Web Based Support for Citizens’ Groups

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ABSTRACT

In recent years, the growing use of information and communication technology (ICT) is expected in citizens’ groups (NPOs, voluntary organizations). But the usage of the tools that can promote online communications in citizens’ groups has not been widely accepted, in comparison with enterprises or educational institutions. In this paper, we aim to clarify the current utilization of online communication tools, and discuss how to promote online communication among members of citizens’ group. Firstly, we analyzed some important factors of why these tools are not widely used. These include that existing tools have many unnecessary functions, and there is a lack of opportunities to obtain the necessary skills to use the tools. Then based on the analysis results, we proposed some solutions to promote the use of online communication tools for citizens’ groups. The first one is to provide educational courses for citizens’ groups, which was verified through a trial experiment we conducted. The second is to develop an easy to use community environment named “e-Citizen square” to provide functions for citizens’ group to easily construct and manage simple Web community sites. The community environment we developed was based on open source contents management systems.
Keywords: Citizens’ Group, Online Communication Tools, Education Course, Community Site, Contents Management System

INTRODUCTION

In this chapter, we describe the types of citizens’ group in Japan and define what communication tools are on the web. We then describe our research approach.

In Japan, there are many voluntary groups and Nonprofit Organizations (NPO). For example, 34401 groups are registered in the NPO database compiled by Japan NPO center (Japan NPO Center, 2008). This number is the total number of groups that are authorized and it is noted that many citizens’ groups have not registered in the database.

In this paper, we call these voluntary groups and NPOs as citizens’ groups. Groups’ missions are for social contribution and supporting residents in the region, etc. In recent years, many tools that can promote communications through the web have been developed. For example, BBSs, Blogs, contents management systems (CMS), etc. In this paper, we call them online communication tools. Not only online communities use them on the web, but also real space based organizations use them for their daily communication activities.

The using of ICT is expected in citizens’ groups because sharing information through using ICT is effective for organization activities (Catone, 2007). ICT’s effectiveness has been pointed out since 1995 (Nonaka, 1995) and enterprises and educational institutions have showed many benefits. The effects are also expected in the citizens’ groups because they have already used the Internet (Jackman & Jones, 2002). Therefore, with more and more new open source and free tools available, manuals and guides of how to use these communication tools for citizens’ groups are also published in Japanese.

Some papers have reported many case studies of using online communication tools effectively and achieving success with unique activities on the web (Tanaka, Kitano, Maruo, & Idel, 2001; Kawai, 2007). However, these cases are special cases of Japanese citizens’ groups, and the current utilization for citizens’ group falls behind those in enterprises and educational institutions.

The scale of the voluntary sector in Japan is smaller than it in the United States and Europe (Lester, Helmut, Regina, Stefan, & Sololowski, 2003). Therefore, if online communication tools are expensive, they will not be able to use them. Recently, some
online communication tools have been developed as open source applications so that they can be used without cost. Moreover, they prepare many functions that are appropriate for citizens’ groups’ activities. Many organizations have already used these tools and built their online communities. So why cannot citizens’ groups use them?

Our purpose is to estimate the factors of the current usage situation, and propose a way of supporting citizens’ group to use online communication tools.

The factors that obstruct their use of online communication tools are not clear. Some studies analyzed the Web site usage of civic groups (Princeton Survey Research Associates, 2001; Cukier & Middleton, 2003). However, they did not pay enough attention to the communication tools, and the study fields are not Japan. On the other hand, some papers have examined the use of ICTs in Japanese citizens’ groups, but their objective was not communication tools. In this study, we confirmed the current utilization of online communication tools in citizens’ groups in Japan by analyzing web pages. Next, the results and reasons are discussed by interviews with the staff of some citizens’ groups. Based on the input, we proposed two methods to promote the usage of online communication tools for the citizens’ group.

The first proposal is an educational course. The purpose of the course is to give necessary skill training of using online communication tools. In Japan, many of citizens’ group staffs are retired persons whose main educational methods are through lifelong education that receives support from country and local government. But these lifelong education courses are not enough, in which courses related to the Internet are insufficient. Education courses on online communication tools within lifelong education did not exist before our proposal.

Moreover, citizens’ groups do not need specialist knowledge of ICT, while they want to acquire basic skill necessary for daily life. However, the courses offered by enterprises and the educational institutions do not satisfy their needs, especially in Internet education.

The second proposal was to promote the usage of online communication tools for citizens’ groups by building a community environment that can provide usable functions for citizens’ groups. The places where citizens’ groups can use the necessary tools easily are lacking, although Blog portal sites for them exist. Services that can use Blog without installation procedures exist, but they do not need a Blog on its own. On the other hand, they do not need all the functions provided in contents management systems and most of the staff did not have the necessary skill to use it. An example of offering web space to NPOs is (Aoba-portal.net, 2007), but it doesn’t include any online
communication tools.

We developed an easy to use community environment that focuses on providing necessary functions for citizens’ groups. We discuss these issues in detail in the following chapter.

In the study of citizens’ groups and ICT, Kanagawa Institute of Technology in Japan is our research partner, which researches are on ICT as a whole, while Nagoya University pays attention to the online communication tools.

**STUDY ON HOW CITIZENS’ GROUPS USE ONLINE COMMUNICATION TOOLS**

The purpose of this research is to clarify the current utilization of online communication tools in groups’ web sites. Firstly, we describe the analysis of web contents of Japanese citizens’ groups is described first. Next, we present some of the interviews with citizens’ groups’ staff. We then discuss the reasons why groups don’t use communication tools as often as expected. Finally, proposals of using online communication tools for citizens’ groups are offered based on the results.

**Analysis of web contents of Japanese citizens’ groups NPOs**

In this section, we describe a contents analysis of citizens’ groups web sites in Japan.

**Objective of analysis**

The objective is to clarify the ratio of tools usage on the web site of citizens’ groups in Japan.

**Methodology**

We sampled 10% from the 5025 websites registered in the Japanese NPOs database (http://www.npo-hiroba.or.jp/). We targeted 458 excluding those with broken links. Blog, BBS, scheduler, file sharing tool, streaming tool, and all tools belonging to contents management system were counted.
Results

Figure 1 shows the usage rate of the online communication tool by citizens’ groups. The results shows that most groups didn’t use the tools on their web sites, only 4% used CMS, 7% used Blog or BBS with static web pages, and 2% used other tools like scheduler or file sharing tool.

![Figure 1 Classification of usage of online communication tools by citizens’ groups](image)

**Interview with citizens’ groups’ staff**

As shown above, groups that are using the online communication tools are very few. The reasons behind this are analyzed in this section through the interviews with groups’ staff.
Objective of interview

The purpose of the interview is to clarify the following questions. Whether there is information that should be shared and sent to them or not? Whether they have the necessary skill to use the tool or not? How do they feel about using these tools?

Methodology

The interviewees are staff from several citizens’ groups which are involved in PC education for adults. We selected the groups that do continuous activities from the Web site survey. We interviewed the staff who had accepted our offer and staff from other related groups. The total number of the interviewees was fourteen. It took from one hour to two hours per interviewee.

Results

Table 1 shows the summary of the interviews.

**Table 1 Summary of interviews on online communication tools by citizens’ groups**

<table>
<thead>
<tr>
<th>Information that should be shared or published</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Messages to members, Introduction of other people (14/14)</td>
</tr>
<tr>
<td>- Teaching materials (files, documents, etc.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff and members skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Staff with beginner level skills (10/14)</td>
</tr>
<tr>
<td>- Staff who believe they have the ability to use expert tools (4/14)</td>
</tr>
<tr>
<td>- Group members who have no previous experience - Level 0 skill (14/14)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjective factors that obstruct usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Lack of time to practice new tools (11/14)</td>
</tr>
<tr>
<td>- Cannot afford to buy new tools (14/14)</td>
</tr>
<tr>
<td>- The functions of the design of the tool are not suitable (11/14)</td>
</tr>
</tbody>
</table>

They talked about their needs of information sharing and their interest in information provision. All of them had a lot of information that should be shared with the members and participants. It was not only messages but also files such as teaching materials. And eleven persons had enough skills to use the online communication tools for beginners like Blog. It was expected that remaining four staff had the ability to use
CMS because they have previous experiences in building complex Web sites or programming and so on. They added that most of their members’ skills were lower than theirs.

On the other hand, they are not accustomed to the online communication tools. Eleven staff said that the tools had too many unnecessary functions for them. For example, they did not need the functions for adding friends with strangers over the Internet, and they did not favor the tools’ interface. They said that the interfaces were too complex for senior citizens, and not clear to use. Additionally, they felt that there was no time to practice using the new tools because they did not have much free time to learn in their daily life. All of the staff thought that they did not have many opportunities to spend on new tools. There are many free online communication tools but they were unaware of that.

Consideration on supporting usage of online communication tools by citizens’ group

Based on the result of 2.1 and 2.2, we discussed the ways to promote online communication tools use for citizens’ groups.

Many citizens’ groups have Web sites. However, most groups are not using online communication tools. The staff of citizens’ groups wants to share or publish information on the Web. However, there is no tool that suits their purposes. In addition, they were ignorant to the fact that some communication tools are free and that there was no need to find funds or spend lavishly on such tools.

In a citizens’ group, a small number of members who have high Internet skills, while other persons have lower skills of the Internet. Ideally, the person with higher skills teaches other people.

We believe that their demand can be filled with a combination of existing tools. A good example was from the 7% of citizens’ groups which used a combination of blogs and BSSs together. There are many groups that do not need to use advanced tools like CMS. Some groups would be satisfied by using simpler tools. We call them light users. The sites that use Blogs and BBSs can be considered light users who succeeded in this aspect. On the other hand, based on the interview results, that was not always the case.

Then, we proposed ways of supporting the use of these tools for light users. From those, we implemented several of the most practical options.
First, we proposed an educational course on online communication tools. The main target audience was light users. However, there was no such course for middle leveled users, so we designed the course to include this level. We conducted this course as part of a lifelong education program by the civic group in Nagoya City, Japan. Secondly, we offered web spaces to provide the tools that the light user can use without spending much time and money. It was a community site for citizens’ groups.

**EDUCATION COURSE ON ONLINE COMMUNICATION TOOLS FOR CITIZENS’ GROUPS**

We developed an education course for members of citizens’ groups.

**Design policy of the course**

What kind of skills do light users need? At first, we separated users of citizens’ groups with leaders and followers. When the group uses the Web space, necessary skills are different between the manager and the user of the group. First, it is necessary that the user understands the concept of account. The user must understand the authority of browsing and writing is different depending on each account. In addition, it is necessary to acquire the skills to utilize the online-editor used for Blogs etc. Additionally, it is preferable to be able to up-load files, images, etc.

The leader should understand the functions of the basic tools, and how to utilize the management dashboard screen. With these skills, we hoped that they can select the necessary tools for their activities and operate them appropriately.

We assumed that the following would be candidates to participate in this course: people who have little experience of using online communication tools, people who have adequate PC literacy, citizens’ group members who use the online communication tools. In addition, we provided some usage models by citizens’ groups to help give a more clear idea on how to use communication tools effectively.

We used the web site that will be described in the next chapter for follower’s classes. We used another service that provides a pre-installed CMS called Xoops (Hug-world, 2006) for leader level classes.
Details of the course

The followers enter a three hour long course, while leaders sit a twenty hour course. It is also possible to attend the course for fifteen hours. Table 2 shows the contents.

Table 2 Contents of the course for online communication tools

<table>
<thead>
<tr>
<th>Level</th>
<th>Class</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>For followers</td>
<td>1</td>
<td>What are online communication tools?</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Log in and logout/Online editor/Introduction to some tools</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Using BBs and Blogs/Uploading files/Replying to others.</td>
</tr>
<tr>
<td>For leaders</td>
<td>4</td>
<td>Some tools that are appropriate for use in groups</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Function of various tools/What is a CMS?</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Web sites built by CMSs</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>How to use “Xoops”-Basic Operation</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>How to use “Xoops”-Management</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>How to use “Xoops”-About Modules</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>How to use “Xoops”-Setting up and using some modules for groups</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>How to use “Xoops”-Setting up and using some modules for groups</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>How to use “Xoops”-Changing the design and manage the users</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Let’s design your group’s website</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Question and Answer session</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Information for building your website</td>
</tr>
</tbody>
</table>

Evaluation of the course for citizens’ group

A citizens’ group that is teaching PC to citizens conducted this course as part of a lifelong learning course in Nagoya City in Japan during March to May 2008. Fourteen people attended the class, five men and nine women. They were in their fifties to seventies. Three participants had skills that were lower than our assumption. We called them the “low skill group”. There were four people who had skills higher than our assumption. We called them the “high skill group”. The rest were the “middle skill group”.
After all of the lectures were finished, we measured their learning levels through achievement evaluations conducted by lecturers and subjective evaluations by the participants themselves. Table 3 shows the result.

**Table 3 Learning levels of the online communication course**

<table>
<thead>
<tr>
<th>Course level</th>
<th>Pre-course skill</th>
<th>Completed tasks and achievements</th>
<th>Satisfied their acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follower</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>3/3</td>
<td></td>
<td>3/3</td>
</tr>
<tr>
<td>Middle</td>
<td>7/7</td>
<td></td>
<td>7/7</td>
</tr>
<tr>
<td>High</td>
<td>4/4</td>
<td></td>
<td>4/4</td>
</tr>
<tr>
<td>Leader</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>2/3</td>
<td></td>
<td>0/3</td>
</tr>
<tr>
<td>Middle</td>
<td>7/7</td>
<td></td>
<td>7/7</td>
</tr>
<tr>
<td>High</td>
<td>4/4</td>
<td></td>
<td>4/4</td>
</tr>
</tbody>
</table>

All the participants who had adequate skills achieved the tasks and satisfied their acquisition. Even those who did not have adequate skills made their web site with the lecturer (tasks were shown in table 2 as contents of the class). The content of the course was found to be appropriate.

**Easy to use community site for citizens’ groups**

In this chapter, we describe the proposal of community sites that provide web space with online communication tools to citizens’ groups.

**Proposal and development of the easy to use community site**

The purpose of this web site is to provide web spaces with online communication tools that are needed by citizens’ groups light users. At first, we decided the kinds of tools to be used based on the result of interviews. Simple homepage and Blog editors are set as the areas that everyone can access. And groupware that include a scheduler, file-sharing tool, BBS and Blog are set as the part that only members of the group can access. We named this set of tools “Group site kit”.

It is a very useful kit for non-expert users for the following reasons:

When users want to make use of a CMS, they should select modules according to the function that they need, and set it up. We provided selected modules suitable for the use of citizen’s groups. Two or more modules that offer the same function are being published on the web. We gave priority to the usability more than the additional features and select modules that are usable for citizen's groups.

The simplest modules are provided in our system among modules with the same function. We gave priority to easy usability rather than rich functionality.

In addition, we set it up beforehand. At the set-up stage, the user should select the functions. We provided the modules omitting the unnecessary functions. When a user accesses the module, the same screen in the set up state is provided in the user’s manual by capturing the view of the same situation. Additionally, the user can use the guide that suits the actual purpose of the citizens’ groups. The online user guide is provided depending on the usage situation to enable non-expert users making use of the system easily.

**Figure 2 Construction of the “e-Citizen’s Square”**
To offer this space to more groups, the Web site is composed based on two open source systems. One of them is called “Netcommons”. It was developed for educational organizations and has a function to provide groupware in closed space (Arai, 2006). Another system is “Xoops”, which is used to compose the area that everyone can access because it enables a detailed access administration. Both of the systems are open source software and work on servers. We made this web site without cost on software.

Additionally, we made part of the “Official contents” that were edited by the administrator of this web site. A part of the official contents is an online manual and tutorial, and another part is selected contents from the group space by an administrator of this community site. When a group has valuable contents for other groups or guests, the administrator edits it as official contents.

We named this web site “e-Citizens’ Square”. Figure 2 shows the construction of this web site.

![Figure 2](image_url)

**Figure 2** The construction of “e-Citizens’ Square”
Details of the site

In this section, we explain this site with concrete illustrations. Figure 3 is the top page of “e-Citizen’s Square” (Matsumoto, 2007).

Figure 4 is an example of the open space of the citizen’s group. This group used the Blog to introduce their activities. Figure 5 is an example of closed space of the citizen’s group. And Figure 5 is a page from the official contents manual.

Figure 4 A Blog site built by a citizens’ group
Preliminary evaluation by a citizens’ group

Three citizens’ group leaders tested this web site. They used the “Group site kit” and built their small web site on “e-Citizens’ Square”. In the process, they used manual too.

We interviewed them after they built their site and managed it for two months. They were satisfied with the offered online communication tools. They evaluated the manual highly because of its readability and that it was easy to follow. However, they thought that the descriptions of usage of each tools should be described in more detail. In addition, they said that the design is not suitable for senior citizens.
We requested the website designer to change the site’s design (Figures of this section are taken after the re-design). And we decided to expand the contents of the manual and tutorial.

CONCLUSION

In the study, we found that most of the citizens’ groups are light users in the usage of Web tools. And we proposed two kinds of solutions for supporting them using Web tools.

We provided an educational course and a community site named “e-Citizens’ Square” that offers web space with online communication tools for citizens’ groups. We believe that this proposal will be an effective solution to support citizens’ groups.

We are now planning to provide more community space to let 10 groups or more to use this site, and then verify the effectiveness of “e-Citizens’ Square”.

REFERENCES


