SITUATED LEARNING OF KITESURFING IN UNIVERSITY TEACHING

José Antonio Pérez-Turpin, Juan Manuel Cortell Tormo, Concepción Suárez-Llorca, Juan José Chinchilla Mira, Eliseo Andreu-Cabrera
Departmental Section of Physical Education and Sports, University of Alicante
jose.perez@ua.es

Abstract

This article focuses on learning physical activities on the sea and focuses on windsurfing. We highlight the construction of knowledge by students from the University of Alicante, studying the course called “Learning sea sports” in the natural setting of the Province of Alicante (Spain). To this end, we identified the negotiations and cultural exchanges that took place between the participants for one academic year, while they were improving their skills in the magnificent setting of the Mediterranean Sea. During this learning process we detected a complex structure of didactic and social experiences that make these sea-based activities (kitesurfing) very different from physical activities in the natural environment that are learnt in more traditional contexts.

Key words: Situated Learning, Kitesurfing, University Students

Introduction

Sea-based physical activities are part of the history of mankind, dating back to when human beings started to conquer the planet. The aquatic environment appears as a transcendental factor that influences us all. It is true that carrying out physical activity in one sea is not the same as carrying it out in another (Acuña, 1991), meaning that we should describe the Mediterranean Sea, the winds are of medium and low strength due to the protection provided by the continents, which makes it possible to learn kitesurfing here as the sea has a high temperature with moderate to light winds.

In the same way, contemporary teaching theory sustains that all knowledge is “situated” and requires teachers to identify the context in which the knowledge is to be learnt and skills applied. We therefore describe situated learning as taking place in significant sociocultural contexts.

As well as the above, different theories of situated learning (Kirk & Macdonald, 1998) have shown the importance of the environment in which the knowledge acquisition process takes place, together with the learning environments, although in the case of kitesurfing the medium cannot be altered. Regardless of this possible modification, an optimum significant learning microsystem is created with an exceptional guide - “the teacher”. Learning sea-based physical activities can thus lead to new knowledge creation contexts, contexts that are totally different to other physical activities in the natural environment and which reflect the immersion associated with a new activity.

However, some writers who have studied situated learning, such as Lave and Wenger (1991), offer a teaching theory or strategy where the important factor is learning as a way of existing in the social world. Lave and Wenger consider learning to be a set of social practices. The concept of situated learning implies comprehensive understanding, which in turn means learning how to live. This idea of learning as an inseparable part of society and culture underlines a set of habits incorporated as daily activities within particular social contexts. Learning any motor skill, and more specifically kitesurfing, involves not only conscious learning but also non-conscious learning that is incorporated into the social life of the learner (Bourdieu, 1977).
Kitesurfing

Kitesurfing is a new sport that combines a kite and a board. It is true that Kitesurfing is originated in China, but his foundation is due to Gjysbertus Adrianus Panhuise. He was the first who patent a navigation system with a surfboard pulled by a parachute. Today, the kitesurfing is a spectacular sport that has each day more and more followers.

It is true that it is still only a young sport and we need to classify it within a group of activities. One of the most modern classifications is the taxonomy of maritime activities (Pérez, Suárez, & Chinchilla, 2006), where kitesurfing appears as an activity with a great impact on the environment. The classification uses respect for the natural environment as its basic premise (Aguado, 1993) and its main features include: Lack of understanding of the marine environment, the significant relationship with the natural context, the experiences of the class members on the sea, the attractive world of the new marine adventure sports and consistency with a modern ecological mentality. Based on the five points mentioned above, kitesurfing appears within this new classification of sea-based physical activities as having an indirect impact on the sea. The classification defines two broad groups of sea-based physical activities. In the first place, we have those activities that have a direct impact on the sea, these being those that have a direct relationship with human the body. The activities in this first group have a direct relationship with the motor factors that are vital for the aquatic environment (Navarro, 1995), such as breathing, floating, propulsion, balance and coordination. Then we have the group of activities that have an indirect impact on the sea and whose pre-requisite is the acquisition of motor factors mentioned above, along with the added complication of handling complex equipment and the specific skills needed for each activity.

Besides the above, the challenge of “situated learning” for university teaching consists of developing methodologies and strategies that support the cooperative activities of the students. In the same way, the fact that kitesurfing is a sport where learning is contextualised and lacking in research led us to carry out this study.

Methods

We decided on a quasi-experimental design using single cases, so that we could use a methodology based on the situated learning of kitesurfing by 4 volunteer students.

In order to carry out the study, we selected a Club for Physical Activities on the Sea called “Parres Center”. This centre is responsible for promoting kitesurfing in Alicante, as well as collaborating with the University of Alicante as a node in the infrastructure for the Basic Sea Sports course, part of the Sciences of Physical Activities and Sport degree. The type of methodology used in the course is based on learning environments where the students themselves carry out the activities freely and the teacher acts as a guide or mediator.

The subject is divided into four Didactic Units for students’ significant learning. One of these is “Let’s learn kitesurfing”, which takes place throughout the course and counts for 3 credits (30 hours) towards the course. Four students of the subject took part in the research study. The study aimed to identify the influence of situated learning on what students learnt and detect content that was learnt but was not part of the goals set by the subject programme.
The four participants (two boys and two girls, all aged 22) knew each other and were kitesurfing for the first time in their social and academic lives. They shared the learning experience with other students from the “Parres Center Club” who had been kitesurfing for much longer and who volunteered to accompany our students. We have used the numbers 1, 2, 3, and 4 to protect the anonymity of the participants.

Video recordings and interviews were used to gather data. When viewing the recordings, we used two external researchers to check the images and oral interviews twice, so as to avoid observer bias. The experts had taken the course during their education and currently teach kitesurfing in the summers. They visited the class at regular intervals to prepare comments that were divided into three sections:

A) Specific motor skills for kitesurfing (Procedures) video recording.
B) Comprehensive content of vocabulary and experiences (contents) interview.
C) Positive-negative social values and social habits (Values) interview.

The observation stages were split over time into three data-gathering occasions:

1. – At the start of the academic year (Stage 1), on the second day of classes to verify their level of kitesurfing skills and their thoughts on what they were experiencing.
2. – Halfway through the year (Stage 2), with the same objective as in stage 1, but including their value acquisition.
3. – At the end of the process (Stage 3), as a means of carrying out a final assessment of the subject.

Extensive and semi-structured interviews were carried out for the observations. Data analysis identified the main topics and ideas that were used to organise data and focus development of the research study.

The Sportsec programme was used to analyse the video recording data and therefore that of Section A, Specific motor skills for kitesurfing. Sportstec software is recognised as a means of obtaining information for the analysis of motor conduct. Said information covers movement time (McErlean, Cassidy, & O'Donoghue, 2000), repetition of gestures, vectorial graphics, geographical analysis of the field of motor action and its relationship with achieving the motor skill, body rotation for viewing and superimposing images. As regards the more quantitative aspect, Sportstec software provides all necessary statistical numerical data, such as sailing time, frequent errors and other factors that may occur in a sport such as kitesurfing.

The Sportsec analysis operations were:

A) Specific motor skills for kitesurfing (Procedures) video recording
   - Recording and digitalisation of the image using sophisticated software technology.
   - Creation of a matrix of codes applied to the technical and tactical aspects of kitesurfing, related to the computer hardware.
   - Capture of the images for each code of the matrix, creating a chronological timeline.

The interview data were analysed using the AQUAD Five (Huber, 2004) research analysis programme. The steps involved in this analysis consisted of data reduction, link rebuilding and comparison of results, as well as the option of inductively inferring from subject data or from regularities in experience and conducts.

In our study, the categories arose from the interviews and are of two kinds. The first category refers to descriptive data. Similarly, the second category refers to inferential data (Comprehensive content of vocabulary and experience, and positive-negative social values and social habits):
Descriptive:
A) Gender, age, socio-cultural level and prior experience with marine sports.

Inferential:
B) Comprehensive content of vocabulary and experience (content) interview
   -newly-learnt knowledge
   -use of previously-learnt knowledge
C) Positive-negative social values and social habits (Values) interview
   -Respect for the environment
   -Acceptance of safety regulations

Results

During the observations made at the three times mentioned above, the results showed a steady evolution in the acquisition of content and procedures, although in the case of values, there was a reduction in the acquisition of positive values at the end. So as better to understand the results, we calculated the percentage averages of the two experts for each of the Stages.

Observers 1 and 2:

Section A

Table 1. Referring to Section 1: “Procedures”

<table>
<thead>
<tr>
<th></th>
<th>Participa.1</th>
<th>Participa.2</th>
<th>Participa.3</th>
<th>Participa.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>25%</td>
<td>11%</td>
<td>33%</td>
<td>29%</td>
</tr>
<tr>
<td>Stage 2</td>
<td>43%</td>
<td>35%</td>
<td>54%</td>
<td>38%</td>
</tr>
<tr>
<td>Stage 3</td>
<td>72%</td>
<td>78%</td>
<td>63%</td>
<td>74%</td>
</tr>
</tbody>
</table>

In this section, we highlighted the evolution of the participants with regard to their improvement in carrying out the specific motor skill for kitesurfing. The development of this section is very important, as participants gradually acquire control of their bodies and the boards in the specific context. As can be seen in Table 1, all four participants increased their control of the specific motor skill.

Section B

Table 2: Referring to Section 2: “Content”

<table>
<thead>
<tr>
<th></th>
<th>Participa.1</th>
<th>Participa.2</th>
<th>Participa.3</th>
<th>Participa.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>23%</td>
<td>13%</td>
<td>19%</td>
<td>28%</td>
</tr>
<tr>
<td>Stage 2</td>
<td>32%</td>
<td>43%</td>
<td>66%</td>
<td>55%</td>
</tr>
<tr>
<td>Stage 3</td>
<td>45%</td>
<td>59%</td>
<td>73%</td>
<td>77%</td>
</tr>
</tbody>
</table>

This section shows the evolution of the participants as regards their improvement in understanding and acquiring knowledge. The new technical concepts that are specific to kitesurfing have been explained in this section. In order to explain this, we will now show what one of the participants said during the interview.

Below is an example of an interview given by participant Nº 4, concerning Section B in Stage 3:
Now I understand all the specific kitesurfing vocabulary and I think I have progressed with my tactics as regards the wind.

Section C

Table 3: Referring to Section 3: “Values”

<table>
<thead>
<tr>
<th>Stage</th>
<th>Participa.1</th>
<th>Participa.2</th>
<th>Participa.3</th>
<th>Participa.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>10%</td>
<td>18%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Stage 2</td>
<td>27%</td>
<td>22%</td>
<td>36%</td>
<td>16%</td>
</tr>
<tr>
<td>Stage 3</td>
<td>07%</td>
<td>16%</td>
<td>12%</td>
<td>10%</td>
</tr>
</tbody>
</table>

This section shows the evolution of the participants as regards improving their positive-negative social values and social habits. While progressing from Stage 1 to Stage 2, students showed an increase in certain values that included respect for and admiration of kitesurfing as an ecological, sea-based physical activity. Thus, it would seem that the aims of this research study have been reached.

However, this increase in the first two stages was cut short by a reduction in the progressive acquisition of values in the three participants during Stage 3, the last stage.

It is important to underline the fact that in Stage 3 we observed a reduction in the acquisition of positive values regarding physical activity on the sea, leading to the appearance of negative social phenomena such as alcohol consumption at social events linked to kitesurfing. We have included what one of the participants said to underline this fact:

Below is an example of an interview given by participant Nº 3, concerning Section C in Stage 3:

....Up to now I have realised that kitesurfing is more exciting than other activities. I love it when we get together with the other kitesurfers after practice and have a drink or two and other stuff. That's when I feel capable of doing all the kitesurfing tricks.

Discussion

The results of the study showed how each participant acquired new content and procedures (Dyson, Griffin, & Hastie, 2004) in the sport, which helped them to deal with kitesurfing as a speciality. The learning process implied a long-term process of changing towards more legitimate and fuller participation in the new practices offered. This progress towards a more complete and mature participation, as well as towards development of the skills (procedures), understanding (content) and habits implies increased responsibility as a student. According to Greeno (1997), learning involves a process of enculturation as regards the language (vocabulary), customs (values) and beliefs of a learning community. This learning that involves the development of the new identity of the participants does not always involve positive aspects such as those described in Sections A and B of our study, but may lead to the situation described in Section C, where we saw during the final observation stage that the participants did not acquire more positive values but, on the contrary, acquired the negative aspects of this enculturation, such as serious as a lack of respect for the sea as well as drug use, alcoholism and delinquency at the end of their windsurfing studies. However, this does not cancel out the significant number of positive factors observed in Sections A and B, where we have seen the improvement in knowledge and procedures, which are extremely important aspects for carrying out this activity, although teaching staff
initiating students in this exciting sport need to pay very close attention to the acquisition of negative values.

**Conclusion**

It is true that, over the last twenty years, learning in the Sports Sciences field has advanced towards alternative teaching methods (Kirk & Macdonald, 1998) with increased use of natural areas in the teaching-learning process. In this research study focusing on the teaching of kitesurfing, we have seen that the involvement of university students in physical activities using the natural environment of the sea favours the acquisition knowledge and procedures in a new way. However, the positive social values require special attention, as the unique nature of this sport has shown us that there are unhealthy behaviour patterns that can easily be adopted by students, with the history of the sport being marred by negative values.

All of this means that members of the teaching staff need to act as mediators in the acquisition of the procedure, content and values when learning kitesurfing, so as to ensure that the overall improvement of students develops correctly.

For future research should be deepened in a number of important points in learning, such as sports clubs and national federations.

**References**


