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# MUSLIM USAGE Of the internet

MUSA FURBER

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#### TABAH ANALYTIC BRIEF, NO. 16, 2017

MUSLIM USAGE OF THE INTERNET
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The *Tabah Analytic Briefs series* aims to empower Tabah clientele – Shari'ah scholars and Muslim opinion leaders – with background information and critical analysis of contemporary events and debates. Each brief is a concise introduction to a concept or topic relating to culture and social change in the global community. The purpose of this series is to provide vital information that will assist scholars and policy makers in formulating a clear conception of the "Shared Public Space", developing an informed discourse, and mediating the challenges facing the Muslim world today.

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## MUSLIM USAGE OF THE INTERNET

**Subject:** How Muslims seek answers to religious questions using both Internet-based and non-Internet-based sources of information.

**Significance:** This study explores how Muslims use the Internet for religious purposes and whether usage patterns vary between Muslim minority and Muslim majority states.

**Executive Summary:** A survey was created and administered over the Internet to gather data on how frequently Muslims use different sources and services of religious information. Statistical analysis of the responses (n = 252) confirmed that some types of usage are correlated with whether one is resident in a Muslim minority or Muslim majority state. Although it was intended as an exploratory study, its findings suggest tentative advice for providers of religious services, whether in a local or global context.

### I. INTRODUCTION

The Internet has become entrenched in the daily lives of large segments of the Muslim populations worldwide, making it an excellent global medium for religious goods and services. This study explores how Muslims use the Internet for religious purposes, and whether usage differences are correlated with whether one is resident in a Muslim minority or majority state.

A survey instrument was designed to explore how Muslims seek answers to religious questions using various forms of Internet-based and non-Internet-based information sources, and to explore their usage of the Internet for other religious purposes. A convenience sample was obtained through the Internet. The survey was conducted in English, and was moreover announced through Twitter and Facebook since these two social media platforms have gained widespread penetration amongst Muslims worldwide. Statistical analysis was performed to determine whether being in a Muslim minority or majority state (as an independent variable) is significantly correlated with the sources Muslims used for answering religious questions (as a dependent variable) and with Muslim usage of the Internet for religious purposes (as a dependent variable).

The results of this study contribute to studies in the fields of religion and computers (more specifically: Muslim use of the Internet). Statistically significant findings provide religious institutions with a better understanding of their stakeholder's use of the Internet, thus en-

abling them to improve service delivery. This should be of particular interest to Muslim majority countries and public institutions responsible for providing religious services to Muslim stakeholders.

#### 1. COMPUTERS AND RELIGION

The study of Muslim usage of the Internet takes place within the broader study of computers and religion. The collection of networks now known as "the Internet" has been a medium for religious communications since at least 1983 when the talk.religion newsgroup was created on USENET.¹ By 1990, USENET was home to at least 300 newsgroups for discussing religion. During the 1980s and 1990s, BBSs (bulletin board services) and other public online services were also hosts to religious content and conversations.

While some religious groups showed initial hesitation to use the Internet for religious purposes, by 2006 all religious groups had accepted and embraced its use.<sup>2</sup> Studies show that religious scholars are not against the use of the Internet for religious discourse per se, and many now consider it something to incorporate into their religious life. These studies also indicate that some religious scholars are concerned that virtual religious acts (such as virtual pilgrimages) erode the dignity of religious practices.

The study of religion and computers has thus far occurred in three waves.<sup>3</sup> First-wave studies were dominated by a utopian or dystopian view of religion online: either religion online was capable of anything, or it would lead to destruction. Second-wave studies were more descriptive, concentrating on who was online and what they were doing, online versus offline behavior, and authority. Among the most important ideas within this wave is the idea that online expression was seen as a way of enhancing and supplementing religious practices and institutions without being a replacement for offline religion.<sup>4</sup> More recent studies fall within a third wave; these studies are more collaborative and interdisciplinary than the prior waves, and emphasize theoretical and interpretive scholarship.

Charles Ess, Akira Kawabata, and Hiroyuki Kurosaki, "Cross-Cultural Perspectives on Religion and Computer-Mediated Communication", *Journal of Computer-Mediated Communication* 12, no. 3 (2007): 939–55.

<sup>2.</sup> T. M. Ciolek, "Online Religion: The Internet and Religion", in *The Internet Encyclopedia*, ed. Hossein Bidgoli (New York: John Wiley & Sons, 2004), 2:798–811; Ess, Kawabata, and Kurosaki, "Cross-Cultural Perspectives on Religion"; Randolph Kluver and Pauline Hope Cheong, "Technological Modernization, the Internet, and Religion in Singapore", *Journal of Computer-Mediated Communication* 12, no. 3 (2007): 1122–42; Daniel Martin Varisco, "Muslims and the Media in the Blogosphere", *Contemporary Islam* 4, no. 1 (2009): 157–77.

<sup>3.</sup> Heidi Campbell, "Internet and Religion", in *The Handbook of Internet Studies*, ed. Mia Consalvo and Charles Ess (Oxford: Wiley-Blackwell, 2011), 232–50.

<sup>4.</sup> D. W. Wheeler, "Beyond Global Culture: Islam, Economic Development, and the Challenges of Cyberspace", *Digest of Middle East Studies* 10, no. 1 (Summer 2001): 1–26.

#### 2. MUSLIMS AND THE INTERNET

Studies of Muslim use of the Internet have been conducted within the study of computers and religion. Common topics include why Muslims use the Internet, how Internet usage influences the Muslim community, religious power and authority, and gender.

Why Muslims use the Internet. Common reasons for Muslim usage of the Internet include that it is more difficult to monitor Internet activity than traditional media, such as the book market.<sup>5</sup> The Internet offers a way around restrictions found offline,<sup>6</sup> and provides anonymity.<sup>7</sup> It also offers mainstream Muslims access to information that is censored in their local market. Religious minorities and individuals whose behavior is deemed deviant by the majority, such as non-heterosexual Muslims and ex-Muslims, were early to adopt the Internet as a safe haven.<sup>8</sup>

The Internet and the Muslim community. How the Internet influences community is another popular topic of study since the Internet gives access to a global, transnational Muslim community of unprecedented scale. Overall, the Internet is an effective tool for keeping nations and diaspora communities together. Despite initial concerns that it would erode national ties, it has instead been found to strengthen them. 10

Power and authority. How the Internet erodes traditional power and authority is perhaps the most common topic in studies of Muslim computer usage. While Campbell finds that the text of the Qur'an remains the ultimate authority for Muslims on the Internet, online views concerning traditional religious authority—the scholars (ulema)—are contentious.<sup>11</sup> Many of the studies expressed outright glee and enthusiasm that the Internet is dismantling traditional Islamic institutions of authority and scholarship. The common thread within these articles is that traditional religious scholars do not use the Internet, while a younger group of Internet- and media-savvy Muslims do. This younger group is more interested in religious-based activism than they are in traditional religious scholarship, and they present an Islamic discourse that is willing to compromise traditional rulings in favor of practicality. This younger group presents a discourse that is attractive to upper- and middle-class Muslims, thus displacing traditional authority and assuming their place as the new religious

<sup>5.</sup> Barbara Stowasser, "Old Shaykhs, Young Women, and the Internet: The Rewriting of Women's Political Rights in Islam", *The Muslim World* 91 (2001): 99–120.

<sup>6.</sup> Wheeler, "Beyond Global Culture".

<sup>7.</sup> Alexis Kort, "Dar al-Cyber Islam: Women, Domestic Violence, and the Islamic Reformation on the World Wide Web", *Journal of Muslim Minority Affairs* 25, no. 3 (2005): 363–83.

<sup>8.</sup> Ess, Kawabata, and Kurosaki, "Cross-Cultural Perspectives on Religion"; Varisco, "Muslims and the Media in the Blogosphere".

<sup>9.</sup> Wheeler, "Beyond Global Culture"; Ralph Grillo, "Islam and Transnationalism", *Journal of Ethnic and Migration Studies* 30, no. 5 (2004): 861–78; Robert A. Saunders, "The Ummah as Nation: A Reappraisal in the Wake of the 'Cartoons Affair'", *Nations and Nationalism* 14, no. 2 (2008): 303–21.

<sup>10.</sup> Thomas H. Eriksen, "Nationalism and the Internet", Nations and Nationalism 13, no. 1 (2007): 1-17.

<sup>11.</sup> Campbell, "Who's Got the Power? Religious Authority and the Internet", *Journal of Computer-Mediated Communication* 12, no. 3 (2007), 1043–62.

elite. Additionally, the younger group's adoption of social media allows them to engage and interact with their followers, in contrast to traditional scholars who do not engage their audience.<sup>12</sup>

Many of the studies claiming shifts in power and authority ignored websites popular amongst Arab Muslims, such as Egypt's Dar-Alifta.org. Additionally, media-savvy representatives of traditional power and authority were ignored, such as Hamza Yusuf, whose "Yala Ya Shabab!" TV series was widely popular throughout MENA, just as they ignore the many traditional scholars in the West who make heavy use of the Internet and social media. It is also interesting that none of the articles read mentioned that Moez Masoud and other members of the "new media-savvy elite" refer their followers to traditional scholars when presented with technical or nuanced questions—suggesting that the new media-savvy elite are the winners of a contest of popularity, not a contest of authority.

Pintak's study of Egyptian views using data from the Arab Barometer presents a view at odds with these claims of a new Muslim authority. Survey data indicate 78% of Egyptians affirmed that religious authorities give adequate answers to the moral problems of the individual, 75% affirmed that clerics provide adequate answers to the problems of family life, 79% affirmed that they give answers addressing the spiritual needs of the public, and 79% affirmed that they give adequate answers to social problems.<sup>13</sup> These results suggest that the Egyptian masses are more content with traditional religious authorities than what is reported in studies on Muslim use of the Internet.

**Gender**. Gender has also been an important topic; more specifically: how the Internet changes gender roles. The Internet provides a type of accessibility without needing to leave the home, thus allowing women in strict countries additional opportunities since they can "leave" without needing a male guardian. The anonymity of the Internet also allows women to ask questions and discuss topics that are difficult to do in person. One study of Internet usage in the Kingdom of Saudi Arabia found that women made up two-thirds of Internet users. <sup>14</sup> Some authors have voiced worry that this virtual accessibility will leave women even more isolated. <sup>15</sup>

<sup>12.</sup> Stowasser, "Old Shaykhs, Young Women, and the Internet"; Kort, "Dar al-Cyber Islam"; Ess, Kawabata, and Kurosaki, "Cross-Cultural Perspectives on Religion"; Saunders, "The Ummah as Nation"; Varisco, "Muslims and the Media in the Blogosphere"; Nabil Echchaibi, "From Audio Tapes to Video Blogs: The Delocalisation of Authority in Islam", *Nations and Nationalism* 17, no. 1 (2011): 25–44; Karim Tartoussieh, 'Virtual Citizenship: Islam, Culture, and Politics in the Digital Age", *International Journal of Cultural Policy* 17, no. 2 (2011): 198–208.

<sup>13.</sup> Lawrence Pintak, "Border Guards of the 'Imagined' Watan: Arab Journalists and the New Arab Consciousness", *The Middle East Journal* 63, no. 2 (2009): 191–212.

<sup>14.</sup> Joshua Teitelbaum, "Dueling for 'Da'wa' State vs. Society on the Saudi Internet", *The Middle East Journal* 56, no. 2 (2002): 222–39.

<sup>15.</sup> Kort, "Dar al-Cyber Islam".

#### II. THE CURRENT STUDY

The current study examined whether being resident in a Muslim minority or majority state influences the frequency and ways that Muslims use the Internet for religious purposes. The specific issues it set out to investigate were:

- The rough demographics of Muslims using the Internet for religious purposes.
- The frequency with which Muslims use different Internet-based services for religious purposes.
- Whether usage in Muslim minority states differs from usage in Muslim majority states.

#### 1. METHOD

This study aimed to examine the broad question of whether being resident in a Muslim minority or majority state was associated with usage of the Internet for religious purposes. Stated more formally, the study set out to test the following broad hypothesis:

Ho: Being resident in a Muslim majority state is not associated with use of the Internet for religious purposes.

HA: Being resident in a Muslim majority state is associated with use of the Internet for religious purposes.

Datasets on Muslim usage of the Internet for religious purposes were not publicly available, so a survey instrument was created to capture data related to sources of religious information and Internet usage for religious purposes. The survey was completed by 252 respondents from countries from Muslim majority and Muslim minority populations. Statistical analysis for measures of association was performed to assess whether the null hypothesis could be rejected for the survey question.

### 1.a Survey Sample and Procedure

A convenience sample was obtained through the Internet. The survey was conducted in English, and was announced through Twitter and Facebook since these two social media platforms have gained widespread penetration amongst Muslims worldwide. Although conducting surveys over the Internet presents the risk of damaging randomization errors, the risk did not apply here since the Internet and its users are the very subject of the study.

The survey was available in English only. This limitation was deemed acceptable for this exploratory study given the widespread use of English on the Internet and among the expected sample populations.

The online survey was announced on 15 November 2011 and responses were gathered until 24 November 2011. During that time, 252 respondents completed the survey, an additional 235 started but did not complete it, and 1,356 chose not to take the survey. The overall response rate of those who visited the survey's landing page was 13.67%.

### 1.b Measures

The study used two types of measures. One type measured how Muslims use the Internet, which required designing and administering a survey instrument. The second type measured religious populations for each state, from cross-national datasets available online.

### 1.b.i The Survey Instrument: Muslim Usage of the Internet for Religious Purposes

A survey instrument was created to capture data on Muslim usage of the Internet for religious purposes. The survey included questions concerning usage of different Internet-based religious services, as well as questions for collecting demographic data about each respondent.

The survey included groups of questions to assess sources of religious knowledge, general usage of Internet services, usage of Internet-based religious services, social media usage, and demographic questions. Most questions had asked about the frequency of using various services during the past month. Respondents were also asked about their Internet activity over the past month. Frequencies were represented along an ordinal scale of usage that included "never", "less than weekly", or "more than weekly". An ordinal scale of frequencies was chosen over an estimation of hours since such estimations are both error prone and taxing on the respondent. Additionally, it was chosen over a scale with items like "never", "average", or "often" since these would be too subjective.

The following paragraphs provide a brief description of each question group.

**Sources of religious information.** These questions assessed what information sources respondents used in order to answer questions about Islam, and usage frequency for each source. These questions were designed to compare usage of Internet-based services to gain religious information versus usage of non-Internet services. Information sources included friends and family, books, TV and radio programs, teachers at school, local religious scholars and institutes, attending lessons, using the Internet, and "other means".

**General usage of Internet services**. These questions concentrated on the frequency of general Internet usage and usage of three common forms of social media: Facebook, Twitter, and blogs. Facebook and Twitter were chosen due to their popularity worldwide and their large penetration in MENA.

**Usage of Internet-based religious services.** These questions explored usage of a variety of Islamic-based religious services. The survey's services included learning Qur'an or hadith, learning about Islam, listening to *anāshīd* or *adhkār* (hymns, invocations), visiting websites or asking questions of scholars or religious institutions, participating on religious discussion forums, and to teach or invite others to Islam (*da'wa*).

**Demographic questions.** These questions gathered non-identifying information about the respondents. Respondents were asked their current country of residence, nationality, sex, age group, marital status, employment status, and educational attainment.

### 1.b.ii Data on Religious Populations

Data on religious populations were available through Penn State University's Association of Religion Data Archives (ARDA). State populations were ranked according to two categories: Muslim minority populations and Muslim majority populations. The resulting variable was treated as a nominal during analysis. Future studies with a larger sample will be able to use narrower categories.

#### 2. DATA ANALYSIS

Once the survey data was collected, variables for the Muslim population size of the respondent's current state of residence were added to each response. During analysis, the survey's original frequency categories ("never", "once", "less than weekly", "weekly", "less than daily", "daily", "several times per day") were recoded as "never", "less than weekly", and "at least weekly", as shown in Table 1.

**Table 1.** Original frequency coding (left), new coding (right)

Never	NT
Once	Never
Less than weekly	Less than weekly
Weekly	
Less than daily	At least weekly
Daily	At least weekly
Several times per day	

Statistical tests were used to measure the association between the dependent variables of the survey data and the independent variable, thus indicating that a relationship was significant enough to safely reject a null hypothesis. Tests of association included Chi squared and gamma, a non-parametric PRE-based measurement.<sup>17</sup>

In simplified terms, Chi-square analysis allows us to quantify the relationship between variables and to then determine whether that relationship is significant enough to reject the hypothesis that the variables are not related and, consequently, accept the alternative

<sup>16.</sup> The data were downloaded from the Association of Religion Data Archives, www.TheARDA.com, and were collected by Roger Finke, Brian J. Grim, Jaime Harris, Robert R. Martin, and Sarah Montminy.

<sup>17.</sup> Evan M. Berman, *Essential Statistics for Public Managers and Policy Analysis* (Washington, DC: CQ Press, 2007), 166; Sarah Boslaugh and Paul Andrew Watters, *Statistics in a Nutshell: A Desktop Quick Reference* (Sebastopol, CA: O'Reilly, 2008), 224–5.

hypothesis that the variables are related. It does this by measuring discrepancies between what we expect to observe if the variables are not related and what we actually observe, and how probable it is that the discrepancy can be explained by chance. It is common practice to accept that a relationship is significant when the probability that the discrepancy can be explained by chance is less than or equal to 5% (written as "p < .05"). This study represents Chi-square analysis in the following format:

$$\chi$$
2 = 8.396, p <.015

where the first number after the equals sign is the measure of the relationship, and p indicates the probability value (p-value) that the relationship can be explained by chance (lower p-values indicate stronger relationships).

The gamma test indicates the strength and direction of an association, and whether the relationship is statistically significant. Values for strength of association were interpreted as follows: values between 0.00 and 0.25 indicated a weak association, values between 0.25 and 0.50 indicated a moderate association, and values between 0.50 and 1.00 indicated a strong association. A positive association indicated that an increase in the independent variable (here: being resident in a Muslim majority state) leads to an increase in the dependent variable (here: frequency of usage of a specific information source or service), whereas a negative association indicates that an increase in the independent variable (here: being resident in a Muslim minority or majority state) will result in a decrease in the dependent variable (here: frequency of usage of a specific information source or service).

A relationship was considered statistically significant for Chi squared and gamma when the test's value was less than or equal to 0.05, which is a common threshold for social sciences studies. If a relationship was found to be statistically significant, then it would be safe to reject the null hypothesis and conclude that a relationship exists between the independent variable (being resident in a Muslim minority or Muslim majority state) and the dependent variable being tested (e.g. frequency of using the Internet to participate in religious lessons).

### 3. RESULTS

### 3.a Overall Demographics of the Survey

The data was collected from 252 respondents from 33 nationalities residing in 16 countries. The disparity between the number of nationalities and number of countries is explained by the large number of responses from the UAE, where over half of the responses came from foreign workers. As mentioned earlier: country of residence was considered of more significance as it is the country of residence that determines whether the respondent is in a Muslim minority or majority population.

There were 140 responses from residents of Muslim majority countries. The countries of residence included Egypt with 64 (25.4% of the total survey); UAE 52 (20.6%); Pakistan

<sup>18.</sup> Berman, Essential Statistics for Public Managers and Policy Analysis, 151.

**Table 2.** Frequencies of respondent countries of residence, and whether Islam is the majority religion

Country of residence	Frequency	%	Islam majority religion	Country of residence	Frequency	%	Islam majority religion
Egypt	64	25.4	TRUE	Australia	2	0.8	FALSE
Jordan	2	0.8	TRUE	Belgium	1	0.4	FALSE
Kuwait	1	0.4	TRUE	Bermuda	1	0.4	FALSE
Malaysia	3	1.2	TRUE	Canada	15	6	FALSE
Pakistan	8	3.2	TRUE	Czech Republic	1	0.4	FALSE
Qatar	2	0.8	TRUE	Denmark	4	1.6	FALSE
Saudi Arabia	6	2.4	TRUE	France	2	0.8	FALSE
Turkey	2	0.8	TRUE	India	3	1.2	FALSE
United Arab Emirates	52	20.6	TRUE	Japan	1	0.4	FALSE
Total	252	100		Luxembourg	1	0.4	FALSE
				Netherlands	1	0.4	FALSE
				New Zealand	1	0.4	FALSE
				Norway	1	0.4	FALSE
				Singapore	3	1.2	FALSE
				South Africa	1	0.4	FALSE
				United Kingdom	46	18.3	FALSE
				USA	28	11.1	FALSE
				Total	252	100	

8 (3.2%); Saudi Arabia 6 (2.4%); Malaysia 3 (1.2%); Jordan, Qatar, and Turkey, each with 2 (0.8%); and Kuwait with 1 (0.4%)—see Table 2.

**Sex.** Female respondents numbered 132 (52.4% of the total), to 120 male respondents (47.6%). For Muslim minority countries, respondents were 42 females (37.50%), 70 males (62.50%). For Muslim majority countries, respondents were 90 females (64.29%), 50 males (35.71%).

**Age.** The age of respondents was widespread: 19 were less than eighteen years of age (7.5%), 63 between eighteen and twenty-four (25%), 82 between twenty-five and twenty-nine (32.5%), 39 between the ages of thirty and thirty-four (15.5%), 29 between thirty-five and thirty-nine (11.5), and 20 were forty or above (8%).

For Muslim minority countries: 4 were less than eighteen years of age (3.57%), 24 between eighteen and twenty-four (21.43%), 32 between twenty-five and twenty-nine (28.57%), 21 between the ages of thirty and thirty-four (18.75%), 21 between thirty-five and thirty-nine (18.75), and 10 were forty or above (8.93%).

For Muslim majority countries: 39 were less than eighteen (10.71%), 39 between eighteen and twenty-four (27.86%), 50 between twenty-five and twenty-nine (35.71%), 18 between the ages of thirty and thirty-four (12.86%), 8 between thirty-five and thirty-nine (5.71%), and 10 were forty or above (7.14%).

**Table 3a.** Comparison of age groups and respondents in Muslim minority and Muslim majority countries

Age group	Muslim min	ority states	Muslim maj	ority states
(years)	Count	%	Count	%
0-17	4	3.57	15	10.71
18-24	24	21.43	39	27.86
25-29	32	28.57	50	35.71
30-34	21	18.75	18	12.86
35-39	21	18.75	8	5.71
40-44	8	7.14	7	5.00
45-49	2	1.79	2	1.43
50-55	0	0.00	1	0.71

**Table 3b.** Region and age crosstabulation (the ages of respondents in Western democracies were slightly older compared to respondents from MENA, as expected, given MENA being a "young" population)

Danian	Age								
Region	0-17	18-24	25-29	30-34	35-39	40-44	45-49	50-55	Total
Western democracies	4	21	27	20	21	8	2	0	103
Middle East and North Africa	12	38	44	18	8	7	1	1	129
Total	16	59	71	39	29	15	3	1	231

See Table 3a for a comparison of age groups and respondents in Muslim minority and Muslim majority states. Table 3b shows respondent ages for Western democracies and Middle East and North Africa (MENA), which were the main regions included in the data. The table indicates that respondents in MENA tended to be younger than respondents from elsewhere.

### 3.b Sources of Religious Information

The survey instrument included a number of items concerning the sources of information consulted when respondents sought answers to their religious questions. Most survey items within this section covered offline sources of information in order to compare popularity of other media among the sample population. Table 4 shows a summary of how respondents answered these questions. Tables 5a and 5b show a summary of response for residents of Muslim minority and majority states (respectively), and Table 6 shows the results of the Chi and gamma tests.

**Table 4.** Summary of responses for sources of religious information

	Never	Never		Less than weekly		weekly
	Count	Row %	Count	Row %	Count	Row %
Friends	88	34.9	104	41.3	60	23.8
Books	108	42.9	80	31.7	64	25.4
TV	183	72.6	32	12.7	37	14.7
Radio	213	84.5	22	8.7	16	6.3

**Table 4.** Summary of responses for sources of religious information (cont'd)

Teacher at school	224	88.9	16	6.3	12	4.8
Local scholar or imam	172	68.3	49	19.4	31	12.3
Local religious institution	222	88.1	17	6.7	13	5.2
Attending religious lecture or lesson	159	63.1	42	16.7	51	20.2
The Internet	44	17.5	84	33.3	124	49.2
Other	193	76.6	26	10.3	33	13.1

Table 5a. Summary of responses for residents of Muslim minority states

	Never	Never		ın weekly	At least weekly	
	Count	Row %	Count	Row %	Count	Row %
Friends	50	44.64	39	34.82	23	20.54
Books	39	34.82	39	34.82	34	30.36
TV	103	91.96	5	4.46	4	3.57
Radio	105	93.75	2	1.79	5	4.46
Teacher at school	104	92.86	1	0.89	7	6.25
Local scholar or imam	70	62.50	23	20.54	19	16.96
Local religious institution	98	87.50	6	5.36	8	7.14
Attending religious lecture or lesson	61	54.46	19	16.96	32	28.57
The Internet	19	16.96	43	38.39	50	44.64
Other	92	82.14	8	7.14	12	10.71

**Table 5b.** Summary of responses for residents of Muslim majority states

	Never		Less than	n weekly	At least v	At least weekly	
	Count	Row %	Count	Row %	Count	Row %	
Friends	38	27.14	65	46.43	37	26.43	
Books	69	49.29	41	29.29	30	21.43	
TV	80	57.14	27	19.29	4	2.86	
Radio	108	77.14	20	14.29	12	8.57	
Teacher at school	120	85.71	15	10.71	5	3.57	
Local scholar or imam	102	72.86	26	18.57	12	8.57	
Local religious institution	124	88.57	11	7.86	5	3.57	
Attending religious lecture or lesson	98	70.00	23	16.43	19	13.57	
The Internet	25	17.86	41	29.29	74	52.86	
Other	101	72.14	18	12.86	21	15.00	

Table 6. Analysis of Muslim minority vs Muslim majority

	Minority vs Majority				
	$\chi^{2}$		$\gamma$		
	Value	Sig.	Value	Sig.	
Friends	8.396	0.015	0.259	0.012	
Books	5.591		-0.24	0.019	
TV	38.105	0.000	0.769	0.000	
Radio	14.723	0.001	0.596	0.000	
Teacher at school	10.748	0.005	0.324	0.093	
Local scholar or imam	4.664	0.097	-0.339	0.052	

**Table 6**. Analysis of Muslim minority vs Muslim majority (*cont'd*)

Local religious institution	2.123	0.346	-0.066	0.728
Attending religious lecture or lesson	9.303	0.01	-0.325	0.004
The Internet	2.93	0.297	0.102	0.344
Other	3.654	0.161	0.254	0.067

### 3.b.i Friends and Family

Respondents reported the frequency of their seeking answers to religious questions through friends as never: 88 (34.9%), less than weekly: 104 (41.3%), at least weekly: 60 (23.8%).

The frequencies for Muslim minority countries were reported as never: 50 (44.64%), less than weekly: 39 (34.82%), at least weekly: 23 (20.54%); while the frequencies for Muslim majority countries were reported as never: 38 (27.14%), less than weekly: 65 (46.43%), at least weekly: 37 (26.43%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states sought answers from friends and family ( $\chi_2 = 8.396$ , p <.015). Gamma analysis indicated a positive moderate association ( $\gamma = .259$ , p < .05).

#### 3.b.ii Books

Respondents reported the frequency of their use of books to answer religious questions as never: 108 (42.9%), less than weekly: 80 (31.7%), at least weekly: 64 (25.4%).

The frequencies for Muslim minority countries were reported as never: 39 (34.82%), less than weekly: 39 (34.82%), at least weekly: 34 (30.36%); while the frequencies for Muslim majority countries were reported as never: 69 (49.29%), less than weekly: 41 (29.29%), at least weekly: 30 (21.43%).

Gamma analysis indicated a statistically significant relationship between the frequencies with which residents in Muslim minority states and Muslim majority states sought answer from books, though it was somewhat weak and negative ( $\gamma = -.24$ , p < .019).

### 3.b.iii TV

Respondents reported the frequency of seeking answers to their religious questions through TV as never: 183 (72.6%), less than weekly: 32 (12.7%), at least weekly: 37 (14.7%).

The frequencies for Muslim minority countries were reported as never: 103 (91.96%), less than weekly: 5 (4.46%), at least weekly: 4 (3.57%); while the frequencies for Muslim majority countries were reported as never: 80 (57.14%), less than weekly: 27 (19.29%), at least weekly: 4 (2.86%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states sought answers from TV ( $\chi$ 2 = 38.105, p = .000); gamma analysis indicated a positive strong association ( $\gamma$  = .769, p = .000).

### 3.b.iv Radio

Respondents reported the frequency of their using the radio to answer religious questions as never: 213 (84.5%), less than weekly: 22 (8.7%), weekly: 11 (4.4%), at least weekly: 16 (6.3%).

The frequencies for Muslim minority countries were reported as never: 105 (93.75%), less than weekly: 2 (1.79%), at least weekly: 5 (4.46%); while the frequencies for Muslim majority countries were reported as never: 108 (77.14%), less than weekly: 20 (14.29%), at least weekly: 12 (8.57%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states sought answers from radio ( $\chi_2 = 14.723$ , p = .001); gamma analysis indicated a positive strong association ( $\gamma = .596$ , p = .000).

### 3.b.v Teacher at School

Respondents reported the frequency of their turning to teachers at school for answers to religious questions as never: 224 (88.9%), less than weekly: 16 (6.3%), at least weekly: 12 (4.8%).

The frequencies for Muslim minority countries were reported as never: 104 (92.86%), less than weekly: 1 (0.89%), at least weekly: 7 (6.25%); while the frequencies for Muslim majority countries were reported as never: 120 (85.71%), less than weekly: 15 (10.71%), at least weekly: 5 (3.57%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states sought answers from a teacher at school ( $\chi_2 = 10.748$ , p < .005).

### 3.b.vi Local Religious Scholars or Imams

Respondents reported the frequency of their using a local scholar or imam for answers as never: 172 (68.3%), less than weekly: 49 (19.4%), at least weekly: 31 (12.3%).

The frequencies for Muslim minority countries were reported as never: 70 (62.50%), less than weekly: 23 (20.54%), at least weekly: 19 (16.96%); while the frequencies for Muslim

majority countries were reported as never: 102 (72.86%), less than weekly: 26 (18.57%), at least weekly: 12 (8.57%).

Chi-squared and gamma analysis did not indicate any statistically significant associations.

### 3.b.vii Local Religious Institutions

Respondents reported the frequency of their using a local institute for answers as never: 222 (88.1%), less than weekly: 17 (6.7%), at least weekly: 13 (5.2%).

The frequencies for Muslim minority countries were reported as never: 98 (87.50%), less than weekly: 6 (5.36%), at least weekly: 8 (7.14%); while the frequencies for Muslim majority countries were reported as never: 124 (88.57%), less than weekly: 11 (7.86%), at least weekly: 5 (3.57%).

Chi-squared and gamma analysis did not indicate any statistically significant associations.

### 3.b.viii Attending Lectures

Respondents reported the frequency of their attending religious lessons and lectures in order to answer questions about religion as never: 159 (63.1%), less than weekly: 42 (16.7%), at least weekly: 51 (20.2%).

The frequencies for Muslim minority countries were reported as never: 61 (54.46%), less than weekly: 19 (16.96%), at least weekly: 32 (28.57%); while the frequencies for Muslim majority countries were reported as never: 98 (70.00%), less than weekly: 23 (16.43%), at least weekly: 19 (13.57%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states sought answers by attending religious lectures ( $\chi$ 2 = 9.303, p < .01); gamma analysis indicated a strong negative relationship ( $\gamma$  = .769, p < .005).

#### 3.b.ix The Internet

Respondents reported the frequency of their seeking answers to their religious questions through the Internet as never: 44 (17.5%), less than weekly: 84 (33.3%), at least weekly: 124 (49.2%).

The frequencies for Muslim minority countries were reported as never: 19 (16.96%), less than weekly: 43 (38.39%), at least weekly: 50 (44.64%); while the frequencies for Muslim majority countries were reported as never: 25 (17.86%), less than weekly: 41 (29.29%), at least weekly: 74 (52.86%).

Chi-squared and gamma analysis did not indicate any statistically significant associations.

### 3.b.x Other

Respondents reported the frequency of their seeking answers to religious questions through other sources as never: 193 (76.6%), less than weekly: 26 (10.3%), at least weekly: 51(20.2%).

The frequencies for Muslim minority countries were reported as never: 92 (82.14%), less than weekly: 8 (7.14%), at least weekly: 12 (10.71%); while the frequencies for Muslim majority countries were reported as never: 101 (72.14%), less than weekly: 18 (12.86%), at least weekly: 21 (15.00%).

Chi-squared and gamma analysis did not indicate any statistically significant associations.

### 3.c Usage of the Internet

The survey instrument included a number of items concerning the frequency with which respondents use various Internet-based services for religious purposes. Most survey items within this section covered offline sources of information.

The results for Internet, Facebook, and Twitter usage were likely biased since the survey was distributed through Facebook and Twitter, which both received a high percentage of daily users.

Table 7 shows a summary of how respondents answered these questions. Tables 8a and 8b show a summary of response for residents of Muslim minority and majority states (respectively), and Table 9 shows the results of the Chi and gamma tests.

**Table 7.** Summary of response for Internet-based usage

	Never	Never		weekly	At least weekly	
	Count	Row %	Count	Row %	Count	Row %
Internet	0	O	24	9.5	228	90.5
Facebook	72	28.6	24	9.5	156	61.9
Twitter	125	49.6	25	9.9	98	38.9
Blogs	111	44	54	21.4	87	34.5
Learn Qur'an or hadith	132	52.4	55	21.8	65	25.8
Learn about Islam	90	35.7	71	28.2	91	36.1
Participate in online lessons or lectures	90	35.7	60	23.8	102	40.5

**Table 7.** Summary of response for Internet-based usage (*cont'd*)

Listen to anāshīd or adhkār	124	49.2	45	17.9	83	32.9
Visiting websites of scholars or institutes	86	34.1	71	28.2	95	37.7
Asking questions of scholars or institutes	198	78.6	33	13.1	21	8.3
Using religious discussion boards	199	78.9	26	10.3	27	10.7
Teaching or doing da'wa	198	78.6	27	10.7	27	10.7

Table 8a. Summary of response for Internet-based usage by Muslim minority state residents

	Never		Less than	weekly	At least weekly	
	Count	Row %	Count	Row %	Count	Row %
Internet	0	0.00	9	8.04	103	91.96
Facebook	42	37.50	9	8.04	61	54.46
Twitter	67	59.82	7	6.25	38	33.93
Blogs	43	38.39	22	19.64	47	41.96
Learn Qur'an or hadith	61	54.46	21	18.75	30	26.79
Learn about Islam	36	32.14	33	29.46	43	38.39
Participate in online lessons or lectures	30	26.79	27	24.11	55	49.11
Listen to anāshīd or adhkār	47	41.96	21	18.75	44	39.29
Visiting websites of scholars or institutes	28	25.00	32	28.57	52	46.43
Asking questions of scholars or institutes	89	79.46	13	11.61	10	8.93
Using religious discussion boards	82	73.21	12	10.71	18	16.07
Teaching or doing da'wa	88	78.57	10	8.93	14	12.50

**Table 8b.** Summary of response for Internet-based usage by Muslim majority state residents

	Never		Less than	Less than weekly		At least weekly	
	Count	Row %	Count	Row %	Count	Row %	
Internet	0	0.00	15	10.71	125	89.29	
Facebook	30	21.43	15	10.71	95	67.86	
Twitter	58	41.43	18	12.86	64	45.71	
Blogs	68	48.57	32	22.86	40	28.57	
Learn Qur'an or hadith	71	50.71	34	24.29	35	25.00	
Learn about Islam	54	38.57	33	38.00	48	34.29	
Participate in online lessons or lectures	60	42.86	33	23.57	47	33-57	
Listen to anāshīd or adhkār	77	55.00	24	17.14	39	27.86	
Visiting websites of scholars or institutes	58	41.43	39	27.86	43	30.71	
Asking questions of scholars or institutes	109	77.86	20	14.29	11	7.86	
Using religious discussion boards	117	83.57	14	10.00	19	13.57	
Teaching or doing da'wa	110	78.57	17	12.14	13	9.29	

**Table 9.** Comparison of minority vs majority

	$\chi^{2}$		$\gamma$	
	Value	Sig.	Value	Sig.
Internet	0.518	0.309	-0.157	0.965
Facebook	7.897	0.019	0.29	0.013
Twitter	9.117	0.01	0.287	0.009
Blogs	4.996	0.082	-0.218	0.036
Learn Qur'an or hadith	1.118	0.572	0.032	0.773

**Table 9.** Comparison of minority vs majority (*cont'd*)

Learn about Islam	1.13	0.568	-0.102	0.325
Participate in online lessons or lectures	8.218	0.016	-0.295	0.003
Listen to anāshīd or adhkār	4.706	0.095	-0.232	0.029
Visiting websites of scholars or institutes	9.008	0.011	-0.305	0.002
Asking questions of scholars or institutes	0.447	0.8	0.035	0.812
Using religious discussion boards	6.276	0.043	-0.307	0.033
Teaching or doing da'wa	1.2	0.549	-0.019	0.896

#### 3.c.i The Internet

Respondents reported the frequency of their usage of Internet as never: 0 (0.00%), less than weekly: 24 (9.5%), at least weekly: 228 (90.5%).

The frequencies for Muslim minority countries were reported as never: 0 (0.00%), less than weekly: 9 (8.04%), at least weekly: 103 (91.96%); while the frequencies for Muslim majority countries were reported as never: 0 (0.00%), less than weekly: 15 (10.71%), at least weekly: 125 (89.29%).

Statistical analysis did not indicate any statistically significant associations between Internet usage and being resident in a Muslim majority state.

### 3.c.ii Facebook

Respondents reported the frequency of their use of Facebook as never: 72 (28.6%), less than weekly: 24 (9.5%), at least weekly: 156 (61.9%).

The frequencies for Muslim minority countries were reported as never: 42 (37.50%), less than weekly: 9 (8.04%), at least weekly: 61 (54.46%); while the frequencies for Muslim majority countries were reported as never: 30 (21.43%), less than weekly: 15 (10.71%), at least weekly: 95 (67.86%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states used Facebook ( $\chi$ 2 = 7.896, p < .05); gamma analysis indicated a moderate positive relationship ( $\gamma$  = .29, p < .01).

#### 3.c.iii Twitter

Respondents reported the frequency of their use of Twitter as never: 125 (49.6%), less than weekly: 25 (9.9%), at least weekly: 98 (38.9%).

The frequencies for Muslim minority countries were reported as never: 67 (59.82%), less than weekly: 7 (6.25%), at least weekly: 38 (33.93%); while the frequencies for Muslim majority countries were reported as never: 58 (41.43%), less than weekly: 18 (12.86%), at least weekly: 64 (45.71%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states used Twitter ( $\chi$ 2 = 9.117, p <= .01), and gamma analysis indicated a moderate positive relationship ( $\gamma$  = .287, p < .01).

### 3.c.iv Blogs

Respondents reported the frequency of their use of Blogs as never: 111 (44.0%), less than weekly: 54 (21.4%), at least weekly: 87 (34.5%).

The frequencies for Muslim minority countries were reported as never: 43 (38.39%), less than weekly: 22 (19.64%), at least weekly: 47 (41.96%); while the frequencies for Muslim majority countries were reported as never: 68 (48.57%), less than weekly: 32 (22.86%), at least weekly: 40 (28.57%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states used blogs and being resident in a Muslim majority state ( $\chi_2 = -.218$ , p < .05).

### 3.c.v Learn Qur'an or Hadith

Respondents reported the frequency of their usage of the Internet to learn Qur'an or hadith as never: 132 (52.4%), less than weekly: 55 (21.8%), at least weekly: 65 (25.8%).

The frequencies for Muslim minority countries were reported as never: 61 (54.46%), less than weekly: 21 (18.75%), at least weekly: 30 (26.79%); while the frequencies for Muslim majority countries were reported as never: 71 (50.71%), less than weekly: 34 (24.29%), at least weekly: 35 (25.00%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states learned Qur'an or hadith through the Internet and being resident in a Muslim majority state.

### 3.c.vi Learn about Islam

Respondents reported the frequency of their usage to learn about Islam as never: 90 (35.7%), less than weekly: 71 (28.2%), at least weekly: 91 (36.1%).

The frequencies for Muslim minority countries were reported as never: 36 (32.14%), less than weekly: 33 (29.46%), at least weekly: 43 (38.39%); while the frequencies for Muslim majority countries were reported as never: 71 (50.71%), less than weekly: 34 (24.29%), at least weekly: 35 (25.00%).

Chi-squared and gamma analysis did not indicate any statistically significant associations.

### 3.c.vii Participate in Religious Lessons

Respondents reported the frequency of their usage of the Internet to participate in lessons as never: 90 (35.7%), less than weekly: 60 (23.8%), at least weekly: 102 (40.5%).

The frequencies for Muslim minority countries were reported as never: 30 (26.79%), less than weekly: 27 (24.11%), at least weekly: 55 (49.11%); while the frequencies for Muslim majority countries were reported as never: 60 (42.86%), less than weekly: 33 (23.57%), at least weekly: 48 (33.57%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states used the Internet to participate in religious lessons ( $\chi 2 = 8.218$ , p < .05); gamma analysis indicated a moderate positive relationship ( $\gamma = .295$ , p < .05).

### 3.c.viii Listen to Anāshīd or Adhkār

Respondents reported the frequency of their using the Internet to listen to *anāshīd* or *adhkār* as never: 124 (49.2%), less than weekly: 45 (17.9%), at least weekly: 83 (32.9%).

The frequencies for Muslim minority countries were reported as never: 47 (41.96%), less than weekly: 21 (18.75%), at least weekly: 44 (39.29%); while the frequencies for Muslim majority countries were reported as never: 77 (55.00%), less than weekly: 24 (17.14%), at least weekly: 39 (27.86%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states used the Internet to listen to  $an\bar{a}sh\bar{i}d$  and  $adhk\bar{a}r$  ( $\gamma$  = -.232, p < .05).

### 3.c.ix Visit Websites of Religious Scholars or Institutions

Respondents reported the frequency of their usage of the Internet to visit websites of scholars or institutes as never: 86 (34.1%), less than weekly: 71 (28.2%), at least weekly: 95 (37.7%), daily: 28 (11.1%).

The frequencies for Muslim minority countries were reported as never: 28 (25.00%), less than weekly: 32 (28.57%), at least weekly: 52 (46.43%); while the frequencies for Muslim majority countries were reported as never: 58 (41.43%), less than weekly: 39 (27.86%), at least weekly: 43 (30.71%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states used the Internet to visit websites of religious scholars or institutions ( $\chi 2 = 9.008$ , p < .05); gamma analysis indicated a moderate positive relationship ( $\gamma = -.305$ , p < .005).

### 3.c.x Ask Questions of Scholars or Institutions

Respondents reported the frequency of their usage of the Internet to ask questions of scholars or institutes as never: 198 (78.6%), less than weekly: 33 (13.1%), at least weekly: 21 (8.3%).

The frequencies for Muslim minority countries were reported as never: 89 (79.46%), less than weekly: 13 (11.61%), at least weekly: 10 (8.93%); while the frequencies for Muslim majority countries were reported as never: 109 (77.86%), less than weekly: 20 (14.29%), at least weekly: 11 (7.86%).

Chi-squared and gamma analysis did not indicate any statistically significant associations.

### 3.c.xi Using Discussion Boards for Religious Topics

Respondents reported the frequency of their use of discussion boards for religious topics as never: 199 (79.0%), less than weekly: 26 (10.3%), at least weekly: 27 (10.7%).

The frequencies for Muslim minority countries were reported as never: 82 (73.21%), less than weekly: 12 (10.71%), at least weekly: 18 (16.07%); while the frequencies for Muslim majority countries were reported as never: 117 (83.57%), less than weekly: 14 (10.00%), at least weekly: 19 (13.57%).

Chi-squared analysis indicated a statistically significant difference between the frequencies with which residents in Muslim minority states and Muslim majority states used discussion boards for religious topics ( $\chi_2 = 6.275$ , p <= .05); gamma analysis indicated a moderate negative relationship ( $\gamma = -.307$ , p < .05).

### 3.c.xii Teach or Do Da'wa

Respondents reported the frequency of their usage of the Internet to teach or do *da'wa* as never: 198 (78.6%), less than weekly: 27 (10.7%), at least weekly: 27 (10.7%).

The frequencies for Muslim minority countries were reported as never: 88 (78.57%), less than weekly: 10 (8.93%), at least weekly: 14 (12.50%); while the frequencies for Muslim majority countries were reported as never: 110 (78.57%), less than weekly: 17 (12.14%), at least weekly: 13 (9.29%).

Chi-squared and gamma analysis did not indicate any statistically significant associations.

#### **DISCUSSION**

Overall, respondents consulted the following informational services when seeking answers to religious questions during the past month: Internet (82.5%), friends (65.1%), books (57.1%), attending religious lessons (36.9%), local scholar or imam (31.7%), TV (27%), radio (15%), local religious institutions (11.9%), a teacher at school (11.1%), and through other means (23.4%).

Respondents' use of the Internet over the past month included: Facebook (71.4%), visiting websites of scholars or religious institutions (65.9%), learning about Islam (64.3%), participating in online lessons (64.3%), blogs (55.9%), listening to  $an\bar{a}sh\bar{t}d$  and  $adhk\bar{a}r$  (50.8%), Twitter (48.8%), learning Qur'an or hadith (47.6%), asking questions of religious scholars or institutions (21.4%), teaching or doing da 'wa (21.4%), and using religious discussion forums (21%).

The analysis earlier in this study indicated that being resident in either a Muslim minority or Muslim majority state does influence the types of sources Muslims use for answering questions about religion, and also influences the purposes for which they use the Internet. In general, the analysis supports rejecting the null hypothesis presented earlier and affirming that whether one is in a Muslim minority or Muslim majority state is associated with the informational sources Muslims use to find answers to questions on religion, and how they use the Internet for religious purposes. However, the more interesting questions are which behaviors are affected and why.

Although the analysis indicated statistically significant associations between being resident in a Muslim minority or majority state and the behaviors mentioned on the survey, it does not establish causality nor explain why this is so. Knowledge of the context within which the behavior occurs may shed light on possible explanations.

Statistical analysis indicated that there were statistically significant differences between the informational sources consulted when seeking answers to religious questions used by respondents in Muslim majority states and in Muslim minority states. Respondents in Muslim majority states make more frequent usage of friends and family, TV, radio, and teachers at school. In contrast, their counterparts in Muslim minority states more frequently seek answers to religious questions by attending religious lessons. Additionally, respondents in Muslim minority states use the Internet more frequently to participate in online lessons, visit websites of religious scholars or institutions, and use online discussion forums for religious discussions.

One explanation for these differences is that respondents in Muslim majority states have a wide variety of close-proximity religious sources and services that reduce their need to use the Internet for religious purposes. Those same options are less available or altogether absent to Muslims living in Muslim minority countries. For example, MENA countries have religious TV and radio programming (both local and via satellite) that are less accessible to

Muslims elsewhere. Their physical social networks are also more likely to contain a larger percentage of Muslims with whom they meet each day. Muslims in MENA use these media and physical social networks because they exist and are convenient, freeing them from the need to attend lessons in real life or online, submit questions to scholars online, or otherwise obtain these types of information online. Additionally, local information is likely to be perceived as more trustworthy than that found on the Internet.

In contrast to Muslims in MENA, those in Muslim minority states do not have these same media opportunities, nor do they have the same physical social networks available to Muslims in MENA. This absence is an impetus for them to seek the information online by participating in online lessons, submitting questions to scholars and institutes, and the like.

In summary, local religious offerings in individual communities in minority Muslim sates do not supply the same range and quantity of offerings found in Muslim majority countries, leading local consumers to seek information elsewhere through the Internet.

Additionally, the analysis indicated also that there was a moderate association between being in a Muslim majority state and higher frequency in usage of Facebook and Twitter.

In spite of being an exploratory study of how Muslims use the Internet for religious purposes, the findings do offer tentative advice for those interested in providing Muslim religious services:

- Social media platforms, such as Twitter and Facebook, are popular, though slightly more so with Muslim majority states. This suggests that providers of religious services in Muslim majority countries should take seriously the possibility of incorporating social media into their service delivery plans. It should not be used merely as a new channel to push information to stakeholders, but should instead be used to engage the stakeholders in two-way conversation.
- Although TV and radio are currently among the preferred sources of religious answers in Muslim majority states, local service providers should be aware that the Internet and books are more popular media. Additionally, they should consider the popularity of social media with youth and the fact that their populations are young. Today's social media services may have already replaced TV and radio for the next generation.
- Religion is a transnational good. Many of its benefits and services can be delivered through the Internet's global communication network. More research needs to be done to develop strategies for delivering religious goods and to a wider audience. But this raises several questions about who is responsible for service provision, who pays, and how it is to be regulated. These and other questions need to be addressed, especially by government religious institutes offering their local services to a global market.
- The Internet is already used to publish fatwas, non-binding legal rulings where Islamic law is applied to highly-contextualized individual problems. Publishing fatwas to the general public runs the risk that highly-contextualized rulings will be applied by others

outside their original context. These risks are increased when one takes into account the potential for fatwa consumers to come from other parts of the globe where circumstances differ significantly from the fatwa's originating locality. Providers of Islamic legal opinions need to take into account differences between private application, local public application, and global application. In the case of public application, fatwas need to be treated as policy documents.

Lagging use of Internet services for religious purposes should not be taken as an indication that the institutes are failing or the services are no longer needed. Many brick and mortar businesses have not incorporated e-commerce into their business model and managed to thrive.

Conclusion: The goal of this study was to examine Muslim usage of the Internet and the differences between Muslim majority and minority states. A survey instrument was administered to gather data on the frequency with which Muslims sought answers to religious questions from different sources (both on- and offline) and the frequency with which they used different Internet-based services for religious purposes, all over the past month. Although the nature of the study was exploratory and of limited duration and scope, the findings indicate that usage patterns do differ between Muslim majority and Muslim minority states for some behaviors, though the causes are not clear. Nonetheless, the findings do suggest tentative advice for providers of religious services, whether they be institutions responsible for providing religious services to local Muslim stakeholders or offering services to the global Muslim community.

And Allah Most High knows best.

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