idea. This study includes 15 longitudinal studies in the database and a significant body of research questioning directionality (89 coefficients testing the reverse causal flow: participation to digital media use).

Boulianne (2015) includes student and youth-focused studies. There were seven youth samples studies and 13 student samples (see Table 1 on page 527). Boulianne (2015) did not address the distinctiveness of young adults compared to older adults, but pointed out differing patterns in the findings. Students samples are less likely to produce significant findings, whereas other youth samples are more likely to produce significant finding (Table 2, page 530). She writes “The findings about the youth samples require caution, because the findings are based on only 20 coefficients derived from 7 studies” (see page 531). Furthermore, the piece focused on social media only (36 studies).

Skoric et al. (2016) focuses on social media’s impact on civic participation, political participation, online engagement, and social capital (22 studies). They do not isolate youth or student samples separately, nor do they report on theories related to youth’s unique relationship to digital media or political participation. They offer insights about online political participation, but do not connect online and offline forms of participation.
Chae et al. (2018) do not address longitudinal research and causal flow. They offer distinct findings not covered by this meta-analysis (online participation as a dependent variable). Chae et al. (2018) examines student versus non-student, but did not find a difference. They find “With regard to sample type, the results indicated no significant difference in the relationship between Internet use and political participation relationship for non-students and students” (page 12). Student status explores education and age effects, whereas the current meta-analysis focuses on theories related to age effects.

**Supplementary Table 1: Review of Key Meta-analysis**

<table>
<thead>
<tr>
<th></th>
<th>Boulianne, 2009</th>
<th>Boulianne, 2015</th>
<th>Skoric et al., 2016</th>
<th>Chae et al., 2018</th>
<th>This study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>38 studies</td>
<td>36 studies</td>
<td>22 studies</td>
<td>56 studies</td>
<td>106 studies</td>
</tr>
<tr>
<td><strong>Geography</strong></td>
<td>United States</td>
<td>Global</td>
<td>Global</td>
<td>Global</td>
<td>Global</td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>Internet use</td>
<td>Social media</td>
<td>Social media</td>
<td>Internet use</td>
<td>Internet use</td>
</tr>
<tr>
<td><strong>Sample</strong></td>
<td>No student/youth samples, only adult samples</td>
<td>20 studies of student/youth, rest are adult samples</td>
<td>Did not report on characteristics of the sample</td>
<td>23 student samples in the 56 studies</td>
<td>All youth/student samples</td>
</tr>
<tr>
<td><strong>Dependent variables</strong></td>
<td>*Civic and political engagement</td>
<td>*Campaign participation *Civic participation *Political participation</td>
<td>*Civic participation *Political participation *Online engagement *Social capital</td>
<td>*Online participation *Offline participation</td>
<td>*Civic and political engagement</td>
</tr>
<tr>
<td><strong>Independent and moderator variables</strong></td>
<td>*Online news *Year of data collection *Type of controls in model *RDD sample</td>
<td>*Sample type (student, youth, adult, etc.) *Democracy *Cross-sectional *Year of data collection *Sample size *Online news *Networking *Generic/hours</td>
<td>*Information *Expressive *Relational *Identity *Entertainment</td>
<td>*Internet vs. social media *Frequency (hours) vs. function *News *Student *Geography *Year *Sample size</td>
<td>*Generic/Hour s *Political *Online political engagement *Gateway vs. spillover *Longitudinal design</td>
</tr>
</tbody>
</table>
In sum, this new meta-analysis builds on the above studies, but poses different questions related to youth. Do non-political uses offer an opportunity for youth to learn politics, as per the school of democracy literature (Table 4); to what extent is slacktivism occurring among youth (Table 5); and what is the causal flow for young people who are newly enfranchised and new to politics (Table 6)?

References for Online Supplement


