INTERNATIONAL JOURNAL OF SOCIAL SCIENCES AND HUMANITY STUDIES
Vol 8, No 2, 2016 ISSN: 1309-8063 (Online)

STUDENT'S SOFT SKILL ACQUISITION IN AN OUTDOOR ADVENTURE EDUCATION EVENT OVER TWO YEARS OF PARTICIPATION

S.J. Roos
North-West University (Vaal Campus), South Africa
E-mail: Fanie.Roos@nwu.ac.za

A. Lennox
North-West University (Vaal Campus), South Africa
E-mail: Anita.Lennox@nwu.ac.za

C. Botha-Ravyse
North-West University (Vaal Campus), South Africa
E-mail: Chrisna.Botha@nwu.ac.za

─Abstract ─

Outdoor Adventure Education can be used to develop and hone the transferable or so called soft skills such as group work and problem-solving skills in higher education. These skills are also much needed to ensure employability. An outdoor adventure activity was developed and implemented by lecturers in order to bridge this gap between university and the industry in order to hone the transferable skills of students studying sport and recreation. Data were collected over two years. Two hundred students participated in the research study with a mean age of 22±4 years. Data were collected qualitatively and analysed and subsequently numerically coded to ensure statistical analyses. Analyses indicated no statistical differences between skills learned in the first and second year. Students were then divided into first time and second time participants and statistical differences were found. The second time participants reported mostly on leadership skills learned and first time participants on teamwork. Implementing an outdoor Adventure Education event was effective in developing skills in students much needed for

success in higher education as well as becoming well-rounded individuals whom possess all the qualities for rewarding employment.

Key Words: *Students, soft skills, adventure education, OAE, recreation*

JEL Classification: I23

1. INTRODUCTION

Traditionally recreation in South Africa has been treated as secondary to other professions and was mainly immersed under the authority of public parks and, more recently, sport (Young, 2015). Currently recreation is governed by the national body of Sport and Recreation South-Africa (SRSA). The National Plan for Sport and Recreation identified recreation as a strategic objective to improve the health and well-being of the nation (SRSA, 2012). This objective further aligns with the National Development Plan 2030 to increase physical activity among citizens. This implies that Higher Education Institutions (HEIs) that offer this qualification play an important role in the development of these students.

In the past a bachelor's degree from an accredited university, along with some practical experience, were considered a graduate's ticket to gainful employment in the field of sport and recreation (McEvoy & Buller, 1990) and in the light of the strategic goal of the National Sport and Recreation Plan an opportunity for each new graduate. However, the latest thoughts on the value of a college degree have suggested that this is no longer the case (D'Eloia & Fulthorp, 2016) These days graduate employers are looking beyond a degree and job demand, they require of candidates to possess various characteristics and skills, many of which are not directly addressed by university degree programmes (D'Eloia & Fulthorp, 2016). These are skills that develop over time and are perceived as manageable. This includes group work, problem-solving, task management and leadership (Collins, Sibthorp, & Gookin, 2016; Prichard, Bizo, & Stratford, 2006a)

At some international universities Adventure Education (AE) courses are being offered with the aim of developing these skills (Cooley, 2015; Cooley, Burns, & Cumming, 2015). Adventure Education refers to an activity or a series of activities with specific learning themes for the participants to learn through the process as well as the reflection sessions. It is supposed to allow them to think and reflect on the lessons learned in the activities and use them in the practices of everyday life (Ewert & Sibthorp, 2014). The activities used are usually varied, such as games, arts, sports, music or rock climbing. The Adventure Education practices are mostly rope-based or team-building activities that develop participant's cognitive abilities or thinking skills, as well as life-long learning themes such as leadership, communication, problem-solving, cooperation, interpersonal interactions, etc. (Chang, 2005). These skills are vital to the successful learning experience of students and can contribute much to their

effectiveness in working on group assignments (Germaine, Richards, Koeller, & Schubert-Irastorza, 2016; Prichard et al., 2006a). The successful implementation of these skills in a group setting is one that is high in demand by employers (Robles, 2012).

These strategies that have been implemented by Adventure Education practices relate and is inherently part of what recreation students should be doing as part of their job for companies and other clients; develop an Adventure Education programme that will address the development of these skills. However, they seldom get the opportunity to experience an adventure programme by taking part in such a programme themselves instead of being taught theoretically how to implement such a programme in a classroom setting. In an effort to bridge the gap between university and the industry, lecturers decided to develop an adventure race designed to instil these skills gained by participating in such a purposeful Adventure Education event. Furthermore it was used as exam preparation.

2 METHODOLOGY

2.1 Research design

A qualitative observational study design was followed where the statistical analysis of the study comprises qualitative and quantitative aspects (Leech & Onwuegbuzie, 2009).

2.2 Research setting

The Ama-zing Race: Academic Maintenance Aid with Zing (Fun) was developed for students to assist them with the development of some life skills such as communication, leadership, teamwork and problem-solving, with a secondary purpose of preparation for the exam. This event was hosted on campus at a university in Gauteng. Data from 2014 and 2015 were included in this study in order to determine if the skills learned by the students would change over time.

2.3 Study population

A total of 173 undergraduate sport students participated in the Ama-zing race with a mean age of 22±4 years. Only 99 students completed the questionnaire in 2014 and 101 students in 2015. Participants are full-time students in a sport science or sport and recreation curriculum. They are both first year and senior students,

therefore some participated for the first time in 2014, but a second time around in 2015 and subsequently there was a new group participating in 2015.

2.4 Ama-zing Race structure

Sport students divided into groups of no more than five team members according to their year group and enrolled course. After the rules of the event were explained, all teams started the race from the same starting place on campus. The teams had to complete ten stations with activities that were spread across the campus and teams received clues as to where the next station would be. The completion of a station included answering questions related to the specific curriculum modules as well as general questions related to the university and campus. Questions were multiple choice questions or true or false type questions. These questions had to be answered correctly, before being allowed to do the physical activity and receive a clue for the next station. The questions used in the activity did not form part of the study but were included in the completion of the task and aided in exam preparation. Each physical activity included cognitive activities and games that had a specific skill or outcome associated with the activity. The outcomes of these activities were teamwork, communication, confidence, leadership, cognitive development and motor skill development, respectively.

In 2014 the questions and clues were given in hard copy while in 2015 the clues and module related questions were given on a tablet at each station. In 2014 teams alternated between stations of five physical activities and five module related and campus information questions. Physical activities included slingshot shooting, dribbling a soccer ball with a weight on a rope tied around the waist and inflatable obstacle course. In 2015 teams alternated between twelve physical activities and twelve module related questions. The physical activities included golf activities, building a boat, relay, building tents and target shooting. Teams had to walk or run to their next station across campus and teams that arrived first would receive the questions or physical task first, giving them an advantage in completing and advancing to the next station.

2.5 Measurement instrument and data collection procedures

Data collection were performed by means of a self-administered qualitative questionnaire. They were asked to report on the skills that they used on the day as

well as the skills that they developed. Questions were also asked regarding how they think these skills were developed and their experience of the Ama-zing Race. In 2015 further questions were asked about whether they thought that they learned new skills for those that participated a second time and if so what they were and why they think these were new skills learned. The questionnaires were distributed just after completion of the Ama-zing Race and students had ample time to reflect on the questions and their experience.

2.6 Ethical issues

Ethical clearance for the study was granted by the Ethical Committee for Social Sciences of the related university. The students signed an informed consent form. They were informed regarding the experiment and their participation were voluntary and anonymous. Seeing as some physical activity participation was included in the study students' safety were ensured by each station being checked according to the regulatory safety for outdoor events act and trained first aiders were on standby at various points on the campus.

2.7 Statistical analyses

Roos, Van den Berg, Lennox, and Els (2016) identified the skills learned in 2014, these skills were analysed and grouped by means of ATLAS ti. These various skills were; communication, leadership, cognitive skill, teamwork, management, physical skill, activity related skill and social skills. The same groups of skills as identified by Roos et al. (2016) were used in 2015. They were also analysed making use of ATLAS ti but for the purpose of this study each one of these skills were given a numerical code in order to allow for statistical analyses.

Statistical analyses were performed using SPSS, Version 22 (SPSS, Chicago, IL, USA). Frequency counts were done to determine the amount of students that reported a specific skill. In order to determine if any new skills were learned from the one year to the next, chi square tests were done across groups as well as for each set of groups.

2. RESULTS

Table 1 illustrates the skills developed and used as reported by students during 2014 and 2015.

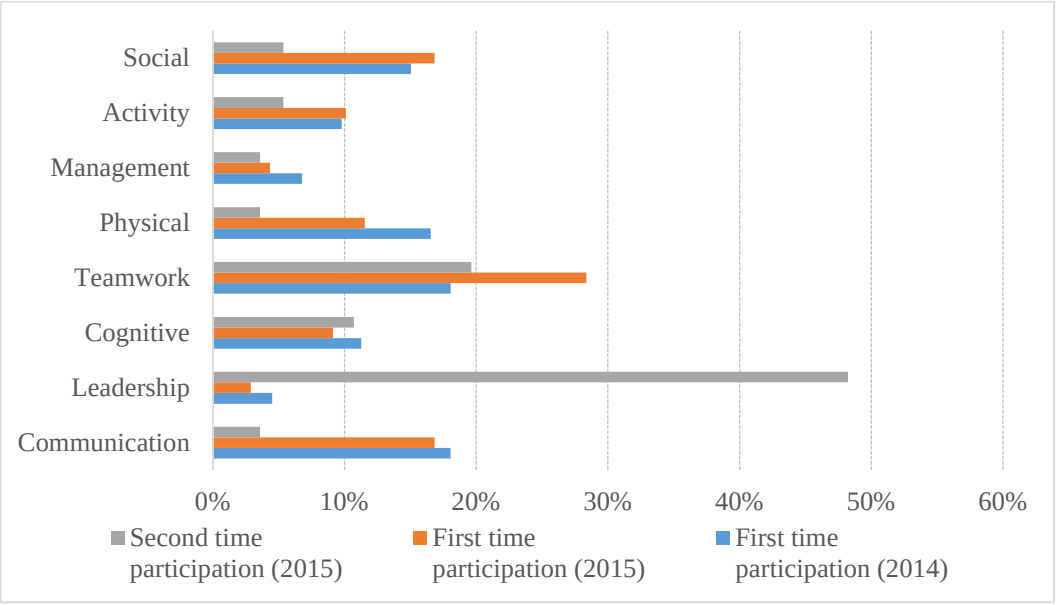
Table 1: Frequency table of skills reported over the two years.

	First time participation (2014)	First time participation (2015)	Second time participation (2015)	TOTAL
Communication	24	35	2	61
Leadership	6	6	27	39
Cognitive	15	19	6	40
Teamwork	24	59	11	94
Physical	22	24	2	48
Management	9	9	2	20
Activity	13	21	3	37
Social	20	35	3	58
TOTAL	133	208	56	**397**

When the first chi square test was done across groups it was determined that the two sets of skills do not statistically differ ($p=0.409$) across the two year groups (i.e. the same skill sets were learned). In 2014 the students who participated for the first time in this event reported that teamwork and communication are the skills that were learned, the same were reported in 2015 but this year group also reported that social skills were learned.

However, when the groups were divided into participants whom participated for the first time in 2014 and a second time in 2015, a statistical difference was found ($p<0.001$). This implies that different skill sets were learned. The same was observed when the groups whom participated for the first time in 2015 and those whom participated for a second time in 2015 were analysed. Different skill sets were learned (p-value < 0.001), students participating for the second time in 2015 reported more on leadership skills that they've learned. The 2014 and 2015 first time participation groups reported teamwork, communication and physical skills, in contrast to the 2015 second time participation, students reported leadership skills as the most learned (Figure 1).

Figure 1: Percentage of participants per group indicating which skills were learned (n=200)



5. DISCUSSION

During the Ama-zing race the researchers found that participating a second time may have led to a different set of skills acquired than the set of skills learned during the first time participation. Leadership was one of the skills that was stressed significantly by students as the most improved skill when participating for a second time. Winston, Miller, Ender, and Grites (1984) defined student-oriented peer leadership as helping other students accomplish goals or solve problems. This definition concurs with the outcome of leadership set by this event. However, the definition of peer leadership was more clearly defined by Baker (2015) as influence over another person of equal status and abilities. The abilities identified by Baker (2015) include (i) Assistance, (ii) Participation and (iii) Presence. This concurred with the qualitative student responses captured during analyses to identify the skills used, where they reported that their leadership skills have improved as they were able to assist others more in completing a task as well as motivate them to participate in all the activities while in the past it was a challenge to get everyone involved.

Another reason for the increased perception of leadership skills gained by the students participating for a second time could be that they realised the significance of this aspect in the race and that a leader needs to give direction and guidance to a group to achieve a goal (Robles, 2012). Paisley, Furman, Sibthorp, and Gookin (2008) reasoned that leadership is defined in an outdoor education setting as taking responsibility and initiative in the decision-making roles in a small group. Seeing that students participated for a second time they are older and more mature, were exposed to more team-related activities inside and outside of classrooms. Paisley et al. (2008) also indicated that mastering a specific skill may improve acquiring other skills, which can be the case with students participating for a second time.

Students whom participated for the first time, reported that communication, teamwork and social skills were the skills most learned. All of these skills appear repeatedly in the literature as crucial for both success in higher education and subsequent employment (Bennett, 2004; Prichard, Stratford, & Bizo, 2006b; Wang, MacCann, Zhuang, Liu, & Roberts, 2009) Communication skills are regarded as speaking and listening proficiency as well as presentation skills. Communication in its various forms plays a very important role in a team, members need to communicate to answer the questions, solve the clues and complete the activities, but this also relate to teamwork in the workplace (Robles, 2012). When applied to group work effective communication would improve group work skills that are likely to increase students' enjoyment, positive attitudes, satisfaction and academic achievement during higher education (Prichard et al., 2006a). These group work skills are also high in demand when entering the workplace (Bennett, 2002).

Teamwork was also reported by students who participated for the first time in 2014 and 2015 as part of the learned set of skills. This was something that is beneficial, as mentioned earlier effective teamwork enhances learning experience, which means that these students at the beginning of their higher education degree will benefit more with the class activities that often include group work. Furthermore, these skills such as teamwork and communication are also crucial skills identified as 21st century learning skills in higher education, which becomes important for success of graduates in the 21st century (Germaine et al., 2016)

Students also reported on social skills as being a skill that they learned especially in 2015, but also only among students participating for the first time. Even though

social skills were not one of the outcomes set out by the Adventure Education the value of such a skill is recognised by the researchers and is something that will be paid more attention to in furture.

Social skills are defined as the skills, behaviours, and characteristics that enable an individual to successfully engage with others (Savitz-Romer, Rowan-Kenyon, & Fancsali, 2015). These skills include communication skills but also refer to being accepted as part of the community (Savitz-Romer et al., 2015). Some of the qualitative data showed that it was an important skill learned by some of the students as they reported on being accepted by a team and being able to have fun with team members they do not normally engage with in class was something that they found to be a valuable skill as part of their social development.

Physical activity and activity specific skills or motor skills were also higher for first time participants even though it is not as high as the other skills acquired. This could be due to the fact that students participating for the first time did not know what to expect and activities like running and agility skills were not expected to be required.

6. CONCLUSION

The participants in 2014 were all first time participants regardless of their year of study, the same skills were reported by those participating for the first time in 2015. This shows that when participating in an activity like this for the first time there is a steep learning curve regardless of our experience. Once you have mastered some of the technical skills as well as become more familiar with the process and flow of the activities, other skills that need more improvement can be honed. Leadership is one such a skill that proved to have been more prominent in students participating for a second time. However, even though this established learning of peer leadership abilities provides a broad field of leadership behaviour necessary to influence others; it does not provide insight into specific leader actions and behaviours. This is something that can be investigated in detail in future research in the development of an Adventure Education activity to enhance peer leadership.

The second time participation also showed that the skills learned the second time around are skills that come with maturity and in the face of confidence about what is expected. With this in mind, it could be that the race may need to be adapted to include some other outcomes or increase the difficulty level in order to reach that

outcome so that the second time participants can also be challenged on more than one level. As a result of the requirements of the modern workplace, universities need to develop students with soft skills as well as hard skills, this may ensure career success. Through a structured outdoor learning opportunity these much needed soft skills could be effectively developed.

REFERENCES

Baker, J. P. (2015). Peer Leadership on the College Campus--Competencies and Skills for Success. *International Journal of Leadership and Change, 3*(1), 6.

Bennett, R. (2002). Employers' Demands for Personal Transferable Skills in Graduates: a content analysis of 1000 job advertisements and an associated empirical study. *Journal of Vocational Education and training, 54*(4), 457-476.

Bennett, S. (2004). Supporting collaborative project teams using computer-based technologies. *Online collaborative learning: Theory and practice*, 1-27.

Chang, M.-M. (2005). Applying self-regulated learning strategies in a web-based instuction - An investigation of motivation perception, computer assisted language learning. *Computer Assisted Language Learning, 18*(3), 217-230. doi:10.1080/09588220500178939

Collins, R. H., Sibthorp, J., & Gookin, J. (2016). Developing Ill-Structured Problem-Solving Skills Through Wilderness Education. *Journal of Experiential Education, 39*(2), 179-195.

Cooley, S. J. (2015). *Developing groupwork through outdoor adventure education: a systematic evaluation of learning and transfer in higher education.* University of Birmingham.

Cooley, S. J., Burns, V. E., & Cumming, J. (2015). The role of outdoor adventure education in facilitating groupwork in higher education. *Higher Education, 69*(4), 567-582.

D'Eloia, M. H., & Fulthorp, K. (2016). Preparing for the Profession: Practitioner Perceptions of College Student Preparedness for Entry-Level, Full-Time Employment in Municipal Recreation Agencies. *Schole, 31*(1).

Ewert, A. W., & Sibthorp, J. (2014). *Outdoor adventure education: Foundations, theory, and research*: Human Kinetics.

Germaine, R., Richards, J., Koeller, M., & Schubert-Irastorza, C. (2016). Purposeful Use of 21st Century Skills in Higher Education. *Publication of National University*, 19.

Leech, N., & Onwuegbuzie, A. (2009). A typology of mixed methods research designs. *Quality & Quantity, 43*(2), 265-275. doi:10.1007/s11135-007-9105-3

McEvoy, G. M., & Buller, P. F. (1990). Five uneasy pieces in the training evaluation puzzle. *Training & Development Journal, 44*(8), 39-43.

Paisley, K., Furman, N., Sibthorp, J., & Gookin, J. (2008). Student learning in outdoor education: A case study from the National Outdoor Leadership School. *Journal of Experiential Education, 30*(3), 201-222.

Prichard, J. S., Bizo, L. A., & Stratford, R. J. (2006a). The educational impact of team-skills training: Preparing students to work in groups. *British Journal of Educational Psychology, 76*(1), 119-140.

Prichard, J. S., Stratford, R. J., & Bizo, L. A. (2006b). Team-skills training enhances collaborative learning. *Learning and Instruction, 16*(3), 256-265.

Robles, M. M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. *Business Communication Quarterly, 75*(4), 453-465.

Roos, S., J, Van den Berg, L., Lennox, A., & Els, B. (2016). Campus Amazing Race as teaching tool: Sport student's perceptions of skills developed and applied. *International Journal of Management and Applied Science, 2*(3), 48-53.

Savitz-Romer, M., Rowan-Kenyon, H. T., & Fancsali, C. (2015). Social, Emotional, and Affective Skills for College and Career Success. *Change: The Magazine of Higher Learning, 47*(5), 18-27.

SRSA. (2012). *National Sport and Recreation Plan*. South-Africa.

Wang, L., MacCann, C., Zhuang, X., Liu, O. L., & Roberts, R. D. (2009). Assessing teamwork and collaboration in high school students A multimethod Approach. *Canadian Journal of School Psychology, 24*(2), 108-124.

Winston, R., Miller, T., Ender, S., & Grites, T. (1984). Developmental academic advising: Addressing students' educational, career, and personal needs. *San Francisco: JosseyBass*.

Young, M. E. (2015). Therapeutic recreation as a developing profession in South Africa. *World Leisure Journal*, *57*(1), 34-45.