ARTÍCULOS

PRODUCING POLITICAL CONTENT FOR WEB 2.0: EMPOWERING CITIZENS AND VULNERABLE POPULATIONS

Producción de contenidos políticos, empoderamiento ciudadano y públicos vulnerables en la web 2.0

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Abstract

Social media, or web 2.0, allows citizens to produce content and information. However, not everybody has the same access to these benefits. This causes the emergence of a digital divide and the appearance of vulnerable sectors. We study the effect of education, financial income, and the frequency of technology use on the capacity of citizens to produce political content on social media in Spain. The methodology is based on a secondary analysis of data, whereby a statistical method was applied to a quantitative questionnaire (n=2,444). The results reveal that citizens’ creation of political content depends more on education level and frequency of digital network use, rather than on income levels. This data provides a significant and novel contribution to the awareness of factors that determine digital inequality.

Keywords

Social media; Web 2.0; Citizen empowerment; Digital democracy; Political communication; Digital inequalities.

Resumen

Los medios sociales, o web 2.0, permiten a los ciudadanos producir contenidos e informaciones. Sin embargo, no todos acceden por igual a estos beneficios. Esto genera la emergencia de desigualdades digitales y la aparición públicos vulnerables. Nuestro objetivo es estudiar la incidencia de la educación, los ingresos económicos y la frecuencia de utilización de las tecnologías en la capacidad de los ciudadanos de producir contenidos políticos en los medios sociales en España. La metodología se basa en el análisis secundario de datos a partir de la aplicación del método estadístico a una encuesta cuantitativa (n=2,444). Los resultados revelan que la creación de contenidos políticos por parte de los ciudadanos depende de la educación y la intensidad de uso de las redes digitales, aunque no tanto del nivel de ingresos. Estos datos realizan una aportación significativa y novedosa al conocimiento de los factores que determinan la desigualdad digital.

Palabras clave

Medios sociales; Web 2.0; Empoderamiento ciudadano; Democracia digital; Comunicación política; Desigualdades digitales.


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**Introduction**

Social media (also known as web 2.0) is a concept that encompasses technologies including social networks, microblogs, blogs, or social video portals, and promotes new communication options for citizens. By means of social media citizens can communicate and interact with others by producing their own content and presenting it to a potentially broad audience (Jenkins, 2006). This possibility has diverse democratic implications as it can encourage citizen participation in public debates, promote pluralism, and reconfigure valid power relations (Castells, 2009). This opens up the prospect of reformulating citizens’ roles in the articulation of public opinion and political communication.

However, the bibliography has proven that not all citizens have equal access to social media’s benefits, in terms of content production (Hargittai; Hsieh, 2013). Digital inequalities consequently appear and turn specific social groups vulnerable, as they are excluded from the advantages generated by 2.0 platforms. This produces democratic costs. Thus, it is essential to analyze the social factors that create vulnerable sectors, as well as the factors that condition and limit the use of digital technologies. Our objective is to study the effect of education, financial income, and the frequency of technology use on citizens’ capacity to produce political content and information for web 2.0 in Spain.

**Bibliographic revision: Citizen empowerment and production of political content on the web 2.0**

Social media has inspired theories about public empowerment:

- on the one hand, thanks to its potential, citizens can produce and spread communicative content (instead of simply consuming) (Jenkins, 2006; Castells, 2009);
- secondly, it provides an opportunity to increase the public’s awareness and awareness of the public sphere (Casero-Ripollés, 2014).

These conditions enable citizens to act as a counterbalance and compensate for the influence of political, financial, and media elites in the configuration of the public debate (Castells, 2009). In this regard, web 2.0 gives:

- a chance to participate in public discussions by freely expressing their opinions (Shirky, 2011);
- users can also inversely implement public agenda building dynamics (Sung-Tae; Young-hwan, 2007);
- even begin political monitoring processes to supervise political, financial, and media powers (Keane, 2009; Feenstra; Casero-Ripollés, 2014).

**Cáceres-Zapatero; Brändle; Ruiz-San-Román (2015)** showed that the Internet generates the feeling of empowerment for approximately half of the population in Spain.

These new possibilities of social media pave the way for a redefinition of citizens’ roles in the classic triangle of political communication. In the past, citizens fulfilled a passive role, merely viewing the interactions between journalists and political actors who controlled and defined the field (Wolton, 1989). According to this theoretical perspective, web 2.0 is equipped with two democratic potentials:

- first of all, it entitles citizens to participate in politics as it enhances their influence;
- secondly, it provides an opportunity to increase the public’s civil obligations, strengthen democracy, and reduce disaffection.

A crucial dimension for these potentials is the reduction of costs for users to create content in a digital environment. As such, the production of political information becomes easy, fast, and cheap. Through social media platforms, users can prepare and spread messages easily and autonomously. Some argue that this will place creation out of the hands of the elites, introducing it to more citizens, thus reinforcing democracy and facilitating greater participation in the public sphere (Jenkins, 2006; Castells, 2009; Benkler, 2015).

Expressing and sharing thoughts or comments, which constitutes one form of political content created through web 2.0, is an action that leads to citizen empowerment, along with a wide range of practices (Cáceres-Zapatero; Brändle; Ruiz-San-Román, 2015).
dynamic, as this form of activism only serves to increase participants’ feeling of well-being (Morozov, 2011).

Secondly, several authors indicate that digital networks are less popularly used for political purposes, as opposed to entertainment and social interaction uses (Van-Dijk, 2013). Politics is still a minority issue on social media, despite its increasing usage in recent years (Dahlgren, 2013), something that has been evidenced empirically in the Spanish case (Fundación Telefónica, 2016). Furthermore, the digital environment imposes an economy of attention that generates disparities (Fuchs, 2014). Any citizen may produce and disseminate information, but not all content has the same visibility at all levels of society. Despite the fact that anyone can use digital networks, not all users are equal. Some users possess more advantages on social media due to their fame or power. They thus create strong doses of attention and they amass large followings, which amplifies their reach and visibility. This establishes limits, in terms of counterbalancing the citizen and web 2.0’s capacity, for social influence.

Lastly, another essential issue concerning citizen empowerment on web 2.0 is related to the requirement of certain technical and cognitive digital abilities (DiMaggio; Hargittai, 2001; Van-Deursen; Van-Dijk, 2011). Above all, communicative cognitive competencies are required; this includes refined search strategies, a critical capacity to assess content credibility, and the ability to prepare content efficiently (Hoffmann; Lutz; Meckel, 2013; Hargittai; Hsieh, 2013). However, not all individuals possess these abilities to the same extent, and as a consequence there are differences in their capacity to exploit social media in terms of power generation; this therefore becomes a source of the digital divide. The big question is: what factors affect individuals’ digital communication competencies?

A research performed by Blank (2011) has focused more on the acquisition of information than on the production of content. Many researchers have demonstrated that information acquisition is not equal across digital networks; instead, it continues to be based on stratification, thus promoting exclusions and the digital divide (Hargittai; Hsieh, 2013). Age, gender, race, and (predominantly) socioeconomic factors lead to differences between users’ abilities to access political information (Norris, 2015). This shows that not all citizens have the same opportunities and that the digital environment establishes cognitive differences, which creates vulnerable sectors and a gap between the information-rich and the information-poor (Bonfadelli, 2002; Haywood, 1995).

However, an analysis of the factors that affect citizens’ content production capacity on social media has received limited attention (Hargittai; Walejko, 2008; Blank, 2013; Hofmann; Lutz; Meckel, 2015). In general, previous research reveals the persistence of social inequality in digital content creation (Schrade, 2013). However, the results were ambiguous and inconclusive. In university-centred studies, Hargittai and Walejko (2008) and Correa (2010) confirm that education is not a determining factor in the production of digital content. On the other hand, Schrade (2011) and Blank (2013) show that education does have a significant effect.

With regards to income, both Hargittai and Walejko (2008) and Van-Deursen and Van-Dijk (2011) link individuals’ economic level to a greater capacity for creating digital content. On the other hand, past experience with content creation and Internet-management tasks are both positively associated with content production (Hargittai; Walejko, 2008; Cáceres-Zapatero; Brändle; Ruiz-San-Román, 2015).

Nevertheless, these limited results are not conclusive. Consequently, there are numerous aspects that require further clarification. This research intends to fill this gap. For this purpose, the Spanish case is studied, as the 15-M movement of 2011 was significant internationally because of the digital mobility and activism it initiated, which was subsequently continued by diverse social segments (Casero-Ripollés, 2015). The objective is to study the effect of education, financial income, and the frequency of digital technology use on citizens’ capacity to produce political content for web 2.0 in Spain. The initial hypothesis upholds that these three factors directly and positively affect citizens’ production of political information. In this regard, people who perform poorly on these three variables are considered to be part of the vulnerable sectors.

Not all citizens have equal access to social media’s benefits in terms of content production

Methodology

The methodology is based on secondary analysis of data, whereby a statistical method is applied to the results obtained from a quantitative questionnaire. Thus, the barometer n. 3,038 (published in September 2014 in Spain) from the Centre for Sociological Research (CIS) was used.

In this survey, 2,444 Spanish residents between the ages of 18 and 95 years were interviewed. At the 95.5% confidence level, the actual error of the entire sample is ±2.0%.

Out of the three types of digital content produced by citizens: expert, entertainment, and politics, the last ones are analyzed. This is why the action of writing comments about current political and social events on digital networks is implemented, in line with earlier bibliography (Blank, 2013). It was determined that the dependent variable would be “Writing comments about current, social or political topics on a forum, blog, social network, etc.”.

As such, the independent variables were:
- education level;
- the level of personal financial income; and
- the frequency of social network use.

The choice of education and income is based on the fact that it deals with factors traditionally used within the bibliography (Hargittai, Hsieh, 2013). On the other hand, exploiting the frequency of use is justified by its connection with users’ specific digital competency requirements, an aspect that may limit citizen empowerment on the Internet (DiMaggio; Hargittai, 2001).
The statistical crossing of dependent variables (Y) and independent variables (X) has been carried out by means of the SPSS program. Calculating the Pearson correlation coefficient (r) and the dependency coefficient ($R^2$) has been done by means of established mathematical formulas; it will determine the degree of dependency between both variables, as well as the relationship (whether positive or negative) among them.

Some variables were recoded as certain values included a very low number of subjects. In these cases, the reduced character of the sample determined its restricted representativeness that skewed the results. Thus, the highest income levels (i.e. “between 2,401 and 3,000”; “between 3,001 and 4,500”; “between 4,501 and 6,000” and “over 6,000 Euros”) were consolidated into a single category called “over 2,401 Euros” that, after this operation, does in fact include an representative number of individuals. Similar groupings have been made with certain values relative to the level of education.

Some statistical analysis results relative to the level of education reveal the existence of a relationship between the degree of academic training and the use of social media to create and disseminate political content ($X^2=131.899$, gl=7, p=0.000) (Table 1). The percentages of people who write messages with lower education levels (linked to categories such as “less than 5 years of education” and “elementary school”) are 0% and 4.5% respectively (Table 1). Similarly, these figures increase as the level of education ascends to 42.9% in postgraduate studies, corresponding to a master’s degree, and 35.5% for individuals who have obtained a PhD. The Pearson correlation coefficient is set on one of the highest values (r=0.957), revealing that the relationship between these variables is positive and strong. Similarly, the coefficient of determination ($R^2=0.915$) is high, further supporting this finding. With these results, we can decisively conclude that education greatly impacts the creation of political content on digital networks, conditioning it decisively.

On the other hand, statistical analysis reveals that an individual’s level of financial income is poorly related to a citizen’s use of social media to produce political information ($X^2=30.576$, gl=7, p=0.000) (Table 2). The analysis of correlation between variables shows that this relationship, albeit positive, is very weak as the Pearson coefficient is r=0.072 and the coefficient of determination is $R^2=0.005$. These values explain that opposite ends are modified in the results. Consequently, the categories corresponding to a greater financial vulnerability (no income and less than 300 Euros monthly) record percentages similar to those obtained by categories linked to a more favorable financial status (income between 1,801 and 2,400 Euros and greater than 2,401 Euros monthly) (Table 2). The practical equivalence of these figures together with the values of the correlation between variables shows that the level of income does not have a direct and conditioning effect on a citizen’s use of web 2.0 to create political content. In other words, greater income does not result in a greater percentage of content creators.

**Table 1. Influence of the level of education in the production of political content for web 2.0**

<table>
<thead>
<tr>
<th>Interviewee’s level of education</th>
<th>Less than 5 years of education</th>
<th>Primary education</th>
<th>Secondary education</th>
<th>Vocational training</th>
<th>A levels</th>
<th>University studies</th>
<th>Postgraduate studies</th>
<th>PhD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write comments about current, social, or political topics on a forum, blog, social network, etc.</td>
<td>Yes</td>
<td>Count</td>
<td>0</td>
<td>14</td>
<td>71</td>
<td>96</td>
<td>90</td>
<td>135</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within the interviewee’s level of education</td>
<td>0.0</td>
<td>4.5</td>
<td>12.1</td>
<td>22.5</td>
<td>29.4</td>
<td>29.5</td>
<td>42.9</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Count</td>
<td>24</td>
<td>294</td>
<td>514</td>
<td>331</td>
<td>216</td>
<td>323</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within the interviewee’s level of education</td>
<td>100.0</td>
<td>95.5</td>
<td>87.9</td>
<td>77.5</td>
<td>70.6</td>
<td>70.5</td>
<td>57.1</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>24</td>
<td>308</td>
<td>585</td>
<td>427</td>
<td>306</td>
<td>458</td>
<td>28</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within the interviewee’s level of education</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

($X^2=131.899$, gl=7, p=0.000)
Table 2. Influence of financial income in the production of political content for web 2.0

<table>
<thead>
<tr>
<th>Income of interviewee (€)</th>
<th>No income</th>
<th>Less than or equal to 300</th>
<th>From 301 to 600</th>
<th>From 601 to 900</th>
<th>From 901 to 1,200</th>
<th>From 1,201 to 1,800</th>
<th>From 1,801 to 2,400</th>
<th>More than 2,400</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write comments about current, social, or political topics on a forum, blog, social network, etc.</td>
<td>Yes</td>
<td>Count</td>
<td>80</td>
<td>20</td>
<td>38</td>
<td>39</td>
<td>60</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within Income of interviewee</td>
<td>19.1</td>
<td>34.5</td>
<td>14.9</td>
<td>15.0</td>
<td>20.6</td>
<td>17.8</td>
<td>34.3</td>
</tr>
<tr>
<td>No</td>
<td>Count</td>
<td>339</td>
<td>38</td>
<td>217</td>
<td>221</td>
<td>231</td>
<td>208</td>
<td>69</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>% within Income of interviewee</td>
<td>80.9</td>
<td>65.5</td>
<td>85.1</td>
<td>85.0</td>
<td>79.4</td>
<td>82.2</td>
<td>65.7</td>
<td>80.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>419</td>
<td>58</td>
<td>255</td>
<td>260</td>
<td>291</td>
<td>253</td>
<td>105</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>% within Income of interviewee</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\(\chi^2=30.576, \text{gl}=7, p=0.000\)

Lastly, the statistical analysis shows that the frequency of social network use is established as a factor that conditions citizens’ creation of political content on social media \(\left(\chi^2=40.885, \text{gl}=6, p=0.000\right)\). Thus, variables displaying a more intense use of digital networks have higher values, while those that induce lower usage frequencies, in turn, have lower percentages. In this sense, 47% of individuals who continuously use web 2.0 produce political information through these platforms. As a result, the use is configured as a conditioning factor that is able to create inequalities, based on its intensity, among citizens.

The creation of political content on social media depends on the users’ level of education and their frequency of use through these platforms. As a result, the use is configured as a conditioning factor that is able to create inequalities, based on its intensity, among citizens.

Conclusions

The results of the Spanish case study partially prove our initial hypothesis: the creation of political content on social media depends on the user’s level of education and their frequency of use through these platforms. As a result, the use is configured as a conditioning factor that is able to create inequalities, based on its intensity, among citizens.

The creation of political content on social media depends on the users’ level of education and their frequency of use through these platforms. As a result, the use is configured as a conditioning factor that is able to create inequalities, based on its intensity, among citizens.

Table 3. Influence of the frequency of social networks use in the production of political content for web 2.0

<table>
<thead>
<tr>
<th>Frequency of social networks use</th>
<th>Continuously</th>
<th>Several times a day</th>
<th>Once per day</th>
<th>From three to five times per week</th>
<th>From one to two times per week</th>
<th>Every couple of weeks</th>
<th>Almost never</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write comments about current, social or political topics on a forum, blog, social network, etc.</td>
<td>Yes</td>
<td>Count</td>
<td>95</td>
<td>129</td>
<td>99</td>
<td>23</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% within Frequency of social networks use</td>
<td>47.0</td>
<td>36.5</td>
<td>33.4</td>
<td>24.0</td>
<td>19.0</td>
<td>25.7</td>
</tr>
<tr>
<td>No</td>
<td>Count</td>
<td>107</td>
<td>224</td>
<td>197</td>
<td>73</td>
<td>85</td>
<td>26</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>% within Frequency of social networks use</td>
<td>53.0</td>
<td>63.5</td>
<td>66.6</td>
<td>76.0</td>
<td>81.0</td>
<td>74.3</td>
<td>86.7</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>202</td>
<td>353</td>
<td>296</td>
<td>96</td>
<td>105</td>
<td>35</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>% within Frequency of social networks use</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\(\chi^2=40.895, \text{gl}=6, p=0.000\)
vantage than those who do not. The latter are configured as vulnerable sectors. This results in the emergence of a digital divide that affects the democratic potential of social media platforms, as they reach some citizens more than others.

Despite being a powerful equalizer, web 2.0 can strengthen existing inequalities and expand them. While it is true that social media can enable citizen empowerment, it does not automatically occur. Not everyone has equal access or potential to use these platforms. The acknowledgement of the vulnerable sectors’ existence demonstrates that social stratification is generated on social media and that there is an asymmetrical distribution of civic power. Those who hold privileged social positions due to their educational level and frequent Internet use have an advantage with respect to those who do not and, thus, their superiority is strengthened. The distance between both types of citizens can be seen in the digital environment with regard to the production of political content.

The level of income does not have a direct and conditioning effect on citizens’ use of web 2.0 to create political content. The statistical data analysis of the Spanish case reinforces the bibliography’s findings regarding the impact of education, that leaves those with a lower level of education in a vulnerable state. This results in the emergence of a digital divide, especially on the factors that determine it, as it contradicts earlier academic research findings (Hargittai; Walejko, 2008; Cáceres-Zapatero; Brändle; Ruiz-San-Román; José-Antonio, 2015).

Despite being a powerful equalizer, web 2.0 can strengthen existing inequalities and expand them. While it is true that social media can enable citizen empowerment, it does not automatically occur. Not everyone has equal access or potential to use these platforms. The acknowledgement of the vulnerable sectors’ existence demonstrates that social stratification is generated on social media and that there is an asymmetrical distribution of civic power. Those who hold privileged social positions due to their educational level and frequent Internet use have an advantage with respect to those who do not and, thus, their superiority is strengthened. The distance between both types of citizens can be seen in the digital environment with regard to the production of political content.


Bibliography


