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4. Third Teaching Cycle

**Third Teaching Cycle:**

**Motivation and Learning Styles in Exercise**

“The teacher must orient his work not on yesterday’s development in the child but on tomorrow’s.”

*Lev Vygotsky, Russian Psychologist (1896-1934)*
4. Executive Summary

This report describes how exercise motivation can influence people to participate in exercise in a taught situation or on an individual basis. The intervention included a quantitative and qualitative questionnaire and an in-house twice weekly exercise class led by a qualified instructor. The target group was undergraduate and postgraduate students and staff in the Department of Information Studies at Aberystwyth University. The findings revealed an interesting insight into the sports habits (frequency and duration) and physical activities of the target group and suggest that many factors such as time, work and family commitments and in some cases, past sport experience may impact on the activity chosen, despite self motivation or learning styles preference.

4.1 Introduction

This investigation into sports motivation and learning styles illustrates how regular physical activity can provide health related benefits for physical and mental well being in an educational setting.

4.1.2 Exercise at Aberystwyth University

I held a keep fit class on a Tuesday and Wednesday lunchtime from the first week of October until the last week of November 2008 inclusively at 12:10 in DIS for up to one hour. A suitable room was booked using central timetabling. The Tuesday class was open to all students and staff, and the Wednesday class to staff only, with a specific invite to the Thomas Parry staff who had heard on the grapevine that there was scope for exercise on their doorstep.

Each participant was requested to fill in a health screening form (for safe workouts and health awareness) and the music and exercises/relaxation techniques used were taken from the ETM course and handbook by Lawrence (2004). The participants were all asked to identify what they wanted to achieve from the keep fit session, so that it could be tailored to suit their fitness needs. The restriction on exertion from the instructor viewpoint was lack of showers and changing room when the afternoon still involved work and lectures. Getting really hot and sweaty was not an option.
The session was kept as a low impact desk workout with a ten minute relaxation element at the end. The attendance was variable from 7 down to 1 per session, depending on commitments and health. One participant was male and the remainder female. The age ranges of the participants were early 20s to late 60s. Learning styles were kept in mind and small pieces of equipment were used to keep the motivation levels raised and interest.

4.1.3 Intended Outcomes (of practical classes)

- To gain an understanding of “good” posture technique and how to adapt it to your workplace
- To offer a practical desk workout session using tried and tested low impact exercises to music
- To demonstrate a collection of stretching and relaxation techniques to de-stress, release tension and unwind

4.2 Brief Review of the Literature

Throughout life we need motivating and self-motivation from within to achieve results, whether this is motivation is connected to academia or leisure. Effective learning is a result of the whole learning climate according to Biggs (1999), and motivation is a crucial component of this environment, although hard to quantify in any meaningful way, and equally hard to identify or observe on any level or form.

Child (1981:94) points out that it would be safe to say that all theorists in the field of learning either explicitly or by implication argue that a motivated creature is more likely to learn than one which is not. Children need to satisfy their desire to explore and manipulate their surroundings; they need approval of others (affiliation) and to achieve; they pursue success and eschew failure. Incentives in the form of rewards (words of praise, encouragement, and recognition), immediate knowledge of satisfying results (not always possible of course), co-operation and self-competition or competition with others are potent sources of motivation for learning.

As we develop into adulthood, we develop habits in everyday activities in both a social and educational context. Child (1981: 95) notes that habits are automatic response patterns elicited by
particular stimuli and are generally acquired by repeating a sequence of activities (the Law of Exercise) until the sequence is spontaneous. In exercise classes, it is unlikely that you would see a dramatic improvement to performance without repetition and practice. The rewards for continual practice are usually found in the physical and psychological benefits which in turn motivate an individual to return for more repetition achieve short term goals. Fitness Wales suggest that an individual requires up to six weeks before any change is noticeable in a class.

According to Honey and Mumford (1992), there are four main learning style preferences: the activist stage, the reflector stage, the theorist stage and the pragmatist stage. Activists are enthusiastic, adaptable risk takers who enjoy a challenge and change. Reflectors are imaginative, innovative, co-operative and sociable. The theorist is logical, likes structured tasks and is analytical. Pragmatists are practical, well organised hands-on experience type of people.

Each stage is necessary for effective learning to take place, however, most people will develop a preference for certain stages which may distort the learning process to the detriment of others. Demographic factors such as age, gender and social class would need to be taken into account if the actual Honey & Mumford Learning Styles Questionnaire (LSQ) were implemented and scored.

Student’s learning styles are known to affect their performance at university (Marriott and Marriott, 2003; Sangster, 1996). High scores on the reflector scale and low scores on the activist scale have been shown to be positively correlated with marks on objective tests at university though not on essay style examination questions (Sangster, 1996). In the words of Honey, “Learning styles preferences determine the things people learn and the ease with which they learn them. They exert a hidden, but powerful, influence on learning effectiveness”.

4.3 The Teaching Cycle

4.3.1 Designing and Implementing the Motivation Questionnaire

During the summer of 2008, I contacted staff and students in the Department of Information Studies to establish who might be
interested in participating in sports related activities on the Llanbadarn campus (see Appendix 10 for a copy of the email).

This email generated a moderate amount of interest from the staff and a keen reaction from postgraduate students. The difficulty was choosing a day, time and room that matched the requirements of the majority verdict. Of those staff and students who expressed a keen interest to participate in some exercise, the overriding reason given was one of convenience on the Llanbadarn campus, and in particular of a lunchtime when there was some free time available.

Secondly, an electronic questionnaire containing five questions was administered to staff and full-time students in the Department of Information Studies during September and early October of 2008 (see Appendix 10a for the master copy). The questions were based on literature from the field of Sports Science, and in particular the Sport motivation 6 scale (see references section).

The Sport Motivation Scale (SMS) was developed in 1995 to measure an athlete’s motivation toward sport participation. I have adopted the appendix of the SMS – 6 for my question 5 and kept the scale of 1-7 for inclusion in my own questionnaire. To analyse the data retrieved, I used Microsoft Excel and looked at the average and standard deviation figures as a quantitative exercise. I have not investigated the additional features, such as integrated regulation from Mallett’s 2008 paper. This is beyond the remit of this particular teaching cycle and relates to the psychology of sport and exercise.

The first 4 questions in the questionnaire were qualitative in nature, and the final question, Number 5 was quantitative and asked, “Why do you practice your sport?” This question then went through a series of 24 items which required a response on a scale of 1-7.

4.4 Interpretation and Analysis of Feedback

4.4.1 Sports Questionnaire (Semester One: 2008)

A total of 40 responses were received, collated and analysed using qualitative and quantitative data methods to supply rich and informative outcome from the sample. The data revealed informative statistical information from the quantitative section (I chose to investigate average and standard deviation) in brief and
use rich data from the qualitative data responses from the first 4 questions).

4.4.2 Qualitative responses

I asked four questions prior to the Sport Motivation scale-6 section to provide a background context to the type of participant who responded.

The responses are noted for information only.

**Question 1.** *What type of physical activities do you participate in at:*  
a) home  
b) fitness centre  
c) other (please list)

<table>
<thead>
<tr>
<th>Responses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Home: Exercise DVDs, yoga, dance, gardening, ironing, exercise bike</td>
</tr>
<tr>
<td>b) Gym: Exercise machine, weights, cycling, step machine, swimming, squash, archery, badminton, Pilates</td>
</tr>
<tr>
<td>c) Other: Walking, running, tennis, skiing, football training</td>
</tr>
</tbody>
</table>

There is a variation in preferred activity type and location. Other factors such as home and work life may have a bearing on this question.

**Question 2.** *How often do you participate in this activity per week (frequency)?*

<table>
<thead>
<tr>
<th>Responses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30 mins &gt; 1-4 per week &gt; daily &gt; weekly</td>
</tr>
</tbody>
</table>

The minimum time spent on an activity ranged from 20 minutes to a weekly session generally speaking.

**Question 3.** *How long do you spend on the activity per occasion (duration)?*

<table>
<thead>
<tr>
<th>Responses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-45 minutes &gt; 2-5 times &gt; .5-3 hours</td>
</tr>
</tbody>
</table>
The minimum was 20 minutes and the maximum up to 3 hours in duration.

**Question 4.** Is this activity a taught session or an individual workout?

<table>
<thead>
<tr>
<th>Responses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taught: 6</td>
</tr>
<tr>
<td>Individual: 30</td>
</tr>
<tr>
<td>Both: 4</td>
</tr>
</tbody>
</table>

From this group of participants, it is fair to say that the majority prefer an individual workout to a taught session.

**4.4.3 Quantitative responses**

**Question 5:** Why do you practice your sport?

For the purpose of this portfolio, and representative data inclusion of the average and standard deviation, I have only highlighted items 2, 4, 7, 9, 13, 16 and 21. The lower the standard deviation figure, the stronger the agreement between the participants in the questionnaire.

The full average and standard deviation data can be located in **Appendix X**.

**Table 3: Scale 1-7**

<table>
<thead>
<tr>
<th>Key 1-7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1= does not correspond at all</td>
</tr>
<tr>
<td>2-3= corresponds a little</td>
</tr>
<tr>
<td>4-5= corresponds mostly</td>
</tr>
<tr>
<td>6-7= corresponds completely</td>
</tr>
</tbody>
</table>

N.B. The % in the pie charts correspond to the key with scales 1-7 as shown above.
Chart 1: Because it's part of the way in which I've chosen to live my life

Statistically, there was high disagreement, with an Average 4.3 and a Standard deviation of 1.84, "corresponds mostly".

Chart 2: Because it allows me to be well regarded by people that I know
The results showed a high agreement with an Average 1.375 and a Standard deviation of 0.7; therefore it does not correspond at all!

**Chart 3: Because it is absolutely necessary to do sports if one wants to be in shape**

This question caused disagreement with an Average 4.35 and a Standard deviation 2.07, resulting in "corresponds mostly" outcome.

**Chart 4: Because it is an extension of me**

In this question, there was an Average 2.7 and a Standard deviation 1.92; "corresponds a little".
Item 13: Because participation in my sport is consistent with my deepest principles

There was an Average of 2 and a Standard deviation 1.48; most believing it "does not correspond", though a number thinking otherwise.

Chart 6: Because I would feel bad if I was not taking time to do it

The statistics reveal a high disagreement with an Average 4.325
and a Standard deviation of 1.95. Although the average is “corresponds mostly”, most people gave other answers.

![Chart 7: Because participation in my sport is an integral part of my life](image)

There is a huge disagreement with an Average 3.1 and a Standard deviation of 1.98. Half of the participants believed it did not correspond at all, but opinion was otherwise divided.

**Any other sports related comments?**

To complete the questionnaire, I asked if there were any other sports related comments. This enabled some participants, who all contributed anonymously unless they chose to reveal their own identity to me, to expand a little more on their thoughts and feelings about their motivation (or in some cases lack of) in the first place regarding sport. I include a sample of the responses here (see Appendix 10b).

“I do not do formal sport at all – never really have done, and probably never will”.

“I prefer to do activities on my own (e.g. cycling, swimming etc.)...I’m
not very keen on competitive activities”

“Wish I knew how to motivate myself to do sport in the first place...”

...”The personal satisfaction gives me a buzz”

“I continue to participate in my personal sports to keep a healthy body and mind”

“Many of my feeling stem from school; where sport felt like institutionalised bullying...”

“Participate for health reasons-to make an effort at getting fitter. Also for a laugh...”

4.5 Gathering Evidence as a Method of Evaluating the Intervention

- Verbal feedback from the staff and student population
- Email and face-to-face interaction with individual participants
- Request for more keep fit sessions in the department and library

4.5.1 Limitations

- Educational and health related benefits require 6 weeks for impact
- Motivation to exercise, personal commitment and perseverance essential
- Short and long term goals
- Exercise sessions are optional and held twice a week when time and day have not always matched availability
- Time factor

4.5.2 Verbal and written feedback from classes

Lawrence (2004:1) argues that being physically fit also contributes to our overall health, or total fitness. Total fitness includes social,
mental, emotional, nutritional and medical fitness. Verbal and electronic feedback was received from a number of the participants to sum up their own experience of the practical keep fit classes that they participated in over several weeks.

“Thank you so much for taking these classes on this campus. I do hope that you will be able to carry on in January 2009”

This participant was very quiet but determined to succeed. She commented that she tried out the exercises after the first week in her office and was able to demonstrate a neck exercise to a member of staff who needed some relief that day.

“The relaxation is the best bit for me!”

One participant automatically switched off and fell asleep each week during the relaxation session. She was not the person who made this comment. As the weeks went on, you could see that the participants valued being given permission to “switch off” and let your body and mind relax.

“I would like to thank you for thinking of us on this campus – I am still doing the arm circling exercise even though I don’t think I can see any difference just yet!”

This person was sceptical at first about being seen to visibly exercise at work. This was overcome by altering the positioning of the class members so that they could not be seen from the glass door in the room. A group of three participants regularly attended from the library, as they motivated each other during the week. She also spotted me in the library one day and mentioned that she was sorry that she had missed a class due to illness.

“Shall we try and encourage some others to attend so that you don’t have to cancel if numbers fall or someone is off sick?”

The author of this quote is pregnant and already a keen sports person, so exercise was already part of her life. She asked if she could borrow the music and some equipment (Swiss ball and small items of equipment) as she may only have a couple of weeks left after Christmas to attend the class before she goes on maternity leave. Real dedication and motivation was shown.
“I have loved it...I had never done any exercise before, so this was a real experience for me”

This was a really interesting response from a lady who experiences heart problems but is allowed to do some moderate exercise three times a week. She had only ever walked from A to B, but since the sessions started, she was the one who would motivate others and offer encouragement. Even when everyone else was away when the Staff Development carried out the observation (see Section 5), she was not put off and actually said to me afterwards that she enjoyed the session despite having company as she has been practicing at home.

“Can you up the tempo next time and offer an intermediate session to incorporate aerobics. If you do Jenny will come and join us!”

This participant had found a shower facility in the next building, and had asked on the last week if we could have two very different session instead of repeating a class twice a week, so that the “younger” participants could have a more cardio vascular workout and yet still have a shower and be able to work for the rest of the afternoon, as they felt ready to move on now to a more active programme.

4.6 Reflection

The feedback from the keep fit classes suggests that these were motivational and appeared to be beneficial to the physical and physiological health of the staff and students in DIS. Perhaps the main reason for this was because those who participated in these sessions were highly motivated individuals who were prepared to attend on a regularly weekly basis to experience the physical and physiological benefits of exercise in a group setting in a familiar environment which led them as individuals to motivate their peers to keep attending. They were also visual and auditory learners which might explain why they picked up the techniques so well from demonstration and verbal instruction.

Despite these positive benefits, a number of interested staff and students who expressed an interest in attending the weekly
sessions were unable to attend at the selected time and day after initial commitment. Several of these prospective participants would benefit from a regular intervention in their working life. The dilemma for the instructor is how to satisfy the demand from the “core” group and reach the “needy” group. I had already sent out an email and organised the two separate days in response to the time and day when most part-time staff and students were in the department.

4.7 Conclusions and Evaluations

In conclusion, the evidence from the questionnaire data suggests that there are a number of highly driven individuals who prefer to use a gym or adopt self-taught methods via an exercise DVD to meet their own particular needs for exercise. The self motivation stems from wanting to be healthy and more productive in their work/studies. Memories (not all happy of gym days) can play a part in the type of exercise undertaken and the location. None of the participants wanted to be on ‘view’ in a public place such as a ‘timetabled’ room. We swapped to a room where the glass was distorted from public scrutiny.

This was study was not designed to be an in-depth investigation, and many other factors including, diet, health, employment, finances and lifestyle would need to be explored further to make the data collated more meaningful. From the findings, it can be noted that this intervention was fit for purpose and revealed some interesting qualitative viewpoints and strong feelings related to the sport motivation scale six on the scale of 1-7. According to Jenkins (2007), “the prevailing view of the extent of motivation is to see it as a function of two factors, expectancy and value, as: motivation = expectancy x value. The crucial component then is expectancy and it follows that each student must expect to succeed and an environment must be fostered where this is the case”.

4.8 Recommendations for Future Practice

- Continue offering exercise classes on a free basis to promote positive health benefits in department
• Consider carrying out a more in-depth study over a longer period of time with a wider target group to foster the desire for success in sport/exercise

• Explore the possibility of offering a bite size session to staff at the University in the hope of widening the exercise classes to include staff from other departments

• Share findings with a PGCTHE intake and ?Publish results in an appropriate journal e.g. Active Learning in Higher Education if significant