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Exploring the use of an on-line environment to enhance a group fitness program

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by

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ABSTRACT

In this study, I explored the use of an on-line environment to enhance a group fitness program, along with the benefits experienced through the use of the tool, and relationships fostered between participants and the researcher. Fourteen participants, who registered for indoor cycling during the Winter 2010 semester, initially signed up and 11 interacted on-line. The environment was set-up to allow social interaction among participants sharing indoor cycling as a common interest. On-line resources and discussion forums were rarely accessed. The chat section allowed eight participants to virtually pedal 900 miles to Florida. Two on-line focus groups allowed for interaction between two participants and the researcher. The on-line supplement provided minimal social support to participants and was not successful in increasing levels of physical activity. However, participants felt the tool would be useful in other more cohesive fitness classes.

DEDICATION

This thesis is dedicated to Renee Bombardier, who reminded me of the many grammar rules that I had forgotten. Renee also ensured that I was acquiring appropriate levels of physical activity, which I needed to combat the stress that accompanied striving for a Masters degree while working full-time. Thank you for your time, energy, patience, and on-going support.

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Lucia Yiu brought some insider knowledge into this study as a past participant of indoor cycling classes. Your comments, suggestions, and attention to detail improved this study. Thank you for your time and participation.

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CHAPTER I

INTRODUCTION

Statistics have shown that minimum required levels of physical activity are not being met. In 2002/2003, only 48% of the Ontarians over 19 surveyed were at least moderately active (Canadian Fitness and Lifestyle Research Institute, n.d.). In Windsor and Essex County, only 45.3% of residents over the age of 11 acquired adequate levels of physical activity in 2009 compared to 49.5% of Ontarians (Statistics Canada, 2009). Levels of heart disease, diabetes, and many types of cancers are soaring across the country even though physical activity has been shown to prevent these chronic diseases (Schutzer & Graves, 2004). Physical activity entails moving the skeletal muscles of the body to increase energy expenditure above resting levels (Katzmarzyk, Baur, Blair, Lambert, Oppert, & Riddoch, 2008). To be considered physically active, individuals must move for 60 minutes per day at light intensity, or 30 minutes per day at moderate or vigorous intensity levels (Canadian Fitness and Lifestyle Research Institute; Gilmour, 2007).

Many barriers to physical activity exist that prevent half of the population from leading an active and healthy lifestyle (Spencer, Adams, Malone, Roy, & Yost, 2006). Studies have shown that barriers to physical activity include: low motivation, lack of social support from family and friends, lack of energy, lack of time, lack of knowledge on the benefits of participating, reduced access to facilities, fear of injury, and environmental barriers such as traffic, weather, and personal safety (Schutzer & Graves, 2004; Windsor-Essex County Health Unit and Health Action Windsor-Essex, 2008; Zlot, Librett, Buchner, & Schmid, 2006). Barriers, which are unique to all individuals, may be

overcome in a variety of ways. For example, social support has been shown to increase the motivation to participate and the enjoyment of participating in physical activities by sharing experiences with a friend, family member, or co-worker (Center for Disease Control and Prevention, 2008a). "The topic of motivation concerns what moves people to act, think, and develop" (Deci & Ryan, 2008, p. 14). Motivations to participate in physical activity may include: physical fitness, personal appearance, pleasure of the experience, mental relief, and social interaction (Ulseth, 2008).

Lack of motivation is common in the fitness industry and leads to high attrition rates (Rascher, n.d.). Participants register for fitness classes with the intention of participating. Within the first three months, drop-out rates for physical activity intervention programs range from 22% to 76% (Jancey, Lee, Howat, Clarke, Wang, & Shilton, 2007). In academia, as technology has advanced, on-line learning tools such as discussion forums have been used to enhance learning and rates of retention. These tools allow interaction with members of the group through the creation of content and chances to provide opinions and feedback. According to Pavey and Garland (2004), on-line learning environments "provide the potential to stimulate depth of learning by encouraging students to engage more fully with the topics and issues" (p. 305). In most cases, structured classes are used in conjunction with an on-line learning environment in a blended learning approach. The on-line aspect of the course often includes informational resources and on-line discussion forums that allow participants to communicate with one another and the instructor.

My research explored the use of an on-line environment to enhance an indoor cycling program at the University of Windsor. Indoor cycling classes take participants

through a warm-up, drills to work on cardiovascular health, hills to increase strength and toning in the muscles of the legs, and a cool-down. As an indoor cycling instructor for Campus Recreation at the University of Windsor, I have had first-hand knowledge on the attendance rates of these classes. I chose the University of Windsor because it adopted, in the academic environment, an on-line learning tool, Collaboration and Learning Environment Windsor (CLEW) (University of Windsor, n.d.a). CLEW is "a web-based system of tools and programs developed by members of educational institutions around the world for use by educational institutions around the world" (University of Windsor, n.d.b).

On-line environments commonly contain many different tools including discussion forums, calendars, and informational resources such as attachments or links to external websites. These environments are often referred to as on-line tools. I was interested in class attendance for the indoor cycling program, participants' use of resources provided within the on-line environment, the content of discussion forums, and the interaction among participants and with the fitness instructor. A benefit of using an on-line environment is that it "provides details of who has logged in, and when," (Hughes, 2007, p. 352) showing levels of engagement with the tool. Engagement is defined as active participation with others concerning the subject matter (Cole, 2009). These environments are flexible, allowing participants to interact with other members at any time of day or night. On-line users interact with other participants that may have common motivations and barriers to participation. In this exploratory study, I analyzed both quantitative and qualitative data to provide information on the use of on-line environments to enhance group fitness programs.

My main question was: How does the use of an on-line environment as a supplement to a group fitness program affect attendance rates and the participant-instructor relationship? To explore this question, the research was designed to look specifically at three sub-questions:

1. How is the on-line environment used, in terms of frequency of use, resources accessed, and popularity of discussion items?
2. What benefits were found by participants from the use of an on-line supplement?
3. How is the participant-instructor relationship affected by the use of the on-line environment?

I provided indoor cycling participants with an on-line environment containing multiple tools that supplemented their group fitness classes. This environment provided resources relating to physical activity, health and well-being. Participants had the ability to request information to be researched. Once the material was validated through the thesis committee, it was posted on-line. On-line discussion forums were used to discuss physical activity, fitness classes, local events, and other topics. I provided a public on-line journal of the music and drills done in my classes as well as information on the issues that indoor cyclers may have been experiencing. Participants had the opportunity to comment on the public on-line journals and provide feedback. As a researcher, I kept my own private journal, hand-written in a diary format, throughout the study that documented my own issues and problems, and interactions with participants during face-to-face classes. I assessed my own participation in classes, my thoughts and feelings on the use of the on-line environment, as well as the relationships I developed with participants from my perspective. I explored the use of the on-line environment to see

how it affected attendance at indoor cycling classes. In my dual role as an instructor and a researcher, I attempted to facilitate the change I wished to see in attendance rates among group fitness participants. The researcher autobiography, located in Appendix A, provides more information about my history and my reasons for undertaking this study.

Assumptions

People want to be healthy

It has been shown that even small increases in levels of physical activity can significantly reduce the chances of premature death (Warburton, Nicol, & Bredin, 2006). With low physical activity levels and soaring rates of heart disease, strokes, and some cancers, it could appear that the population does not care about themselves or their health (Chad et al., 2005; Gilmour, 2007; Heart Health Action Windsor-Essex and the Windsor-Essex County Health Unit, 2003; Tucker & Irwin, 2006). In this study, however, I assumed that individuals do care about their health and well-being. If given the choice to be sick or to be healthy, I believe that we would all choose to be healthy. I think that individuals want to live longer, sleep better, and have more energy. Thus, I assumed that indoor cycling participants made a conscious step towards better health by registering for the group fitness program.

Participants had access to the Internet and a web browser

According to Statistics Canada (2008), 73% of Canadians went on-line for personal reasons in 2007. In this study, I assumed that indoor cycling participants had access to the Internet, had the skills required to access a website using a web browser, could login, and could read material provided on-line. The majority of participants were associated with the University of Windsor as faculty or students who used a computer

and the Internet on a regular basis for research, course work, or to communicate with students and other employees.

My relationships with participants continually changed

As a group fitness instructor, I interacted with participants face-to-face in classes that I taught. I also interacted with participants in the on-line environment. I had the choice to shape and re-shape my boundaries as a group fitness instructor by broadening my practical consciousness. I also had the choice to increase or decrease the intensity of my classes or vary the drills used in classes based on feedback. In turn, participants had the choice to shape and re-shape their own health and physical activity boundaries based on information discussed or provided on-line or through drills completed in class. I assumed that the relationships I shared with participants were continuously changing as the semester progressed.

My history, experience, and beliefs all affected my research

According to Arber (2006), researchers reflect upon their own actions and values during research, as well as the actions and values of participants. During this study, I was an insider as well as an outsider. I was a group fitness instructor, leading participants through the in-class portion of their program. I was also a researcher, looking at the attendance rates of participants, their use of the on-line supplement, and the development of participant-instructor relationships. My personal experiences as an instructor and my role as a researcher affected my outlook on the data collected. I needed to find a balance between my two roles and use the knowledge and skills that I acquired to provide a socially welcoming and useful tool for indoor cycling participants. My dual perspective

provided me "with insight into the intimate workings of the group under study" (Suzuki, Ahluwalia, Arora, & Mattis, 2007, p. 300).

Theoretical and Practical Justifications

On-line social support groups "offer individuals opportunities to affiliate and identify with others who are experiencing similar circumstances" (Bane, Haymaker, & Zinchuk, 2005, p. 240). These social groups foster a sense of well-being and control over oneself, as well as social interactions with others (Liu & Larose, 2008). Social support groups provide a helpful resource used by members to share and obtain information (Coursaris & Liu, 2009).

Over time, the Internet has evolved to allow not just social support groups but social networking to occur on-line. Many tools have been created allowing these social environments to flourish. Social networking technology, or Web 2.0[1] technology, allows individuals to stay in contact with friends, acquaintances, and colleagues through the use of tools such as Facebook[2]. This and other similar tools allow users to create on-line personal profiles to share comments and personal data. Weblogs or blogs[3] and wikis[4] are both forms of on-line social interaction: the blog is "centred on the individual" and the wiki is centred on the group (Hodkinson, 2007, p. 625; Hookway, 2008). The level of participation in social technology varies by individual. Reasons for variation are similar to barriers preventing physical activity including: low motivation and a perceived lack of ability (Kay, 2006). Individuals with closer relationships, more community ties, and

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[1] Web 2.0 is a term describing the ability to collaborate and share information on-line (Cronin, 2009).

[2] Facebook is an on-line social networking tool that "reinforce[s] existing social networks" (Gurak & Antonijevic, 2008, p. 66).

[3] A blog is a personal on-line journal written in reverse chronological order (Flatley, 2005).

[4] A wiki is a collection of Web pages "created by a collaborative effort" (Cronin, 2009, p. 66).

larger perceived social support will participate more frequently as they are happier and have lower stress levels (Bessière, Kiesler, Kraut, & Boneva, 2008). Individuals who are more introverted and socially isolated will participate less in social networking due to their lower levels of perceived and actual social support.

On-line learning environments have the "capacity to facilitate more engagement with content, greater learner motivation, [and] increased interaction with the instructor" (Ransdell, Rice, Snelson, & Decola, 2008, p. 46). Heath-related on-line fitness courses have been implemented as supplements to physical education classes (Ransdell et al.). These blended environments "are designed to teach students concepts related to lifelong fitness" (p. 47). Programs of this nature have shown increased levels of physical activity and positive behaviour changes in high school aged individuals. This study contributed to ongoing academic explorations about the effectiveness of on-line learning in a new environment – the fitness class.

Participants are agents who can use social interaction to expand their boundaries and successfully participate in physical activity. Agents are individuals capable of pursuing their goals by acting to achieve them (Llewellyn, 2007). Acting requires reflection on oneself and others who are involved, knowledge and personal understanding of the activity, and motivation to act. This action disrupts social patterns previously perceived as normal, challenging the practical consciousness of the acting individual (Cho & Lee, 2008). This action, in a group fitness environment, can affect the behaviours of other participants, and that of the instructor. Participants may have been shaped by altering their levels of physical activity through participation in class and within the on-line environment. Similarly, the instructor may have been shaped by the

enthusiasm of participants, or the lack thereof, and levels of attendance at indoor cycling classes. An actively changing relationship was formed between participants and the instructor. The researcher became a facilitator in this relationship who provided participants with tools to maintain or increase their levels of physical activity.

In this study, I explored the use of an on-line environment that provided participants with informational resources and opportunities to interact socially with individuals sharing a common interest. The intent of this social interaction was to provide the motivation required for participants to maintain or increase attendance at group fitness classes. This study made a practical contribution to the way participants experienced their involvement in indoor cycling classes. This study also impacted on the ways I know myself as an instructor of such classes.

CHAPTER II

REVIEW OF LITERATURE

Main question: How does the use of an on-line environment as a supplement to a group fitness program affect attendance rates and the participant-instructor relationship?

The problem was explored by collecting attendance numbers for indoor cycling classes and comparing attendance for each participant in my classes to his/her levels of social engagement and interaction within the on-line environment.

Sub-question 1: How is the on-line environment used, in terms of frequency of use, resources accessed, and popularity of discussion items?

Review of Literature

According to Bromham and Oprandi (2006), "one of the greatest challenges of a blended learning approach is to generate student engagement outside traditional face-to-face classes" (p. 22). The information provided within the on-line supplement should meet the needs of all users. The depth of learning and the success of the on-line environment are dependent on the participation levels and satisfaction assumed by the users (Wang & Wang, 2009). Reasons for lack of participation may include problems using the technology, lack of confidence in the quality of personal contributions, and lack of interest in the subject matter (Cole, 2009). To increase engagement within the on-line environment, participants should have the opportunity to suggest content to be provided. Suggested content should be researched and sent to a committee of experts to assess the quality and validity of materials (Ransdell et al., 2008). Acquiring the knowledge and recommendations of the committee provides the participants with the most relevant and up-to-date information (King, 2007). It has been shown that individuals prefer to use resources that have been recommended to them as the information is easily accessible

and more often trusted (Cho & Lee, 2008). Searching through on-line resources often leads to information overload for the viewer. The instructor of the course determines the success or failure of the on-line tool by deciding the information to provide and by creating an environment that is both useful and easy to use (Wang & Wang, 2009). Engaging users in the process of providing content for the on-line learning environment will increase the value of the tool.

Discussion forums can be used within on-line environments to increase participation. On-line forums allow an exchange of information over time that increases social interaction through the development of new content as participants become contributors (Cole, 2009; Hazari, North, & Moreland, 2009). Threads of responses are created as participants respond and counter-respond to posted messages (Deryakulu & Olkun, 2007). The on-line forum becomes a trusted community that encourages interaction and communication (Kosonen & Kianto, 2009). This communication can be an extension of face-to-face interactions that allows every participant to have an equal voice (Flatley, 2005). Participation within on-line environments can be done actively, by contributing to content, or passively by reading material provided by others. It has been shown that individuals who participate in on-line collaborations are driven by pure enjoyment, the chance of acquiring new skills or information, and the chance to achieve personal benefits (Arazy, Gellatly, Jang, & Patterson, 2009). The passive participants, who lurk within the on-line environment, learn from the experience through reflection on the comments posted by others (Hew & Cheun, 2003; Zhu, 2006). In an academic environment, lurking is also referred to as social loafing (Matthew, Felvegi, & Callaway, 2009). Their participation within the environment can be captured through the statistics

showing the number of messages that have been read (Hew & Cheun). Tracking the amount of time participants spend in the on-line environment is important as there may be a threshold of time required on-line to increase attendance at face-to-face classes (Ransdell et al., 2008).

Directional Propositions

By nature of the on-line tool, statistics were collected on the frequency of use. The tool captured the number of resources and posts read and/or responded to by each participant. I believed that most participants would lurk within the environment and access only information and resources that they requested. Reading information provided by others is a safe way to interact on-line. It allows users to feel as though they are part of the community without requiring the extra time and confidence in oneself to post feedback. I assumed that access to resources would be high at the beginning of the study, when students were just beginning their academic semester, and would drop as the study progressed. Students, faculty, and staff would be more engaged in course work that would be graded or would affect their careers as the term progressed, and thus they would focus on that rather than material meant for personal use.

I was able to qualitatively review the content of the on-line discussions to see who participated and the information being discussed. It is usual for a few individuals to participate in on-line discussions while others simply read the content (Cole, 2009). Engagement in on-line environments is generally higher when students will be graded on their participation and lower when participation is voluntary (Cole; Hazari et al., 2009). I believed that University students would be more active than staff or faculty members within the on-line environment as they would have more experience with the tool. I also

believed that access to the on-line environment would be more convenient for students, as a tab for indoor cycling would appear within CLEW in addition to tabs for other academic courses.

Sub-question 2: What benefits were found by participants from the use of an on-line supplement?

Review of Literature

Physical activity has the potential to reduce stress, decrease depression, and reduce the risk of some cancers and diseases (Tucker & Irwin, 2006). Physical activities that include weight bearing exercises have been recommended for the reduction of bone loss associated with aging (Center for Disease Control and Prevention, 2008b; Warburton et al., 2006). Studies have also shown that increasing levels of physical activity assist adults in maintaining their independence as they age by increasing their capability to function through their daily routines (Warburton et al.). Other benefits of leading an active lifestyle include higher self-esteem and improved sleep (Windsor-Essex County Health Unit and Health Action Windsor-Essex, 2008).

Physical activity can be acquired through various activities such as working out at a fitness facility, or hiking in the outdoors. Data collected by Ready, Naimark, Tatr and Boreskie (2005) showed that 25% of Canadians used private fitness facilities, 90% of whom exercised regularly. "A fitness centre presents a variety of activity options, and demands activity by virtue of programs, equipment, fees paid, and the expectations of staff and fellow members" (Ready et al., p. 200). This idea of a fitness centre leads us to ask about the definition of fitness. Kilgore and Rippetoe (2007) defined fitness in terms of strength, endurance, and mobility. Strength is the ability to move under load, endurance is the ability to sustain a task over time, and mobility is the ability to move in

various directions to carry out both simple and complex motor skills. Lockhart (1994) conceptualizes fitness very differently as a movement towards a state of being healthy and away from outward looks and quantitative measures. Her ideal fitness goal is a perfect balance of health and well-being that is unique for every individual. Regardless of the definition of fitness, physical activity can lead to health and well-being.

Physical activity can be achieved alone, through activities such as running or swimming, or as a group, through fitness classes or team sports. Group fitness classes provide a motivating social environment allowing instructors to lead and encourage participants to have fun (Vogel, 2002). The environment includes the social aspects of physical activity and the social support received by participants (Jancey et al., 2007). Tucker and Irwin (2006) conducted a study at the University of Western Ontario to assess the appeal of using a buddy system to motivate physical activity. Social support was shown to encourage students of university age to maintain adequate levels of physical activity over time. Increased levels of social support positively affected progress on goals for physical activity (Lutz, Karoly, & Morris, 2008).

In this study, the benefits of physical activity could have been achieved by participants if they met recommended levels through the maintenance of, or an increase in attendance at group fitness classes. Participants could also have acquired adequate fitness levels through other extra-curricular activities experienced outside of the study. Other activities may have included running, participation in other group fitness classes, and intramural sports.

Participation in the study may have provided users of the on-line environment with informational, social, and emotional benefits. Resources provided may have

increased the health, fitness, and nutritional knowledge that users possessed. The content was meant to encourage complex thinking and build related skills (Persell, 2004). Socially, users had the opportunity to develop strong and intimate relationships with other on-line users (Hodkinson, 2007). These relationships could have developed through on-line interaction and sharing of thoughts, feelings, opinions, or useful resources. Emotionally, participants may have benefited through personal growth and the satisfaction of engagement in a social environment that allowed for both collaboration with others in the on-line community, and reflection of self (Kosonen & Kianto, 2009). A key to the growth experienced by individuals within collaborative environments is the freedom to interact or lurk without feeling the constraints of time and space (Reichardt & Harder, 2005). Participants had the option to read or post comments within the on-line environment at any time of day provided they had access to a computer with an Internet connection. This level of freedom could have empowered users to actively seek information and share their own knowledge and skills with other users. This empowerment has been shown to provide users with an improved quality of life and a heightened sense of self-awareness to make informed decisions (Broom, 2005).

Directional Propositions

I expected attendance levels at indoor cycling classes to be only slightly higher for those participants who fully engaged with the on-line environment. Individuals who registered for group fitness classes had already taken a step towards better health. However, participants may have gotten their recommended levels of physical activity through a combination of class attendance and extra-curricular activities.

As well, the time constraints and work- and course-related responsibilities that participants already had did not change as a result of the study. In addition to attending fitness classes, some of the spare time that participants had may have been spent within the on-line environment. I believed that only individuals that felt a true social connection to other participants in the on-line environment, or within face-to-face classes, would make the extra effort required to attend more classes.

I believed that the experience of using the supplement would be beneficial to participants who enjoyed independent learning and exploring information during their leisure time. These individuals may have been more apt to request information to be added to the on-line environment and they may have participated more frequently in on-line discussions.

Students who were taking other academic courses may not have participated as frequently, as their time may have been spent writing papers and completing assignments for grades rather than reading health and physical activity information. Drawing from my own experiences researching for information, I rarely re-visit the same site more than twice. If participants perceived the resources as stagnant, they may rarely have returned to look for new materials. I expected that participants would enjoy the concept of the tool, believing it to be a valuable resource, though it would not be used as fully or completely as intended. I expected informational, social, and emotional benefits of using the on-line environment to vary greatly for all participants, with higher benefits experienced by users with higher levels of engagement.

Sub-question 3: How was the participant-instructor relationship affected by the use of the on-line environment?

Review of Literature

According to Gallais (2008), being an insider researcher, such as I was as an indoor cycling instructor, I brought my own knowledge into the research. I felt confident that I could establish a research relationship with my participants. As a past indoor cycling participant, I brought with me some insider knowledge of the motivation and behaviours required for participants to attend classes. Being in front of the class, I had the ability to offer good or poor workouts. I could instruct challenging and fun classes that met all fitness levels, or I could provide boring and monotonous classes that challenged only some participants in attendance. I could empathize with participants, having been in their shoes. I knew that attending fitness classes on a regular basis was a challenge as I have often struggled to overcome my own barriers such as lack of time and lack of motivation. Being aware of the setting and understanding the situation from the view of the participants in my classes increased my credibility with them as a researcher.

It was my responsibility to incorporate appropriate music into the indoor cycling classes that I instructed to keep participants interested and to facilitate their continued adherence to the activity (Schutzer & Graves, 2004). "Music is reported to enhance the exercise experience by lessening the perceptions of difficulty, monotony, and discomforts associated with exercise" (p. 1060). My music choices, along with drills completed in class, were documented in a public on-line journal that I kept within a discussion forum in the on-line environment. The public on-line journal was written using characteristics of a blog with the intention of sharing more information about indoor cycling including the benefits and barriers common to participants. Through the use of a public on-line

journal, I hoped to create a sense of community that allowed participants to share their own physical activity experiences, motivations, and the ways they chose to overcome their barriers (Gurak & Antonijevic, 2008). A blog is a process for the author that allows for reflection and personal growth. Hookway (2008) believes that blogging, a valid research method, allows the examination of social processes over time as blog entries are dated in a reverse chronological order. Seeking participant-instructor interaction, the public on-line journal was also written using characteristics of a wiki that incorporated the group as a collective. This technology blurred the author and the audience of the content, creating greater chances for social interaction (Gurak & Antonijevic). Wikis are more effective than blogs in a group environment, as participants become actively involved rather than being on the receiving end of static knowledge (Cronin, 2009). This involvement allowed for both evolutions of the content and of the relationships of contributors.

The wiki in CLEW allows comments to be posted in a pseudo-HTML[5] format and allows flow from page to page. Through conversation with the Centre for Teaching and Learning on campus, it was recommended that the public on-line journal be developed within the on-line discussion forum rather than using the wiki tool. This was recommended for ease of use, to keep readers in a smaller area of the on-line environment, and to increase engagement of the tool (Hazari et al., 2009). Creating multiple forums within the on-line environment would keep the journal content and the other on-line discussion content separate (Centre for Teaching and Learning, personal communication, December 10, 2009).

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[5] HTML, used to describe web pages, stands for Hyper Text Markup Language (W3Schools, 1999).

Through the on-line environment, I had the opportunity to provide feedback to participants regarding their posts. I perceived physical activity challenges presented by participants as modifiable. Through my interaction with participants, I assumed that I was able to shape their behaviours by encouraging healthier, more positive habits. In the process of re-shaping boundaries, participants had the ability to share information that allowed for growth and new interpretations of health and well-being to be assimilated into my own life (Gallais, 2008). This process of growth between the participants and the instructor was explored through content analysis of on-line interactions.

Directional Propositions

I expected to learn a great deal about myself and the participants through this process. I hoped to enjoy a new collection of music, suggested by participants, as well as variations in indoor cycling drills or stretches that participants wished to have incorporated into classes. I intended to learn a lot about health and physical activity as I researched websites and other on-line resources to provide the information requested. I was interested to see the types of information suggested and by whom.

Through the literature review and previous experience, I assumed that participation in class and within the on-line tool would decrease over time. I expected to find this aspect of the study very frustrating, forcing me to work even harder at fostering my relationship with participants in class and through the on-line environment. I wanted to provide information and resources that participants would find useful.

CHAPTER III

DESIGN AND METHODOLOGY

Introduction

Participants of all ages can register for programs offered through Campus Recreation at the University of Windsor. The 8- to 10-week programs require a single payment of $40 for students, $45 for staff, faculty, and alumni, and $50 for members of the community. The program fees are very reasonable and within reach of the participants (Jancey et al., 2007). The Cycle Fit program offered classes seven days per week at various times during the Winter 2010 semester. There were 17 time slots offered during the semester that included both indoor cycling and total body conditioning or TBC classes. TBC classes incorporated half an hour of indoor cycling and half an hour of weight training. Participants could attend as many or as few classes throughout the semester as they chose. Each instructor was given classes in specific time slots. Instructors changed their time slots when substituting for other instructors.

Sample

As an indoor cycling instructor at the University of Windsor, I taught three evening classes per week, on Monday and Thursday from 4 to 5 pm and on Tuesday from 6 to 7 pm. These classes were attended regularly by a few participants, but were also attended by other registered participants, and individuals who paid a drop-in rate of $5 per class. There are 13 bikes in the classroom, including the bicycle used by the instructor. Rarely does the class fill to capacity. Through the Fall 2009 semester, levels of attendance ranged from zero to 11 participants per class and the average was four attendees per class (Campus Recreation, personal communication, December 5, 2009).

In the Fall and Winter semesters of 2009, there were 77 and 76 registered indoor cycling participants and 1 and 0 drop-ins, respectively. The Winter 2010 semester had 73 registered participants and 12 drop-in participants.

I used a convenience sampling method to recruit participants for the study. To attend a class, participants had to leave identification with the Campus Recreation Desk in exchange for their seats. This is how class attendance was kept. I spoke to all scheduled classes beginning with the 5 pm class on the last Tuesday in January. At the end of each class, I spent a few minutes informing participants of the study and offering them more information. I provided interested participants with envelopes containing a recruitment letter, available in Appendix B, and a Letter of Information for Consent to Participate in Research, provided in Appendix C. Interested individuals needed to access a website to sign-up for the study. This process relieved the participants of any coercion as they were not asked to make an immediate decision to participate. In addition to handing out envelopes, posters were also put up in the indoor cycling room stating the website to access more information, as well as contact information for the researcher. A copy of the poster can be found in Appendix D.

Participants wishing to join the study accessed the Letter of Information at http://www.uwindsor.ca/cyclefit. I required the name of the participant, their e-mail address, demographic information, their experience using other on-line environments, and their preference in attending a short workshop on how to use CLEW to access the on-line environment. A copy of the initial survey can be found in Appendix E. Participants had the option of accessing the CLEW website using their own login information, or through a 'friend' account (Centre for Teaching and Learning, personal communication,

December 10, 2009). Friend accounts were created by the researcher through a website provided by IT Services on an as-needed basis. The participant needed to confirm the account and provide a first and last name that was shown in the on-line environment. Once access had been granted, individuals received an e-mail supplying them with the website address needed to access the on-line environment. This process continued for the first two weeks of the program. A minimum of six indoor cycling participants willing to use the on-line supplement was reached, giving a purposeful sample. In order to provide a sense of community in the forum, no fewer than six participants are recommended. Oates (2000) believes that six to 10 individuals is manageable within a focus group. The environment was meant to be similar to an on-line focus group allowing participants to share their attitudes and opinions (Franklin & Lowry, 2001).

Data Collection

A mixed-method approach was used in this study. A combination of quantitative and qualitative data were collected through the use of on-line tools. The number of visits to the on-line site was captured for each participant through the use of the on-line environment. Resources pertaining to health, fitness, and wellness were provided on-line by the researcher. The number of resources read by each participant was collected. Discussion forums were created to allow interaction to occur between participants and the researcher. The number of reads, posts, and responses to posts within the discussion forums were captured by the on-line environment. On-line focus groups were held twice during the study to further develop the participant-instructor relationships and to better understand the physical activity barriers participants were facing. The number of posts and interactions with others in the focus group were counted. The chat area of the on-line

tool was used to mark attendance, allowing participants to virtually pedal to Florida through the semester. Marked attendance was totalled weekly and a map was provided on-line to show the distances traveled over time. E-mails were sent from the announcements section of the on-line tool to notify participants of upcoming events and to bring them back into the on-line environment. Throughout the study, the researcher kept a private hand-written journal to document interactions with participants. At the end of the study, an anonymous on-line survey was dispersed to collect feedback from participants about their experiences using the on-line environment. All of the data collected within the on-line environment, as well as the private hand-written journal, was qualitatively analysed and coded to assess the benefits experienced by participants through the use of the tool and the participant-instructor relationships. The following paragraphs describe the use of the on-line tools and the data collected within them in more detail.

A pilot study was developed to request anonymous feedback through an on-line survey from indoor cycling participants who were registered in the semester of Fall 2009. This pilot study was done to assess the possible use of an on-line environment as a supplement to the indoor cycling program in the future. The on-line survey requested motivations and perceived barriers to participation in addition to content that could be provided in an on-line environment. The results showed that registered participants were motivated by the instructor and found work and school to be barriers to their participation. 60% of respondents were students, 60% preferred to login to the system using their own University of Windsor accounts, 70% were likely to use an on-line supplement, and 90% had used CLEW in the past. I used the information collected

through my literature review and the pilot study, in addition to the recommendations of my thesis committee, to add initial content to the CLEW website. This content can be found in Appendix F.

Participants in previous indoor cycling classes had mentioned to me that they did not know of class times or events occurring on campus or in the community. I thus provided participants with local health and physical activity events in a discussion forum as they arose, since notifying participants of events may increase physical activity levels. Ransdell et al. (2008) recommend the use of a calendar of local events to increase the motivation associated with the use of the tool. Events were reviewed by the thesis committee prior to being added to the on-line environment to increase their validity. Data were collected through the on-line tool that told me which users clicked on the events, and which events were least and most popular. A list of all discussion forums including those for local events is provided in Appendix G.

The use of discussion forums provides casual conversation between classmates, giving students ample time to formulate questions and replies to post (Pavey & Garland, 2004). The on-line participant-instructor interactions allowed for expansion and further support of existing relationships previously formed in person (Cho & Lee, 2008). To ensure students remained engaged to participate, the instructor needed to maintain involvement in the discussions and answer any questions posted (Pavey & Garland). Intervention by the instructor was periodically required "to maintain an interesting and productive conversation" (Pavey & Garland, p. 311). Discussion items were answered within a few days and new discussion items were added weekly to enhance the sense of

community within the social environment. The on-line discussion forums gave participants who did not attend the focus group the opportunity to suggest content.

The equivalent of a focus group was held on-line during the third week of the indoor cycling program to further the website content and to develop the participant-instructor relationships. Participants were asked to sign in to the on-line tool at 9 pm one evening to participate in the on-line discussion. I had a list of eight questions prepared that can be found in Appendix H. I asked participants questions one at a time and responded to their responses and questions as appropriate. I moved on to the next question when responses had subsided or when the conversation was moving away from the subject matter. I asked participants to provide their physical activity experiences, their motivations to participate, and barriers they faced preventing participation. In response, I posted suggestions and comments on how to increase their motivations to participate, and how to overcome barriers.

Face-to-face focus groups would have been a viable option to collect this data as they allow the researcher to collect thoughts and opinions. Participants in a focus group setting feel obligated to explain themselves more fully to the other individuals involved (Oates, 2000). Focus groups "produce rich data in the participants' own words" (Oates, p. 187). However, having a computer-mediated focus group allowed for further engagement of the tool. Participants could access the on-line environment from any computer with an Internet connection, rather than traveling to the University outside of their scheduled class times. This was more convenient for participants and provided similar data. On-line focus groups can resolve issues with face-to-face focus groups such as multiple individuals speaking at once or trouble deciphering voices due to background

noise (Franklin & Lowry, 2001). CLEW has the ability to record the typed conversations as they occur, allowing them to be copied and pasted into a word processor and coded at a later date. The goals of the initial focus group were to collect suggestions for resources and to increase the social interaction within the tool.

The requested information was researched and a list of chosen resources was sent to my thesis committee. Content validity was checked by running the on-line materials through my committee to acquire their knowledge and recommendations (Ransdell et al., 2008). The resources were added to the CLEW website as they were agreed upon by the committee. The quality of the learning materials is an important aspect of the success of on-line tools. Providing quality information suggested by the participants in a timely manner assists in this success. The list of on-line resources can be found in Appendix I.

A second computer-mediated focus group was held during week seven of the program. At that time, I asked how participants were dealing with stress, how stress affected their exercise and eating habits, if and how they used social support, and recommendations to increase attendance at face-to-face classes. Hughes (2007) completed action research that involved finding a solution to increase module retention rates for a University level class by blending a face-to-face and an on-line environment that would enable "students to learn more deeply" (p. 352). "At the learner level, distance education has the capacity to facilitate more engagement with content, greater learner motivation, increased interaction with the instructor, better computer-skill development, and increased learning and understanding of subject matter" (Ransdell et al., 2008, p. 46). The goals of this focus group were to better understand the barriers facing participants and to collect more suggestions to increase attendance. A few e-mails

were sent to participants requesting their participation through the CLEW announcement tool. This brought them back into the on-line environment if they had not visited the site recently. New content was added based on the collected feedback once it was reviewed by the thesis committee. The second focus group guide is located in Appendix J.

As an indoor cycling instructor, I wished to provide fun and challenging classes for my participants. In the public on-line journal forum, I shared the songs that were played in class each day, as well as the drills that were performed. The public journals were posted the day of or the day after each class every week. To assist participants in speaking openly and browsing the content within the site, I added content to the site weekly and e-mailed participants every other week. Participants had the opportunity to browse the resources provided and compare their physical activity barriers to those experienced by others. Some of the public on-line journal content can be found in Appendix G. I also hand-wrote a private journal, similar to a diary, that allowed me to "rewrite [my]self through interaction with [my] audience" which assisted me in linking us together through the social environment (Gurak & Antonijevic, 2008, p. 65). The public on-line journals, discussions, and chats allowed users to re-write themselves through interaction with me and other participants. The private hand-written journal, and interactions with participants, gave me the opportunity to re-write myself. Participants had the choice to re-shape their boundaries by increasing their engagement of the tool and altering their levels of attendance. I, too, had the choice of allowing the experience and the relationships with participants to re-shape my boundaries as both an instructor and a researcher. My perceptions, written within my private journal, were used to assess the perceived benefits experienced by participants throughout the study.

At the end of the study, an anonymous on-line survey was dispersed through the announcement section of the on-line tool to collect further comments and suggestions for improvements of the program, and for future studies. I asked: how individuals enjoyed the experience, if they benefited from reading the on-line resources, if they found the on-line environment socially supportive, and if the supplement contributed to their indoor cycling class attendance levels. I asked the participants how the on-line site could be enhanced for future use, how they rated the content of discussion items, if the public on-line journals were useful, and if the frequency of e-mails sent to participants were adequate. The use of an anonymous on-line survey allowed participants to share their feedback. The survey instrument can be found in Appendix K.

Data Analysis

The on-line environment contained Site Stats. This section was set-up to tell me how frequently the site was visited and by whom (IT Services HelpDesk, 2009). A summary of visits and activity within the site was automatically compiled. The report feature in CLEW allowed me to export the activity that occurred. Data were exported for the on-line discussion forums. The history of the discussions was saved into a text format to track the conversations. The number of messages that each participant posted were counted, as well as the length of each message in words, and the number of other participants that each participant conversed with (Guan, Tsai, & Hwang, 2006). A level of engagement was calculated for each participant by summing the number of visits from the Site Stats, the number of posts, the number of words in each post, the number of reads, the number of responses to posts, and the number of interactions with others. An example showing the items added together for one participant and the instructor can be

found in Appendix L. Participants with higher numbers interacted with the tool, their peers, and the researcher more frequently than participants with lower levels of engagement.

Attendance was kept for each indoor cycling class, tracked as participants collected their seats from the Campus Recreation Desk. Using the numbers collected, I was able to determine if attendance at classes was maintained, increased, or decreased as the program progressed. I requested that Campus Recreation provide the total number of classes that each individual participating in the study attended. This allowed me to compare the quantitative data I collected within the on-line tool, in terms of the calculated level of engagement, to attendance for each participant.

Zhu (2006) commented on the differing models and approaches to content analysis for on-line interaction. Some existing models, such as that of Henri (1992) have been criticized for their complexity (Guan et al., 2006). As a starting point, I combined the reasons for attending group fitness classes discovered through the literature review, and results from the pilot study, with barriers experienced by group fitness participants. The reasons for participation included: scheduling, support from friends, and enhancing health. The list of barriers included: lack of time, lack of support, and other obligations. I also used the three factors that commonly affect attrition rates for physical activity; environmental factors, program factors, and person-based factors (Jancey et al., 2007). The environmental factors included the social aspects of physical activity and the social support received by participants. Program factors included the design of the program and processes of recruitment. The person-based factors included the perceptions and beliefs

that individuals brought with them to the physical activity environment. I used these factors as a basis for my qualitative data analysis.

With the above reasons, barriers, and factors in mind, I began the initial process of reviewing all the data separately that was collected within the on-line environment including: the chat area, both focus groups, the discussion forums, and the announcements. I also reviewed the content of my private hand-written journal. I reached 90 codes originally and merged all coded text together to analyze each code. My initial list of 90 codes was separated into reasons, barriers, environmental factors, program factors, and person-based factors. These codes and their groupings can be found in Appendix M. At this time, some codes were placed into multiple groups. I then began to read the content within each of the 90 codes. As I read through each code, I began sorting, merging and deleting codes. The list of 90 was whittled down to 57 codes using the categories: attendance, barriers, benefits, motivation, physical activity, program, social interaction, and study. These 57 codes and their groupings can be found in Appendix N. The codes were reviewed, sorted, and merged producing 32 codes in the following categories: attendance, barriers, benefits, communication, motivation, physical activity, program, and study. Codes that had the same meanings were merged together, as were codes with little content in them. These 32 codes and their groupings can be found in Appendix O. The remaining codes were further reviewed, sorted, and merged. Codes that had the same name as their categories were removed. This resulted in 23 codes sorted into the following nine categories: attendance, barriers, benefits, communication, motivation, physical activity (outside of the study), program, support, and study. These codes were further grouped to assist me in answering sub-questions 2

and 3, and to provide future recommendations. The final 23 codes can be found in Appendix P. These 23 codes were also used to sort and review the interactions that participants had with each other and with the researcher within the on-line environment. All interactions were grouped into the final 23 codes and analyzed to assess relationships between participants and with the instructor.

Each of the nine categories including attendance, barriers, benefits, communication, motivation, physical activity, program, support, and study, are described below. Attendance was collected in the chat area, as participants virtually pedaled to Florida throughout the semester. This category also contained all information about attendance at indoor cycling classes that was found within the focus groups, the attendance forum, and the on-line and private hand-written journals. Barriers were reasons that prevented participation in physical activity including planning and scheduling issues and stress. Benefits included perceived benefits from participation in physical activity, including better nutrition. The category for communication contained a variety of interactions including: apologies, appreciation, feedback, informing, praise, requests, social, and suggestions. In the case of motivation, I was looking for reasons that individuals participated in physical activity. The physical activity category included all physical activities mentioned such as yoga or boot camp classes that were outside of the indoor cycling program. Items coded as program referred directly to the indoor cycling program and included: drills, events, facility, incentives, inconsistencies, instructors, music, and recruitment. The category for support contained any interaction that made me feel that support was being expressed between the researcher and

participants, or among participants. The last code, study, contained information about the focus groups and the on-line resources.

To assess the participant-instructor relationship, the categories coded as communication and support were further analyzed to determine the relationship each participant shared with the instructor through the study. For example, comments such as this one from a participant during the second focus group were included as part of the relationship between the researcher and participants within the on-line environment: "Sorry again for yesterday -- i'm sure it must be frustrating! but we are here now" (personal communication, March 12, 2010). This particular comment was referring to two focus groups that were canceled prior to the second focus group due to the lack of on-line attendance. All interactions between participants and the instructor were also grouped, by participant, and analyzed to assess the relationship that each shared with me. The quantitative data collected in terms of the number of interactions between the participant and the instructor were also used to assess this relationship.

The results of the data analyzed gave me a sense of the social environment created and the growth of participant-instructor relationships, or the lack of, through the study. This exploration supports the need for future research with larger samples using other types of group fitness classes.

Delimitations and Limitations

Lack of Interest to Interact With Other Group Fitness Participants

The study was set-up to allow only indoor cycling participants to interact with one another in the on-line environment. The indoor cycling schedule was set-up to allow participants the freedom to attend classes in a variety of time slots, and change classes

from week to week. For this reason, participants may not have interacted with the same people in face-to-face classes. The goal of the on-line environment was to interact with peers in a social manner creating a supportive community. Participants may not have wanted to form a community of support with individuals that they did not know or had not seen in class. Bringing participants from a common group fitness program together may not have been enough to elicit the social environment intended.

Multiple Instructors Teaching Indoor Cycling Classes

The indoor cycling program during the Winter 2010 semester consisted of 17 classes that were split into six different time slots. These classes were taught by eight different instructors. I taught three classes in two different time slots. Only seven of the 11 study participants that interacted on-line attended my classes. This study explored the interaction of group fitness participants on-line with one another, and with the instructor. This diversity in instructors may have limited the interaction of participants in the on-line environment.

Class Times Were Assigned

The classes that I instructed were at 4 pm on Monday and Thursday, and at 6 pm on Tuesday evenings. The classes that were the most popular were at 12 pm and 5 pm. The interaction that occurred in-class and on-line with participants and myself may have been limited by the time slots that I was assigned.

Data Collected Strictly Within the On-line Environment

I chose to use only on-line technology to collect data for this study. I wished to enhance engagement with the tool, and not bring participants away from the on-line environment. The use of interviews instead of an anonymous on-line survey may have

provided more useful responses to the questions being asked. However, as a study for a master's thesis, there were limits to the amount of data that could be collected and the amount of time that could be put into the process and the analysis. Adding an interview to the coding would have significantly increased the time spent analyzing data. This may have limited the interaction between the participants and me.

Chances for Misunderstanding

The on-line environment was set-up to allow participants to log in and out as they pleased. Participants could read any of the data provided and respond to any content within the site. This structure may have provided chances for misunderstanding. Without the use of facial expressions, gestures, and tones, it could have been hard to determine how some comments were meant to be taken (Guan et al., 2006). This could also have affected the data analysis as the context of the posts may have been perceived in a manner that was not originally intended.

Results not Relevant to Larger Populations

The intention was to recruit a minimum of six to 10 individuals for the study. With only 11 participants that signed in, the sample size was very small. The results of this exploratory study are not relevant to larger populations. Additional studies using larger samples and other group fitness classes will be required to draw further conclusions on the use of on-line environments to enhance group fitness programs.

Be Aware of Own Biases

As an instructor and a researcher within the study, I brought my own biases and previous experiences into the on-line environment and into the coding process. The interactions between the participants and me were important to the study. I did not wish

to sway the behaviours of participants. When providing information on-line, I carefully worded my responses before posting. In my private hand-written journal, I allowed myself to write my personal thoughts and feelings during the study. The content from the public on-line journal and my private hand-written journal were both included in the qualitative data analysis. As a person with a positive view of health and wellness, I was careful to use the literature findings to help me shape the coding process, in order to minimize my particular personal perspective.

CHAPTER IV

RESULTS AND ANALYSIS

Demographics

There were 14 respondents that accessed the Letter of Information and completed the initial on-line survey. Of these respondents, two were faculty members, three were graduate students, three were undergraduate students, and the remaining six were not affiliated with the university. Of these 14 respondents, three were male and the remaining 11 were female. The respondents were in various age groups with six being under 25, two between 26 and 32, two between 33 and 39, one between 40 and 46, two between 47 and 54, and one over 55. Only one of the respondents had not used some form of social networking in the past. The frequency of using social networking tools was weekly for five participants and daily for five. The remaining four respondents did not use these tools, such as Facebook, blogs, and wikis on a regular basis.

The responses showed that 50% of respondents had registered for the indoor cycling program in the past. Of these seven respondents, five noted that they attended classes more than once per week. The majority of respondents were motivated to participate in physical activity if the classes fit their schedule, for health reasons, and if they liked the instructor. Half of respondents were motivated to participate by their friends and to relieve stress. Less than half of participants were motivated to participate for other reasons such as: guilt, family influences, and looking good.

Respondents were asked to speculate the reasons why they may not attend indoor cycling classes during the semester. The reasons for not attending included: work,

scheduling conflicts, homework and exams, bad weather, health issues, the instructor, and the facility.

An important aspect of the study was the attendance at indoor cycling classes. Campus Recreation kept attendance records when indoor cyclers collected a seat prior to each class. Figure 1 below shows the number of seats distributed to all 85 indoor cycling participants compared to seats distributed to only the 11 study participants who logged into the on-line environment at least once.

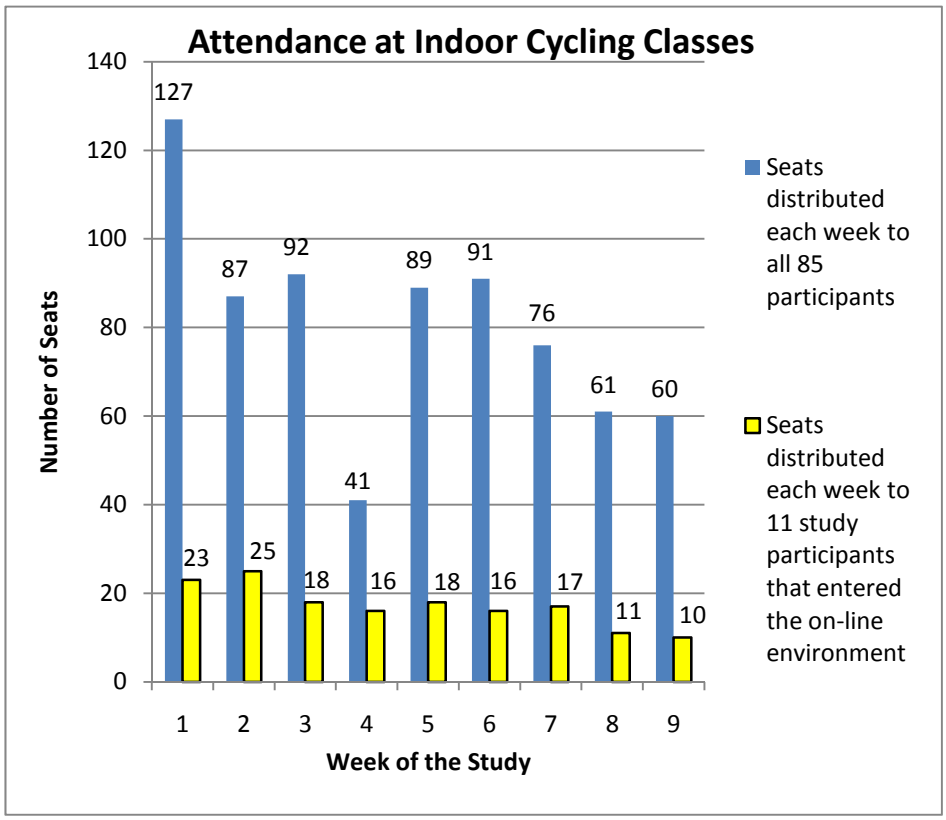


Figure 1: Attendance at indoor cycling classes. This figure compares the number of seats distributed by Campus Recreation to all participants and only those that logged into the on-line environment at least once.

Some participants marked attendance at classes within the chat section of the on-line environment. There are some discrepancies between the attendance kept within the

chat and that kept by Campus Recreation. More specifically, two female participants marked higher attendance in the chat section, four female participants and one male participant marked less attendance in the chat section, and one female marked the same number of classes attended. The remaining three participants, two females and one male, did not mark attendance in the chat area. The researcher attended 28 classes and marked each of them in the chat. Campus Recreation does not record the attendance for fitness instructors in the same area as participant attendance is kept. This data is shown in Figure 2.

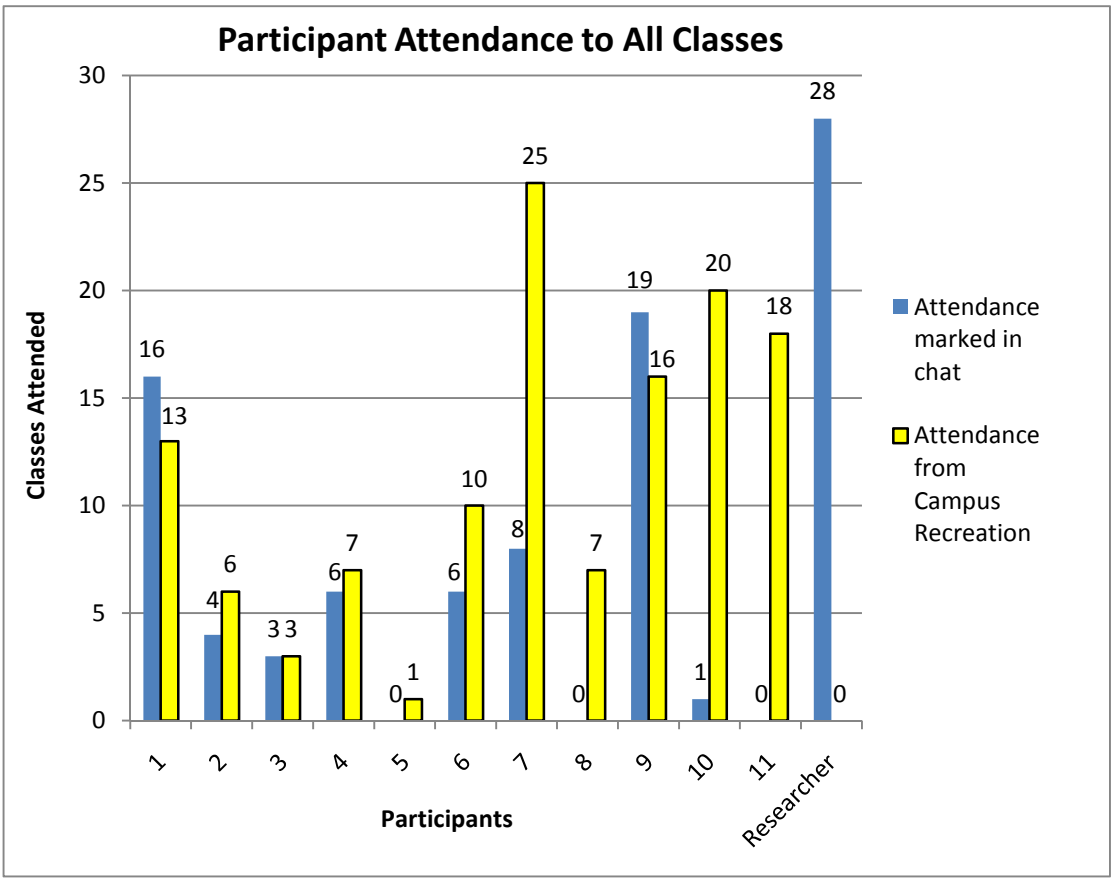


Figure 2: Participant attendance at all classes. This figure shows the number of classes that each participant marked within the chat area of the on-line environment compared to the attendance kept by Campus Recreation.

The overall attendance records showed that the average attendance at each class in the schedule was five participants. When all of the attendance collected by Campus Recreation was totalled, 792 classes were attended. With 73 registered participants and 12 drop-in participants, the number of indoor cyclers totalled 85. If each of these cyclers attended the same number of classes, the attendance would be 9.3 classes each over the 11-week period. Attending 9.3 classes over 11 weeks is less than one hour of intense exercise per week. The following data, in Figure 3, shows the classes that each study participant actually attended each week. The maximum number of classes attended in any given week by the participants and the instructor was four.

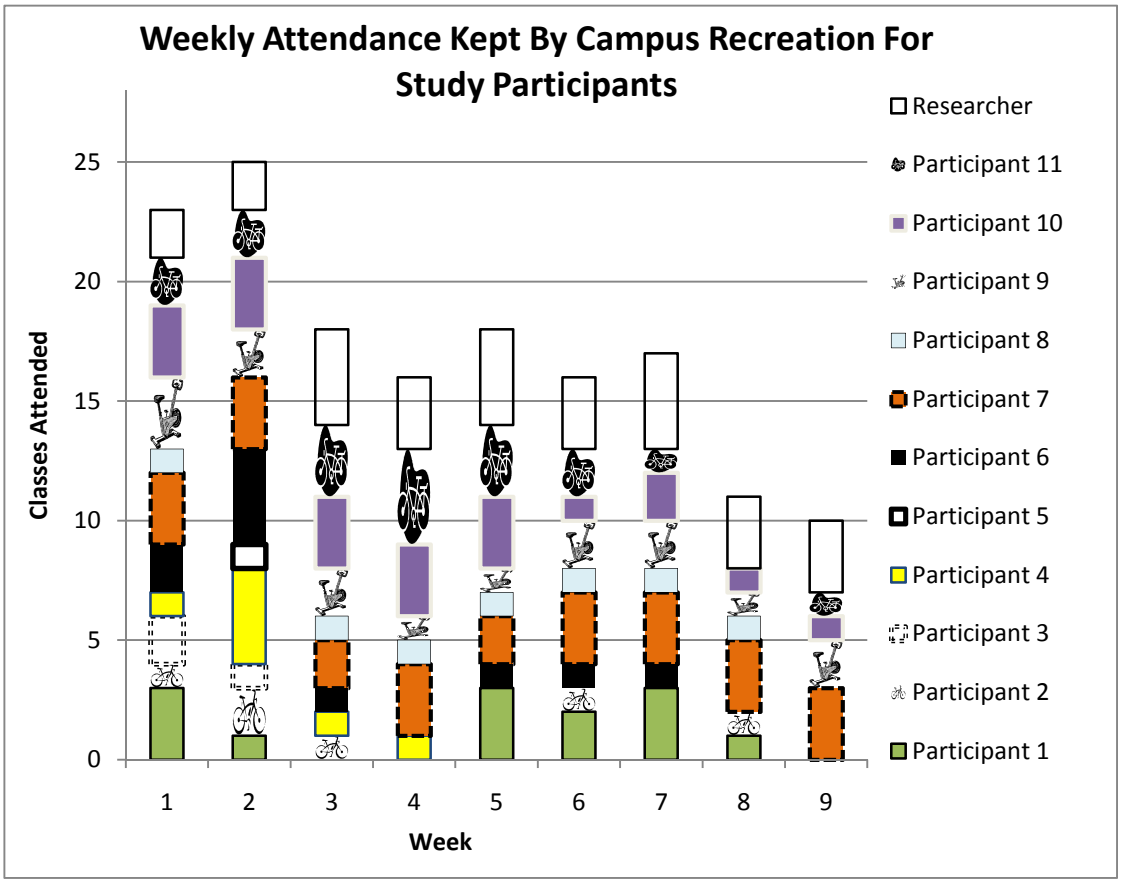


Figure 3: Weekly attendance kept by Campus Recreation for study participants. This figure shows the weekly attendance at indoor cycling classes for each participant and the researcher.

The researcher and eight participants marked attendance in the chat to virtually travel to Florida as a group. Each class marked was calculated as 10 miles. We accumulated 900 miles by the end of the semester, which landed us right at the Florida border. The distances travelled to Florida from week to week are shown in Figure 4 below.

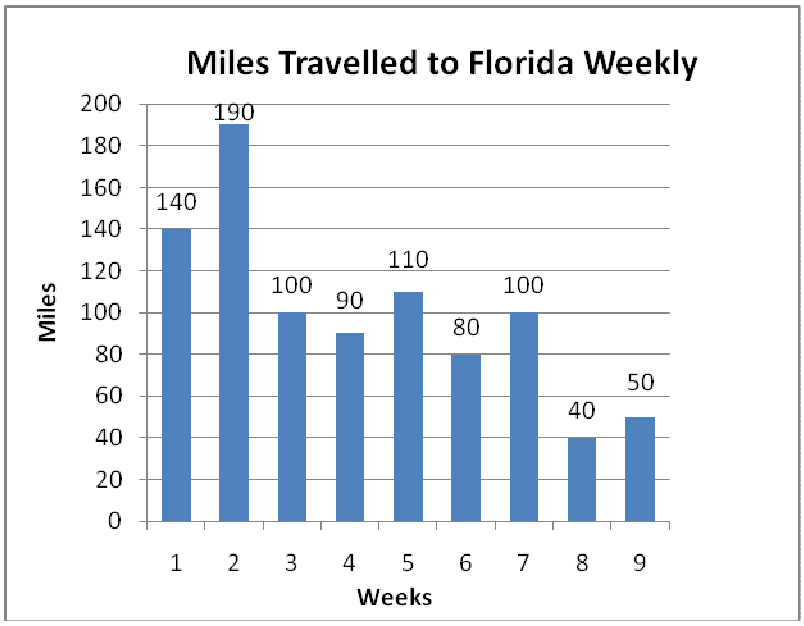


Figure 4: Miles travelled to Florida weekly. This figure shows the weekly accumulation of miles as we virtually pedaled to Florida. We accumulated 900 miles, which landed us right at the Florida border.

During the tenth week of the study, a final survey was sent out through the announcement tool. There were four female participants that completed the survey, three of which were students under the age of 25. The fourth survey was completed by a faculty member. The on-line environment motivated 50% of participants to attend more classes though only one participant mentioned actually attending more classes. Another participant felt the supplement assisted in increasing her amount of physical activity outside of the scheduled cycling classes. Half of the respondents enjoyed the external

event links the most. All of the respondents stated that the information provided was relevant and useful.

Sub-question 1: How is the on-line environment used, in terms of frequency of use, resources accessed, and popularity of discussion items?

Results

The on-line environment was visited a total of 325 times in the 10-week period. The most visits, 68, occurred in week 2 and the fewest, 11, occurred in week 10 of the study. The indoor cycling semester was 9 weeks long. The on-line environment was left open for the tenth week while feedback forms were being collected. The details are shown in Figure 5.

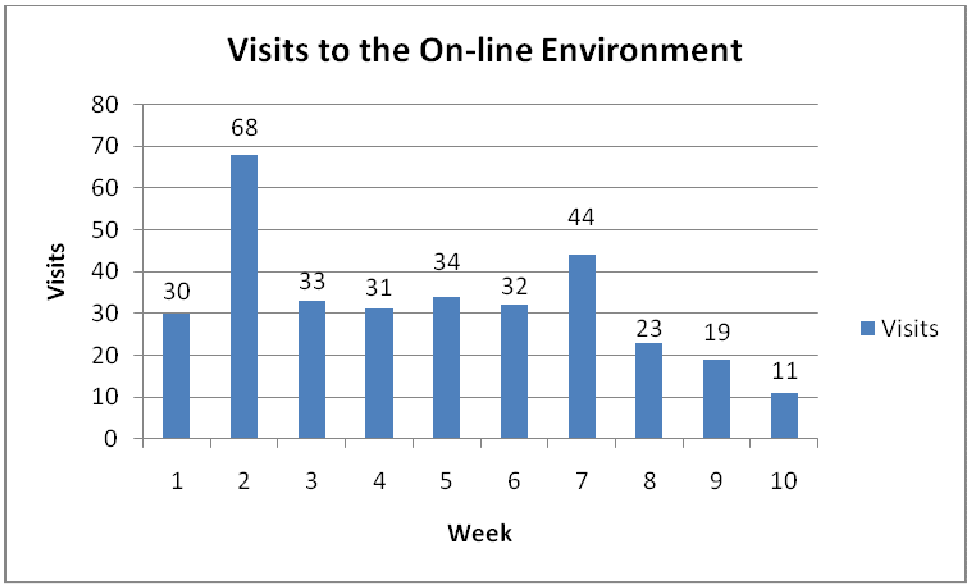


Figure 5: Visits to the on-line environment. This figure illustrates the number of visits to the on-line environment, by all participants and the instructor, for each week of the study.

There were 11 participants who signed into the on-line environment. Two of these participants were males from outside of the University. The remaining participants were females, eight of whom were from campus and one who was external. Of these participants, there were four who entered the on-line environment only once, one who

entered it each of four, five, eight and 19 times, two participants who entered it nine times, and one who entered it 140 times. The researcher entered the on-line environment 127 times. A visit is simply an access to the on-line environment. Participants, and the researcher, may have simply lurked during a visit, or may have read, posted, and responded to posts. Figure 6 shows the number of visits per week for each participant and the researcher.

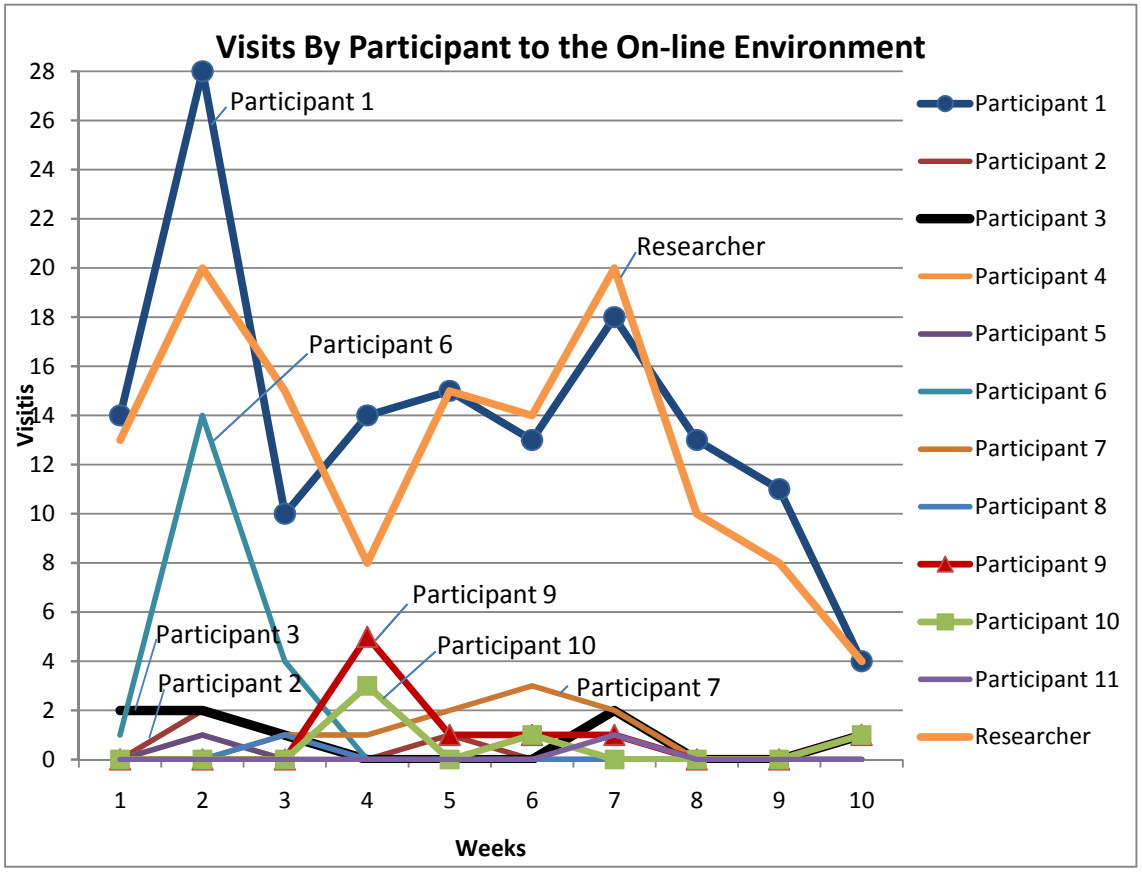


Figure 6: Visits by participant to the on-line environment. This figure illustrates the number of visits that each participant and the researcher made to the on-line environment from week to week during the study.

Activity within the on-line environment was limited to the chat section, two on-line focus groups, also within the chat, resources, discussion forums, and announcements. During my visits to the on-line environment, I may have done a variety of actions

including sending an announcement, creating multiple on-line resources, reading and commenting on posts in the chat section, and creating an entry in the public on-line journal. Participants also did a variety of actions while in the on-line environment including reading or creating forum messages, reading content, or adding to the chat area. The Site Stats showed the tools used by participants during visits, but not the amount of time spent on-line during each visit.

The chat section was the most popular tool with 46.8% of the activity, followed by the resources area with 36.7% of the activity, the discussion forums with 14.2%, and the announcement tool with 2.2%. The remaining activity occurring within the on-line environment was the researcher using the site mailing list. The numbers below add to 100.1% due to rounding. This chart was created about the activity within the on-line environment through the use of Site Stats. Figure 7 shows the activity based on the tools used for the 10-week period.

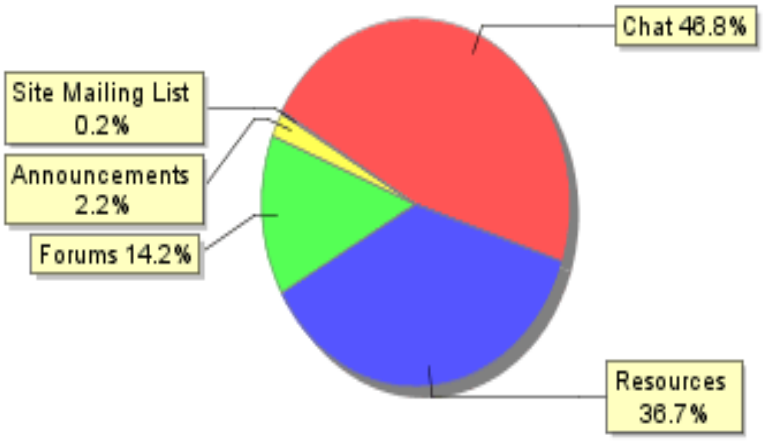


Figure 7: Activity within the on-line environment. This figure illustrates the amount that each tool was used by all participants and the researcher during the 10-week study.

The activity for each participant and the researcher, in terms of the number of posts to the on-line environment, is shown in Figure 8. The resources and the

announcements were omitted from Figure 8 as all of the 159 resources and 9 announcements were posted by the researcher. The figure shows from top to bottom that three participants and the researcher participated in the discussion forums; the same two participants, both students, and the researcher participated in the focus groups; and eight participants and the researcher participated in the chat section.

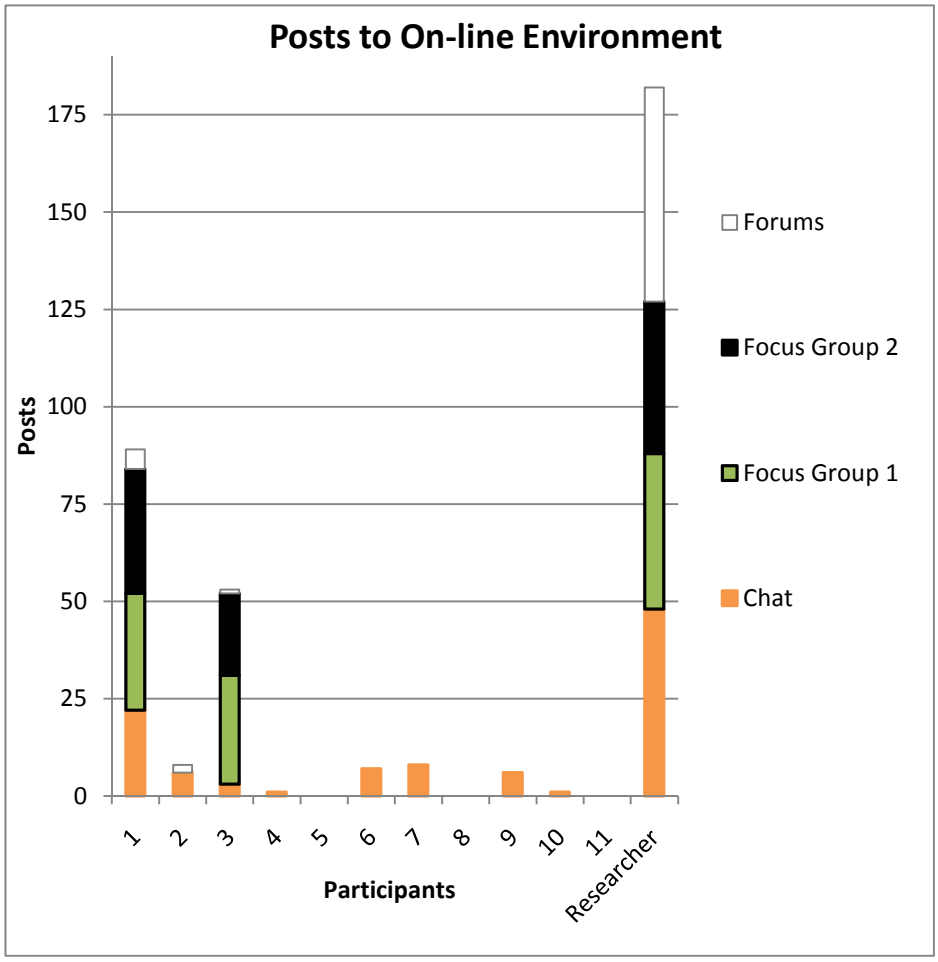


Figure 8: Posts to on-line environment. The figure illustrates the number of posts that each participant and the researcher made using the available tools. Resources and announcements, posted solely by the researcher, were omitted.

The chat area was the most popular tool used within the on-line environment and was used by 8 out of 11 or 73% of the participants who logged in at least once. Details of the posts within the chat for each participant and the researcher are shown in Figure 9.

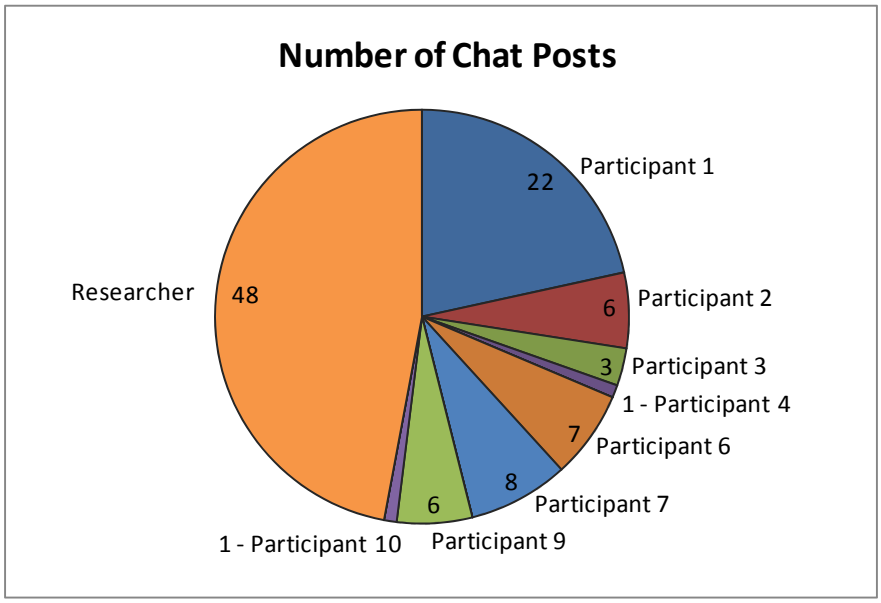


Figure 9: Number of chat posts. The figure illustrates the number of posts that each participant and the researcher made within the chat section of the on-line environment.

The resources section was populated with 159 items. The participants read only seven of the items or 0.04%. Five participants read the seven items with one female student reading three, and the remaining four female participants reading one resource each. Two of these four participants were students, one was a faculty member, and the other was external to the University. The researcher read 37 of the items. Details are shown in Figure 10.

Figure 10: Number of resources read. This figure illustrates the number of resources read by the participants and the researcher.

The site contained four different discussion forums. The attendance, local events, request for addition of content, and public on-line journal forums contained nine, five, one, and 40 posts respectively. In total, of the 55 posts within the forums, only 14 or 25.45% of the posts were read by participants. One female student read ten postings, a second female student read three, and a third female student read one. Statistics from the on-line environment showed the researcher as having read 50 posts. These details are shown in Figure 11.

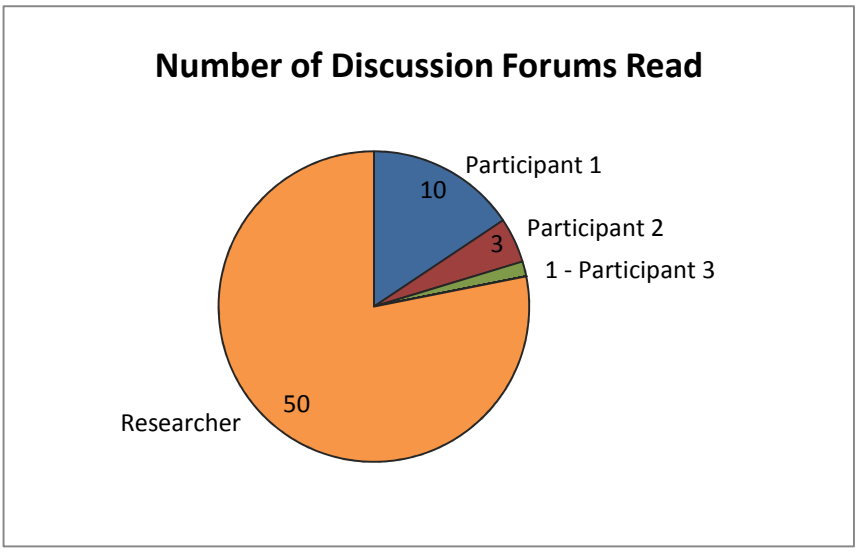


Figure 11: Number of discussion forums read. This figure illustrates the number of discussion forum items that were read by participants and the researcher.

The discussion forums were set-up so participants could create new posts or respond to existing posts. The same three female student participants that read the forum posts also contributed to the conversation. One participant posted five comments, a second posted two, and the third participant posted once. The researcher created 17 posts within the on-line forums. This information is shown below in Figure 12.

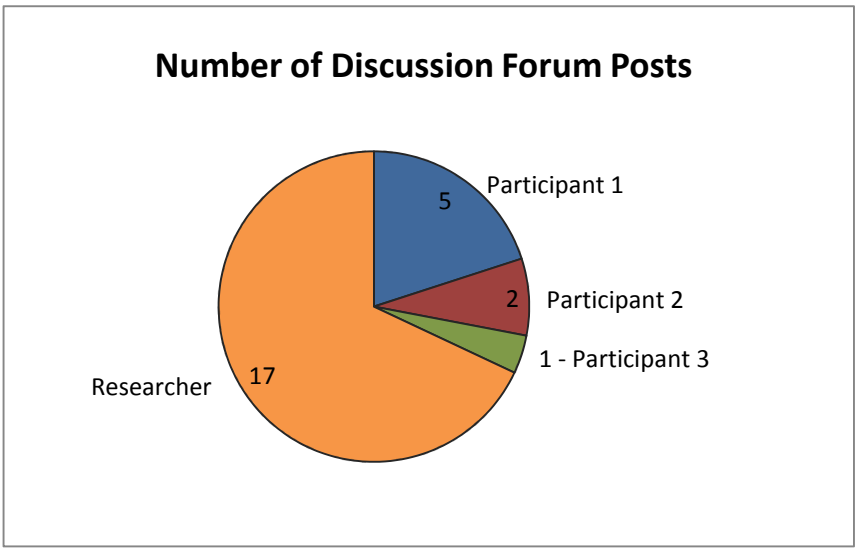


Figure 12: Number of discussion forum posts. This figure illustrates the comments posted by participants and the researcher within the discussion forums.

Only two female student participants and the researcher participated in the focus groups. The researcher had the most posts in both cases, followed by Participant 1 and Participant 3. As the moderator, I posted questions and also posted responses to comments posted by each of the attendees. At any given time, I could have been conversing with both participants and responding to their comments. At the same time, the two participants were also responding to posts created by one another. Once the posts for a particular question subsided, a new question was posted until all questions had been asked.

The first focus group, containing eight questions, lasted for 54 minutes. The topics discussed included: reasons for participating in physical activity, the benefits experienced through attendance at indoor cycling classes, other physical activities outside of the study that participants were involved in, ideas to increase attendance at indoor cycling classes, the social aspects of group fitness classes, the importance of good music in classes, the lack of interest in the resources area and what information could be

provided that participants may be interested in reading, and the importance of stretching at the end of each class. Figure 13 shows the participation for the first focus group.

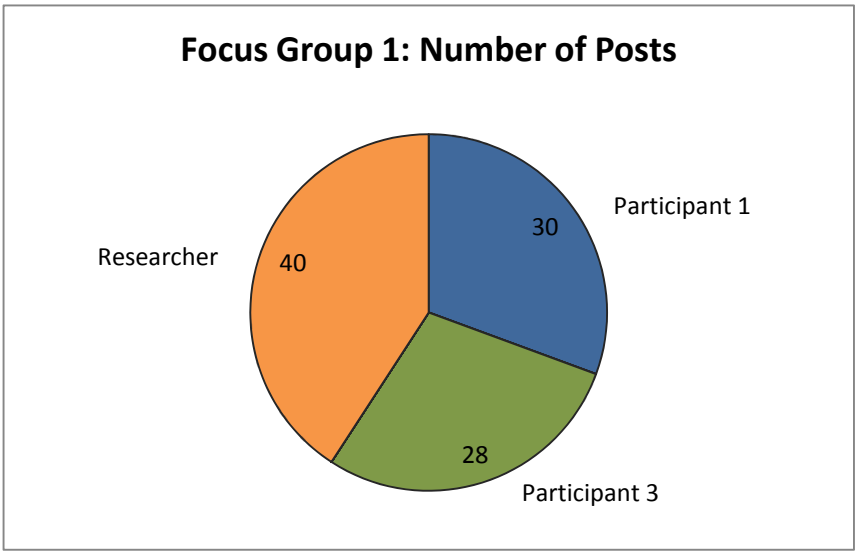


Figure 13: Focus group 1: Number of posts. This figure illustrates the participation of the participants and the researcher during focus group 1.

The final focus group, containing 7 questions, lasted only 37 minutes. The topics discussed included: how stress affects motivation and levels of physical activity, tricks used to maintain a healthy diet and activity level, the importance of social support and scheduling to assist in motivation to participate and maintain good health, and ideas to increase the attendance at group fitness classes. Figure 14 shows the participation for the second focus group.

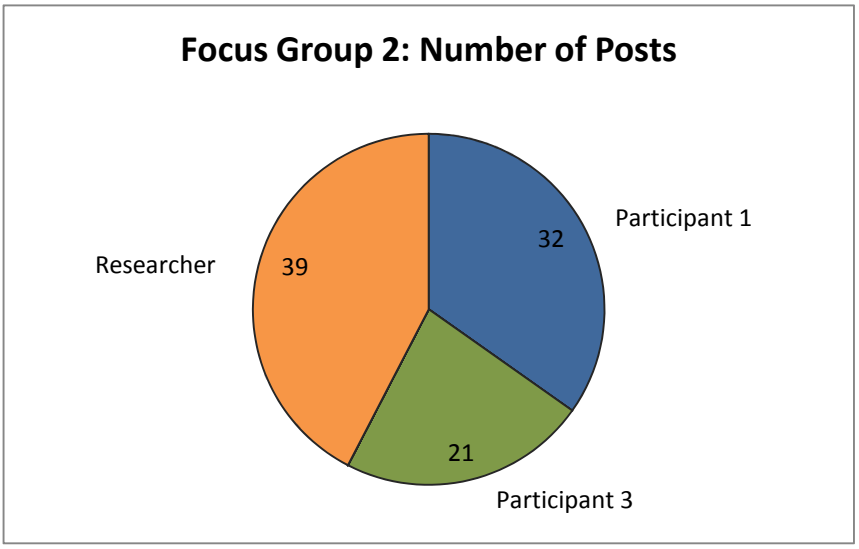


Figure 14: Focus group 2: Number of posts. This figure illustrates the participation of two female participants and the researcher during focus group 2.

The on-line environment was available from the last week of January through the last week of March. In a single week in January, the activity within the site totalled 102. Over the 4 weeks in February, including Study Week in which the students had no academic classes, the activity within the site totalled 313. During the month of March, the activity within the on-line environment was 224. This data is show in Figure 15.

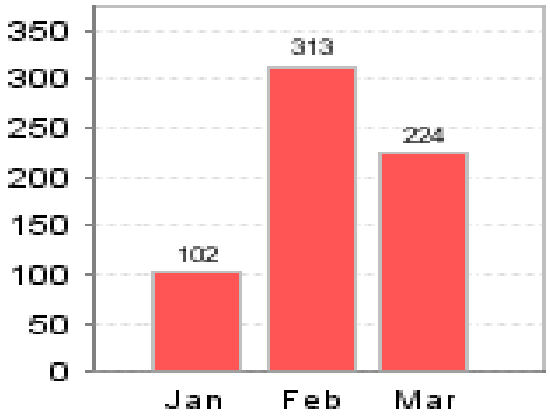


Figure 15: Activity within the on-line environment by month. This figure shows the activity within all areas of the on-line environment, by participants and the researcher, during the last week of January and the months of February and March.

It was mentioned earlier that a level of engagement would be calculated for each participant by summing the number of site visits, the number of messages that each participant read and posted, the length of each message in words, and the number of other participants with which each participant conversed. The researcher had a level of engagement of 7803, followed by Participant 1 with 2208 and Participant 3 with 1272. The researcher had the highest level of engagement due to the creation of resources, announcements, and on-line forum items. Details of the level of engagement for participants and the researcher are shown below in Figure 16.

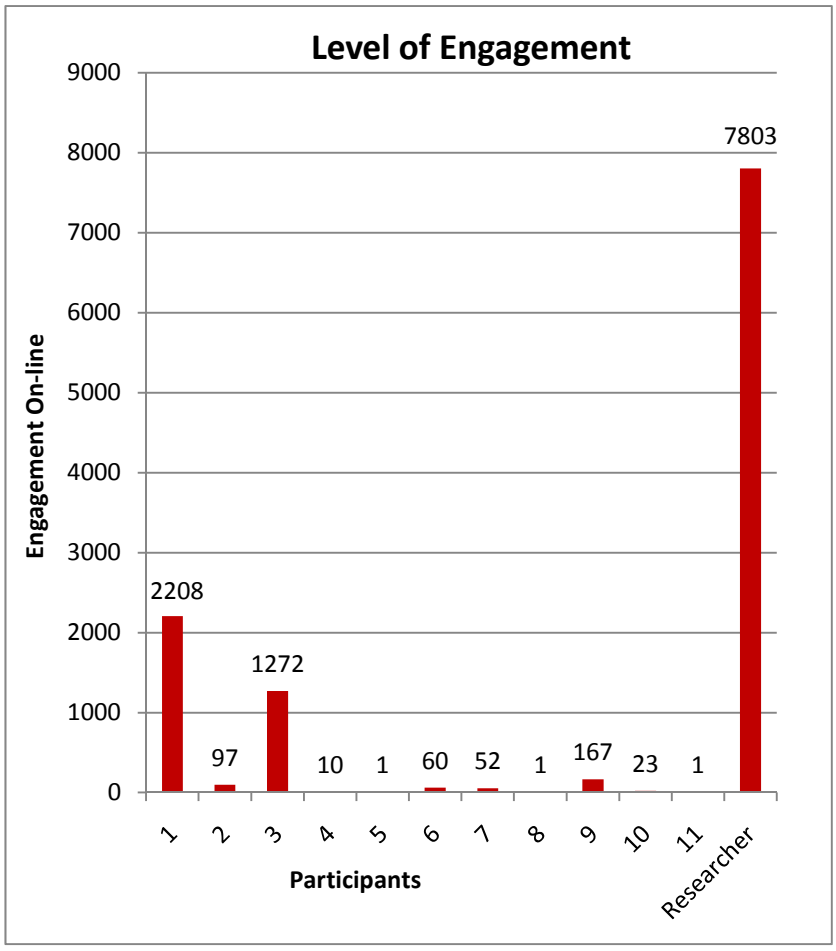


Figure 16: Level of engagement. This figure shows the amount that each participant and the researcher participated within the on-line environment.

Participants 1 and 3, both female students, had the second and third highest levels of engagement due to their attendance at the on-line focus groups. The remaining participants engaged only within the chat, discussion forums, and resources area of the on-line environment. Figure 17 below shows the level of engagement within the on-line environment with the focus group interactions removed for all participants and the researcher. With the focus groups removed, it is clear that Participant 1 interacted more within the on-line environment than any other participant.

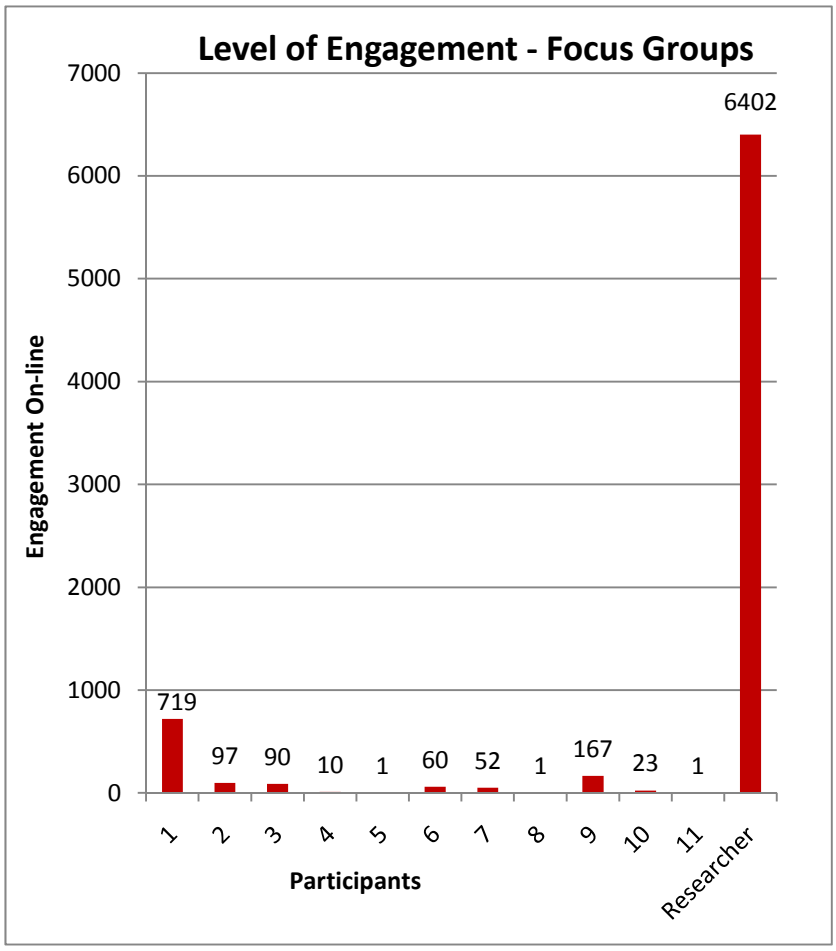


Figure 17: Level of engagement - Focus Groups. This figure shows the level of engagement within the on-line environment for all participants and the researcher with the focus group interactions removed.

Figure 18 below shows the level of engagement within the on-line environment compared to the attendance from Campus Recreation. Participant 7 and 11, both male external participants, and Participant 10, a female faculty member, had the highest attendance in face-to-face classes (25, 18, and 20 classes respectively), yet these three participants had low levels of engagement within the on-line environment. The two female student participants with the highest levels of engagement, Participant 1 and Participant 3, attended 13 and 3 face-to-face classes, respectively.

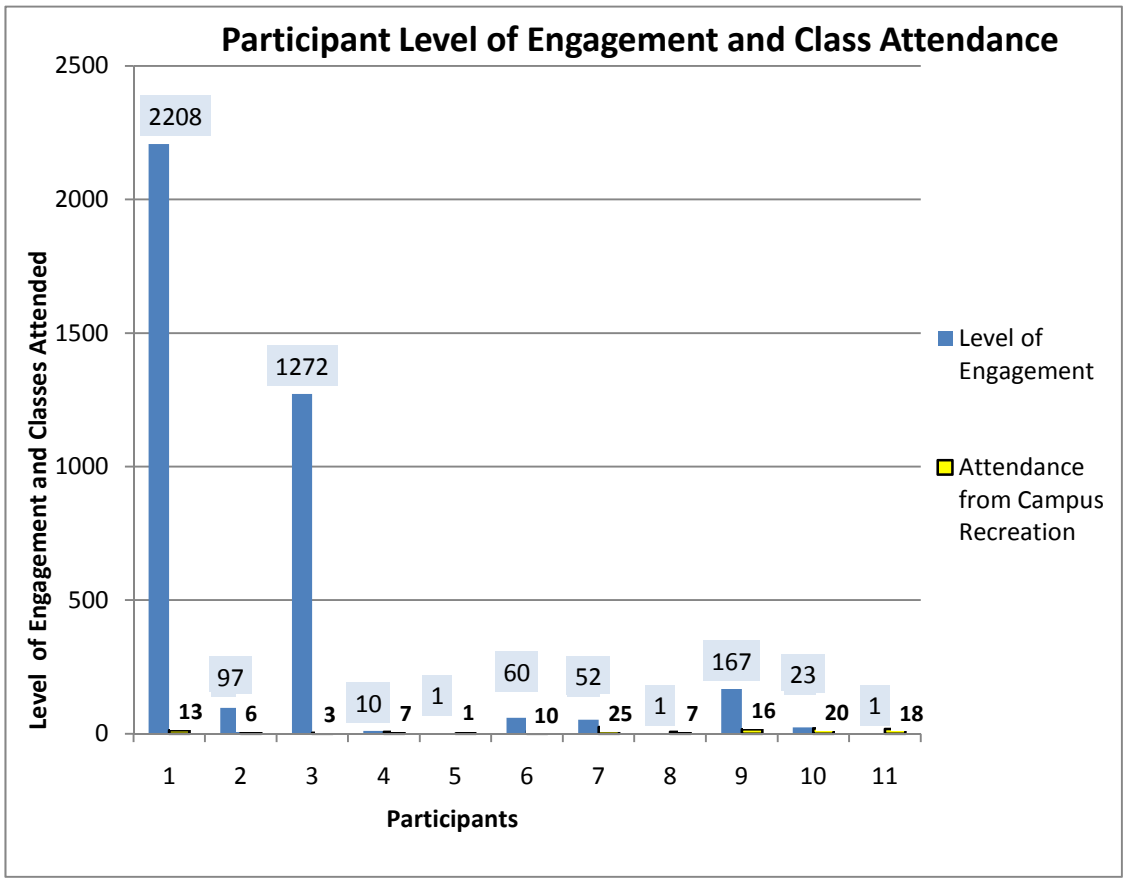


Figure 18: Participant level of engagement and class attendance. This figure compares the level of engagement and class attendance for the 11 participants that logged into the on-line environment at least once.

During the initial survey, participants provided information regarding their frequency of on-line social networking. Five of the 11 participants that entered the on-line environment admitted to social networking on a daily basis. Three other participants that logged in noted interacting on a weekly basis. Participant 4, a female faculty member, as well as Participant 9, a female external participant, and Participant 11, a male external to the University, never engage in on-line social networking. Social networking in this case refers to the use of Facebook, MySpace, Blogs, Wikis, Twitter, and on-line forums. The details for all 11 participants are shown below in Figure 19.

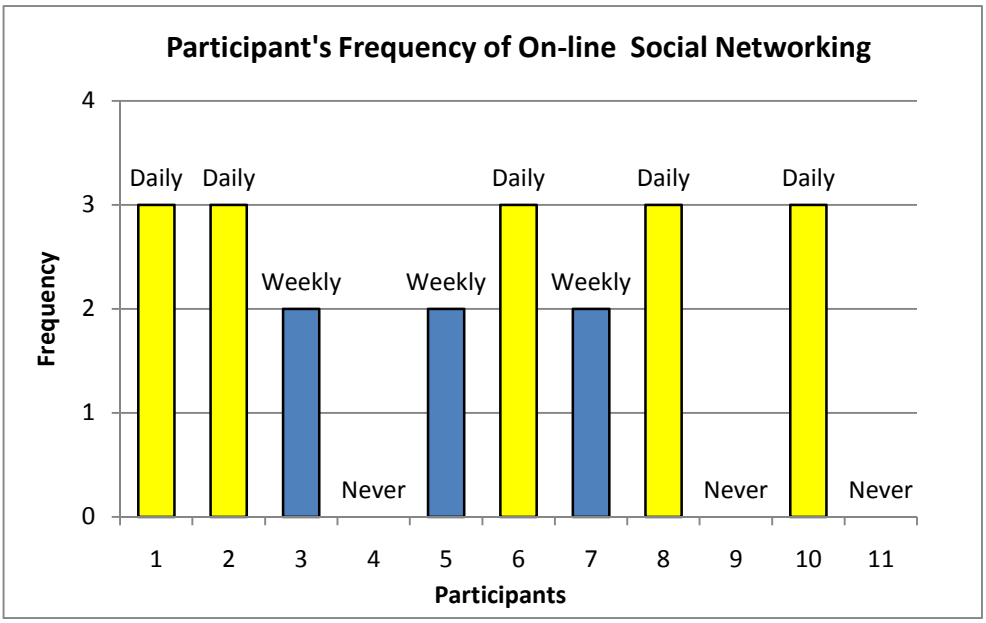


Figure 19: Participant's frequency of on-line social networking. This figure shows the frequency of on-line social networking for each of the 11 participants who logged into the on-line environment. The responses include the use of Facebook, MySpace, Blogs, Wikis, Twitter, and other on-line forums.

Analysis

Sub-question 1 was concerned with how the on-line environment was used by participants. The number of visits to the on-line environment, and the activity within it,

were very low. An increase occurred during week 2, when participants were commenting on music in the on-line forum. Participation on-line stabilized until week 7, when the final focus group caused an increase in on-line interaction. Activity on-line then decreased for the remaining three weeks of the study. These results support what Bromham and Oprandi (2006) note as the greatest challenge of using a blended learning approach in an academic environment: generating engagement of the tool. The on-line environment, as a whole, was not very successful, as participation was quite low. Generating engagement of the on-line environment outside of the academic realm was also challenging. This assessment draws on the work of Wang and Wang (2009) which describes success of on-line environments as being dependent on the participation levels within the on-line environments and the satisfaction assumed by the users. In academia, Wang and Wang feel that on-line learning increases the depth of learning. With low participation on-line, and only 7 of the on-line resources being read, it does not appear that a blended environment assisted participants in gaining more knowledge in the area of health and fitness.

The results of this study challenge the idea of Ransdell et al. (2008) that participants get more engaged if they have the opportunity to suggest content for the site. Their work was done with high school aged students in physical education classes. Allowing participants to suggest content for the on-line environment did not increase their engagement. There was very little data requested through the on-line environment and even fewer resources read by participants. These results both support and challenge the work of Cole (2009). She stated that it is common for a few individuals to participate in on-line discussions, which three out of 11 participants did in this study, and for others

to simply read the content, which did not happen. Of the 55 posts to the discussion forums, three female students posted the only eight items. These same three students read 14 items. The remaining eight participants did not post to the on-line forums or read any posts.

The results also challenge the concept that on-line discussion forums become a trusted community encouraging interaction (Kosonen & Kianto, 2009). It was difficult to bond with others within the discussion forums with so little interaction between participants and the researcher. However, the on-line focus groups extended this concept; a trusted community appeared to be formed on-line between the two attendees and the researcher. This concept was further extended by the actual scheduling of the final focus group. Focus group two was scheduled on March 4. No participants were on-line at that time; I cancelled the meeting, having waited 15 minutes for attendees. It was re-scheduled for March 11. One participant was in attendance while we waited for others, however this attendee was busy doing other work and did not resume activity on-line. This focus group was also cancelled. The following day, Participant 1 and Participant 3 e-mailed asking if the final focus group could occur that day, March 12, as both of these female students would like to attend. The focus groups contained valuable suggestions and ideas regarding health, motivation, and physical activity. These results extended the work of Oates (2000) that focus groups provide rich data in the participants' own words. Oates is referring to face-to-face focus groups. This study used on-line focus groups which, like face-to-face focus groups, seemed to make participants feel more obligated to explain themselves more fully to other attendees.

Participation within the on-line environment was high for Participant 1 and Participant 3, and low for all other participants. The frequency of social networking for these two participants was provided as daily and weekly, respectively. With the focus group interaction removed from the level of engagement, Participant 9, a female external to the University, had the second highest level of engagement, aside from the researcher. This is a surprising result as this participant noted that she never networks socially on-line. This participant engaged in the chat area of the on-line tool and read one of the on-line resources.

The low participation within the site could have been due to a lack of interest in interacting with other group fitness participants. The variety within the indoor cycling schedule may have limited the face-to-face interaction of participants, which in turn made interaction on-line less appealing.

Sub-question 2: What benefits were found by participants from the use of an on-line supplement?

Results

Benefits perceived by participants could have been physical benefits, achieved through participation in physical activity, or informational, social, and emotional benefits experienced through participation in the study. The perceived benefits were assessed through content analysis of the data collected on-line as well the content written in my private journal. During the first focus group, Participant 1 mentioned that she had "definitely noticed an increase in [her] aerobic endurance, a little more muscle tone in [her] legs (especially calf muscles)[, that she had] more energy after a class[, and that her] perseverance in attempting the harder [indoor cycling drills had increased]" (personal communication, February 10, 2010). Participant 3 mentioned that she was

being more conscious of her eating habits, that she was “feeling more energized[, and that she was] more incline[d] to do more active things - i.e., walk more than taking cabs etc. and [she was feeling] more confident in [her] clothes after a great spin class/week” (personal communication, February 10, 2010).

In terms of informational benefits, during the first focus group, Participant 1 stated that she “would like to do a 5km or 10km run by the end of the semester” (personal communication, February 10, 2010) and requested that information be researched and added to the events area. This female student mentioned that she was not reading the on-line resources provided as she “already [had] the information [she] need[ed] about being healthy” (personal communication, February 10, 2010). At this time, Participant 3 apologized that she had not checked them out yet. She mentioned that she would “peruse and let [me] know [if she had any requests for content]” (personal communication, February 10, 2010).

Socially, Participant 3 mentioned that she thought it “may be helpful in class to get to know people. [She found] it difficult to pursue this common goal [of pedalling to Florida] together without knowing [her] teammates” (personal communication, February 10, 2010). Participant 1 felt that this could be done by “trying to get to know people's names, and making them more identifiable” (personal communication, February 10, 2010). Participant 3 agreed with this comment and mentioned that when “you make people more visible they are more incline[d] to participate” (personal communication, February 10, 2010).

Emotionally, one comment that surfaced during the first focus group was about making the on-line environment more inviting. Participant 3 felt that “maybe dimming

the lights or more motivational pictures [would provide more satisfaction when engaging in indoor cycling classes as she found] it difficult to push through a hard drill when [she was] staring at the anatomy posters" (personal communication, February 10, 2010). Participant 1 stated that "[she thought] music [was] very important [and that she enjoyed] when a drill end[ed] at the end of a song [because] you can usually tell when the song is coming to an end so you see the end in sight and you keep going" (personal communication, February 10, 2010).

Part of the final on-line survey asked respondents about the benefits they received from using the on-line supplement. Although 100% of the four respondents reported that they did not connect with other indoor cyclers on a social level, 75% enjoyed sharing comments and feedback with others on-line.

Analysis

Sub-question 2 was concerned with the perceived benefits found by participants through the use of the on-line environment. Through participation in indoor cycling classes, and other physical activities outside of the study, participants may have experienced some health benefits. According to Gilmour (2007) and the Canadian Fitness and Lifestyle Research Institute (n.d.), 60 minutes of light or 30 minutes of moderate or intense physical activity is recommended every day to experience health benefits. Two participants and the instructor attended as many as four indoor cycling classes some weeks. All of the participants and the instructor would also have had to participate in other activities outside of the study to have experienced health benefits. These benefits, according to Schutzer & Graves (2004), may have included a reduced risk of heart disease, diabetes, and many types of cancers.

According to the statistics collected within the on-line environment, participants did not socially interact and did not become engaged within the on-line environment. This was evident in both Figure 10 and Figure 16. Figure 10 showed that only 7 of 159 on-line resources were read. According to Persell (2004), in an academic environment, providing informational resources has been shown to encourage complex thinking and build related skills. The results of this study do not support this claim. Although a few resources were read, it is not clear if participants learned or used the information. Figure 16 depicted the level of engagement during the study as being very low for all but two participants. The two participants who attended the focus groups had higher levels of engagement with the tool. One of these participants mentioned volunteering for an event, and both participated in intramural sports. This result may support the work of Bessière, Kiesler, Kraut, and Boneva (2008), as these two participants appeared to have ties to their community and a higher perceived level of social support than other participants. One focus group attendee supported the results of Tucker and Irwin (2006) where the use of a buddy system was shown to motivate participants in a University setting to be more physically active. She wrote "I NEED it!" (personal communication, March 12, 2010) when asked if social support was important.

The two female students who attended both focus groups interacted a significant amount with one another and with the researcher. According to the Center for Disease Control and Prevention (2008a), these two women may have experienced some form of social support, as a benefit of using the on-line supplement, through sharing of their thoughts, feelings, and experiences with one another and with the researcher. This would support the work of Cole (2009) as the focus group attendees were engaged through

active participation with others. The work of Hodkinson (2007) suggests users had the opportunity to develop strong relationships with other on-line users. This was not experienced by participants. As stated in the final survey, "I think the idea was novel however, the lack of association between those using the site and real situational interactions made it less relevant" (personal communication, March 29, 2010). The results of the final survey also stated that participants did not socially connect with other indoor cyclers but they did enjoy sharing comments and feedback with others on-line. This contradiction may be a result of various perceptions or definitions of social support.

According to Marcus and Forsyth (2009), there are four kinds of social support including: instrumental, informational, emotional, and appraising. "Instrumental support involves giving another person something tangible to encourage behavior change" (p. 42) such as new workout clothing or a treadmill. Informational support entails providing relevant information, which was done by the researcher through the addition of 159 resources within the on-line environment. Emotional support consists of letting others know that you care about them and what they are doing to achieve their goals. This support was evident in the focus groups through the questions being asked and responses between the participants and the researcher. During the second focus group, we discussed how to relieve stress and some tips to maintain a healthy diet during times of stress. During this interaction, I mentioned the importance of getting up and moving away from our computers during the day as our bodies and our brains need a break (personal communication, March 12, 2010). I was trying to convey to participants that I cared about their health and well-being. Participant 3 mentioned during this thread that she was "going to make a stronger effort to eat lunch outside as soon as possible"

(personal communication, March 12, 2010). The last form of support is appraisal, which incorporates the provision of feedback and encouragement to others who are trying to change their behaviours. This form of support was provided by the researcher throughout the study as resources were added, journal entries were created, and focus groups were completed, to encourage more on-line and in-class participation. During the final focus group, I used appraisal as I told both female attendees: "Your participation is appreciated, both of you! Thank you so much for signing on. I hope you relieve lots of stress and get all the exercise you need this week. Every week!" (personal communication, March 12, 2010).

Eight of the participants that logged into the on-line environment marked attendance in the chat section of the tool. These participants, along with the researcher, were working towards the common goal of virtually travelling to Florida. As mentioned previously, Participant 3 found this goal difficult as she did not know who her teammates were (personal communication, February 10, 2010). This challenges the work of Kosonen and Kianto (2009), that participation on-line has the ability to provide personal growth and satisfaction of engagement through interaction with others. It is not apparent in this study that personal growth or satisfaction of engagement was achieved. However, a response to the final survey noted that one participant "focused more on attendance levels to try to get to Florida [rather than reading the discussion forums]" (personal communication, February 10, 2010). This supports the work of Lutz, Karoly, and Morris (2008) which notes that increased levels of social support can affect the progress on goals for physical activity.

Sub-question 3: How was the participant-instructor relationship affected by the use of an on-line environment?

Results

Once the study had begun, the first week of classes was exciting as I tried to determine in class who might sign up for the study, and also who had already signed up or entered the on-line environment. It took some time to learn the names of participants in class and associate the names with those in the study. I documented my experiences in my private hand-written journal during this time, and throughout the study. I used my private journal as a reminder to look up information, or post specific comments, feedback, encouragement, or resources. I used the private hand-written journal to make notes about class attendance, interest in music played during classes or certain drills, and to note important events as they occurred. One experience that I felt was important occurred on an evening that I was scheduled to teach at 4 pm and again at 7 pm. I was the scheduled instructor for the 4 pm class and the second class I was covering for another instructor. I was certain that participants would not attend both classes, so I used the same music and drills. In the 4 pm class, I noted in my private hand-written journal (February 9, 2010) that the class had "six ladies in it" and that "I used a CD that I put together myself and they loved it". These six participants thrilled me with their enthusiasm and their ability to push through each drill. I also noted in my private hand-written journal that I "used the same CD" for my second class and "[t]hey liked it, but not as much". In the 7 pm class, there were 11 participants but the level of motivation was much lower and fewer people sang to the music that I played. I was frustrated that "[t]here were three ladies in the front row that wouldn't stop talking. I kept talking louder and trying to get them to work so they did not have time to talk". These three

indoor cycling participants were not in the study. The instructor, physical environment, music, and drills were all the same, but the atmosphere within the class was significantly different. This experience reinforced the reason that I chose to provide so many resources within the on-line environment. Participants are unique and require different motivations to achieve their goals. I wanted to meet the needs of everyone.

A second experience, that I documented in my private hand-written journal (February 11, 2010), occurred one evening during week 6 of the semester. An indoor cycling participant, who was not in the study, asked me prior to class to set the tension on my bike to a five, on a scale of one to 10. The bikes used for indoor cycling have a tension dial on them that can be turned to increase or decrease the difficulty in pedalling. For safety reasons, as the tension dials do not have numbers on them, we use a scale of one to 10 to describe what the different tensions should feel like. There is no tension at level one of the scale and there is so much tension at level 10 that the pedals are stopped. A level five on the tension scale allows a cycler to stay seated and pedal as though they were riding through water. The participant asked to sit on my bike and test the tension in order to determine how a tension of five felt. This incident informed me of the confusion that some participants must be experiencing during classes. If this individual was not comfortable setting the bike to a tension of five, then we as instructors were not describing the different levels in enough detail. I mentioned in my private hand-written journal that I needed to describe the levels from one to 10 in a better way in the future. I am still struggling to find a successful way of explaining this information to future indoor cycling participants.

Interaction between the researcher and the participants throughout the study was very minimal, except for those participants who attended the focus groups. Figure 20 below shows the interaction that each participant had with the researcher within each of the on-line tools and in face-to-face classes.

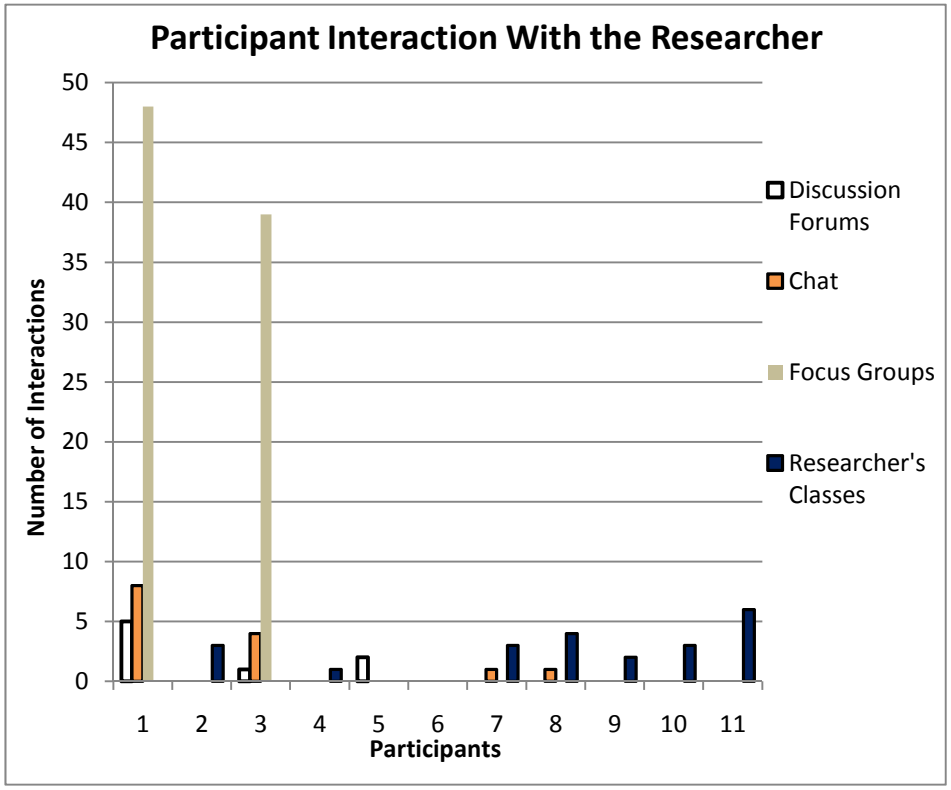


Figure 20: Participant interaction with the researcher. This figure shows the number of times that each participant interacted with the researcher in each on-line tool and during classes taught by the researcher.

Of the four discussion forums, there was no interaction within attendance, local events, or request for site content. The public on-line journal forum received a few posts early in the study that pertained to music requests. Participant 3 mentioned that she really liked "Sandstorm by Darude [as it] has some great beats for speed and breaks for climbs!!" (personal communication, January 29, 2010). Participant 2 noted that "[m]ost techno tends to get [her] blood pumping, without being distracted by listening to lyrics.

Also, [that] hearing some metal would be nice for a change" (personal communication, February 1, 2010). Participant 1 informed the researcher that she had experienced "inconsistencies between instructors on what they call 'figure 8's' or 'aggressive standing up' or different positions while on the bike" (personal communication, February 3, 2010). She noted that it "[m]ay be good to have the instructors become more consistent so that [riders] know what that position actually is and are not confused when one instructor does it one way, and another instructor another way" (personal communication, February 3, 2010). This reinforces the need to train instructors at the beginning of the term and to be consistent with the drills used in classes. The participant was not confident in doing certain drills from class to class as the format was not consistent. A small training manual e-mailed to instructors at the beginning of each semester may resolve this issue.

Within the on-line environment, the chat section was used primarily to post attendance. A typical post contained the date and time a class was attended. The following is an example of a post created by Participant 2, a female student: "Tuesday, Feb 9, 6pm - X" (personal communication, February 9, 2010). The idea of travelling virtually to Florida as a group goal through posted attendance was mentioned a few times as a positive motivator to log on and to attend classes. Outside of the focus groups that occurred in the chat area, this tool was used minimally for any other type of interaction. Although 7 of 11 participants attended at least one class taught by the researcher, only five of the participants marked these classes within the chat section. It was difficult to interact with participants during face-to-face classes due to the nature of indoor cycling. Participants come into the classroom, choose a spin bike, and remain in that location for the entire class. Interaction with the instructor or other participants is minimal.

Participants who interacted the most on-line, including both focus group attendees, did not attend classes taught by the researcher and participants who attended the most classes taught by the researcher did not interact on-line. Figure 21 below illustrates the attendance marked in the chat section by participants and the attendance marked by Campus Recreation for the classes taught by the researcher. The attendance marked by Campus Recreation for the researcher is zero as Campus Recreation does not keep attendance for instructors.

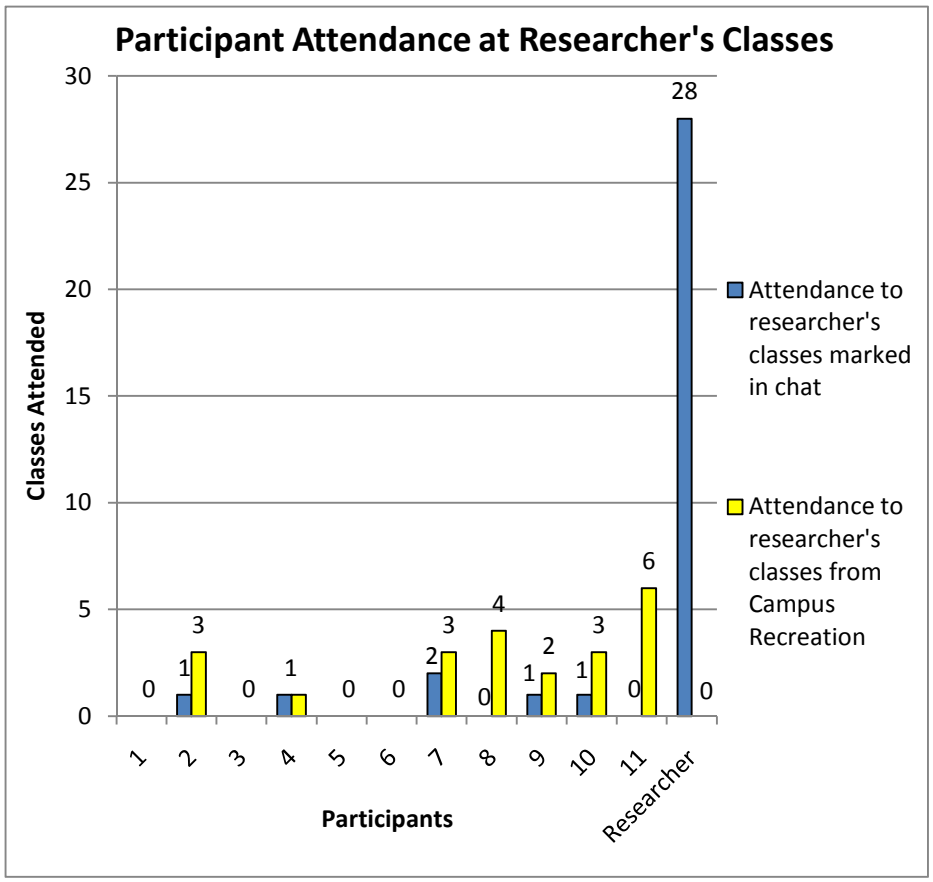


Figure 21: Participant attendance at researcher`s classes. The figure illustrates that 7 of 11 participants attended classes taught by the researcher but only 5 marked those classes into the chat section of the on-line environment.

The participant-instructor relationships were affected the most through conversations within the focus groups. These conversations allowed a significant amount of interaction to occur between the three attendees. In the first focus group, participants shared their reasons for participating in physical activity. Participant 1 mentioned that "[she] like[s] to exercise to stay healthy, it makes [her] feel good, [she has] more energy throughout the day, and [she] find[s that she] eat[s] healthier when [she] exercise[s] often" (personal communication, February 10, 2010). Participant 3 commented that she likes to exercise "for two reasons, to feel good ([she] always find[s] the more exercise [she] engage[s] in the better [she] feel[s], the more energy [she has] etc) and to feel [she] reflect[s] the discipline [she] promote[s]" (personal communication, February 10, 2010). They also commented on the different programs and activities they attended to stay healthy such as: boot camp, yoga classes, and intramural sports. The participants also noted their interest in learning the names of other people in their classes. This assisted them in helping to stay motivated. The focus group also produced suggestions for the indoor cycling schedule. Participant 3 noted that the noon classes were busier than all other classes on the schedule, sometimes turning participants away. To overcome this, she suggested "two back to back [classes] such as one at 11:30-12:30 and 12:30-1:30" (personal communication, February 10, 2010). Other suggestions discussed at this time were the use of motivational music that is not played too loudly, and the option of attending with a buddy for a discounted price. Participant 1 suggested that "they [Campus Recreation] should have a discount for those who sign up with a buddy who they will come with??? like as a motivator" (personal communication, February 10, 2010). These suggestions allowed the participants and the researcher to brainstorm

together with the goal of increasing participation and providing a better indoor cycling program.

In the second focus group, attended by the same two female students, more social interaction occurred. The attendees discussed how to manage their diets and physical activity levels during stressful times. Participant 1 stated that she "usually get[s] lazy and therefore do[es] not cook a good meal (dinner usually) so [she] won't eat as well definitely (more junky type of food...or eating out). [She] will usually not eat as many fruits and vegetables" (personal communication, February 10, 2010). It was mentioned that planning meals and scheduling exercise were very important, as was having another person support your diet and exercise goals. Participant 3 noted that "[i]f [she] take[s] time right after groceries to cut everything up [she] will eat it. [She] also like[s] to store snacks in [her] desk at work that are healthy/convenient like apple sauce or almonds that way [she is] less likely to buy chocolate etc." (personal communication, March 12, 2010). Participant 1 mentioned that "[a]t the grocery store [she] tr[ies] to avoid the chips and pop aisle" (personal communication, March 12, 2010). Stress appears to mask the benefits of exercise and a healthy diet, creating a barrier to overcome. Participant 3 mentioned during the second focus group that she "get[s] really bogged down by [stress] that exercising seems like another variable to take [her] away from the task [she] ha[s] to do. However, if someone makes [her] workout ([she is] not very good at intrinsic motivation) [she] find[s she] feel[s] more able to take on the task after exercise" (personal communication, March 12, 2010). To maintain physical activity levels during times of stress, it was recommended that clothes be set aside for participation the night before and that a buddy system be used so the pair can motivate each other to attend. It was also

mentioned that during times of stress, participants were more likely to attend a group fitness class at a scheduled time rather than plan a walk or run on their own time. When asked if social support is needed to participate in physical activity, Participant 1 states that "social support definitely helps. [She does]n''t necessarily need it, but it helps. When [she has] somebody to go to the gym with, or to classes with, [she is] more inclined to go and work hard" (personal communication, March 12, 2010). She also mentioned that she is "motivated to go [to boot camp classes] because [the instructor] will notice when [she is] not there, a bunch of others will notice (who [she has] come to know and are regulars) so [she] feel[s] bad not going" (personal communication, March 12, 2010). These comments allude to the fact that social support is important and that social activities may be more motivating than individual activities.

As the semester progressed, I mentioned within my private hand-written journal (February 24, 2010) that "[a]ttendance to classes ha[d] been low and activity in the CLEW site ha[d] also been low. I add[ed] new resources all the time, but they [weren't] being read. No one [was] reading the resources [and I was] not sure what to do about that". At one point during the study, I even stated in my private journal that I had not been "writing long [public on-line] journals. It [had] been difficult since I [knew] that no one [was] reading them" (March 20, 2010). I asked the participants who attended the second focus group to provide suggestions on resolving these issues. Participant 1 suggested that Campus Recreation "offer free admission [and] announce it to the undergraduate classes that they can try a class to see if they like it" (personal communication, March 12, 2010). Other suggestions to increase participation to indoor cycling classes included offering the chance to bring a friend for free and rewarding those

that attend, possibly through ballots for a random draw or a discount for a future semester.

During the semester, I had classes with one participant in them, often the same participant, who was not in the study. We spoke in class about the low levels of attendance. I asked this individual for suggestions on improving attendance at classes. One suggestion was to make the physical environment more inviting. This was also mentioned in a focus group, when a participant recommended placing motivational posters up on the walls. Other suggestions included: more advertising, sending more e-mails to registered and previously registered participants, allowing free try-out classes, adding 45 minute classes to the schedule, and also adding classes meant for beginners.

Results of the final survey showed that three out of four respondents connected with the researcher on a social level. Due to the anonymity of the final survey results, it is not possible to determine how many classes these three participants attended, including those taught by the researcher, or the level of engagement for each respondent.

Analysis

Sub-question 3 was concerned with how the participant-instructor relationship affected the use of the on-line environment. As the researcher, I was extremely excited to begin the study, once ethics approval was received. However, I was very nervous about speaking to participants at the end of cycling classes while recruiting for the study. I was nervous that participants would not be interested in the study, or in the information that I wanted to offer. I noted this nervousness in my private hand-written journal. I believed that my excitement and nervousness conveyed, to me, that I was interested in the study and in motivating this group in being healthier and more physically active. I wanted the

study to be a success, and I wanted to be a successful role model for participants in my classes.

Music was the only topic of interest within the on-line discussion forums. This supports the work of Schutzer and Graves (2004) as they noted that music is used "to enhance the exercise experience by lessening the perceptions of difficulty, monotony, and discomforts associated with exercise" (p. 1060). Throughout the study, I created my own music CDs and choreographed indoor cycling drills to complete during each song. This experience has re-shaped my boundaries as a group fitness instructor. Through my dual role as a group fitness instructor and a researcher, I was both an insider and an outsider in this study. I interacted with participants on-line and collected their music suggestions. I interacted in face-to-face classes where I played the suggested music. I also analyzed the data collected through the study. This experience supports the work of Gallais (2008) that reflection and self-awareness as an insider/outsider researcher provides a greater awareness and understanding of the group being studied. I no longer feel comfortable walking into a spin class with a CD that was purchased or without a structure for the class that I am about to teach. In the future, I will continue to create my own music, and plan drills accordingly, to assist in providing the best classes that I can to my participants.

In my public on-line journal, I noted each song and all drills performed each class, in addition to other information regarding benefits and barriers to participation in physical activity. This writing process challenges the work of Gurak and Antonijevik (2008), which notes that writing a public on-line journal assists the author with social interactions and social links to others on-line. This process was meant to create a sense of community, allowing participants to share their own physical activity experiences. I

did not feel more socially connected to others in the on-line environment through this writing process. This result may have been altered if participants had read or commented on more of the public on-line journal posts.

Within my private hand-written journal (February 24, 2010), I noted that "I enjoy[ed] teaching the Tue[sday] classes as I [got] to do some teaching off of the bike". These classes consisted of 45 minutes of indoor cycling followed by 15 minutes of mat exercises to strengthen the abdominal and lower back muscles. I found these classes interesting because they allowed me to interact with my participants off of the spin bikes. I was able to vary the classes so that I did not get bored, but more importantly, so my participants were challenged in a different manner. This experience has also re-shaped my boundaries as a group fitness instructor, further supporting Gallais (2008). Through the development of classes, and the assessment of them in the data analysis, I will be more concerned with variety and with creating a balance in my future classes to enhance the overall experience for participants and myself.

Through the 9-week study, I expressed my frustration several times, within my private hand-written journal, that the resources were not being read. I thought that I was supplying too many resources, the wrong information, or that participants were simply as busy as I was through the semester and did not have time for extra reading. It did not occur to me at that time that my audience might be well-versed in health and physical activity information and may have already known the information that I was sharing. During the focus groups and again while reviewing the data collected through the final survey, I was informed by participants that they were already familiar with the information that I was providing. A female faculty member who completed the final

survey mentioned that her “advanced knowledge of health and wellness made it a little irrelevant for [her] to check into the website daily/weekly” (personal communication, March 29, 2010). This result supports the work of Arazy, Gellatly, Jang, and Patterson (2009) which mentioned that individuals who participate on-line are driven by the chance to acquire new information. Participants were not forthcoming in their need for resources, except for an interest in local 5 km and 10 km runs. Regardless, I tried to provide all the information that I could find on local events and other information that I thought would be relevant.

The low interaction between participants and the researcher may have been due to the decision to keep interaction on-line, to the variety of instructors teaching indoor cycling classes, or to the scheduled class times assigned to the researcher. Focus groups or interviews may have increased this interaction. Participants may have attended classes taught by many different instructors, and possibly none taught by the researcher. The class times assigned to the researcher were at 4 pm and 6 pm during the study. The most popular classes, mentioned by participants in a focus group, were at noon.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary and Conclusions

My main question was: How does the use of an on-line environment as a supplement to a group fitness program affect attendance rates and the participant-instructor relationship? To explore this question, the research was designed to look specifically at three sub-questions.

1. How is the on-line environment used, in terms of frequency of use, resources accessed, and popularity of discussion items?

   The on-line environment was set-up to allow participants to read and post comments within the discussion forums, to read the on-line resources that I posted, and to provide their attendance at face-to-face classes within the chat area. Site Stats within the on-line environment allowed me to collect the number of visits, posts, and interactions. Interaction within the on-line environment was very low. The activity was slightly higher, as expected, during the beginning of the study, and dropped as the study progressed. Also, as expected, students were more active within the on-line environment than faculty members. The focus groups were the most successful aspect of the on-line supplement, followed by the chat section. The chat allowed eight out of 11 participants, and the researcher, to virtually pedal to Florida during the semester.

2. What benefits were found by participants from the use of an on-line supplement?

   The on-line environment was set-up as a supplement to indoor cycling classes. Study participants had the ability to request content to be added to the site. Benefits

were shared by participants in the focus groups, and in the results of the final survey. The interactions on-line and the content of the private hand-written journal allowed me, as the researcher, to analyze the benefits experienced by participants from my perspective.

Participants who socially interacted the most within the on-line environment had low attendance at face-to-face classes and those with higher attendance did not interact on-line. As participants attended face-to-face classes, they marked their attendance in the chat section of the on-line tool. Marking attendance allowed participants to work towards the common goal of virtually pedalling 900 miles to Florida during the semester.

The two participants who attended the on-line focus groups may have experienced some form of social support due to their on-line engagement with each other and the researcher. All other participants did not experience any social benefits from using the supplement. All participants within the study would have had to participate in other physical activities outside of indoor cycling to have achieved health benefits.

3. How is the participant-instructor relationship affected by the use of the on-line environment?

The on-line supplement contained public journals that I posted after each of the classes that I taught. These journals contained the drills that were performed to each song during class, as well as benefits and barriers that participants may have been experiencing. To further assess the participant-instructor relationships, I also analyzed the content of my private hand-written journal.

Participants had the ability to interact with me on-line by posting comments to the on-line forums and within the chat area of the tool. They could also have interacted with me during the on-line focus groups that occurred at week 3 and week 7 of the study. It was difficult to determine how the participant-instructor relationships were affected by the use of the supplement due to the low interaction on-line. I felt more socially connected to the two participants that attended the on-line focus groups than any other participants. These two participants did not attend any of my face-to-face classes.

Music was very important to participants as many suggestions were provided during the initial survey and music was the only topic discussed within the on-line forums. I created CDs and a sequence of drills for each class that I taught. This experience has re-shaped my boundaries as a group fitness instructor in terms of my preparedness for classes and my desire to provide the best classes possible.

The public on-line journal described the songs and drills for each class and possible benefits and barriers that participants may have been experiencing. This process did not make me feel socially connected to participants as these journals were rarely read. However, I did enjoy keeping a private hand-written journal of my experiences as a researcher and as an instructor throughout the study. This process assisted in organizing my thoughts and helped me determine the resources to add on-line.

Across Canada, the majority of the population intends to participate in physical activity though only 46% actually engage (Rhodes, Blanchard, & Bellows, 2008). Social support, perceived barriers, benefits, and enjoyment all assist in determining levels of

physical activity (Wilson, 1998). These determinants are all modifiable and may be targeted to increase levels of physical activity.

By targeting social support, I hoped to reduce the perceived barriers and increase the benefits experienced by indoor cycling participants. I was hoping that the use of an on-line supplement would allow participants to achieve recommended levels of physical activity and maintain or increase attendance at group fitness classes. For the majority of participants within the study, this was not the case. I believe that a few barriers such as low motivation, a lack of time, and a lack of energy may have caused attendance levels, and activity within the on-line environment, to be low. For most participants, the motivations such as physical fitness, personal appearance, pleasure, mental relief, and social interactions were out-weighed by the barriers.

The indoor cycling environment is not conducive to allowing for adequate social interaction with others. In the on-line environment, participants may have felt as though they were communicating with strangers as they were unable to bond with others during face-to-face classes. This type of study would be more appropriate in a physical fitness setting that allows users to see and interact with one another on a regular basis.

As the researcher, I found the study beneficial as I used my interactions with participants in class to assist me with the information to provide on-line. In turn, I was able to use suggestions from the on-line environment to provide better classes to attendees and to collect recommendations to better the program and the facility.

Recommendations

Theoretical

1. According to Bessière, Kiesler, Kraut, and Boneva (2008), individuals who see themselves as being extroverted, rather than introverted, tend to participate more in on-line social networking. As part of the demographics section, in future studies, I would recommend that a question be asked regarding this trait. I believe that both participants who had the highest levels of engagement within the on-line environment would consider themselves to be extroverted.
2. During a focus group, a female student mentioned that "she was not very good at intrinsic motivation" (personal communication, March 12, 2010). As part of the demographic section in future studies, I would recommend asking if participants can motivate themselves (intrinsically) to participate in physical activity, or if they require motivation from someone else (extrinsically) to participate. These responses may allow further exploration into the use of on-line environments to enhance group fitness programs.
3. I was under the impression that users would read and comment on discussion forums. I assumed that participants who had the motivation to attend fitness classes would also have sufficient motivation and intention to use the on-line supplement. As the instructor, I determined the information to provide on-line. The work of Wang & Wang (2009) states that in an academic environment, the instructor determines the success or failure of the on-line tool through the content provided. In future studies, I would recommend removing the on-line discussion forums, as they were rarely used in this study, and providing only relevant

resources, a chat section containing a group goal, and a separate area for on-line focus groups to occur.

4. The private hand-written journal allowed me to document the study from my perspective. I would recommend that a separate private journal be kept by researchers in future studies. The information documented in my notebook was useful in assessing the boundaries of the researcher throughout the study and recording participant-instructor interactions.
5. It was mentioned during the study that inconsistencies existed between instructors' use of terms and drills in face-to-face classes. In the future, I would recommend studying a particular class that has only one instructor to remove this inconsistency.
6. The final on-line survey was anonymous in hopes that participants would provide more honest responses. In the future, I would recommend that these responses be confidential, not anonymous. The final survey asked respondents to provide information regarding their attendance to indoor cycling classes, their connection to others and the instructor on a social level, and their opinion regarding information provided on-line. I was unable to tie these responses to other data provided by participants throughout the study.
7. The final survey requested the benefits that were experienced through participation in the study. I would recommend asking about other benefits such as the improvement of self-esteem and improved sleep that are known benefits of physical activity. These benefits came out in the focus groups and appeared in the

data analysis. The questions asked in the surveys were not adequate to assess these benefits for the entire group of participants.

8. The final survey asked participants how many indoor cycling classes they attended in the available time slots throughout the semester. The final survey did not ask participants if they participated in other physical activities outside of the study, why they participated in physical activity and what barriers may have prevented them from participating over the semester. This information may be useful to collect in future studies to allow the benefits and barriers of physical activity to be more closely tied to participants and their experiences.
9. In order to increase the participant-instructor relationship, and gather more qualitative data, I recommend interviews with participants during the middle of the study, and at the end, if time permits.

Practical

1. Program registrations may be increased by advertising more on campus through the use of posters or by visiting undergraduate academic classrooms to recruit participants face-to-face.
2. E-mails are provided to Campus Recreation as part of the registration process. These addresses could be used to inform registered and previously registered participants of up-coming classes.
3. Registered participants could have the option of inviting one friend each semester to try-out a class with them for free.
4. One hour classes may be too long for some participants. Perhaps shorter classes that are only 45 minutes in length could be added to the indoor cycling schedule.

5. Beginners may be overwhelmed by one hour classes or by advanced riders attending classes. Classes for beginners could be added to the schedule to alleviate this issue.
6. Music in class is very important. Participants mentioned that although they like the music loud, the instructor needs to be heard over the music. It was recommended by participants that music that is up-beat and free of profanities and vulgar language be played during classes.
7. Some participants mentioned inconsistencies between drills performed by different instructors. Perhaps a short e-booklet of drills, their names, and the different riding positions could be created and distributed to each instructor prior to the start of each semester.
8. I believe that I overwhelmed individuals with information within the site. Future sites such as this one, used to enhance group fitness programs, should contain less information that is more relevant to the audience and their needs.
9. There seemed to be some confusion among participants about the tension scale that ranges from one to 10 on the spin bikes. Perhaps a better description could be created for each level that more specifically explains what each tension should feel like to the rider. These descriptions should be used consistently by all instructors.
10. During the study, participants were asked what could be done to motivate them to attend more classes. One participant suggested making the physical environment more inviting by adding motivational posters to the walls. Perhaps this could be done in the indoor cycling room.

11. In the final survey, all four respondents stated that they did not connect with other participants on a social level. The schedule was set-up so registrants could attend various classes during any given week. I would recommend an on-line supplement in the future for classes such as yoga and boot camp that allow the same group of participants to interact at least two to three times per week in face-to-face classes.

APPENDICES

APPENDIX A

Researcher Autobiography

Through my childhood, I played outside constantly. I participated in many sports, including tap dance, ballet, figure skating, gymnastics, baseball, volleyball, basketball, track and field, cross country, and soccer. Over time, I moved away from team sports towards such individual physical activities as: rollerblading, running, cross country skiing, biking, hiking, camping, and yoga. Physical activity is not a want, but a need for me. I use the time to collect my thoughts and rejuvenate. Physical activity provides the energy that I need to succeed in my life.

Since 1994, I knew that I wanted to be a group fitness instructor. I loved to attend step aerobics and other fitness classes. I still love the combined energy felt within a class when participants are moving in sync. It was not until 2001 that I finally followed through and became a fitness instructor through Campus Recreation. I have taught step aerobics, cardio kick-boxing, strength training, total body conditioning, ball classes, yoga with weights, and indoor cycling classes during the last several years. Teaching a variety of classes allows me to meet and assist new participants in achieving their health and physical activity goals.

There is plenty of information available to Canadians on healthy levels of physical activity but the population does not seem to be taking notice. It is an on-going personal challenge to provide this information in a unique way to more individuals and to help them make physical activity a part of their daily routine. In this study, indoor cycling participants had already taken the first step in bettering their health by registering

for the program. I made it my challenge to provide them with a supplemental reason to continue attending classes and to continue working towards better health. Paying a small sum of money for a semester of classes is quite easy. The difficult part is maintaining the motivation and positive behaviour change. As a group fitness instructor with Campus Recreation, I have observed the fluctuations in class attendance and the drop in participation as semesters progress. With my combined background as a web developer and a fitness instructor, I wanted to provide an on-line environment, with relevant health-related materials, that assisted in maintaining and increasing levels of physical activity.

APPENDIX B

Recruitment Letter

Hi!

My name is Sherri Simpson. I am an indoor cycling instructor. I teach the 4 pm Cycle Fit classes on Monday and Thursday evenings. As a graduate student in the Department of Kinesiology, I am doing a study for my thesis that will explore the use of CLEW (an on-line learning environment commonly used for academic courses) as part of the indoor cycling program this semester.

Lack of social support is a known barrier to participation in physical activity. I am exploring the use of the CLEW on-line learning environment to see if an on-line social network can be created that in turn increases attendance at indoor cycling classes.

If you choose to participate in the study, you will be provided with a convenient resource containing links to information regarding physical activity, stretches, local events, and other health-related websites. You will have the ability to submit requests for information to be added. I will research the information and have it reviewed by my thesis committee to ensure that you are provided with the most relevant and current information available.

There will be on-line discussion forums to discuss classes, music that motivates you, and other topics as requested. As the instructor and the researcher, I will write a public on-line journal about the classes I teach, about indoor cycling, and about the barriers that need to be overcome in group fitness classes to maintain attendance. You will be able to read and comment on the journals.

Participation will last throughout the semester. You can access the CLEW site as little or as much as you choose. At the end of the study, an on-line survey will be available for you to supply anonymous feedback regarding your experiences using the CLEW site. Through this study, you will be assisting in the expansion of research available in this area. Results may determine that on-line social interaction increases levels of attendance at group fitness classes and social environments should be used with other classes.

If you wish to participate, please access the URL: http://www.uwindsor.ca/cyclefit to complete the Letter of Information for Consent to Participate. You can participate as yourself, so that other users see your name on posts, or using a guest account that will be created for you. You will be contacted by e-mail once you have been given access to the website. Only the instructor and other participants in the study will be able to read and post comments.

Participants will be able to enter a draw for one of two $50 Campus Recreation discount cards, or for one of two gift certificates to the University of Windsor BookStore.

Principal Investigator: Sherri Simpson

sherri@uwindsor.ca

519-253-3000 ext. 4439

Faculty Advisor: Dr. Victoria Paraschak

parasch@uwindsor.ca

519-253-3000 ext. 2445

Thank you for your time.

APPENDIX C

Letter of Consent to Participate

LETTER OF INFORMATION FOR CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Exploring the use of an on-line environment as a social to a group fitness program

You are asked to participate in a research study conducted by Sherri Simpson, the principal investigator, under the supervision of her faculty advisor, Dr. Victoria Paraschak at the University of Windsor. The results of the study will contribute to the principal investigator's masters thesis.

If you have any questions or concerns about the research, please feel to contact Sherri Simpson at 519-253-3000 ext. 4439 or by e-mail at sherri@uwindsor.ca or Dr. Victoria Paraschak at 519-253-3000 ext. 2445 or by e-mail at parasch@uwindsor.ca.

PURPOSE OF THE STUDY

This study will explore the use of an on-line environment as a supplement to a group fitness program. The goal is to create social interaction between participants on-line that in turn increases or maintains attendance levels at indoor cycling classes through the semester.

PROCEDURES

As a participant, you will have the ability to:

- Complete an initial survey asking you to provide your name and e-mail address.
- Attend a CLEW on-line environment workshop, if needed.

- Login to a CLEW website throughout the semester.
- Browse health and well-being resources provided and participate in on-line discussions.
- Request more information to be added to the site.
- Comment on personal journal posts made by the instructor.
- Complete a final on-line survey to share feedback and comments about your experiences using the on-line environment.

You may access the on-line environment as often as you wish. You may participate in as many or as few of the above items as you wish.

POTENTIAL RISKS AND DISCOMFORTS

Risks for this study are low but do exist. As a contributor, you are asked to reflect emotionally and share your comments, feedback, experiences, and opinions with other indoor cycling participants. Other participants will be able to read and comment on your posts. They will know who you are on-line, as you will them. Other users may not treat your posts as confidential so the data posted may be shared with users outside of the study.

It is possible that participants within the study will use vulgarities or other inappropriate behaviours within the on-line environment. Participants acting in this way will be warned or removed from the study.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

A convenient list of information regarding physical activity and health and well-being will be provided to you within the on-line environment. You may request that new information be researched and added for you. The information added will be passed

through a committee to ensure that it is relevant and valid. A calendar of local events will also be included that will allow you to become more engaged in your community.

As a participant in the study, you will be contributing to the small amount of research that exists on using on-line environments outside of the academic realm. This research may provide positive results for expanding future research of this nature. Future research may include using on-line environments to supplement other group fitness programs.

PAYMENT FOR PARTICIPATION

As a participant of the study, if you have logged into the on-line environment at least once, you will be eligible for a draw of $50 payable as a Campus Recreation gift card or a gift card to the University of Windsor BookStore. The number of draws will depend on the number of participants that sign up for the study.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission.

You will have the option of participating in the on-line environment logged in as yourself through your UWinID, which will increase the social interaction and support within the environment, or as a guest.

While communicating with other participants on-line, you will be able to see the names of those you are interacting with. Only registered participants and the instructor will have access to the on-line environment. Your participation will be kept confidential during the study.

Once the study is complete, access to the on-line environment will be removed for all participants. Campus Recreation will share your attendance for each class with the researcher. Your attendance will be compared to your activity within the on-line environment to explore the benefits of using an on-line environment as a supplement to the indoor cycling program.

The CLEW site will remain in existence, password protected, for one year after the principal investigator's thesis has been defended. After that time, the site will be deleted.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind by e-mailing, phoning, or contacting the researcher in person. You may also refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. If a participant is treating other participants rudely or unfairly within the on-line environment, access to the CLEW site for that participant will be removed. Vulgarities and other forms of harassment will not be acceptable within the on-line environment. It is requested that comments be kept clean and well natured. Participants using this inappropriate language will be removed from the study at the discretion of the researcher.

If you choose to withdraw from the study, all comments and posts that are shown to be created by you can be removed at your request and not used in the data analysis phase. This request must be made before the study closes and analysis has taken place.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS

Research results will be made available to participants on the REB website located at:

http://www.uwindsor.ca/reb

Results will be available by the end of August 2010.

SUBSEQUENT USE OF DATA

This data will be used in subsequent studies.

RIGHTS OF RESEARCH SUBJECTS

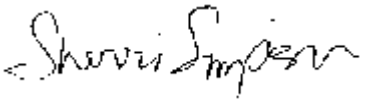
You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact:

Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4;

Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.



January 21, 2010

_____

Signature of Investigator Date

Please print this for your records.

Please use the userID cycle and the password survey

I AGREE TO PARTICIPATE

I DO NOT AGREE TO PARTICIPATE

Revised April 2009

APPENDIX D

Recruitment Poster

APPENDIX E

Initial Survey

1. First Name: Last Name:

2. E-mail Address: (If you provide your University of Windsor e-mail address, you will be able to access the on-line environment through your UWinID and password. If you provide an e-mail address that does not contain @uwindsor.ca, a friend account will be created for you. You will receive an e-mail asking you to confirm the account and enter your First and Last name. You will access the CLEW on-line environment using your friend account.)

3. Status
    a. Faculty
    b. Staff
    c. Graduate Student
    d. Undergraduate Student
    e. External

4. Sex
    a. Male
    b. Female
    c. Transgender

5. Age Group
    a. Under 18
    b. 18 – 25
    c. 26 – 32
    d. 33 – 39
    e. 40 – 46
    f. 47 – 54
    g. 55+

6. Which on-line social networking tools have you used in the past?
    a. Facebook, My Space
    b. Blogs, Wikis
    c. Twitter
    d. None
    e. Other: please specify: (text box)

7. How often do you participate in on-line social networking?
    a. Never
    b. Less than once per month
    c. Every week
    d. Daily

e. More than once per day

8. Would you like to attend a short 15 min. workshop explaining how to use the CLEW on-line environment?
    a. Yes
    b. No
        a. If Yes, please provide days and times when you would be available: (text box)

9. Have you registered for the indoor cycling program in the past?
    a. Yes
    b. No
        a. If Yes, how often did you attend? (text box)

10. How many indoor cycling classes do you plan to attend this semester? (text box)

11. What do you think will motivate you to continue attending indoor cycling classes? Choose all that apply.
    a. Fits into my schedule
    b. The instructor
    c. My friends
    d. My family
    e. To relieve stress
    f. For health reasons
    g. I will feel guilty if I don't
    h. Other, please specify: (text box)

12. What do you think might prevent you from attending indoor cycling classes? Choose all that apply.
    a. Bad weather
    b. No ride to school
    c. Work
    d. Studying / homework / exams
    e. My family
    f. My friends
    g. Health issues
    h. The instructor
    i. Bad time slots / schedule changes
    j. Other, please specify: (text box)

13. What kind of music would you like to hear during your indoor cycling classes?
    a. Text box

14. Other comments / suggestions: (text box)

APPENDIX F

CLEW Initial Content

1. Canada's Physical Activity Guide: http://www.phac-aspc.gc.ca/pau-uap/paguide/
2. Canada's Food Guide: http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php
3. The Importance of Sleep: http://www.wechu.org/workplace-health/initiatives/e-bulletins/HotTopic-ABCs%20of%20Zzzs.pdf
4. Add Physical Activity to Your Day: http://www.heartandstroke.com/site/apps/nlnet/content2.aspx?c=ikIQLcMWJtE&b=4832209&ct=7511411&src=healthline
5. Stretching at Your Desk: http://www.ccohs.ca/oshanswers/ergonomics/office/stretching.html
6. Benefits of Indoor Cycling: http://www.fitmoves.com/IndoorCycling/spinning-workout-review.htm
7. Tips for Being Active: http://www.cflri.ca/eng/lifestyle/index.php
8. Southwestern Ontario in motion: http://www.swontarioinmotion.ca/
9. Fitness and Lifestyle Expo: http://www.bdproductions.ca/
10. City of Windsor Parks and Trails: http://www.citywindsor.ca/documents/GIS/parkmaps/ ParksTrailsandLeisureFacilities.pdf

APPENDIX G

Discussion Forum Topics

Attendance

1. Week 1: January 25 – 31 We made it through Toledo to just past Findley, Ohio.
2. Week 2: February 1 – 7 We left Ohio and made it just passed Lexington, Kentucky.
3. Week 3: February 8 – 14 We have 10 reported. I'm adding 6 more from previous weeks.
4. Week 4: February 15 – 21 We are almost to Chattanooga.
5. Week 5: February 22 – 28 We made it to Atlanta!
6. Week 6: March 1 – 7 We made it to Macon, Georgia!
7. Week 7: March 8 – 14 I think we might make it to Florida!
8. Week 8: March 15 – 21 We are very close to the Florida border!
9. Week 9: March 21 – 28 We just crossed the Florida border!

Local Events

1. 16th Annual Ambulance Chasers 5 kn Walk, Wheel or Run
   Spin-a-thon at the St. Clair College of the Arts on March 6th:
   http://www.windsorspinathon.com/
2. Bike Trek May 29th and 30th: http://www.on.lung.ca/Events-and-Fundraisers/BikeTREK/
3. Tri-for-Life at UWindsor on March 21: http://www.active.com/triathlon/windsor-on/triforlife-triathlon-2010

4. Skate at WFCU for the Humane Society March 13 from 2-4: http://www.citywindsor.ca/news/fullevent.asp?listing=7259
5. Running Factory Spring Thaw 5k Run/Walk March 7: http://www.goevents.ca/newGOEvents/runningfactory/springthaw.html
6. W.R.A.C.E. 5k/10k at the Ciociaro Club April 24: http://www.wrace.org/html/events.html
7. Personal Training Course at the St. Denis Centre March 27/28 and April ¾: http://www.canfitpro.net/certification/ourcertificates/personal_trainer/take_this_course.html
8. Fitness, Health, and Wellness Expo at the Caboto January 30/31: http://www.bdproductions.ca/
9. Eating Disorder Awareness Week February 2
10. Skills to Enhance Personal Success Workshops: http://www.uwindsor.ca/lifeline/campus-life-line-workshop-schedule
11. Campus Wellness Seminars through Learning and Organizational Development Serivces: http://www.uwindsor.ca/lod

<u>Request for Content</u>

1. Please suggest information or resources that you would like to see added to the site. To provide a more engaging experience for participants, I would like to collect content that you feel should be added to the site. Content will be added as it is found and validated through my committee.
2. Looking for a new bike? New stretches? Cross training ideas? Share your suggestions for content.

Public On-line Journal

1. What music would you like to hear?
2. What we did in the 4 pm spin class on Monday, Jan. 25.
3. What we did in 4 pm spin on Thursday, Jan. 28.
4. Things you may have noticed about indoor cycling and your body after your first week of the program.
5. What we did (or were supposed to do) in class on Monday.
6. What we did in class that day; on the day filled with 4's
7. You made it through week 2! Congratulations for sticking with it.
8. I taught 2 classes using the same CD this day. I made the CD myself. What do you think of my choices?
9. We did 45 minutes of spin and 15 minutes of abs.
10. The music we listened to for the 1 hour class. We used the Revmaster Pilot II's!
11. We had 10 people in class for the holiday! Excellent turn out.
12. We had 3 participants to this 45 min. spin / 15 minute ab class! We did 2 sets of Tabatas.
13. This was a really tough class. We did Tabatas again, see Tuesdays post for details.
14. Let me know if you have more song / drill suggestions!
15. We had 4 attendees!
16. I covered this class for Sandra. There were 6 participants.
17. This is what I plan to play in class! See you there. :O)
18. I love teaching to a full class. We were packed at noon today!

19. This class is 45 minutes of spin followed by 15 minutes of abs. We had 3 participants.
20. We had 3 participants to class today. Missing the fan makes a big difference!
21. I let one of the participants choose the CD. This is what we listened to!
22. We had 6 participants. I covered this class for [another instructor].
23. 1 participant attended class.
24. 1 participant attended (same participant from Tuesday :O)
25. We had 5 participants. One mentioned at the end of class that she really liked the music. Let me know if you agree!
26. There were 4 participants. We spun and did our abdominal and lower back workout!
27. There were 3 participants in class.
28. There were 3 participants today. It was quite warm in the Duddy. That did not stop us from working hard!
29. We had 2 participants to class.
30. We had 3 participants!

APPENDIX H

Focus Group 1 Guide

1. Why do you participate in physical activity?
2. What benefits, if any, have you noticed from participating in spin this semester? eg. Sleeping better, eating better, feeling more energized, more muscle tone, etc.
3. What other activities are you participating in, besides spin?
4. Do you have any ideas for me? How do I help others increase attendance at spin?
5. What do you think is preventing the 60 people signed up from attending?
6. Do you have any other comments for me about spin? About your bike fit, the music, the chosen drills?
7. Are there more interesting topics that I could be researching for you?
8. Are we stretching you enough after spin? Are we missing any muscle groups?

APPENDIX I

On-line Resources

Cardio Exercises / Tips

- How Does a Treadmill Work? http://www.livestrong.com/article/25905-treadmill-work/
- Exercise Bike Vs. Treadmill: http://www.livestrong.com/article/71127-exercise-bike-vs.-treadmill/
- Breathing Tips for a Beginner Runner: http://www.livestrong.com/article/59766-breathing-tips-beginner-runner/
- 5 Things You Need to Know About Long Distance Running: http://www.livestrong.com/article/4273-need-long-distance-running/
- Running Exercise Routines: http://www.livestrong.com/article/18127-running-exercise-routines/
- How to Choose the Best Running and Walking Shoes: http://www.more.com/2029/3364-training-tip--get-the- right?sssdmh=dm17.434502&esrc=halfmarathon_Wk2&email=1079326709
- The Best Treadmill Jogging Routine: http://www.livestrong.com/article/54576-treadmill-jogging-routine/
- Bike to Work: http://www.wechealthunit.org/workplace-health/initiatives/brochures/BikeToWorkBro.pdf
- Training Among the Tulips (Gardening Workout): http://www.ideafit.com/fitness-library/training-among-tulips-gardening-workout

Flexibility / Stress Relief / Stretching / Yoga

- Stretching at Your Desk: http://www.ccohs.ca/oshanswers/ergonomics/office/stretching.html
- Tips for Flexibility Training: http://www.ideafit.com/fitness-library/tips-flexibility-training
- Posture Pointers: http://www.ideafit.com/fitness-library/improve-posture
- Lower Body Stretches: http://exercise.about.com/cs/flexibility/l/blstretch.htm
- Hip opening exercises for cyclists: http://www.spinning.com/images/Hip_Openers.pdf
- Stretches for Spinners: http://www.spinning.com/images/Stretching.pdf
- Yoga Styles: http://www.fitnessmagazine.com/workout/yoga/poses/yoga-workout/?page=8
- Breathing Exercises for Stress: http://www.livestrong.com/article/18813-breathing-exercises-stress/
- 10 Tips to Better Balance: http://www.ideafit.com/fitness-library/balance-exercises
- Stretching - A Research Retrospective: http://www.ideafit.com/fitness-library/stretching-research-retrospective
- Let Physical Activity Lighten the Load (Dealing with Stress): http://www.wechealthunit.org/workplace-health/health-topics/worklife-balance/let-physical-activity-lighten-the-load/?searchterm=activity

Food / Nutrition

- Canada's Food Guide: http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php
- Caffeine Use: http://www.ideafit.com/fitness-library/caffeine
- Chocolate: http://www.ideafit.com/fitness-library/chocolate
- Hummus: http://www.ehow.com/about_4604119_what-nutritional-value-hummus.html
- How to add more fruit and vegetables to your diet: http://www.infobarrel.com/Easy_Ways_to_Add_more_Fruit_and_Vegetables_into_Your_Diet_Plan
- Spicing up your water to reach your daily intake: http://nutrition.suite101.com/article.cfm/spicing_up_plain_drinking_water
- The 10 Healthiest Foods on the Planet: http://www.fitnessmagazine.com/recipes/healthy-eating/superfoods/the-10-healthiest-foods-on-the-planet
- A Pyramid Food Plan: http://images.meredith.com/fitness/pdf/pyramid.pdf http://images.meredith.com/fitness/pdf/pyramid.pdf
- The Good Egg: http://www.ideafit.com/fitness-library/good-egg
- Feed Your Head: http://www.ideafit.com/fitness-library/feed-your-head-0
- The Hidden Cost of Liquid Calories: http://www.ideafit.com/fitness-library/hidden-cost-liquid-calories-0
- Keeping Hunger at Bay: http://www.ideafit.com/fitness-library/keep-hunger-bay

- Shake the Salt Habit: http://www.heartandstroke.com/site/apps/nlnet/content2.aspx?c=ikIQLcMWJtE&b=4869055&ct=4512727&src=healthline
- Multiple Answers About Multivitamins: http://www.ideafit.com/fitness-library/multiple-answers-about-multivitamins-1
- Refueling After Exercise, Client Handout: http://www.ideafit.com/fitness-library/refueling-after-exercise-client-handout
- Are Energy Drinks Safe? http://www.wechealthunit.org/school-health/substance-abuse-prevention/articles/are-energy-drinks-safe
- Foiling Workplace Temptations: http://www.ideafit.com/fitness-library/foiling-workplace-temptations-0
- Food Fit For Travel: http://www.ideafit.com/fitness-library/food-fit-travel

Indoor Cycling

- Benefits of Indoor Cycling: http://www.fitmoves.com/IndoorCycling/spinning-workout-review.htm
- Are You Ready For Indoor Cycling: http://www.ideafit.com/fitness-library/indoor-cycling-tips
- 5 Things You Need to Know About Indoor Cycling/Spinning: http://www.livestrong.com/article/3448-need-indoor-cyclingspinning/
- Preventing Indoor Cycling Injuries, Client Handout: http://www.ideafit.com/fitness-library/preventing-indoor-cycling-injuries-client-handout

- Benefits of Indoor Cycling: http://www.livestrong.com/article/17664-benefits-spinning-cycling-class/
- Cadence: http://coachlevi.com/cycling/how-to-count-your-cadence/
- Getting started with spinning: http://www.spinning.com/spinning-enthusiasts/spinning-program-faq.asp
- Hand positions while spinning seated and standing: http://www.spinning.com/images/Core_Movements.pdf
- Bike fit: http://www.spinning.com/images/Bike_Setup.pdf
- A triathlete's guide to indoor cycling (bike fit, hand positions, sitting, standing, what to avoid): http://www.trinewbies.com/tno_cycling/tno_cyclearticle_09.asp
- Cycle drills: http://www.ideafit.com/fitness-library/indoor-cycling-drills
- Indoor Cycling Theme rides: http://www.fitmoves.com/IndoorCycling/Theme%20Descriptions.htm
- Sample sprint: http://www.spinning.com/images/Sprinting.pdf
- Effective Indoor Cycling Programs: http://www.training4cyclists.com/effective-programs-for-indoor-cycling/
- Revmaster Pilot II's were added to the spin bikes: http://www.lemondfitness.com/product_detail/113/0/revmaster-pilot-ii
- What is the Difference Between a Spinning Bike and an Exercise Bike? http://www.livestrong.com/article/38730-difference-between-spinning-bike-/
- Indoor Cycling Sample Class: Explore Your Zones: http://www.ideafit.com/fitness-library/indoor-cycling-workout

Local Events and Retail Locations

- Fitness and Lifestyle Expo: http://www.bdproductions.ca/
- Campus Lifeline Workshops: http://www.uwindsor.ca/lifeline/campus-life-line-workshop-schedule
- Skills To Enhance Personal Success (STEPS) Workshops: http://www.uwindsor.ca/lifeline/steps-skills-to-enhance-personal-success
- Wellness Seminars on Campus: http://www.uwindsor.ca/lod/wellness-seminars
- Eating Disorder Awareness Week - "In observation of Eating Disorder Awareness Week, Student Health Services will staff an information booth on campus Tuesday and Wednesday, from 10:30 a.m. to 2 p.m. in the CAW Student Centre Commons and 5 to 7 p.m. in Vanier Hall, adjacent to the main dining hall. The effort is focussed on helping men and women feel at ease with their natural size, Wilson says, providing information on specialized treatment, education, and support for services for people affected directly and indirectly by an eating disorder."
- Human Kinetics, your source for health and fitness books: http://www.humankinetics.com/ (If you shop in their warehouse off of Riverside Drive East on Devonshire Road, you can get a free book for every one you buy. You can also get coupons and discounts if you join their Facebook group: Human Kinetics, 475 Devonshire Rd., Unit 100, Windsor, Ontario N8Y 2L5 Phone: 800-465-7301 (in Canada only) or 519-971-9500 Email: info@hkcanada.com)
- Can Fit Pro: http://canfitpro.com/

(If you are interested in becoming a personal trainer, yoga instructor, or group fitness instructor, look into becoming Can Fit Pro certified.)

- Personal Training Course: http://www.canfitpro.net/certification/ourcertificates/personal_trainer/take_this_course.html?FirstTime=0&event_type=all&event_address_3=ON
  (This course is held at the St. Denis Centre here at the University on March 27/28 and April 3/4.)
- Finer Fitness: Finer Fitness down from Devonshire Mall at 2780 Howard Avenue, Windsor,ON, Call them at 519-966-9603.
  (If you're looking for any fitness gear for home, or you'd just like to browse, check it out.)
- Sport Check: http://www.sportchek.ca
  (If you need some new winter clothing or outdoor gear, Sport Check has some sales. They have a store at Devonshire Mall: 3100 Howard Avenue Windsor, ON N8X 3Y8 (519) 972-8379)
- National Sports Centre: http://www.nationalsports.com/store-locator.asp?id=22
  (The store is out on Legacy Park Drive, near Costco.)
- Columbia Sportswear Outlet Store: 1650 Huron Church Road, Windsor ON beside Wendy's near the Ambassador Mall. (519) 252-5203
  (This store contains all of your outdoor gear including clothing and shoes. They often have sale racks where you can find some great deals.)
- Windsor Crossing: http://www.windsorcrossing.com/

(There are Sales and Coupons listed on the website in the menu. If you are looking for a new pair of shoes, check out the Reebok store.)

- Walkerville Yoga Loft: http://www.walkervilleyogaloft.com/ at 624 Chilver Rd, off of Wyandotte St. West or http://www.mydowntownyoga.com/

  (If you are looking for a new yoga experience, try out the Walkerville Yoga Loft or Downtown Yoga. Your first class is $5 and drops are $15.)

- Scouts Windsor: http://www.scoutswindsor.com/shop.htm

  (There is a Scout shop behind the Devonshire Mall on Marentette Avenue that has camping and outdoor gear. They currently have hiking socks on sale!)

- Computer Literacy Training Workshops

  Preview:

  http://web4.uwindsor.ca/units/its/website/CLSmain.nsf/SubCategoryFlyOut/4E5E80A2DD0FE5EA8525738B004E7817

  Register:

  https://web4.uwindsor.ca/units/its/cls/clsworkshopsnew.nsf/rwlform?openform

  (Reduce any stress caused by technology by becoming more familiar with the software packages that you use.)

- Running Factory Spring Thaw 5k Run/Walk:

  http://www.goevents.ca/newGOEvents/runningfactory/springthaw.html

- W.R.A.C.E. 2010 Events. Next race April 24th:

  http://www.wrace.org/html/events.html

- Windsor Spinathon for Hospice March 6 from 8 am - 1 pm: http://www.windsorspinathon.com/ (http://www.citywindsor.ca/news/fullevent.asp?listing=7255)
- Local Bike Trek May 29th and 30th for Lung Cancer (Registration open until March 9): http://www.biketrek.ca (http://www.citywindsor.ca/news/fullevent.asp?listing=7270)
- Skate for the Humane Society on March 13th at the WFCU from 2 - 4 pm: http://www.citywindsor.ca/news/fullevent.asp?listing=7259
- Tri-For-Life Triathlon @ St. Denis Centre March 21: http://www.active.com/event_detail.cfm?event_id=1839415
- MS Walk in Windsor on Sunday, April 18, 2010 at Assumption Church: http://www.mssociety.ca/ontario/scwalk_swo.htm?siteName=Windsor&siteNum=57
- Windsor 2010 Spring Sprint on Sunday, June 13, 2010 at Riverside Sportsmen Club: 5k run or walk: http://www.springsprint.ca
- Relay for Life on June 18 at the Vollmer Culture & Recreation Complex in LaSalle: http://convio.cancer.ca/site/TR?fr_id=5724&pg=entry

Other Health, Fitness, and Wellness Issues

- Canada's Physical Activity Guide: http://www.phac-aspc.gc.ca/pau-uap/paguide/
- The Importance of Sleep: http://www.wechu.org/workplace-health/initiatives/e-bulletins/HotTopic-ABCs%20of%20Zzzs.pdf

- Add Physical Activity to Your Day: http://www.heartandstroke.com/site/apps/nlnet/content2.aspx?c=ikIQLcMWJtE&b=4832209&ct=7511411&src=healthline
- Tips for Being Active: http://www.cflri.ca/eng/lifestyle/index.php
- Southwestern Ontario in motion: http://www.swontarioinmotion.ca/
- City of Windsor Parks and Trails: http://www.citywindsor.ca/documents/GIS/parkmaps/ParksTrailsandLeisureFacilities.pdf
- Physical Activity: Common Barriers: http://www.wechealthunit.org/workplace-health/initiatives/e-bulletins/PhysicalAct_E_BulletinWEB.pdf
- Target Heart Rate Chart: http://www.active2010.ca/index.cfm?fa=english_tools.target
- What Role Does Physical Activity Play in My Health? http://www.wechealthunit.org/healthy-living/physical-activity/articles/what-role-does-physical-activity-play-in-my-health/?searchterm=active
- 10 Ways to Go Green, Get Healthy, Save Money (from Fitness Magazine): http://www.fitnessmagazine.com/health/spirit/your-best-you/10-ways-to-go-green-get-healthy-save-money/
- Heart rate monitor: http://www.spinning.com/images/Heart_Rate_Monitor.pdf
- Calculating aerobic heart rate: http://www.spinning.com/images/AerobicBaseBuilding.pdf
- Why you should care about your resting heart rate: http://www.training4cyclists.com/why-you-should-care-about-resting-heart-rate/

- Staying motivated to attend classes: http://www.spinning.com/images/Staying_Motivated.pdf
- Boosting Your Body Image: http://www.ideafit.com/fitness-library/body-image
- 5 Things You Need to Know About What Causes Muscle Cramps: http://www.livestrong.com/article/5484-need-what-causes-muscle-cramps/
- Body Mass Index (BMI) Calculator: http://www.active2010.ca/index.cfm?fa=english_tools.bmi
- Boosting Your Immune System: http://www.wechealthunit.org/workplace-health/health-topics/infection-protection-fall-06/boosting-your-immune-system/?searchterm=active
- Mental Health and Physical Health - Exploring the Connection: http://www.wechealthunit.org/workplace-health/health-topics/keep-health-in-mind/mental-health-and-physical-health-exploring-the-connection/?searchterm=active
- Toolbox of Life: http://www.wechealthunit.org/workplace-health/health-topics/keep-health-in-mind/mental-toolbox/?searchterm=active
- Working Toward Wellness: http://www.wechealthunit.org/workplace-health/initiatives/brochures/GetActiveBeActiveBro.pdf
- Top 10 Most Frequently Asked Questions In a Fitness Center (And Their Answers): http://www.ideafit.com/fitness-library/top-10-most-frequently-asked-questions-in-a-fitness-center-and-their-answers

- Understanding Depression: http://www.wechealthunit.org/workplace-health/health-topics/worklife-balance/understanding-depression/?searchterm=active
- How to Become a Morning Person: http://www.fitnessmagazine.com/health/spirit/get-to-sleep-guide/become-a-morning-person/

Strength and Core Training

- The Role of Stretching Exercises - From Warm-Ups to Cool-Downs: http://www.ideafit.com/fitness-library/role-stretching-exercises-warm-ups-cool-downs
- Our Obsession with Ab Exercises: http://sportsmedicine.about.com/od/abdominalcorestrength1/a/Ab_Obsession.htm
- 10 Weight Training Success Tips: http://weighttraining.about.com/od/succeedingwithweights/qt/success_tips.htm
- Pyramid Upper Body Workout: http://exercise.about.com/cs/exerciseworkouts/l/blpyramidarms.htm
- Hit Every Muscle in 5 Minutes: http://www.fitnessmagazine.com/workout/express/5-minute/hit-every-muscle-in-5-minutes/?sssdmh=dm17.432055&esrc=nwydcibestbody3&email=1079326709\

APPENDIX J

Focus Group 2 Guide

1. Tell me the bad parts about stress first. What does stress do to you?
2. What about your eating habits when you're stressed?
3. Are there good points to stress? Does it make you want to exercise more or work harder to relieve stress?
4. Do you have any tricks that you use to try to eat healthy more often?
5. Do you ever take a 3 or 10 minute break and go climb the stairs or anything, just to clear your head?
6. Tell me about social support. Do you need it, use it, thrive on it, avoid it?
7. I have 2 weeks left to try to get attendance up in spin. Any ideas?

APPENDIX K

On-line Survey Instrument

1) Status
   a. Faculty
   b. Staff
   c. Graduate Student
   d. Undergraduate Student
   e. Other - Community Member

2) Sex
   a. Male
   b. Female
   c. Transgender

3) Age Group
   a. Under 18
   b. 18 – 25
   c. 26 – 32
   d. 33 – 39
   e. 40 – 46
   f. 47 – 54
   g. 55+

4) From the schedule provided below, please share the approximate number of indoor cycling classes that you attended this semester on each day:

TIME	MON	TUES	WED	THURS	FRI	SAT	SUN
7:00 am							
12:00 pm							
4:00 pm							
5:00 pm							

6:00 pm

7:00 pm

5) Did you receive an adequate number of e-mails regarding the study?
   a. None at all
   b. A few
   c. Just the right amount
   d. Quite a lot
   e. Way too many

6) How much did you use CLEW, the on-line supplement?
   a. Not at all (If this is clicked, hide the rest of the questions.)
   b. A little
   c. I used a fair amount
   d. A lot
   e. All the time

7) What benefits did you receive from using the on-line tool?
   a. Were you motivated to attend more classes? Yes/No
   b. Did you attend more classes? Yes/No
   c. Did you increase your level of physical activity outside of attending class? Yes/No
   d. Did you connect with other participants on a social level? Yes/No
   e. Did you connect with the instructor on a social level? Yes/No
   f. Did you find the information provided on the site relevant and useful? Yes/No
   g. Did you enjoy sharing comments and feedback with other on-line users? Yes/No
   h. Other: Please explain your responses:
   i. open ended text box available to type responses

8) Please comment on the links that were provided. (i.e., did you like them, were suggested links posted timely, etc.)
   a. open ended text box available to type responses

9) Please comment on the use of computer-mediated focus groups for this study. (i.e., did you like the idea, did this format seem appropriate, did you feel socially included in the discussions through use of this tool)
   a. open ended text box available to type responses

10) Please comment on the use of the on-line discussion forum and the chat area. (i.e., did you like the idea, did this format seem appropriate, did you feel socially included in the group through use of these tools; likes and dislikes about them)

a. open ended text box available to type responses

11) Please comment on the personal journal provided by the instructor in the forum area. (i.e., did you like the idea, did this format seem appropriate, did you feel socially included in the group through use of this tool)

a. open ended text box available to type responses

12) How worthwhile was the on-line environment as a supplement to the indoor cycling program?

a. Not at all worthwhile
b. A little worthwhile
c. Worthwhile
d. Very worthwhile
e. Completely worthwhile

13) Would you recommend the use of an on-line supplement for this or other group fitness programs? Check all that apply.

a. Indoor Cycling
b. TBC – Total Body Conditioning
c. Yoga
d. Pilates
e. Boot Camp
f. Other(s):
Please explain: (text box available to type responses)

14) Please provide any other feedback or recommendations on your experience using the tool or suggestions for future improvements.

a. open ended text box available to type responses

APPENDIX L

Level of Engagement

Activity	Participant 1	Researcher
# CLEW Visits	140	127
# Chat Posts	22	48
# Chat Words	195	474
Focus Group 1: # Posts	30	40
Focus Group 1: # Words	730	742
Focus Group 2: # Posts	32	39
Focus Group 2: # Words	697	580
# Resources Added	0	159
# Resources Read	3	37
Total Forum Posts	5	17
Total Forum Reads	10	50
Total Forum Responses	0	3
Total Forum Words	283	4503
Announcements Created	0	9
Announcements: # Words	0	887
Interaction Discussions	5	7
Interaction Chat	8	20
Interaction Focus Groups	48	61
Level of Engagement	2208	7803

APPENDIX M

90 Initial Codes

1. Reasons for participation including: scheduling, support from friends, and enhancing health [Aerobic endurance, Attendance, Benefits, Confident, Confirm, Convenience, Contact, Driven, Encourage, Energy, Enthusiasm, Flexibility, Goals, Health (healthy), Ideas, Interaction, Lack benefits (sleep, muscle, nutrition), Motivation, Muscle tone, Nutrition, Physical activity (more active, outside activities), Planning, Praise, Prepare, Progress, Reliance, Request, Research, Resources, Respond, Responsible, Reward, Routine, Schedule, Sedentary, Set example, Social, Suggest, Support, Time, Tips]
2. Barriers including: lack of time, lack of support, and other obligations [Bad choices, Barriers, Boredom, Break (need one), Busy, Deter, Distracted, Forget, Lazy, Long hours, Not healthy, Obligation, Overwhelmed, Physical pain, Planning, Preferences, Prepare, Resources, Routine, Schedule, Short tempered, Stress, Temptation, Time, Tired, Weather]
3. Environmental factors affecting attrition rates for physical activity: social aspects of physical activity and the social support received by participants [Agree, Appreciate, Assist (assistance), Communication, Contact, Encourage, Energy, Enthusiasm, Events, Feedback, Focus group, Goals, Greet, Humour, Interaction, Motivation, Music, Physical activity (more active, outside activities), Praise, Rapport, Respond, Responsible, Smile, Social, Support]
4. Program factors affecting attrition rates for physical activity: design of the program and processes of recruitment [Deter, Drills, Ethics, Facility, Flexibility, Ideas, Incentive, Inconsistencies, Inform (notify), Instruct, Instructors, Music, Preferences,

Program, Progress, Promote, Request, Research, Reward, Schedule, Study, Suggest, Time]

5. Person-based factors affecting attrition rates for physical activity: perceptions and beliefs that individual's brought with them to the physical activity environment [Apology, Confidential, Deter, Flexibility, Focus group, Goals, Humour, Inform (notify), Interaction, Irritable, Known (benefits), Lack benefits (sleep, muscle, nutrition), Lazy, Long hours, Motivation, Not healthy, Nutrition, Obligation, Overwhelmed, Participation, Physical pain, Planning, Preferences, Prepare, Progress, Rapport, Reliance, Responsible, Reward, Routine, Sedentary, Set example, Short tempered, Smile, Spontaneity, Suggest, Support, Temptation, Time, Tips, Tired]

APPENDIX N

57 Focus Codes

1. Attendance: [Attendance, Participation]
2. Barriers: [Bad choices, Barriers, Boredom, Break (need one), Deter, Inconsistencies, Instructors, Lazy, Obligation, Overwhelmed, Recruitment, Schedule, Stress, Time, Tired]
3. Benefits: [Benefits, Confidence, Convenience, Endurance, Energy, Flexibility, Instructors, Music, Schedule, Sleep, Social, Support]
4. Motivation: [Driven, Goals, Incentives, Motivation, Music, Planning, Preferences, Social, Support]
5. Physical activity: [Health, Nutrition, Physical activity (more active, outside activities)]
6. Program: [Drills, Events, Facility, Music, Program]
7. Social Interaction: [Agree, Apology, Appreciate, Assist, Communicate, Confirm, Contact, Ethics, Feedback, Inform (notify), Interact, Praise, Rapport, Requests, Social, Support]
8. Study: [Focus group, Resources, Study]

APPENDIX O

32 Focus Codes

1. Attendance: [Attendance]
2. Barriers: [Barriers, Break (need one), Planning, Schedule, Stress]
3. Benefits: [Benefits, Nutrition, Social, Support]
4. Communication: [Apology, Appreciate, Communication, Events, Feedback, Focus group, Incentive, Inconsistencies, Inform (notify), Instructors, Planning, Praise, Recruitment, Request, Resources, Social, Suggest, Support]
5. Motivation: [Motivation, Music]
6. Physical activity: [Physical activity (more active, outside activities), Social]
7. Program: [Drills, Facility, Program]
8. Study: [Focus group, Resources, Study]

APPENDIX P

9 Final Categories and 23 Focus Codes

Sub-question 2: What benefits were found by participants from the use of an on-line supplement?

1. Attendance
2. Barriers [Break, Planning, Schedule, Stress]
3. Benefits [Nutrition]
4. Motivation
5. Physical activity (outside the study)
6. Support

Sub-question 3: How was the participant-instructor relationship affected by the use of the on-line environment?

7. Communication [Apology, Appreciate, Feedback, Inform, Praise, Request, Social, Suggest]
6. Support (same as above)

Future Recommendations

8. Program [Drills, Events, Facility, Incentive, Inconsistencies, Instructors, Music, Recruitment]
9. Study: [Focus group, Resources]

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