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Seven Characteristics of a Successful Virtual Volunteering Platform

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Abstract: People volunteer their time and energy to projects for many different reasons. For some people, the reason may be that family members are involved in the project such as parents volunteering at their children's schools or parents becoming Scout leaders. For other people, there may be a religious component where people donate their time and energy to bettering humanity by assisting in soup kitchens and hospices. There is another group of potential volunteers, however, who would like to assist in projects but do not have the time or the means to travel and physically donate their time on location. In such cases, *virtual volunteering* is a possible way for projects to harness the goodwill of prospective volunteers without the overheads of the travel to locations. This paper describes a project where people could become *virtual tutors* to assist children with their mathematics homework using a combination of Internet technologies and cell phone technologies. From this *virtual tutoring* project, seven characteristics were found to be necessary for platforms which support *virtual tutoring* to retain their volunteers. It is believed that these seven characteristics apply in general to *virtual volunteering* and would assist any *virtual volunteer* organisation in retaining their volunteers.

Keywords: Virtual Volunteering, Dr Math, C³TO

1 Introduction

Volunteers give their time freely for the benefit of others [1]. Parents often volunteer at their children's schools by helping on the playground, in the library, or on the sports fields. Members of religious organisations often volunteer at hospitals, soup kitchens, hospices, and even prisons. People with a sense of civic duty often volunteer to build houses for the poor or travel to assist at the sites of natural disasters such as earthquakes and hurricanes. Enthusiasts volunteer to assist at specific gatherings such as aircraft enthusiasts assisting at air shows or car enthusiasts assisting at race tracks.

As the Internet grows, the concept of *virtual volunteering* has emerged. Many people would like to volunteer their time but because of job and family constraints or possibly because of physical disabilities, these people are not able to take time out of their busy day to travel to a specific location or to an organisation to volunteer. These people search for volunteer opportunities that they can do from their home computer or office computer. In addition, because of the mobile nature of people (often moving from city to city, if not country to country), potential volunteers often have emotional ties to a group of people who are not geographically nearby. In all these cases, *virtual volunteering* is a mechanism where people can volunteer to help others by using their personal computer system [2].

There have been a number of extremely successful implementations of *virtual volunteering*.

Project Gutenberg uses a worldwide crew of volunteers to compile a digital library of books whose copyrights have expired. Some volunteers type in the text of the books. Other volunteers proofread books [3]. According to the Project Gutenberg's website,

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volunteers are also needed to procure eligible paper books, burn CDs and DVDs for people who do not have Internet access, and promote the project [4].

The LibriVox project is another good example of *virtual volunteering.* The objective of the LibriVox project is to provide audio formats to books already in the public domain. LibriVox welcomes volunteers from around the globe to record books, plays, and poetry [5]. Volunteers read books, plays, poetry, and other documents aloud to make audio recordings.

Another example of virtual volunteering is the SETI@Home. Although this project does not necessarily allow volunteers to donate their personal time, volunteers do donate use of their personal computers in the search for extraterrestrial intelligence [6].

"Dr Math" is a project that was started in January 2007, at the Meraka Institute. It links up primary and secondary school pupils to *volunteer tutors* in mathematics. The school pupils use chat protocols such as MXit on their cell phones. The volunteer tutors use traditional computer workstations connected to the Internet [7, 8].

The paper will itemize seven important characteristics that Internet platforms need to provide in order to maintain their *virtual tutor* base in a sustainable manner. It is believed that these seven characteristics also apply in general to a *virtual volunteer* base.

2 Overview of "Dr Math"

The "Dr Math" project was initiated in January 2007, and has been running for nearly four years. From a technical point of view, the "Dr Math" project allows primary and secondary school pupils to use a chat client on their cell phones. The "Dr Math" platform links the pupils up to tutors (who were using traditional internet based workstations) who are qualified to answer their questions. The technologies behind "Dr Math" and the various features of the "Dr Math" platform have been previously documented [9].

During these four years, the researchers have experimented with a number of features in order to facilitate easy *virtual tutoring.* The platform has evolved from a simple chat client to a sophisticated platform currently with over 20,000 registered pupils being supported by approximately one hundred tutors. The platform has evolved to such an extent that more than just mathematics is being tutored. Currently seven school subjects are covered. The underlying platform on which "Dr Math" is executing is C³TO (Chatter Call Centre/Tutoring Online) [10].

School pupils will always need help with mathematics. It was not necessary to advertise in order to have 20,000 pupils asking questions about mathematics. The pupils eagerly shared the contact details of "Dr Math" with their friends.

It was more difficult, however, to find the tutors to assist the pupils. This paper is not about how to originally source the volunteers. This paper is about how to retain the *virtual tutors* once they have started volunteering. What characteristics does the C³TO platform and the "Dr Math" project provide to help sustain this base of volunteers? What characteristics are lacking in the C³TO platform or the "Dr Math" project which would assist in retaining the volunteers?

It is believed that the characteristics found in C³TO which encourage the retention of *virtual tutors* would also apply to any *virtual volunteer*.

"Dr Math" has been operational for nearly four years. The platform has been modified, augmented, enhanced, and completely rewritten. The "Dr Math" researchers have learned many things over these four years.

There are seven important characteristics of a *virtual tutoring* platform can be summarised:

1. Adequate technology
2. Ethics, Security, and Legalities
3. Structure of responsibility and authority

4. Easy online registration
5. Easy scheduling
6. Sense of community
7. Say “thank you”

Each of these topics will be discussed in separate sections.

3 Adequate Technology

There must be adequate technology to support your expected volunteer base. If your project involves any type of social networking, it is important to remember the user base will only increase [11] and that your platform must be scalable. This was one aspect of the original “Dr Math” project where the researchers had a learning curve. The original implementation of “Dr Math” expected no more than twenty to thirty pupils to ask for help with their mathematics homework. As such, only one tutor needed to be available at any one time. As the history of the “Dr Math” project shows, thousands of pupils wanted help with their mathematics homework and the original “Dr Math” platform did not scale. A complete rewrite of “Dr Math” resulted in the new C³TO platform, which was specifically designed with scalability in mind.

The specific technology used in the “Dr Math”/C³TO platform is not relevant to this discussion of retaining volunteers; however, an overview of the technology used in that project can be found in a number of documents [9].

It is easy to make the mistake of assuming that because *virtual tutors* and *virtual volunteers* do not require desks, chairs, computers, and internet connectivity from your organisation, that they also do not require bandwidth (or connectivity speed). This can be a fatal mistake for your project. While it is true that *virtual volunteers* provide their own workstation, workplace and Internet connectivity, the only presence that the *virtual volunteers* have with your project or your organisation is provided via your organisation's bandwidth. If you want them to be active in your organisation, they must have high enough bandwidth to support the activity.

In order to attract and retain a crew of *virtual volunteers,* any software requirements for the *virtual volunteers'* computers must be kept to a minimum or, at the very least, clearly itemised. In addition, your project must not abuse the *virtual volunteers'* personal Internet connection by requiring excessive downloads of large files or incessant polling.

4 Ethics, Security and Legalities

It is important that your platform supports the ethics of your organisation. Data security must be taken seriously. All legal requirements must be adhered to. Not only will this assist your project in general, it will assure the *virtual volunteers* that they are also being protected.

In the specific case of “Dr Math”, pupils were accessing “Dr Math” using MXit on their cell phones. MXit is a chat protocol that uses Internet technologies over cell phones (instead of SMS or MMS technologies). A superficial search at Google with the keywords “mxit kidnap” or “mxit predator” will provide a plethora of articles arguing that MXit is not a safe forum for teenagers.

In order to counter that idea and to ensure that pupils were safe talking with “Dr Math”, a code of conduct was drafted up and all *virtual tutors* were required to sign the code of conduct. This code of conduct clearly stated that tutors were not allowed to discuss illegal activities such as drugs. The code of conduct clearly stated that tutors were only allowed to discuss mathematics (or other school related subjects). In addition, the code of conduct clarified that *virtual tutors* were not counsellors and were not allowed to counsel pupils on

personal issues such as sex, relationships, pregnancy, etc. On this last topic, it is important to note that although a virtual counselling system is a good idea, the *virtual tutors* which were recruited for "Dr Math" were primarily engineering and science university students which no counselling experience.

All textual conversations were recorded by the platform and spot checked by administrators. Research is ongoing into specifically attempting to spot topics in the conversations.

5 Structure of Responsibility and Authority

Non-profit organisations are high consumers of volunteers. Few people realise that the non-profit sector in the United States is by far America's largest "employer" with over 80 million Americans donating nearly five hours per week as a volunteer at a non-profit organisation [7]. This is equal to ten million full time jobs.

The platform that supports your virtual volunteering network must supply the structure of responsibility and authority that your organisation maintains.

In the case of the "Dr Math" project hosted on the C³TO platform, administrators maintained the entire *virtual tutoring* platform. Administrators appointed experts in specific domain areas. These experts managed the subject domain. For example, in the case of "Dr Math", experts created quizes, competitions, and games in the topic of mathematics. In addition, experts managed the tutors in that specific subject domain. This particular case is a hierarchical structure. However, if your organisation supported a flatter structure, then the *virtual volunteering* must support that structure.

6 Easy Online Registration

It must be easy for a *virtual volunteer* to register on the platform and start volunteering. A potential *virtual volunteer* must be able to register on the platform and then receive all the documentation required for signature. The potential volunteer can then print the documents, sign them, and then either upload them back to the platform. Depending on the structure of responsibility and authority, administrators or experts can review the documentation and authorise the potential volunteer to be a *virtual volunteer*. This is a type of workflow system that is present in most commercial operations.

In this respect, the "Dr Math"/C³TO platform partially satisfied this requirement. In the case of the "Dr Math" tutoring system hosted on the C³TO platform, *virtual tutors* could, indeed, register on the platform. However, at the time of writing this paper, the forms that the *virtual tutors* needed to sign in order to be authorised to become a tutor (such as the Code of Conduct) were emailed back and forth. This created a gap where documents could get lost and time was wasted.

Future releases of the C³TO will cater for this, and we hope to report positively in this respect at the presentation of this paper.

7 Easy Scheduling

In some volunteering opportunities (virtual or actual), actual times may or may not be important. For example, if a parent is volunteering at his or her child's school as a playground monitor, then the parent is expected to be present at a specific time. On the other hand, if a citizen is volunteering to pick up litter alongside the road, the specific time is not important as long as the litter is picked up.

The same is true in *virtual volunteering*. Some *virtual volunteering* opportunities have time constraints and some do not. For example, in the case of the Gutenberg project, it makes no difference to the project if a *virtual volunteer* proofreads a book in the morning or in the afternoon.

However, in the case of "Dr Math" *virtual tutoring* and other *virtual volunteering* opportunities where people must link up with other people, scheduling is important. In this respect, the C³TO researchers have learned a lot.

During early implementations of "Dr Math", the organisers attempted to arrange the volunteers in order to cover all times slots when pupils may need help with their mathematics homework. This was stressful on the side of the organisers and caused friction with the some of the volunteer tutors.

Currently, the C³TO platform allows the *virtual tutors* to advertise when they expect to be available. For example, one *virtual tutor* may say that he or she will be available Mondays from 14:00 until 16:00. Another *virtual tutor* may say that he or she will be available Tuesdays from 15:00 until 18:00. And a third *virtual tutor* may say that he or she will be available on Wednesdays from 16:00 until 20:00. The platform then generates an overall schedule of tutors, which is accessible to the pupils.

8 Sense of Community

In Section 5 above, non-profit organisations were described as a type of "employer". Assuming that to be true, then *virtual volunteering* can be compared to a type of *telecommuting* where employees work from home or work via the internet. The *virtual volunteers* may be considered to be a virtual team working towards a common end. Many of the same social issues that arise in telecommuting situations also arise in *virtual volunteering* situations.

Common social concerns with telecommuting or virtual teams include [12]:

1. Building trust between team members
2. Overcoming feelings of isolation
3. Interpersonal relationships between team members
4. Recognition of performance

For example, can virtual team members communicate calmly between themselves if there is a disagreement or do they revert to "flame wars" with email messages written in all capital letters? Can virtual team members receive recognition for their hard work?

These concerns are also valid in *virtual volunteering* situations.

In the case of the "Dr Math" *virtual tutoring* project, the organisers attempted to alleviate some of these concerns by maintaining an active mailing list and encouraging *virtual tutors* to communicate with each other. The administrators regularly posted interesting snippets from the tutoring log files. They encouraged discussions on difficult topics, which tutors had stumbled over.

In future releases of C³TO, plans are being made to allow more tutor to tutor communication through the actual tutoring platform so that if a tutor is asked a question which he or she is struggling to answer, then the tutor could ask other tutors for assistance.

9 Say "Thank You"

As with any volunteering project (physical or virtual), it is important to say "Thank You". In the case of the "Dr Math" tutoring project, administrators regularly sent out email to tutors thanking them for their contributions. In addition, the C³TO platform allowed the administrators to easily view the actual times a volunteer had assisted. If a volunteer had been absent for a while, an administrator would write an email thanking the volunteer for the contribution they had already made, commenting about how much they had been appreciated, and asking when they would help again in the future. If administrators found cute or funny examples of tutoring while viewing the log files for security reasons, they

emailed these to the tutors. In addition, the administrators found examples of pupils thanking tutors, these thank-you messages were forwarded to all the tutors.

In the case of the LibriVox *virtual volunteering* platform, the platform allows people who had downloaded audio files, listened to them and enjoyed them to specifically thank the people who had read the book or story aloud.

If more funding becomes available for the "Dr Math" project, the organisers have plans to also provide the volunteers with tangible tokens of appreciation in the form of T-shirts or base ball caps.

10 Business Benefits

There are many examples of successful volunteer organisations in the world. The Scouting organisation relies on volunteer Scout leaders [13]. Many churches rely on volunteers to maintain their social outreach programs. Many aspects of the Red Cross [14], Doctors Without Borders [15], the Salvation Army [16], Houses for Humanity, [17] are operated by volunteers.

Virtual volunteering allows organisations to tap a supply of potential volunteers who do not have the time or the means to physically travel to the location of the volunteer organisation. In the case of the "Dr Math" project, some of these examples include:

1. University students who did not have driver's licenses and could not travel to primary or secondary schools to tutor.
2. People who were afraid to travel into "townships" to tutor (The term "township" in South Africa refers to a traditionally African sub-urban area which is densely populated, often poorly electrified containing shacks or small houses which often do not have indoor plumbing.)
3. South Africans who were living abroad and wanted to assist in the upliftment of youth in South Africa.
4. Professionals who wanted to donate small amounts of time for specific campaigns such as Mandela Day in a convenient manner.
5. Parents with young children at home who wanted to donate their time to tutor but could not afford babysitting costs or did not wish to leave their children with non-family caretakers.

Other examples which did not happen during the "Dr Math" project, but could be supported by the C³TO platform include:

1. European tutors assisting pupils in ex-colonial African countries with the same language. For example Portuguese speaking tutors in Portugal assisting pupils in Mozambique or Angola.
2. Outreach programs from universities in the First World assisting universities in the Third World.
3. Enabling language tuition by linking up pupils learning a second language with a native speaker of that language (NB: care must be taken with spelling in this case. MXit users use an abbreviated form of spelling omitting most vowels and substituting numbers and symbols for some sounds).
4. Assisting pupils in war torn areas who are afraid to leave the safety of their homes because of a real potential danger of being shot.

11 Conclusions

Virtual volunteering is emerging as a type of volunteering where the volunteer donates his or her time via the Internet. This paper has highlighted seven important characteristics of a

virtual tutoring platform that supported the "Dr Math" tutoring system. These seven characteristics can be summarised:

1. Adequate technology – The platform must have ample bandwidth and be scalable to support the growing volunteer base. In addition, the platform must not abuse the Internet connectivity of the volunteer.
2. Ethics, Security, and Legalities – The platform must support the ethics of the organisation. Security measures must be in place to protect both the volunteer and the people who are being assisted. All legal requirements must be adhered to by the platform.
3. Structure of Responsibility and Authority – The platform must support the structure of responsibility and authority of the organisation or project. This may be a hierarchical structure or may be a flatter, interlaced structure. In either case, the structure must be supported by the platform.
4. Easy Online Registration – The platform must allow potential volunteers to easily register online. All documentation must be easily downloaded from the platform. The signed documents must be easily uploaded to the platform using a type of workflow operation. Platform administrators must be able to easily upgrade potential volunteers to full volunteers.
5. Easy Scheduling – The platform must support easy scheduling of the volunteers. If the project is one where *virtual volunteers* must be online and available at the same time the people being assisted, volunteers must be able to create their own time schedules.
6. Sense of Community – The platform must support a sense of community. *Virtual volunteers* must be able to communicate with each other. Additional platforms such as mailing lists and bulletin boards can enhance the project.
7. Say "Thank You" - The platform must allow the organisers to easily thank the volunteers for their time and energy.

These seven characteristics of a successful *virtual tutoring* platform can be generalised to a successful *virtual volunteering* platform.

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