CAMPUS AMAZING RACE AS TEACHING TOOL: SPORT STUDENTS' PERCEPTIONS OF SKILLS DEVELOPED AND APPLIED

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Abstract- Industry demands that graduates possess specific hard and soft skills when entering the work environment. Universities across the globe are increasingly required to produce highly-skilled graduates who are able to respond to the ever changing and complex needs of the workplace. Owing to the pressure and demands of industry, tertiary institutions constantly seek to employ new and innovative teaching and learning methods to develop students' much needed diverse skills. The objective of this study was the identification of the skills developed and applied by sport students during an outdoor adventure program in the form of an on-campus Amazing Race event. Full-time students enrolled in sport and recreation curriculums at a South African university in the Gauteng province participated in this innovative teaching and learning opportunity, which incorporated physical, social and cognitive outcomes. For the study, 99 students aged between 18-24years, voluntarily completed three open-ended questions regarding the skills they applied and developed during the event participation. Qualitative techniques were utilised to analyse the data inductively and rendered 121 meaning units, grouped together into 11 categories, which grouped into six primary skill themes, namely: management, cognitive, social, knowledge, physical and fun. Students identified more soft skills than hard skills. Tertiary institutions could employ this outdoor innovative teaching and learning method to develop students' hard as well as soft skills.

Keywords- Students, development, soft skills, hard skills, Amazing Race

I. INTRODUCTION

Business environments historically required new employees to possess a number of hard skills and not a great deal of soft skills [1]. As the workplace evolved it has become clear that for employees to be successful, soft skills are of great importance [1]. This is due to the fact that employees who exhibit a great deal of hard and soft skills have proven to be more productive, career driven, loyal and successful employees, therefore making them a desired necessity for any organisation [2], [3]. Reference[4] posited that soft skills complement hard skills and that highly qualified employees can develop and function more effectively within a working environment with adequate soft skills. Owing to the pressure and demands of industry, tertiary institutions constantly seek to apply new and innovative teaching and learning methods to develop students' much needed diverse skills [3], [5], [6].

II. LITERATURE REVIEW

Soft skills

Research indicated that in order for employees to maintain long term job success, 75% is dependent on soft skills such as good people skills [7], [8]. "People skills" developed by an individual include leadership, communication, time management, problem solving and team work [3]. These skills are traits of an individual and therefore can be characterised as qualities and attitudes [4]. These character traits improve work performance and collaboration with other employees and clients [9]. Businesses are thus encouraging the development of soft skills in order to improve performance of employees [10]. Hard skills as well as soft skills are an everyday occurrence in the work environment and part of the daily work routine of each individual [11], [12]. Development of students' soft skills could therefore enhance their employability [13].

Hard skills

Hard skills are the accomplishments of an individual found on their résumé. Examples of these skills are education, work experience, knowledge and level of expertise [3]. This refers to the ability to perform tasks that is acquired through knowledge gained from various educational sectors [3]. Gaining knowledge within a specific industry, acquiring experience and being competent in technical skills can lead to improved work performance in all areas. Even though research suggest that soft skills contribute significantly more to workplace success [14], employees need a strong combination of both skills to achieve long-term success in the current business industry [5], [15]. Combining these hard skills with the previously mentioned soft skills can lead to remarkably productive and quality employees [5].

University role in skills development

It has become essential for universities to yield skilled graduates who are able to respond to the ever changing workplace [16], [17], [18].Reference [4] indicated that a curriculum needs to consist of soft skill subjects that complement the essential technical skills, but that students need to seek diverse ways to develop soft skills if such subjects are absent in curricula. In many instances lecturers are

incorporating the development of soft skills in the technical aspects of subjects and the way they are taught, through the means of student participation during a lecture, and therefore unconsciously learn key soft skills.Activities performed by students that develop their soft skills include student presentation of content, group discussions and group work[4],as well as other innovative teaching and learning methods such as outdoor adventure programs [19].

Skills development through outdoor adventure

The use of outdoor experiences for educational and skills development purposes are widely implemented in different fields of study [19]. Common features of outdoor adventure programs include small group settings, assignments of a mental nature, physically challenging objectives and group activities requiring problem solving and decision making [19]. While physical activities are part of the outdoor adventure program, physical fitness and physical skills are not the primary goals [19]. However, physical activities can be utilized as an effective educational tool for participants to identify their own strengths and weaknesses and to learn new skills [19]. Even though outdoor adventure programs have an underlying competition format to it, the focus is on cooperation amongst group members [19]. Reference [19]indicated the effectiveness of outdoor adventure programs and positive attainment such as academic, leadership and social behaviour [19]. The goal of this study was to identify the skills developed and applied by sport students during an on campus outdoor adventure program in the format of the television program Amazing Race.

III. THEORETICAL FRAMEWORK

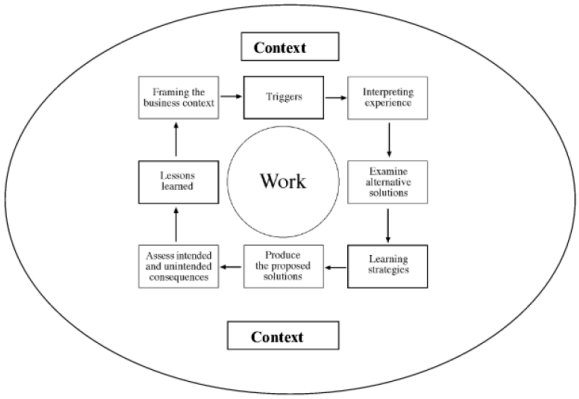

Figure 1: Re-conceptual informal and incidental learning model (1999), [20]

Reference [21] reviewed the theory and research on informal and incidental learning based on Marsick and Watkins definition of informal and incidental learning [21]. Incidental learning is defined as:"a by-product of some other activity, such as task accomplishment, interpersonal interaction, sensing of organizational culture, trial-and-error experimentation, or even formal learning" [21].

The theory which Marsick and Watkins proposed is that in practice, employees as well as students do not intentionally plan to accomplish particular objectives[20]. This implies implicit learning occur without the employees and students' awareness. Students face challenges when making new connections or when learning in new ways, therefore the theory of incidental learning can be utilised as it provides a framework to understand these soft skills students learn through the challengesthey face. The tacit learning framework also provides students the opportunity to learn new skills as well as opportunities in different contexts to process experiences into knowledge[22].

IV. METHODOLOGY

This study is exploratory in nature and therefore a qualitative method was applied following the technique proposed by [23]. A non-probability, purposeful sampling technique was employed since the researchers intend to discover and gain insight regarding the experience of a specific group of people [24].

Sample

From the one hundred and seventy three undergraduate sport curriculum students, one hundred and forty participated in the event. Ninety-nine students (male = 52; female = 47) completed the questionnaire. Students' ages ranged between 18 to 24 years and are full time students in a sport science or sport and recreation curriculum at a university in South Africa. The students'feedback regarding their experience would contribute to the knowledge data pool on skills developed during an outdoor adventure learning experience.Students were requested to voluntarily and anonymously complete the questionnaire.

Amazing Race set-up

Sport curriculum students formed their own groups of no more than five team members according to their year group and qualification. All teams started the race from the same location on campus after the rules and procedures for the day were explained. Teams had to complete ten stations of activities which were scattered across the campus and just as in the television Amazing Race program, teams received clues as to where the next station would be. 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. Module specific questions were set for each year group and per specific module, while the same

campus related questions were posed to all teams. Module content questions for example requested teams to complete word puzzles, match column A with B and open-ended style questions. Campus related questions also included building puzzles, matching column A and B or short fill in type questions. Teams had to walk or run to their next station and teams arriving first would receive the questions or physical task first, giving them an advantage of completing first and advancing to the next station.

Measurement instrument and data collection procedures

Data collection was performed by means of a self-administered qualitative questionnaire. Six questions regarding their experience of the Amazing Race event of which two were included in this study were posed. This study focused on the questions: (i)Which skills did you use today?;(ii)Which skills did you develop today? The questionnaires were distributed just after completion of the Amazing Race event and students had ample time to reflect on and elaborate on the questions and their experience.

V. ETHICAL ISSUES

The university authorities granted permission for the event and research to be conducted. Students were informed that participation was voluntarily and anonymous.

VI. DATA ANALYSIS

A qualitative technique, which requires two steps were used to analyse the data. The first step involved creating tags and secondly creating categories [23]. Creating tags consisted of identifying the meaning units of information concerning the skills developed and applied during the Amazing Race as perceived by sport and recreation students. These meaning units contain specific ideas or views, which are able to stand on their own [23]. Thereafter the meaning units with similar tags were grouped together into broader categories and named. These individual categories were then labelled as primary themes. Reliability of the data was confirmed by referring back to original statements of the individual students and through validation of the meaning units as well as the categories [24].

VII. FINDINGS

One hundred and twenty one meaning units were grouped together into 6 categories, namely: management skills, cognitive skills, social skills, knowledge skills, physical skills and fun. Five of the categories were grouped together under two primary themes of soft and hard skills. Categories related to soft skills include management, cognitive and social skills, while hard skills include the categories of knowledge and physical skills. The category of fun was not grouped under a theme, but will be discussed individually. Indicated in the table below are the categories as well as the number of students who responded positively to the various aspects.

Table I

Soft skills	**Students (n)**
Management skills	35
Communication	46
Social skills	75
Cognitive skills	14
Hard skills	
Knowledge	10
Physical skills	65
Fun / Enjoyment	6
Total students responded	99

Soft skills

The categories within the soft skills theme which emerged from the meaning units are: management skills, cognitive skills and social skills.

Management skills

Students noted various aspects of management such ascommunication, which 78% noted as the most important skill to have in order to have completed the raceleadership and leadership skills, with 35% noting it as second highest management skill used and developed.

The terms "listening" and "communicating effectively" or "communication" were noted. Further statements such as: "communication – talk and answer question" and "mostly communication that was needed to work well as a team" enforces the need for good communication skills.

Social skills

Students realized thedevelopment and the importance of their social skills during the event and 57% noted teamwork as the most important of all the social skills.

Statements such as "patient" or "patience", "motivation" and "learning to motivate other students" were numerous. Likewise aspects such as "respect others", "sportsmanship", "cooperation" and "teamwork" indicate the importance of social skills

utilization within this team set-up and outdoor adventure event.

Cognitive skills

The last category within the soft skills theme is cognitive skills. Thinking critically emerged as the skill of highest importance with 35% noting its importance in completing the event.

The following meaning units were noted in this category: "working out clues", "using my mind to find clues", "quick thinking" and "thinking on my feet". Further meaning units mentioned was "thinking critically", "problem solving" and "creative".

Hard skills

The second theme of hard skills comprised of the two categories knowledge and physical skills.

Knowledge

This is important since students had to call upon previously gained knowledge regarding module content and campus questions. Students commented on their knowledge utilized during the event and 90% noted that knowledge was crucial in completing the event.

Students commented on their knowledge utilized during the event through statements such as "general knowledge" or "knowledge", and "knowledge - gained all these years".

Physical skills

Even though stations within the outdoor activities had module content specific outcomes, students were challenged physically and many students noted speed (26%) and accuracy/aiming skills (28%) as vital skills.

This is evident through statements such as: "fitness", "endurance", "muscle endurance" and "muscular strength". Physical skills such as "speed", "strength" and "power" and "accuracy" or "aiming skills" were also noted.

Fun / enjoyment

Even though the study did not aim to test the enjoyment or fun factor of the activity, it was a meaning unit that was identified as mentioned by the students.

The category of fun / enjoyment was created through meaning units such as: "having fun", "enjoyment" and "having fun no matter the challenge". Students also mentioned "enjoyment of physical & brain activities" and "to enjoy yourself and have fun, it's not all about winning" which indicates their positive experience of the event.

VIII. DISCUSSION

Soft skills

This study indicated that students acknowledgeddeveloping and applying various soft skills during the educational outdoor Amazing Race event. The categories of management and social skills are concurrent with research findings where interpersonal skills are developed through outdoor adventure programs [25]. Additional skills identified such as small group behaviour, leadership and communication are also documented as being developed during outdoor educational programs[25].

Students also emphasized the importance of the application of cognitive skills during the outdoor adventure program. According to [19] this is a distinct outcome usually achieved through outdoor adventure programs. Owning to the design of outdoor adventure programs with regards to interaction between group members and physical and mental challenges, the necessity of cognitive skills such as decision making and problem solving is essential [19]. The interaction of mental, emotional, interpersonal and the environment, provide the framework for the application of Watkins and Marsick's theory to the Amazing Race event [20], [21]. Students seem to have developed and applied soft skills without the student's awareness.

Hard skills

The Amazing Race event design stated module specific outcomes at certain stations, which necessitated knowledge as a hard skill to be utilized. Even though most outdoor adventure programs do no set specific knowledge gaining outcomes, the set-up of this study included such aspects. In this regard research indicated that outdoor adventure programs have a positive impact on academic achievement [26], which could be attributed to the physical and mental challenges posed during the entire race and not just at specific stations. Students comprehended the importance of the application of previously gained knowledge to be applied during the Amazing race, which was evident through their comments. Due to the requirements of the profession of coaching and recreation, a levelof physical fitness is an important work place prerequisite [27]. Students identified essential physical skills such as running, strength, power and aiming as skills they needed to accomplish the physical task they had to perform. Reference [27] confirms the importance of physical skills needed for coaching and recreation professionals by stating they should exhibit qualities of a healthy lifestyle. The students' realization of their current lack of physical fitness and the necessity of such attributes within the recreational and coaching domain is insightful. Seen as the fact that the profession necessitates a healthy lifestyle,students' within this domain should be encouraged to develop similar healthy lifestyles [27].

Fun

The design of the outdoor adventure program lends itself towards a unique and enjoyable experience for the students. Their perceived enjoyment of the activities, physical exertion and mental challenges accentuates the importance of practical educational

activities implementation to enhance the development of skills [28]. Students indicated that a creative, situational teaching approach, positively affects their enjoyment of the subject [29]. Activities that provide feelings of interest and enjoyment provided students with an increase in knowledge gained and the achievement of the learning outcomes [29]. The development of hard skills is therefore enhanced through enjoyment and fun [30]. Outdoor teaching situations where students operate autonomically, and through the fun experience with others, positively enhance the acquisition of soft skills [31]. Social behaviour, such as working together as a team and effective communication, advance enjoyment and enhance the learning opportunity [28]. Students indicated a preference to fun and challenging learning situations outside the traditional classroom setting [32], necessitating the exploration of more outdoor adventure programs for educational purposes.

CONCLUSION

In the ever changing tertiary educational environment where universities constantly need to fulfil in delivering students according to the needs of industry, an educational outdoor adventure event such as an Amazing Race could be utilized effectively. Universities can no longer only focus on the development of hard skills such as subject specific knowledge gain, but also need to deliver well-rounded students with a set of soft skills such as leadership, communication and problem solving. Through a structured outdoor learning opportunity these much needed soft and hard skills could simultaneously be developed effectively.

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