Increasing e-Government Adoption through Social Media: A case of Nepal

**Abstract:** It is necessary to secure citizens confidence in government and the Internet to ensure broader adoption of e-government. Empirical data shows that government’s communication efforts have impact on citizens trust level. First, this study analyzes Nepalese ‘digital native’s’ trust level in government and the Internet. Second, based on the findings of the ‘digital native’s’ trust level, this study will predict if Nepalese e-government implementation will yield wider e-government adoption. Third, this study measures effectiveness of government’s past communication outreach efforts and also investigates possibilities of using social media to enhance citizen’s trust. Results indicate that ineffective targeting of government’s communication outreach efforts have negatively impacted ‘digital native’s’ trust level in government and the Internet. Finally, recommendations to create critical mass of e-government adopters using social media are discussed.

1. **Introduction**

E-government is the use of information and communication technologies (ICTs) in government to improve managerial effectiveness, deliver efficient public services, and promote democratic values (Gil-Garcia et al. 2003). However, despite growing investment globally, adoptions of e-Government have been slower than government’s expectations (Al-Shafi & Weerakkody, 2008). Citizens who had previously used e-government services are returning back to the traditional method, because citizens only adopt e-government, if they believe it to be trustworthy (ACSI, 2005, Horrigan, 2003, Van Dijk et al, 2006; Belanger & Carter, 2008).

Citizens should have a reasonably higher level of trust in government and the Internet in order to trust e-government (Srivastav & Teo, 2009). Although, empirical data show that there is a growing trust in the Internet, citizen’s trust towards government has declined dramatically over the past thirty years (Singh et al., 2010; Rosenstone & Hansen 1993; Hibbing & Theiss-Morse 2001). Government and citizens misunderstand and mistrust each other at a fundamental level (Bach & Kaufman, 2009). As a result, if citizens do not trust governmental policies and plans in advance, it is highly likely that they will not gain sufficient level of trust after the implementation as well (Termeer, et al. 2009).

Citizen’s lack of awareness regarding benefits of e-government has contributed to the declining rate of e-government adoption (Pilling, & Boeltzig, 2007). Communication had positive impacts on adoption of e-government services in Canada, Singapore, Dubai, and the Netherlands (Teerling & Pieterson, 2009). Thus, effective and targeted communication is necessary to build citizen’s awareness, knowledge, perceptions, and trust towards e-government services (Teerling & Pieterson, 2009). Although,
communication channels differ in characteristics and viewership, governments usually take up a policy of pushing the same information through every channel without considering citizen’s preferred choices of channels (Ebbers et al., 2007; Teerling & Pietersen, 2009). Among various communication channels, Internet has emerged as the most popular channel of interaction. However, recently, social media has gained worldwide adoption at an immense scale emerging as the most preferred communication channel on the Internet. In December of 2009, there were total of 300 million unique worldwide visitors on social media websites (Nielsonwire, 2010)

Contrary to content and advertisement driven traditional media, social media is a platform for interaction and relationships building (Eisenberg, 2008). In 2009, people spent 82 % more time on social media compared to the previous year (Nielsonwire, 2010). Business community consider social media marketing as the wave of the future, because social media is almost ubiquitous with ‘digital natives (DN)’ (JISC, 2007; Skul, 2008). ‘DNs belong to a generation born between 1980 and 1994. They seek instant gratification, are impatient with linear thinking, have the ability to multitask, and are more concerned with speed of access (Prensky, 2001; Bayne & Ross, 2007). Generally, DNs are deemed to have a high level of trust in technology, particularly the Internet. Nepalese government’s e-government implementation plan indentifies ‘DNs’ as the initial target group for e-government adoption to create critical mass required for successful momentum necessary to attract new adopters. However, it is important to remember that ubiquity with social media does not automatically translate their willingness to use e-government services (Owen, 2004).

Nepal is one of the least developed countries in the world with a population of 28 million people (CIA, 2010). Nepal differs economically, socially and culturally with developed countries. As a result ‘DNs in Nepal could exhibit different social media usage patterns compared to their counterparts in developed countries. More importantly, Asian Development Bank (ADB) has granted 25 million US dollars for implementation of ICT Development Project through an ADB technical assistance project (ADB, 2006). The project is designed to improve the legal, regulatory, and institutional framework to expand ICT accessibility and implement e-Government applications based on the roadmap identified by the e-Government master plan. Therefore, before expending millions of dollars on e-government projects, it is necessary to find out if current environment’s is favorable for e-government implementation.

This study is divided into 8 sections including this introductory remark. Section 2 discusses motivation, aim, and research questions. Section 3 builds theoretical foundation based on literature review. Section 4 provides methodology. Section 5 presents results of the study followed by discussion of the findings on section 6. Section 7 discusses limitations of the study. Finally, the section 8 provides conclusion.
2. Aim and Research Questions

There are several studies on e-government adoption (Ebrahim & Irani, 2005; Bugler & Bretschneider, 1993; Norris & Kraemer, 1996, Gronlund & Horan, 2004). Scholars generally believe lack of awareness (Reffat, 2003), access to e-services (Fang, 2002; Darrell, 2002), usability of e-government websites (Sampson, 2002), digital divide (InfoDev, 2002), lack of citizen’s interest (Sampson, 2002) and lack of government support (Karunananda & Weerakkody, 2006) are hindering e-government adoption. However, findings of a rigorous literature review illustrate trust as the most important factor necessary for e-government adoption. Therefore, success of e-government projects depends on trust between government and citizens (E-government handbook, 2007).

Waters and Burnett’s (2009) study on 275 nonprofit organization’s profile on Facebook concludes that organizations are not using social media to its full potential, however, the study fails to assess Facebook’s effectiveness as a relationship building tool. Stephenson & Bonabeau’s (2007) study identified opportunities of integrating homeland security system with social media, but did not discuss challenges. Avidar’s (2009) study explores Israel’s societal culture as an environment in which public relations practice has to align. The study found that Israeli practitioners are willing to use social media.

A high number of publications regarded trust as an important factor for e-government adoption and identified communication as an important measure to build trust towards e-government. Other handful of studies discussed government’s inability to adapt to the changing socio-technical landscape. Several publications highlighted massive proliferation of social media. Similarly, there were numerous publications dealing with ‘digital natives’, particularly focused on their characteristics. However, it was not possible to find scholarly endeavors that discussed importance assessing existing e-government strategies in the change in citizen online behavior, particularly in regards to using social media for e-government adoption. Therefore, this study tries to fill the gap in Information Systems research by investigating opportunities of increasing e-government adoption through effective interaction with DNs in the new socio-technical landscape dominated by social media.

Therefore, the main aim of this study is to discover Nepalese DN’s trust level in government and the Internet and also investigate possibilities of using social media to enhance trust in order to ensure high level of e-government adoption. The aim of this study will be fulfilled by answering following research questions.

- What is the trust level of Nepalese ‘digital natives’ towards Nepalese government?
- What is the trust level of Nepalese ‘digital natives’ towards the Internet?
• What are the effective digital channels to communicate and engage Nepalese ‘digital natives’?
• How can the Nepalese government utilize social media to its advantage, particularly to enhance or maintain ‘digital natives’ trust towards government and the Internet?

3. Theoretical foundation & literature review

Trust is the foundation of all human and institutional interaction (Duck, 1997; Kramer & Tyler, 1995). Social psychologists describe trust as behavioral expectations of others, while personality psychologists define trust as individual characteristics (Kim & Prabhakar, 2000). Trust in government refers to one’s perceptions regarding the government’s integrity and ability to provide transparent services (Bacerra & Gupta, 1999). Although, trust is often discussed in the context of individual and groups, it can also be applied to technology. Trust in technology is the belief that technology can be used to accomplish desired task satisfactorily (Srivastav & Teo, 2009). According to Teo et al. (2009) e-government adoption can only take place, when citizens have a high level of trust both in government as well as in the Internet.

3.1 Trust in government

Citizen’s trust in government depends on their expectations based on previous interactions with various government agencies (Zucker 1986). Trust in government can be categorized into relationship trust and institutional trust. (Papadakis, 1999). Relationship trust is the sum of citizen’s belief in government’s competence, benevolence, and integrity (Mayer et al., 1995). Competence is related to citizen’s perception towards government’s technical and organizational capability to implement e-government (Mishra, 1996). Benevolence is related to the belief that governments function in the best interest of citizens (Cummings & Bromiley, 1996). Integrity implies to government’s honesty and promise keeping practices (Sheppard & Sherman, 1998). Institutional trust on the other hand, refers to citizen’s perception towards institutional environment e.g. Internet (McKnight et al., 2002). Institutional trust can be enhanced through legislative measures such as developing and enforcing cyber laws, encryptions standards, and right to information act.

3.2 Trust in technology

Citizen’s trust in technology can be divided broadly into two categories: belief in ‘competence’ and ‘perceived risk’ of the Internet (McKnight et al. 2002). Competence trust develops over time with continued experience of using e-government services, while perceived risk can be reduced by fostering institution based trust through development of technical security policies (Backhouse et al. 2005). Institutional trust is essential, because citizens are reluctant to adopt e-government not only due to their
mistrust in government, but also in technology (Internet) used for e-government (Mayer et al., 1995; Hoffman et al. 1999).

### 3.3 Trust in e-government

Based on the discussions of section 3.1 and 3.2, it is safe to conclude that e-government adoption will not take place unless citizens have high level of trust in government and the Internet (Carter & Belanger, 2006). As a result, citizens may either choose not to adopt or to revert to the traditional offline means of interaction with the government (Teo et al. 2009; Srivastava and Teo, 2004). Various levels of citizen trust in e-government can be expressed in the form of a 2X2 matrix (Figure 1). The matrix is borrowed from Teo & Srivastava (2009). The figure 1 shows that differing levels of citizen trust in the two dimensions of trust may lead to different performance outcomes of e-government implementation. Table 1 shows results of e-government implementation based on the four criteria’s in the e-government trust grid (Figure 1).

Figure 1. E-government citizen trust grid.

Source: Srivasta and Teo (2009).

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Result of e-government implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative</td>
<td>Total synergy between government and citizens which leads to success of e-government programs</td>
</tr>
<tr>
<td>Cooperative</td>
<td>Citizens use government just to cooperate with the government, but avoid e-government where and when possible</td>
</tr>
<tr>
<td>Competitive</td>
<td>Yield unpredictable and sporadic results</td>
</tr>
<tr>
<td>Adversarial</td>
<td>Low level of adoption, thus leading to total failure.</td>
</tr>
</tbody>
</table>

### 3.4 Communication

Citizen’s distrust in government occurs mostly during conversation and consultation. Therefore, government needs to communicate their ability and commitment towards providing citizens with convenient and dependable online services (Beöanger & Carter, 2008). Such type of publicity will rapidly increase citizen’s perceptions of government’s trustworthiness, because users who have had positive experiences with e-government services have a high tendency of recommending the services to others,
thus providing an excellent opportunity to create critical mass (Freed, 2003). More importantly, it is necessary for organizations to adopt social media as the primary communication channel, because it is synonymous with DNs.

3.5 Social Media
Social media will play an important role in online interaction and knowledge organization in the future (Mislove et al., 2007). Social media websites (SMW) such as Facebook, Twitter, and YouTube are dominant players in social media space. In 2009, Facebook and Twitter saw usage increase of 200% and 368% respectively (Fitzgerald, 2010). McCarty (2008) believes governments operate in a centralized, hierarchical manner, while the public work through networks of strong and weak ties to share information and solve problems. Social media facilitates public to work in a networked manner. More importantly, since, relationships are foundation of social media; it provides an effective way to connect with communities (Waters et al. 2009). However, despite social media’s strength, governments have been slow to adopt it.

4. Methodology
This section presents research methodology and is divided into three parts: research design, sample and questionnaire design.

4.1 Research Design
Interpretative studies are appropriate to study complex subjects such as human behavior and social phenomenon (Villiers, 2005). Therefore, an interpretative research was selected for this study, because this study required analysis of complex subjects such as trust, adoption, communication, usage behavior, and social media. The complexity also called for quantitative and qualitative data synthesis. Therefore, this study utilizes both quantitative and qualitative methods. Quantitative method operates by numbers, while qualitative method operates more by means of verbal aspects.

Survey questionnaire and semi structured interviews were used to collect quantitative and qualitative data. The survey approach refers to a group of methods emphasizing quantitative analysis where data from large population are collected through methods such as mail questionnaires or telephone interviews (Gable, 1994). Representative sampling is the hallmark of survey research. For example to be representative, the response rate must be high (Krosnick, 1999). However, surveys with low response rates can be more accurate than surveys with high response rates, particular when random sampling is not used (Visser et al., 1996)
The purposes of the interviews were to access what is in and on the interviewee’s mind (Stenhouse, 1984). Interviews provide respondents opportunities to reconstruct past, interpret the present, and predict the future allowing access to the participant’s interpretations of the actions and events which have or are taking place (Lincoln and Guba, 1985).

4.2 Sample

A questionnaire was used to gather a mix of quantitative and qualitative data from the Nepalese ‘DNs’. Since, students in high schools have parental and school’s control over their Internet usage, the DN’s who were in the universities were surveyed for the purpose of this study. This part of the study used stratified random sampling. Due to the deteriorating political situation and frequent transportation strikes, it was not possible to travel outside of the capital city. As a result, only the students from Kathmandu University were used as sample. Research assistant who is based in Kathmandu randomly distributed the questionnaires at the university cafeteria on 9th April, 2010. Total of 100 questionnaires were randomly distributed to the students as they entered the University cafeteria.

In order to explore possibilities of using social media to build or enhance DN’s trust towards government and the Internet, two social media marketers were selected for interviews. One individual is owner of the e-commerce site Thamel.com and other individual is the owner of the entertainment & events management agency, Partynepal. The participants were contacted via email to secure interview dates and time. Both interviews were conducted through Skype on 12th April, 2010. The interview questions are included in Appendix II.

The findings of the study, particularly social media’s massive explosion and DN’s desire to be communicated via social media were shared with the executives of two government bodies responsible for e-government policy and implementation: High Level Commission for IT (HLCIT) and National IT Center (NITC) respectively. The two executives are able to influence decisions regarding e-government in Nepal. The government’s reflection was deemed necessary to find out if the findings are applicable in the real world government scenario. The participants were interviewed through Skype on 21st of April, 2010.

4.3 Survey questionnaire and Interview design.

The survey questionnaire consists of 25 survey items out of which 24 are designed to gather quantitative data (Appendix 1). The survey items are designed to identify Nepalese ‘DN’s’ trust level in government and the Internet, thus providing answer to the research questions. Beyond simply answering the research questions, additional items were included to provide supporting information. The survey items were designed to provide information about ‘DNs’ perception on trust in government, trust in technology,
preferred communication channel, Internet and social media usage patterns, and their opinion on government’s presence on social media.

The first set of survey items were used to identify whether relationship based or institutional trust based factors were contributing to DN’s trust level towards government in order to answers the first research question. The second set of survey items were used to gather information regarding ‘DNs trust level towards technology (Internet) in order to answers the second research question. The survey items were designed to find out if competence trust or perceived risk of the Internet contributed to DNs current level of trust in the Internet. The third set of survey items were used to indentify effective channels to be used by the Nepalese government in their e-government outreach programs when targeting DN. The survey items were also designed to provide insight into effectiveness of government’s previous communication outreach programs. The forth set of survey items were designed to understand DN’s view towards government’s presence on social media in order to answer the fourth research questions. Additionally, the interviews with the two social media experts were designed to provide answers to the fourth research question which is discussed in the following section. Table 2 links the survey items and interview questions with the research questions.

Table2. Matching survey questionnaire and interview questions with the main Research Questions.

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Questionnaire</th>
<th>Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 What is the trust level of Nepalese ‘digital natives’ towards Nepalese government</td>
<td>1, 2, 3, 12, 13, 14, 15, 16</td>
<td></td>
</tr>
<tr>
<td>2 What is the trust level of Nepalese ‘digital natives’ towards and Internet technology?</td>
<td>1, 2, 3, 9, 10, 11</td>
<td></td>
</tr>
<tr>
<td>3 What are the effective digital channels to communicate and engage Nepalese ‘digital natives’?</td>
<td>4, 5, 6, 7, 8, 17, 18,</td>
<td>1, 2</td>
</tr>
<tr>
<td>4 How can the Nepalese government utilize Social Media to its advantage, particularly to enhance or maintain ‘digital natives’ trust towards government and the Internet?</td>
<td>19, 20, 21,</td>
<td>3, 4, 5, 6, 7</td>
</tr>
</tbody>
</table>

The semi structured interview consists of 7 questions designed to gather data from the two social media experts (Appendix II). The interview questions were designed to gather information regarding their patterns of social media usage to promote their business, social media websites used to promote their businesses, ways government could use social media to enhance e-government trust and finally, ways social media could be incorporated with the overall e-government strategy.

5. Results

The survey questionnaires were distributed randomly to 100 respondents at Kathmandu University. 95 questionnaire were returned (N = 95). The respondent’s age ranged from 19-30 and the average age was 26. 60% of the respondents reported Bachelors degree as their highest degree. Further findings of this study are divided into four sections: trust in government, trust in the Internet, effective communication channels, and social media.
**Trust in Government:** Table 3 presents the results of DN’s trust level towards government. The results are divided into two main categories: relationship and institutional trust.

### Table 3. Digital native’s level of relationship and institutional trust towards government.

<table>
<thead>
<tr>
<th>Relationship trust</th>
<th>Yes</th>
<th>%</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relationship trust</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Competency:</strong> Do you think government has capacity to deliver e-government services through Internet</td>
<td>35</td>
<td>37%</td>
<td>60</td>
<td>63%</td>
</tr>
<tr>
<td><strong>Benevolence:</strong> Do you think government acts on citizen’s interest</td>
<td>30</td>
<td>32%</td>
<td>65</td>
<td>68%</td>
</tr>
<tr>
<td><strong>Integrity:</strong> Do you think government is honest in its dealing</td>
<td>9</td>
<td>10%</td>
<td>86</td>
<td>90%</td>
</tr>
<tr>
<td><strong>Integrity:</strong> Do you think government is transparent</td>
<td>10</td>
<td>11%</td>
<td>85</td>
<td>89%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Institutional trust</th>
<th>Yes</th>
<th>%</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutional trust</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have awareness regarding privacy policy, cyber law, and encryption used by the government</td>
<td>4</td>
<td>4%</td>
<td>91</td>
<td>96%</td>
</tr>
</tbody>
</table>

n= Number of respondents

65% of the respondents who had higher level of trust in government reported Masters Degree as their highest level of education.

**Trust in the Internet:** The results show that 61% of the respondents never or rarely visited government websites. Only 17% of the respondents visited government websites on a regular basis. The respondents who visited government websites reported Masters Degree as their highest level of education. Table 4 presents DN’s perception of risk towards sharing information on the Internet in general as well as with the government.

### Table 4. Digital natives comfort level towards sharing information on the Internet

<table>
<thead>
<tr>
<th>Do you feel comfortable sharing information on the Internet</th>
<th>Very Comfortable</th>
<th>Comfortable</th>
<th>Neutral</th>
<th>Uncomfortable</th>
<th>Very Uncomfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46%</td>
<td>23%</td>
<td>10%</td>
<td>15%</td>
<td>6%</td>
</tr>
<tr>
<td>Do you feel comfortable sharing information on the Internet with government</td>
<td>5%</td>
<td>20%</td>
<td>21%</td>
<td>25%</td>
<td>29%</td>
</tr>
</tbody>
</table>

The respondents (46%) who were comfortable sharing information on the Internet reported high school as the highest level of education. The respondents (25%) who were comfortable and very comfortable sharing information with the government over the Internet reported having master’s degree as their highest level of education.
Effectiveness of Traditional Communication Channel: The respondents (14%) who had come across government’s participatory policy making initiatives and media outreach program associated with it reported Masters Degree as their highest level of education. Table 3 presents effectiveness of the government’s participatory policy making initiatives and the visibility of participatory policy initiative’s advertisement through traditional media.

Table 5. Effectiveness of governments communication for participatory policy outreach program

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government disseminates policy related information through their website in order to promote participatory policy making. Have you come across such initiatives?</td>
<td>14%</td>
<td>86%</td>
</tr>
<tr>
<td>Nepalese government advertises on print radio, and television about participatory policy making initiatives. Have you come across such communication outreach?</td>
<td>27%</td>
<td>73%</td>
</tr>
</tbody>
</table>

The social media experts were only using Facebook to build personal network as well for business promotion. However, they are also planning to expand to Twitter, YouTube, and other social media websites as their adoption level grow with time.

Social Media –Digital Natives: The findings show that 64% of the respondents use the Internet for more than four hours per day while only 12% of the respondents use Internet for less than two hours per day. The respondents (64%) who use the Internet for more than four hours reported using social media websites for more than four hours per day as well. Similarly, the respondents (12%) who use the Internet for less than two hours per day also use social media sites for less than two hours per day. 60% of the respondents who use YouTube and Facebook on a regular basis also use the Internet for more than four hours per day.

The findings also show that 60% of the respondents who prefer viewing content recommended by their friends through the social media websites also search for information on the World Wide Web. They were also using the Internet for more than four hours per day. However, only 32% of the respondents prefer content recommended by their friends on the social media websites, but did not actively look for content on the Internet. In regards to the preferred content on social media, 37% of the respondent’s prefer viewing pictures, while 21% preferred watching streaming videos on social media websites.

67% of the respondents were in favor of Nepalese government’s presence on social media. 56% of the respondent considered government’s presence on social media as a sign of progressive and transparent government. However, in regards to the open question, 89% of the respondents believed that the Nepalese government should immediately open accounts on social media websites and disseminate governmental information. 37% of the respondents believed government’s presence on social media will translate
government’s image into a modern one. 79% of the respondents hinted that they would prefer viewing government related videos on YouTube at their leisure time. One respondent wrote:

Government’s presence on social media websites in order to interact with citizen to promote e-government programs will help citizens believe that the government is transparent in its dealing and also serious about e-government.

Social Media - Experts: Owner of thamel.com constantly scan discussions on social media websites and Nepalese community websites to identify future business opportunities. However, both of them believe that the government should have an immediate presence on social media. One expert said:

Yes, government should have presence on the social media websites, as most of the urban youth have presence on these sites. If government also has presence on these sites, their program will be visible to the urban youths.

Another expert said:

When people visit social media websites they are hungry from social content. Therefore, it is simply providing the value they are seeking. For example, if the Ministry of Finance were to update status every day on Facebook or Twitter, I would be interested to join their fan page and see what they are up to.

Both of them said that the government could immediately use social media to promote two-way communication with youths and promote transparency. Both of them believed that it will be mandatory in the future for Nepalese government to integrate e-government services with the social media websites, because that is where citizens with the Internet access will be. However, one expert said:

The social media platforms have to be localized before integrating with e-government.

6. Discussion

In this section, the implications of the findings are discussed. While the findings are likely to be applicable to every organization, this study focuses mainly on three things. First, identify factors contributing to Nepalese DN’s current level of trust on government and the Internet. Second, based on the trust level predict success of failure of e-government in Nepal. Third, explore opportunities of using social media to build citizens trust and ultimately increase e-government adoption.

The findings show that DN’s have a relatively low level of trust in government. However, they have comparatively higher level of relationship trust than institutional trust in government. Lack of
governmental transparency and dishonest dealings practices in the past have contributed to the lower level of relationship trust. Therefore, in order to enhance citizens trust level, the government needs to increase transparency and honesty in its dealing with citizens.

Although, relatively higher numbers of respondents believed in government’s capacity to deliver e-government services, they were not aware of privacy policies and encryption on government websites, cyber laws, and other security measures taken by the government. The government needs to also enhance security on the Internet through various legislative and technical measures. Interestingly enough, respondents who regularly visited government websites had Master’s degree, thus it is necessary to convince DNs with Bachelors degree or lower to use the government websites by providing valuable information on the websites.

The findings show that DN’s have a relatively low level of trust in the Internet when interacting with the government. Most of them never or rarely visited government websites which resulted in a lower level of competence trust, thus contributed to increasing perceived risk of the Internet. Therefore, even though majority of the respondents were comfortable sharing information over the Internet, they did not feel comfortable sharing information with the government. Therefore, the government needs to provide valuable and timely information through the government websites in order to lure DN’s to visit the government websites, because continuous interaction with the government website is necessary to enhance competency trust on the Internet. Since, respondents who had higher level of trust on sharing information with government also had Masters Degree, it is necessary to communicate with DN’s with Bachelors degree or lower.

The findings also show that DN’s were not aware of government’s participatory policy making initiatives, because the government’s communication outreach was not visible to DNs. This ineffective communication outreach has contributed to citizens not knowing about governments participatory policy formulation initiatives. As a result DN’s rarely visited government websites which in turn contributed to a low level of competence trust towards the Internet.

The findings show that there is a direct link between social media usage and the number of hours spent on the Internet. There is also a direct link between Facebook and YouTube usage with the number of hours spent on social media. More importantly, majority of DN’s positive response towards government’s presence on social media coupled with their Internet and social media usage patterns provides an excellent opportunity for government to harness the potential of social media to enhance trust in government as well as the Internet. Government can start by digitizing government’s communication outreach videos and print advertisement and push those though social media.
Complimenting the views of DNs, social media experts also believed that the government would benefit by having presence on social media, especially in terms of promoting transparency. They also hinted that the government needs to start thinking about developing applications in local language as well.

The Nepal government’s e-government executives believed in embracing new technologies to empower citizens. They were aware of social media’s popularity and were planning to utilize them soon, but did not mention when citizens could see government’s using social media.

7. Limitations

There are several limitations to this study. The sample was collected from only one university. Future studies should seek larger sample sizes comprised of respondents from different universities in various locations in Nepal. Future studies should engage technical staff of the government and social media experts on a deeper level. At the same time also involve broader set of government executives to validate these results. Future research could also investigate challenges associated with government’s presence on social media.

8. Conclusion

Trust is a fundamental element in the adoption process of delivering services on the Internet. The world has seen several businesses solely operating on the Internet. For example, Amazon.com sells millions of mechanizes yearly based on customers trust. Similarly, successful e-government adoption requires citizens to have a high level of trust in government as well as the Internet.

Governments initially target small group of e-government adopters to create a critical mass required for positive momentum of adoption, i.e. DN’s in Nepal’s case. DN’s low level of trust towards Nepal government is traced to lack of transparency and dishonesty from the government’s side. Lack of technical and legislative measures such as cyber laws, encryption, and privacy policies on government websites also contributed to low level of trust on the Internet.

DN’s low level of trust in government and the Internet means Nepal’s e-government implementation will fall under Adversarial section of the e-government trust grid (Fig 1) discussed in section 3.3. If e-government is implemented in Nepal under current scenario, there is almost zero level of e-government adoption. Therefore, it is necessary to take necessary actions to enhance DN’s trust level towards government as well as the Internet prior to e-government implementation.

DN’s lower levels of trust towards government and the Internet are directly linked to government’s ineffective communication. Therefore, it is apparent that governments communication outreach through
traditional media have not been effective at targeting DN’s. However, DN’s high level of engagement in social media and their positive response towards government’s presence on social media provides newer avenues for establishing a favorable environment to create critical mass required to generate momentum for e-government adoption. However, relationship building, honesty, and transparency should be at the heart of this trust building communication efforts through social media.
References


Appendices

Appendix I
Quantitative survey for digital natives

Demography

1. Age

2. Gender
   - Male
   - Female

2. Highest level of education
   - High School
   - Bachelors
   - Masters
   - PhD

Internet & social media usage

3. How many hours do you use Internet on a daily basis? Please select one answer.
   - More than four hours per day
   - Four hours per day
   - Three hours per day
   - Two hours per day
   - Less than two hours per day
4. Do you use social networking websites? _____ if Yes, please tick appropriate ones
   YouTube _______
   Facebook _______
   Twitter _______
   Others ______________________________________________

5. How much time on average do you spend JUST on social networking sites each day?
   More than four hours per day ______
   Four hours per day ______
   Three hours per day ______
   Two hours per day ______
   Less than two hours per day ______

6. Do you view content (news, blogs, Pdfs & videos) recommended by your friends through the social networking websites or do you actively search for information on the Web?
   Prefer content recommended by friends ___________
   Actively look for information on the Web ___________
   Both ___________

7. Which type of media do you consume most on the Internet? Please select one.
   Streaming videos ______
   Podcast Videos ______
   Streaming audio ______
   Podcast audio ______
   Websites ______
Trust on Technology

Competence trust

8. Do you visit/use government Websites?

Always

Often

Rarely

Never

Perceived Risk

9. Do you feel comfortable sharing your personal and financial information over the Internet?

Very comfortable             Comfortable             Neutral             Uncomfortable             Very Uncomfortable

Perceived Risk

10. Do you feel comfortable sharing your personal and financial information over the Internet with Nepalese Government?

Very comfortable             Comfortable             Neutral             Uncomfortable             Very Uncomfortable

Trust on Government

Relationship trust: Competence trust

11. Do you think Nepalese government has capacity to deliver services through the Internet?

Yes

No
Relationship trust: Benevolence trust

12. Do you think Nepalese government always acts in citizen’s interest?
   Yes ______
   No ______

Relationship Trust: Integrity trust

12. Do you think Nepalese government is honest in its dealings?
   Yes ______
   No ______

Relationship Trust: Integrity trust

13. Do you think Nepalese government is transparent?
   Yes ______
   No ______

Institutional trust:

14. Are you aware of privacy policy, security, and encryption standards prescribed or used by government Websites?
   Yes ______
   No ______

Communication outreach

15. Government agencies disseminate policy related information through their Websites in order to promote participatory policy making. Have you ever come across such initiatives?
   Yes ______
   No ______

Effectiveness of communication outreach through traditional media
16. Nepalese Government advertises on newspapers, radio, and television about participatory policy making initiatives? Have you come across such communication outreach?

Yes _________
No _________

Social Media

17. Do you think government should have presence on the Social Networking websites?

Yes _________
No _________

18. Only progressive and proactive governments have social networking websites presence.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

19. In your opinion, how can government utilize social networking websites to build or maintain trust among young generations, particularly youth?


Appendix II

1. Do you use Social Networking Websites, if so please specify the sites and purpose of use?

2. Do you have your business’s presence on Social Networking Websites? If yes, can you please elaborate on why and how you use them for your business?

3. Do you think government should have presence on the Social Networking Websites? If yes, can you give reasons?

4. What do you think are some of the ways in which government could immediately benefit by having presence on social media (social networking Websites), particularly to build or enhance citizens trust towards government?

5. How can government utilize social networking websites to enhance ‘digital natives’ trust towards Internet to in order to foster adoption of e-government services?

6. In your opinion, what should be the government’s long term vision towards integrating social networking sites in overall e-government strategy?

7. Any other thoughts or comments?