

## **An Introductory Instructional Module on Twitter as a Communication Tool for University Students**

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**Abstract:** This project sought to implement an instructional module that can serve as an orientation for new users of Twitter. The module covers important aspects of Twitter such as explaining what Twitter is, how Twitter works, how users can get started using it, and tips beginners should know. The module was created as an interactive PDF so that users would be engaged by animations similar to those in Powerpoint presentations, be able to answer questions that mimicked Flash, and easily distributed across multiple computers. The module was tested by participants and its effectiveness evaluated in a survey completed by participants after they finished the module. At the heart of the project was the thought that having a better understanding of Twitter before using it would help new users with adoption.

### **Introduction**

Twitter is a microblogging web application where users are prompted to answer the company's original question of, "What are you doing," in 140 characters or less. It has quickly developed into a social and communication network where users post updates that are visible to the world and are delivered to individuals who follow them. Updates that users post may also include rich content such as links to photos, videos, music, and webpages that the author finds interesting enough to share.

As Twitter has grown, its resourcefulness as a communication tool has become evident. News breaks on Twitter with both China's Sichuan earthquake in May 2008 (Emmett, 2009) and the US Airways Hudson River crash in January 2009 being first reported via the online service (Sangani, 2009). Not only is news being reported via Twitter, but it also helps to disseminate information on the ground during crises and natural disasters. A recent case was last year during the Iran elections as Iranians used Twitter to protest their outrage of the election results.

With a number of meaningful uses, Twitter can be a difficult application to figure out. With 60% of new users who sign up not coming back the following month (Farhi, 2009), one has to wonder

why people are not staying around if there are a lot of positives to using Twitter. Is this exodus the result of these people seeing no value in the web application? Or could it be because people hear about it, but don't know what it is entirely about when they sign up? More research in this area is warranted to answer these questions.

## **Review of the Literature**

Twitter has grown in popularity since its creation in 2006, and is today utilized by news media, businesses, organizations, government, celebrities, and millions of people around the world. With such widespread adoption, it makes understanding of this application critical. By utilizing cell phones, the mobile web, and its use on computers; users can send and receive updates almost anywhere (7 Things, 2007). What makes Twitter intriguing is that it builds an online community between users who follow one another and update frequently (7 Things, 2009).

While some may see 140 characters as limiting, some argue that this is Twitter's greatest asset as it forces people to get to the point, be concise, and focus on the message (Jacques, 2009). At face value there's something to be said about brevity. Often times constraints provide creative solutions for users. In this case some of the direct benefits of limiting yourself to 140 characters are that you need to take your time when you craft updates so as to not have any typos. It also demands that you be efficient and use keywords, while not bogging the message down with unnecessary words (Jacques, 2009).

While a number of people, groups, and organizations are utilizing Twitter in many different and unique ways, what is important to realize is how it is connecting people. An important aspect to Twitter is the ambient awareness that the application gives users. As short pointed status updates pour in, it paints a picture of those that you follow (Johnson, 2009). A common practice on Twitter is to share interesting, fun, or informative information from the web. This important practice points people to possible new information and resources as a user's followers post links to stories, articles, blogs, images, video, or anything that is posted on the online. By understanding some of these aspects, the hope is that a new user can make Twitter work for them sooner.

Twitter has seen tremendous growth since it was created as a result of widespread use by mainstream media, businesses, and various organizations (Farhi, 2009). What is drawing people to Twitter? What are they utilizing it for? Is it useful and worthwhile? These are all questions a user should think about before they get started. In the end, it all depends on how the user "uses" it (Farhi, 2009).

## **Purpose**

The project hoped to answer some of these questions with the creation of an instructional module for users to go through before they use the service. The purpose of this instructional module was to educate university students on the value and usefulness of Twitter by providing them with a better understanding of microblogging and its use as a communication tool. The hope is that with a better understanding of Twitter before users start using it, this will better acclimate them to its use and make adoption possible.

## **Methodology**

The module itself was geared towards new users as a way to introduce them to Twitter. It provided users with an understanding of what Twitter is, what it does, and how to use it. The format of an interactive PDF was decided on so that users could benefit from taking the module on almost any platform, and if needed, not be tied to the Internet. A secondary goal for the study was to see if user understanding of the application could lead to better adoption.

### *Module Development and Design*

After reviewing the literature, introductory information for the learners was flagged for use in the instructional module. This information was then grouped together in similar categories and from these groupings, the framework of the module started to develop. Four basic questions emerged and it was these four questions that would compose the different sections of the module:

- (1) What is Twitter? - This section provided a basic and broad introduction to Twitter.
- (2) How Does Twitter Work? - This section talked about the mechanics of Twitter such as posting updates, the mechanism of following people, and the inherent openness that Twitter provides.
- (3) How Do I Use Twitter? - This section covered using Twitter on cell phones and computers, things to consider when following people, sharing media, and posting links to other information.
- (4) What Should I Know? - This section covered lingo and terms used by Twitter users as well as good etiquette that is important to know.

For each section, information was presented to the learner along with screenshots and other relevant images of concepts being covered. At the end of each section, a series of questions were presented to test to knowledge of the learner on the section just covered. These questions were multiple-choice and provided some ancillary feedback when learners answered questions incorrectly.

The module was an interactive PDF that was designed using Adobe InDesign in conjunction with Adobe Acrobat Pro, Photoshop, and Illustrator. The visual look of the module adapted elements from the Twitter website for three distinct purposes: 1) to provide a look and feel similar to that of the Twitter website, 2) to be visual appealing to users to keep them engaged, and 3) to provide a functional way of breaking up information into smaller and more learnable chunks.

### *Instruments*

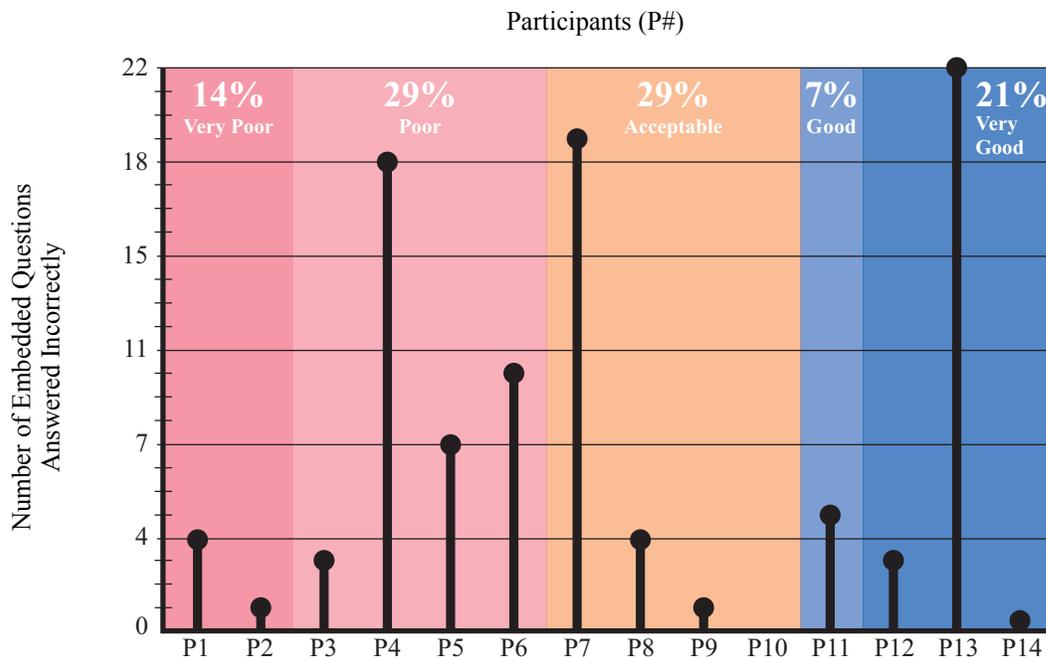
The module was distributed electronically to volunteer participants to test. In the survey that accompanied the module, a series of quantitative and qualitative questions were posed to participants to gauge the effectiveness of the module. Questions posed to participants asked their thoughts on the difficulty of the module, whether content and questions were understandable or not, about the length and design of the module, did participants find benefit in the module, and if they believed this module could help educate other new users. Detailed responses from participants sought to find what parts of the module worked well, what could be done to improve the module, the participant's overall experience, and any additional feedback they may have had.

### **Findings & Results**

Participants answered a post module survey that asked a number of questions regarding their experience with going through the module. The survey was broken up into three sections: the first, gathering background information on the participant such as computer, internet, and twitter use; the second, asking likert scale questions about the module itself; and section three, posing general opened questions. In total, fourteen participants tested the module and provided survey feedback.

As background for this study, two questions were asked to see how much experience participants had with using a computer and the Internet. Almost all participants responded with "very good" computer and Internet use with only one person responding that their Internet use was "good." The final question of section one asked users to rate their use/understanding of Twitter as: 'very good,' 'good,' 'acceptable,' 'poor,' and 'very poor.' Three participants responded indicating their Twitter use was 'very good,' one responded with 'good,' four answered with 'acceptable,' another four answered with 'poor,' and two participants responding with 'very poor' (Figure 1).

In section two, participants were asked to make one selection out of five choices on a likert scale: 'strongly agree,' 'agree,' 'disagree,' 'strongly disagree,' 'unsure.' A majority of participants thought that the difficulty of the module was adequate (71% strongly agree, 21% agree, 7% unsure) and the length of the module adequate (36% strongly agree, 57% agree, disagree 7%). Participants responded by saying that the questions and scenarios presented in the module were



**Figure 1.** Participant answers to embedded questions grouped according to Twitter use.

both meaningful (57% strongly agree, 43% agree) and understandable (50% strongly agree, 50% agree), however one person (7%) disagreed that the instructions provided were clear and easy to understand while the rest did agree (29% strongly agree, 64% agree).

The tracking of responses that participants gave to embedded questions within the module was not possible due to formatting limitations with Adobe Acrobat as well as logistical constraints of participants not being on the same network. As an alternative, one specific question in the survey asked participants how many questions they answered incorrectly on the first guess as a way of gauging how well they performed during the module. Out of a total of 22 embedded questions within the module, eight participants (57% - P1, P2, P3, P8, P9, P11, P12, P14) responded to five questions or less incorrectly and five participants (36% - P4, P5, P6, P7, P13) responding to more than five questions incorrectly with one participant (7% - P10) that did not respond (Figure 1).

All participants felt that the module was effective in giving them the basics of Twitter (57% strongly agree, 43% agree) and most felt they now have a better understanding of Twitter than they did before the module (64% strongly agree, 29% agree). Again, all participants agreed (71% strongly agree, 29% agree) responded that the module could be used as a tool to help educate new users of Twitter. On the whole a majority (43% strongly agree, 43% agree) of the participants felt that since they now understood Twitter they would be more inclined to use it in

the future with one participant (7%) disagreeing and another unsure.

In the last section, questions were open-ended and participants could leave whatever written feedback they chose to. When asked what worked well in the guide, most participants felt that the design and layout of the module was very well done while the second most common thing mentioned was that the amount of content and material presented was just right.

When posed the question on how the module could be improved, there were a wide range of answers. However, the three points that were mentioned the most by various participants were: 1) navigation issues with the advancing of pages/slides of the module. This was due to the inherent nature of Adobe Reader's default setting of having a mouse click anywhere on a slide, advance to the next one (with the exception of hot spots for navigation buttons and Q & A buttons); 2) grammatical or wording issues that contributed to comprehension problems; 3) design elements that posed a distraction. Table 1 gives a more detailed breakdown of the categories mentioned with categories only being added if an issue was mentioned more than one time.

Area For Improvement	Mentions By Users
Navigation	4
Grammar/Wording	4
Design Elements	3
Web/Flash Based	2
Include Video	2

**Table 1.** Open ended responses from participants on improving the module.

## Conclusions

As a whole the data suggests that the module was well received and that it could be a useful tool in introducing new users to Twitter. The main contributing factors to this seem to be the layout and design of the module and the content that was presented. Many participants noted that they liked the design of the module as it was visually appealing and seemed to fit with the context of Twitter. This was done purposefully as a secondary way of relating the module and content being presented to imitate the style and look of Twitter. The design also allowed for breaking up information into chunks that could be more readily processed by participants and not be text heavy.

The primary purpose of the module was to provide enough introductory information about Twitter to help new users to understand and use it. With all participants agreeing or strongly agreeing that the length of the module is adequate, it would seem that the right amount of information was covered with several users commenting that the information that was presented was very worthwhile to know. With these two factors in mind as well other positive feedback from participants, on the surface the module appears to have accomplished its primary purpose of introducing new users to Twitter.

An area where there were some unexpected results was the relationship between participant Twitter use and the number of embedded questions they answered incorrectly (Figure 1). A natural inference would be that someone with more Twitter use would be better equipped to answer introductory questions on how to use Twitter, while someone with not as much experience would have more incorrect responses than someone with more experience using Twitter. However from the data collected this does not seem to be the case. If done again, additional measures would need to be put into place to better gauge the knowledge participants gained.

From looking at the varying amounts of embedded questions answered incorrectly by participants (Figure 1), there is no clear relationship between how much experience someone has had using Twitter and how well they answered the embedded questions. You have participants (P1-P3) with low Twitter experience scoring fairly well and a participant (P13) with a large amount of Twitter experience scoring poorly. Take away these four data points and the expected trend of more experienced users scoring well and less experienced users scoring lower would be present. Meanwhile users with 'acceptable' or average use (P7-P10) demonstrated no clear pattern in the amount of incorrectly answered embedded questions they had (Figure 1).

A number of factors could have contributed to this unexpected result. For participants with 'very poor' or 'poor' user experience with Twitter, perhaps the module did achieve goal of educating them. Or perhaps there was misreading of embedded questions or the survey question which could have skewed the results. Four participants did mention that they thought there were some issues with grammar and wording (Table 1). Another contributing factor could be the small sample size. Perhaps with a larger scale survey, rewritten questions, or more in-depth questions, trends would emerge.

In hindsight and with the feedback provided by participants in Table 1, a number of revisions for future versions of the module would be made to ensure that the module is more clearly understandable and engaging. Fixes to navigation would be to include opening pages for each section which could also allow for participants to jump to a certain section rather than having

them scroll one page at a time. One technical quirk with presentation PDFs is that by clicking on a slide, you advance the module. This navigation issue would also be corrected for future version.

Another improvement for the module would be to have web based version as well as have videos to demonstrate certain information covered. Due to technical limitations such as inexperience in web building and embedding videos in PDFs, the module's first incarnation was influenced by these limitations.

An underlying question throughout the entire study was to see if having a better understanding of Twitter before someone starts using it would make adoption of Twitter more likely. To try and answer this a key question was asked of participants to see if they would be more inclined to use Twitter in the future, with 90% of participants agreeing that they would. While on the surface this would seem to answer the question, due to the small nature of this study this single question does not provide a solid enough base to make this conclusion. Having more participants answer this question would yield more accurate results as well as having more time to later follow up with these participants to see how things turned out would also provide an additional level of support for an answer to the question, but this is another study for another time. For now the responses collected from the post module surveys suggests that this underlying question seems to have been answered.

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