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WEBSITE ADOPTION BY LOCAL SPORTING BODIES IN AUSTRALIA AND NEW ZEALAND

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Abstract

Local sporting clubs rely heavily on volunteers to run and manage their everyday activities. Some clubs are turning to Internet technologies, such as club websites, to assist them in carrying out these functions. However, little is known about the effect that the adoption of these websites has on these clubs. Community organisations such as sporting clubs often face difficulties in regards to the use of many information and communications technologies, with low adoption levels. Using Rogers' (2003) innovation-decision process as a guiding framework, this study examined five sporting associations in Australia and New Zealand with respect to their website adoption using a combination of surveys and interviews. The results show diverse levels of website adoption by local sporting clubs across different sporting associations. Some of these differences occur in relation to the influence that institutions (such as sporting associations and peak bodies) have over club decision making, but in other instances adoption decisions are made within the club by members and stakeholders. The most common reason for non-adoption was a lack of expertise. Lack of time was mentioned by a few interviewees but was not prominent. Cost was not mentioned as an inhibitor. In relation to benefits, the club website provided a means of communication of information from the club to its members and the chance to market to potential members. Also, the website could be used as a means to present current match results and player statistics.

Keywords: website; adoption; local sporting clubs; I-D maps; innovation diffusion

1 INTRODUCTION

This paper examines the adoption of websites by local sporting clubs. Such clubs fall into a group known as community-based organisations (or CBOs). Like many CBOs, local sporting clubs typically rely on volunteers to help them carry out the regular activities of running the club, which includes recruiting and retaining players, organising 'match day' or similar activities and maintaining club finances (Cuskelly, 2005). CBOs typically adopt and use information and communications technologies (ICTs) in a different manner than private businesses. The use of ICTs in organisations that rely on volunteers does not necessarily provide a 'profit' for the organisation, but is aimed at improving its ability to share ideas and information to meet social needs (MacKay, Parent and Gemino 2004). There is a historical gap in the level of research conducted in this area (Hall and Banting, 2002). Anecdotal evidence suggests that volunteers in local sporting clubs are using ICTs to assist them to carry out their activities. Using Rogers (2003) Innovation-Decision process as a theoretical foundation, this paper examines the adoption and use of one form of ICT, websites, by clubs in five local sporting associations in Australia and New Zealand.

2 THE WEBSITES OF COMMUNITY BASED ORGANISATIONS

A community is a group of people with common functions, concerns, and interests (Roberts, 1979). Community based organisations are "non-profit organisations that operate in urban neighbourhoods to benefit neighbourhood residents and address their concerns. CBOs typically serve a relatively small geographic area, tend to have a small full time staff and often depend on neighbourhood volunteers for programme delivery" (Kellogg, 1999).

The websites of CBOs can be used for a number of purposes. These include the provision of information such as organisational objectives, contact information (Olsen et al, 2001), mission, privacy polices (Hart, 2002), information about programmes, activities, special events, financial information (Oehler and Morris, 2000), information on how to become a volunteer in the CBO (Hooper and Stobart, 2003; Oehler and Morris, 2000) and so forth. Another use for CBOs websites, especially charitable organisations (charities), is to try to supplement their revenue through donations or online sales (Hooper and Stobart 2003; Olsen, Keevers, Paul and Covington, 2001; Oehler and Morris 2000). Some of the more sophisticated features include message boards, chat facilities or online polls to promote a feeling of 'community' (Hooper and Stobart, 2003). Recently these forms of technology have evolved into social networking websites. Burgess and Bingley (2008) examined 45 CBO websites, and found there were differences in the website features that different types of CBOs will adopt. Additionally, it did appear that the websites of some metropolitan CBOs, particularly libraries and charities, were somewhat more sophisticated than their rural counterparts.

Bingley, Urwin, Hunter and Burgess (2010) conducted a study which involved interviews with 39 CBOs in Australia, New Zealand and the UK. The study identified that CBOs had difficulties in sourcing the necessary skills to build their websites and, often after they had done so even the most basic knowledge relating to website operations was lost due to factors such as staff turnover. Many CBOs were not clear about the details associated with their website (such as where it was hosted and how to edit content) and that much of this confusion was because the person who had created the website was no longer with the organisation, or that the knowledge had not transferred to the organisation in the first place as the website was built outside of the CBO.

Sporting bodies are a specific form of CBO. Sport can provide a number of benefits to the community, such as social networking, improvements in health, and high self-esteem. Being involved in a sporting club can provide "a feeling the members have of belonging, a feeling that members matter to one another and the group and a shared faith that members' needs will be met through their commitment together" (McMillan and Cahvis, 1986). There seems to be a link between individual well-being and having a sense of community (Pretty, Andrewes and Collett, 1994). There is not a great deal of literature available addressing the adoption and use of Internet applications in local

sporting bodies, and a dearth pertaining to the use websites by local sporting clubs. Thus, for the purposes of this paper, the literature relating to the use of ICTs and websites by CBOs and businesses will be employed to identify the underlying factors that may influence the adoption and use of websites by local sporting clubs.

CBOs are typically limited in what they are able to do with their websites by the skills available within the organisation (Hooper and Stobart, 2003; Schneider, 2003). In addition to this, the website is often not viewed as having priority within the organisation (Olsen et al, 2001) with a CBO's 'core activities' seen as having a higher priority. They also face challenges in relation to *resource poverty*, that is, the limited availability of capital, time and the necessary skills when it comes to the use of ICTs in general, and websites more specifically (Denison and Johanson ,2007; Denison, 2005; CCNR, 2003). ***Thus, one of the major issues examined in this paper is if resource poverty plays a role in the adoption or non-adoption of websites by local sporting clubs.***

Technology in general and ICTs in particular, have been noted to be a primary contributor to economic growth rates at national levels (Ciarli and Rabellitti, 2007). ICTs are capable of improving information flows (Diaz, 1997), especially in regards to how they can facilitate communication with the subsequent transfer of important decision-making information (Turban et al., 2006). These capabilities can result in improved productivity, reduced costs, improved decision-making, enhanced customer relations and the development of new strategic applications (Wreden, 1997). ***Do these benefits of ICT use translate to locate sporting clubs when they adopt websites?***

Volunteering is "an activity which takes place through not for profit organisations or projects" (Volunteering Australia, 2007). Volunteers donate effort and time for the benefit of others (Wilson, 2000). Volunteer boards or executive committees typically administer non-profit amateur sporting clubs and organisations. They contain elected, self-selected, appointed, and invited members who are responsible for the operations of the organisation (Doherty, Patterson and Van Bussel, 2004). At a local, or community level, non-profit amateur sports clubs rely more or less exclusively on volunteer administrators (Doherty and Carron, 2003). These are, as Shibli et. al (1999: p.10) label them, "systematic volunteers" who "have a clearly defined role and are required to make a regular commitment to the operation of the club. ***Are these roles influenced by or affected by the adoption of websites in local sporting clubs?***

Although there is research examining Internet adoption in small businesses, this cannot necessarily be generalised to small CBOs and their volunteers. Consequently, more specific research is needed to investigate potential differences between the use of ICTs by volunteers in CBOs and that in businesses (Mackay et al, 2004). For instance, Daniel et al. (2002) found that the volunteer sector is amongst the lowest levels of e-commerce adoption in the UK. ***Do these limitations effect the adoption of websites by local sporting clubs?***

On an overall basis, this paper reports on a project that examines the level of adoption of websites by local sporting clubs, and the factors that lead to the decision to adopt (or not adopt) and continue (or discontinue) their use.

3 THE ADOPTION OF ICT

One of the most popular approaches used to examine the adoption and use of technology is Rogers' (2003) *diffusion of innovations.* This approach, and its associated Innovation-Decision Process, can provide an important insight into how technologies are adopted by people in their everyday lives. The theory was introduced by Rogers in the 1960s and has been revised a number of times. The approach provides an overall explanation of how innovations diffuse through social systems over time to be either adopted or rejected by constituents (Kappelman, 1995; Suraya 2005).

The diffusion of an innovation is "the process in which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication, in that the messages are concerned with new ideas." (Rogers, 2003: 5). An innovation is "an idea, practice, or object that is perceived as new by an individual or other unit of

adoption" (Rogers, 2003: 12). The idea does not actually have to be new- it only needs to *appear* to be new to the individual.

Rogers suggests that the perceived attributes, or characteristics, of an innovation are a main influence in the adoption of an innovation. Tornatzky and Klein (1982) concluded that three innovation characteristics (*relative advantage*, *compatibility*, and *complexity*) had the most consistent and significant relationships to the innovation adoption process. Al-Gahtani (2003) found that *relative advantage* and *compatibility* were both positively related and complexity was negatively related to the innovation adoption process. Rogers identified five characteristics that he argued accounted for 87% of the variance in rates of adoption of an innovation. These characteristics are (Rogers, 2003):

1. *Relative Advantage*: the degree to which an innovation is perceived to be better that the innovation it has replaced.
2. *Compatibility*: the degree in which an innovation is perceived to be consistent with the present socio-cultural values and beliefs.
3. *Complexity*: the degree of which an innovation is perceived to be difficult to implement, understand, or use
4. *Trialability*: the degree to which an innovation may be experimented with by an individual.
5. *Observability*: the degree to which the results of an innovation are perceptible to others.

A key component of Innovation Diffusion theory is the Innovation-Decision Process (Rogers, 2003). This process is described as when "an individual passes from gaining initial knowledge of an innovation, to form an attitude towards the innovation, to making a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision" (Rogers 2003, 168).

The steps or stages of the Innovation-Decision Process are, in order of occurrence (Rogers, 2003):

1. **Knowledge** – when a decision maker is made aware of an innovation.
2. **Persuasion** – when a decision maker forms an attitude towards an innovation. One of the aspects that can affect attitude is the *perceived attributes* of the innovation, which were discussed earlier, but can also be influenced by other factors. It would be expected some findings related to the research questions that deal with *resource poverty* and the *benefits of ICTs* would become evident.
3. **Decision** – when a decision maker engages in activities that lead to either choosing the innovation or rejecting it. When discussing the adoption of innovations in organisations, Rogers (2003) recognises that adoption decisions may be made by individuals, collectives (decisions made by consensus) or by authorities (decisions forced upon others). Carr (1999) explains the "…adoption and diffusion process generally followed what has been termed the "traditional model," a "top-down" process in which administrative "mandate" introduced the technology and administrative perceptions, decisions and strategies drove adoption and diffusion. Successful adoption was highly dependent on the degree, stability and wisdom of administrative sponsorship." **This potential *institutional influence* is also examined in this study.**
4. **Implementation** – when a decision maker puts in place the new innovation. Again, issues related to resource poverty – having limited finances, time and expertise would be relevant here. It is also expected that any changes to the roles of volunteers in sporting clubs would be highlighted here.
5. **Confirmation** – when a decision maker wants reinforcement about the decision made to use the innovation. The decision to continue or discontinue use of the innovation is made.

4 THE STUDY

The overall aim of this study was to examine the adoption and use of websites by local sporting clubs in Australia and New Zealand. Although the study predominantly encompasses local sporting clubs involved in the game of cricket, associations involving the sports of hockey and football (soccer) are also investigated to provide a broader coverage. The study used a series of five case studies based on different sporting associations (involving local clubs) across Australia and New Zealand. Each case study was unique in relation to its combination of country (Australia or New Zealand), location (metropolitan or rural) and sporting activity (cricket, hockey or football). As per Yin (2003), a combination of data collection approaches were employed to gather data related to the research questions. In this project, surveys and semi-structured interviews were used as data collection

instruments. The Innovation-Decision Process was used as a basis for identifying how local sporting clubs implemented and used websites. Sport is generally organised at the local level with sporting clubs being part of an association. The data collection was undertaken at the *Club and Association level* (an Association generally comprising 10-50 Clubs). The Sporting associations typically have regular meetings of delegates from their participating clubs.

For the survey phase of the study, different sporting associations were contacted for the purpose of distributing surveys to club delegates at association meetings. This ensures a relatively captive audience and provides close to a 'full population' of clubs in each association. The surveys, which took only 5-10 minutes to fill out, asked simple questions related to the knowledge, persuasion, adoption and confirmation stages of the Rogers Innovation-Decision Process. Descriptive surveys were used as they *"describe a particular phenomenon: its current situation, it properties and conditions"* (Williamson 2002, 91). For this study, the surveys provided an overall picture as to the different stages of the innovation-decision process in regards to websites that sporting associations and their local sporting clubs were at, including the level of usage of websites.

The survey that was used was based on a flow chart diagram typically 'yes' or 'no' responses, which determined which level of the Innovation-Decision Process they were at for a particular Internet Application. Rogers suggested that it might be difficult to delineate between the final stages of the Process (Rogers 2003)— hence, the researchers have kept the first three stages and merged the 'implementation' stage with 'decision' stage. The other reason for doing this is that decision stage is a moment in time, whereas the implementation stage represents how an innovation is implemented over time. Thus, there is a clear difference between the decision to adopt and how the adoption occurs (decision/ implementation) and the decision to continue to use the innovation ('Confirmation').

Survey data was collected from five local cricket associations. The associations were selected on the basis of convenience – with the location of the researchers at the various times allowing them to investigate associations in both countries. Details of the case studies and surveys are in Table.

Details	**Auckland Cricket Association**	**North Metro Cricket Association**	**Colac Cricket Association**	**Geelong Football Association**	**Christchurch Hockey Association**	**Total**
Country	**New Zealand**	**Australia**	**Australia**	**New Zealand**	**Australia**	
Locale	Metropolitan	Metropolitan	Rural	Metropolitan	Metropolitan	
Sport	Cricket	Cricket	Cricket	Hockey	Football	
Date of data collection	May 2008	October 2008	November 2009	September 2010	November 2008	
Number of clubs	9	25	17	20	17	88
Surveys Completed	7 (78% of clubs)	20 (80%)	16 (94%)	11 (55%)	17 (100%)	71 (81%)

Table 1. Case Study and Survey details

As can be seen from the results (and as was expected) the percentage response rate for the survey was quite high when compared to the *population* for four of the associations. The only exception was with the Geelong Football Association, where the survey was mailed out to clubs rather than distributed at a meeting. The response rate for this association (55%), is still acceptable for surveys.

The second (Interview) phase of the study was aimed at the volunteer level of local sporting clubs within each sporting association. This phase was aimed at identifying the *factors* that influenced different stages of the innovation-decision process in regards to club websites. Thus, data collection for this phase involved semi-structured interviews. This technique is *"frequently used in case studies"* and *"it can be used to supplement survey data"* (Williams 2002, 241). The interviews were conducted with different volunteers from the sporting clubs (typically in roles such as secretary, president and so forth). The questions again related to the stages of Rogers' (2003) Innovation-Decision Process. The aim was to interview two members of a committee in two clubs for each association (four interviews per association). Interviews were written up as soon as possible after they were conducted and entered into the qualitative software package Nvivo for analysis in relation to the themes as characterised by

the stages of the innovation–decision process. Each interview typically took 45-90 minutes to conduct. Refer to

for a breakdown of the number of interviews that will be conducted across sports and in each location.

Details	Auckland Cricket Association	North Metro Cricket Association	Colac Cricket Association	Geelong Football Association	Christchurch Hockey Association	Total
Date of data collection	May 2008	October 2008	November 2009	September 2010	November 2008	
Number of interviews	5	4	4	3	5	21

Table 1. Case Study and Survey details

5 RESULTS

Figure 1 shows the stages of adoption of club websites for clubs in each sporting association (as derived from their survey responses) as an I-D map (refer Bingley and Burgess, 2011). The feature of the I-D map is that it not only shows the percentage of clubs that are at each stage of adoption. Darker shaded areas represent a higher proportion of clubs at a particular stage (on a scale of white for no clubs at the stage to black for all clubs at a particular stage, with various shades of grey in between).

The vast majority of clubs in all of the associations had knowledge of the club website. Only one of the respondent clubs (of the 71 that responded to the survey) suggested that they did not have knowledge of a club website. All except one of the clubs in the Auckland and North Metro cricket associations had been through the persuasion and adoption stages and had reached the confirmation stage – indicating that they were intending to continue to use the club website. In the other three associations, clubs were at various levels of moving through the stages of adoption. Around half of clubs in the Geelong and Christchurch associations (both non-cricket) were at the confirmation stage. The Colac cricket association provided an interesting result. Although almost two-thirds (64%) of the clubs were at the persuasion stage, less than one-third (29%) had actually progressed though to the adoption and confirmation stages.

Association	Stages of Adoption (%)			
	Knowledge	**Persuasion**	**Adoption**	**Confirmation**
Auckland	100	100	100	100
North Metro	100	100	96	96
Colac	94	64	29	29
Geelong	100	70	58	52
Christchurch	100	54	45	45

Figure 1. Percentage of clubs at innovation-decision stages

The discussion will now move to the factors that affected the various stages of adoption in each association. The following sections report on the interview results for each section and the discussion is limited to an overall of themes encountered.

5.1 Auckland Cricket Association

Based in New Zealand's capital city (Auckland), the Auckland Cricket Association (ACA), is one of the six major associations responsible for managing and developing Cricket in New Zealand. ACA is made up of 14 principal (or major) and 10 standard (or minor) Cricket clubs that provide club Cricket coverage for the whole Auckland region. Minor Cricket clubs were used for this study. All of these clubs are predominantly volunteer run and administered. However, although the major teams do have a full time manager, they still rely on volunteer help to run effectively.

All of the responding clubs had a club website, and indicated they will continue to use one into the future. The average length of time each club had been using a website was about seven and a half years, with the longest being 15 years (since 1993) and the most recent being one year (since 2007). The club that had a website for one year (since 2007), had only been using email for three years (since 2005), whereas the club that had a website for 15 years (since 1993) has been using email for the 15 years (since 1993) as well. All of the clubs have indicated they intend to use a website into the future.

Committee members at three clubs (labelled here as Club 1; Club 2 and Club 3) were interviewed for this association. Two of the clubs that were interviewed for this association (Club 1 and Club 3) were the two clubs that did not complete the survey. As it turns out, neither club had a club website, so not all of the clubs (but still the vast majority) had a website.

In relation to the Knowledge stage of adoption, all of the clubs were aware of club websites through either knowing that other clubs had them or via a presentation about the Internet hosted by Cricket New Zealand. Thus all clubs were at least at the Persuasion stage. The two clubs that did have a website suggested that there was not enough time available and that they lacked an ICT person to help set one up. Club 1 was still persuaded to adopt and indicated that this would happen at some stage in the future. Club 2 had an operational Club Website, and was thus in the Confirmation stage of the adoption model. The club was influenced to adopt a Website after suggestions by the ACA, although they had only recently adopted the website and had not seen any benefits at that stage.

5.2 North Metro Cricket Association

The North Metro Cricket Association (NMCA) is a Cricket association based in the Northern suburbs of Melbourne, and has 30 clubs. There are 10 senior grades made up of eight teams per grade. This is a large association. There was a high level of Club Website adoption in this Association, with all clubs being at least in the Persuasion stages. The survey also showed that 96% of the clubs surveyed had adopted a website, and moved to the Confirmation stage. Out of the clubs in the Confirmation stage, all of them will continue to use their website in the future. The average length of time the clubs have had a website was 4.2 years, with the minimum being only half a year (since mid 2006), and the maximum about eight years (since 2000). There was one club that had not adopted a club website, however they were planning to use it, and this Decision was made by the Committee.

Committee members at two clubs (labelled here as Club 1 and Club 2) were interviewed for this association. All of the interviewed clubs had implemented a club website and were at the Confirmation stage (intending to use the website into the future).

One club found out about a club website through the NMCA, one via a State government peak body and the last found out by seeing the websites of other clubs (as with the previous association). As all clubs had adopted a website, interviewees in this association tended to discuss the reasons for adopting a website and the benefits derived from it more than the previous association. One interviewee commented about how the Club Website can be used for information diffusion (relative advantage). In relation to *Observability*, committee members were able to observe websites from other Cricket clubs, and even other sports, 'in action'. For Club 1, the decision to adopt a website was made easier as the State governing peak body, Cricket Victoria, supplied them with a free website. The Secretary of Club 2 I indicated that the website was used as part of a "club image revamp".

In relation to the Adoption stage, the interviewees at Club 2 suggested that the club needed more training in regards to the website and also needed a webmaster to administer it into the future. The comments in the Confirmation stage mostly related to website traffic, the communication and marketing issues of the club and feedback from the players. All clubs will continue to use a Club Website Internet application into the future.

In a separate decision, the NMCA implemented *MyCricket*, an online statistics program to support entering and storing cricket player and match data. For Club 1, the option of an integrated website (which included embedded match fixtures, ladders and players statistics) was an attractive proposition and lead to its adoption. According to the Club Secretary, the Club President "hounded Cricket Australia [the national cricketing peak body] for one [a club website] and they gave it to him". The

President updated and maintained the Club Website. In Club 2 the Club Secretary set up the website, and when it was established it was very basic. Now it has evolved and it is widely used" "the hit counter has gone from almost nothing to 5100 in a couple of years". The club's Committee generally used the website to convey information to players. The Club Website also has their player statistics online, and a link to Cricket Australia's *MyCricket,* so Players can look up ladders, and current fixtures. The website was a marketing tool; the club had a "couple of people" join because of it. The club believes they have become more professional, and have used the website to give the club a "fresh look". When questioned about the ease of use, the Secretary replied that its "not really hard, but it took a lot of time and patience. They put a lot of stuff on the website as a whole."

5.3 Colac Cricket Association

The Colac Cricket Association is based in the rural area of Victoria (approximately two hours drive from Melbourne). This association has three senior grades and two junior grades. Overall there are 17 clubs that compete in this Association, and there are 34 teams. From all the clubs that were surveyed, only five clubs had websites (12 had no website). Of the clubs that did not have a website, six were planning to build one. The average length of time the clubs have had a Club Website was 2.6 years. The longest use of the Club Website was four years (since 2004) and the shortest was one year (since 2007). All of the five clubs that had a website will continue to use it into the future.

Committee members at three clubs (labelled here as Club 1; Club 2 and Club 3) were interviewed for this association. Club 1 did not have a website as it was only a small club that did not see the need for one. The Secretary stated that "we are a small club, and didn't need to communicate to our members that way". However, the interviewees at Club 2 suggested that Cricket Victoria (the State peak body for cricket) went through a period around 2005 where they wanted all Cricket clubs to have a website. This was when Club 2's website was established. Notably, the website had not been updated or modified since 2005. However, with a large number older players leaving the club, and younger ones joining, the committee wanted these younger members to manage the Club's website. Club 2's website was used for information, history, player information and a way to communicate with ex players. The club found out about having a website through the state governing body, Cricket Victoria. Club 3 had a website, and in the beginning the President helped set it up. However, now they have someone at the club (who is undertaking an engineering degree) to administrator the website. The President also added that he basically tells his webmaster what to upload, and it "gets done". When asked the reasons as to what the website was used for, he responded "because we thought we should. It makes people think we are on top of things". When asked about how he found out about having a website, he replied with "information from the VCA (previous name for Cricket Victoria), lots of emails from the VCA". He also mentioned that another club (just so happened to be the Club 2) has a website and saw this as a good idea however, he noted that Club 2's website "had not been touched in years". He also indicated that a benefit the website provided was that was appealing to younger people. The President then added that the website had not changed the way he performed his duties, however he says that "maybe in the future it will".

5.4 Geelong Football Association

This Soccer Association is located an hour's drive southwest of Melbourne. Geelong is the second largest city in the state of Victoria with over 140,000 people. This Association had 17 clubs, which was broken down into three men's and two women's divisions. These are the main divisions for this Association, and they are played on the weekends. However this Association also has mid week and junior competitions, with three divisions on Monday night, three divisions on a Wednesday night, and 16 mixed junior divisions. These weekday competitions are more social competitions where each 'club' has only one team, and managed very informally. The main divisions of this Association have little contact with these teams. The junior divisions are divided into age categories, which also include five age divisions that play indoors during the summer (the 'off' season). There are many teams that complete in this Association, however due to many of the games not over lapping, players can complete in three or four games a week if they chose to. Only half of the clubs surveyed are in the

Confirmation stage for having a Club Website. The average age of the Club Websites was 5.3 years, with the two clubs having adopted their websites ten years ago (since 2000), and three clubs only two years ago (since 2008). Of the seven clubs that have not adopted a Club Website, two have made the decision to, and five have not.

Committee members at three clubs (labelled here as Club 1; Club 2 and Club 3) were interviewed for this association. Club 1 is a combined sports club with cricket and soccer teams. Thus, the club has a 'combined' Website, with different sections dedicated to either one or the other of the two sports. The President and the Soccer Delegate both were involved in the setting up of this innovation. The President was more directly involved: "We used to have two websites, one for Cricket and one for Soccer. Now we have recently launched another one, however it is for the Sports Club". This website is a standalone website which is connected to a database. The match results and the player's statistics are available on the website. The Soccer Delegate added that "the new website was used to give the sporting club more of a sense of community, instead of a Cricket club and a Soccer club that share the same venue". Asked whether it has changed how they performed their tasks at the club, the Soccer Delegate said that "it has, now I have to make sure all of the new people are there (in the database connected to the website), and that the scores and ladders are up to date". The President commented that "it has in the short term, and I now need to give our Webmaster all the information he needs to complete it".

Club 2 also has a website, administered by the Club Secretary: "As we are a new club, we wanted to have a website as a promotional tool to new members". In relation to the benefits the website provided: "it gave the club more exposure for new members, and also was a central place to give our existing members information". The website had not changed the way he performs his tasks. He was the person who made the decision to adopt this innovation adding that "I felt it was necessary to have a website, so I made the decision. We are not in the dark ages anymore".

Club 3 also has a website, integrated with a third party online statistics operator. The website was fairly basic, but did have integrated fixture and current ladder. The website was set up by " a guy at the club who does it for us. Even though we are a small club, it still good to have website for our players and sponsors". When asked if the website had changed the way he performed his duties, the President replied that "a little, all I do is give the teams to the IT guy and he puts them online". Asked if the innovation was difficult for him to use, the President said that it was not and "all I do it look at the website, the IT guy does the real work".

5.5 Christchurch Hockey Association

The Christchurch Hockey Association is based in Canterbury, New Zealand. Christchurch has a population of almost 350,000 people. This is a very large Association with 23 senior divisions (includes men and women), five youth division, and 14 junior divisions (includes boys and girls). However there are only 20 clubs. Games of Hockey are played between two teams consisting of two halves, each 30-35 minutes in duration. On a Saturday they can play three junior matches and five senior matches on one sports pitch. They are also able to run a mid-week set of games which compliments the Association's competition. The survey results showed that all of the clubs had heard about having a Club website. However these figures dramatically fall away to 54% of clubs in at least the Persuasion stage. However, there are a number of school and college clubs that do not have a website, utilising their school's website. Only 45% of the clubs surveyed have implemented a club website, with a similar number grouped in the Confirmation stage— all of which indicated that they will continue to use their website into the future. If the schools and colleges that are utilising their school's site are removed from the data (five schools and colleges out of the 11 surveys), you are left with five of the six clubs (83%) in the Confirmation stage. However, only having a little more than a quarter of the clubs represented might not be enough to make any strong recommendations.

Committee members at three clubs (labelled here as Club 1; Club 2 and Club 3) were interviewed for this association. Club 1 had a website that was mainly used for historical information, with the President adding that it is the "profile of the club" and the first point for contact for members and prospective members. The President indicated that "before the website, there was a lot of manual

filing and because of that, a lot got lost". The Secretary suggested that the main benefit of it was as a promotional tool, adding that "lots of people contact them from overseas about joining the club"— an important point of reference to prospective players planning to move to Christchurch. In regards to how it changed operations in the club, the President commented that "it had not had as much of an influence. The operational tasks have stayed the same". The club employs an ICT person to maintain the website.

Club 2 did not have a website; however they do have an online listing on the local Regional Portal. The committee discussed having a website, but decided against it. This meant they had passed through the Knowledge, Persuasion, and Decision stages, but had not adopted.

The President and the Secretary of Club 3 said that over time they have had to change Internet service providers and due to that, the look of the Website had changed. The last service provider change was due to the fact the company went broke. At the time of interview the club was looking for another one service provider. The Secretary assumed most people in the club used the website. However, he used it the most as he was in charge of updating it. The President said that it did not change the way they do things (the core tasks), just the way the members access information. The Secretary did find it hard to manage and update the website in the beginning, but had overcome those teething issues.

6 DISCUSSION

This study, involving five different sporting associations in Australia and New Zealand, offered some interesting insights into the adoption and use of websites by local sporting clubs. These will be examined along the themes of the research questions identified earlier in the article.

The survey results show that there can be vast differences in the adoption of club websites across sporting associations when categorising them using the Innovation Decision Process (Rogers 2003). The interviews suggested that some of these differences occur in relation to *institutional influences.* In the case of sporting associations, they are able to suggest to their clubs that they adopt websites, or as happened on a few occasions, the fact that the association had adopted a particular online statistics package that incorporated an integrated club website also encouraged clubs to adopt a website. Other institutional influences include State and Federal peak bodies that offered free websites or advice on setting them up. As these adoption decisions were not forced upon local clubs, this is consistent with Rogers'(2003) notion of collective rather than authoritative decisions.

In relation to *resource poverty*, most of the evidence for this came from clubs that had not implemented a website. As virtually all clubs were aware of the availability of club websites (knowledge), the most common reason for not adopting was a lack of *knowledge or expertise*. It was interesting that in some instances ICT experts were sourced from inside or outside of clubs to set up and/or maintain a club website. Another aspect of resource poverty, *lack of time*, was mentioned by a few interviewees but was not prominent. Of real note is that *cost* was not mentioned as an inhibitor to adopting a website.

The roles of volunteers in local sporting clubs were affected by the adoption of club websites, but for the most part not to any great extent. Whilst a few things may have changed in relation to the need to maintain the website up to date, the activities of the volunteers within the club remained the same.

Are local sporting clubs less likely to adopt websites than private businesses? Perhaps this question is more related to institutional influence and resource poverty than the fact that clubs are run by volunteers. The fact that in some cases the clubs received support from sporting associations and peak bodies could make them more inclined to adopt websites than, say, some small businesses. Also, the lack of expertise within clubs was a main driver for non-adoption – there seemed to be nothing in the role of 'volunteer' itself that hinted at lower adoption rates.

Do the 'business' benefits of ICT use translate to local sporting clubs when they adopt websites? Yes, this was certainly the case and was identified as part of the discussion in the persuasion and confirmation stages. For the most part, the sporting club's website provided a means of disseminating and communicating information from the club to its members and also to attract new members. The

website in some instances was a means to present current results and statistics – these sometimes being integrated with an external third party online statistics package. It was suggested in a number of instances that the club website gave clubs a more professional image.

7 CONCLUSION

This paper examined the level of adoption and use of websites by local sporting clubs in five sporting associations in Australia and New Zealand. Using Rogers' (2003) Innovation-Decision process as its theoretical foundation, the study additionally examined the factors that impinge on the adoption process. The study contributes to knowledge by linking these factors with Rogers' (2003) innovation-decision process and then examining them throughout the study. The data collection provided a rich picture of the levels of adoption and factors affecting the adoption of websites for each association that was investigated, which due to space restrictions could only be touched upon in the paper. The survey aspect of the study was extremely successful, with high response rates for each participating association. The surveys suggested that, even in this small sample of sporting associations, there can be major differences in the levels of adoption of websites by local sporting clubs across sporting associations. The interviews revealed that this is predominantly due to the benefits that websites provide in relation to information dissemination and improved club image and the influence of institutional forces, such as the sporting associations themselves or the sport's peak bodies. Factors relating to *resource* poverty, especially lack of relevant skills or knowledge and to a lesser extent lack of available time, can inhibit website adoption. The results suggest that sporting organisations involving local sporting clubs each have their individual set of factors that promote or inhibit the adoption of club websites. It is these factors themselves that are relatively consistent with some of those identified in the literature review and that the authors believe may be generalisable to local sporting clubs as a whole. However, the *overall effect* of these factors and the eventual decision to adopt or not adopt a club website is something that cannot be generalised as even the small sample of associations in this study showed differences across sporting clubs.

References

Al-Gahtani, S. S. (2003). Computer technology adoption in saudi arabia: Correlates of perceived innovation attributes. *Information Technology for Development*, *10*(1), 57-69.

Burgess, S. & Bingley, S. (2008). An Analysis of Australian Community Based Organisation websites by Type, Location and Feature, *Global Business & Economics Anthology,* vol. I, 86-101.

Bingley, S., & Burgess, S. (2011). Using I-D maps to represent the adoption of internet applications by local cricket clubs. In A. Tatnall (Ed.), *Actor-network theory and technology innovation: Advancements and new concepts* (pp. 80-94). Hershey, PA: IGI Global.

Bingley, S., Urwin, G., Hunter, M. G., & Burgess, S. (2010). Website development and use in CBOs: A knowledge management perspective. *The International Journal of Interdisciplinary Social Sciences*, 5(5), 327-338.

Carr, N. (2001). The Digital Enterprise. Boston : Harvard Business School Press.

Carr, V, N Jr. The Learning Center for Interactive Technology, 21 June 1999.

Centre for Community Networking Research (CCNR). (2003). *The Monash Community Information and Communication Technologies Index (CICT)*, February, Monash University, Melbourne, Australia.

Ciarli, R and Rabellotti, R.(2007). ICT in Industrial Districts: An Empirical Analysis on Adoption, Use and Impact. *Industry and Innovation*, 277-303. Vol. 14(3)

Cuskelly, G. (1995). The Influence of Committee Functioning on the Organisational Commitment of Volunteer Administrators in Sport, *Journal of Sport Behaviour*, 254-270. Vol 18(4)

Daniel, E, Wilson, H and Myers, A.(2002). Adoption of e-commerce by SMEs in the UK: Towards a Stage Model, *International Small Business Journal*, 253-270. Vol 20 (3)

Denison, T. (2005), The Diffusion and Sustainability of Technology within Community Sector Organisations, *The 6th International Conference on Knowledge, Culture and Change in Organisations*, Prato, Italy, 11-14 July.

Denison, T. & Johanson, G. (2007). Surveys of the Use of Information and Communications Technologies by Community-Based Organisations. *The Journal of Community Informatics* .

Diaz, J. (1997). *Communication and Rural Development*. Paris : United Nations Educational, Scientific and Cultural Organisation (UNESCO).

Doherty, A, Patterson, M and Van Bussel, M. (2004). What Do We Expect? An Examination of Perceived Committee Norms in Non-profit Sport Organisations. 2004, *Sports Management Review*, 109-132. Vol 7 (2)

Doherty, A and Carron, A. (2003). Cohesion in Volunteer Sport Executive Committees, *Journal of Sport Management*, pp. 116-141. Vol 17 (2)

Hall, M., & Banting, K. (2002). The Nonprofit Sector in Canada: an Introduction. *School of Policy Studies, Queen's University (Working Paper)* .

Hart, T.R. (2002). ePhilanthorpy: Using the Internet to Build Support, *International Journal of Nonprofit and Voluntary Sector Marketing*, 7(4), 353-360.

Hooper, P. & Stobart, S. (2003). Using Third-Party Services to reduce the Development Cost and improve the Effectiveness of Charity Websites, *International Journal of Nonprofit and Voluntary Sector Marketing*, 8(4), 328-336.

Kappelman, L. A. (1995). Measuring user involvement: A diffusion of innovation perspective. *ACM SIGMIS Database, 26*(2-3), 65-86.

Kellogg, W. (1999). Community-based Organisations and Neighbourhood Environmental Problem Solving: A Framework for Adoption of Information Technologies, *Journal of Environmental Planning*, 445-469. Vol 42 (4)

MacKay, N., Parent, M., & Gemino, A. (2004). A Model of Electronic Commerce Adoption by Small Voluntary Organisations. *European Journal of Information Systems* , 147–159.

McMillan, D and Chavis, D. (1986) Sense of Community: A Definition and Theory, *American Journal of Community Psychology*, 6-23. Vol 13

Oehler, J.E. & Morris, TW. (2000). Not-for-Profit Organizations can profit by investing in the Internet, *CPA Journal*, 70(12), 65.

Olsen, M., Keevers, M.L.; Paul, J. & Covington, S. (2001). E-Relationship Development Strategy for the Nonprofit Fundraising Professional, *International Journal of Nonprofit and Voluntary Sector Marketing*, 6(4), 364-373.

Pretty, G, Andrewes, L and Collett, C. (1994). Exploring Adolescent's Sense of Community and Its Relationship to Loneliness. 1994, *Journal of Community Psychology*, 346-357. Vol 22 (4)

Roberts, H. (1979). *Community Development: Learning and Action*. Toronto : University of Toronto Press.

Rogers, E. (2003). *Diffusion of Innovations (5th ed.).* New York: The Free Press.

Schneider, J. (2003). Small, Minority-Based Nonprofits in the Information Age, *Nonprofit Management & Literature*, 13(4), 383-399.

Shibli, S., Taylor, P., Nichols, G., Gratton, C., Kokolakakis, T. (1999) The Characteristics of Volunteers in UK Sports Clubs, *European Journal for Sport Management*, 10-27.

Suraya, R. (2005). Internet diffusion and e-business opportunities amongst Malaysian travel agencies. In Proceedings of the Hawaii International Conference on Business, Honolulu.

Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *IEEE Transactions on Engineering Management, 29*(1), 28-45.

Turban, E., Volonino, L,. Leidner, D., McLean, E,. (2006) Information Technology and Management. Hoboken : John Wiley & Sons.

Volunteering Australia. (2005). *Definitions and Principles of Volunteering*. Volunteering Australia. [Online] June 2005. [Accessed: 28 May 2007.], http://www.volunteeringaustralia.org.

Wilson, J. (2000). *Volunteering*. Annual Review of Sociology, pp. 215-240. Vol 26 (1)

Williamson, K. Research Methods for Students, Academics and Professionals – Information Management and Systems. Wagga Wagga: Centre for Information Studies, Charles Sturt University, 2002.

Wreden, N. (1997). Business boosting technologies. *Beyond Computing*, 6(9), 26-32.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). London, UK: Sage.