



EVALUATION OF THE USE OF **CONCEPT2** ROWING ERGOMETERS **IN SCHOOLS**

Institute of Youth Sport | School of Sport and Exercise Sciences | Loughborough University
Hayley Musson, Dr John G. Morris and Dr. Mary E. Nevill



Contents

Page

1.0 EXECUTIVE SUMMARY	04
2.0 INTRODUCTION	06
2.1 The Context	06
3.0 DATA COLLECTIONS METHODS	07
3.1 Staff Survey	07
3.2 Pupil Surveys	07
3.3 Pupil Focus Groups and Staff Interviews	08
4.0 RESULTS	09
4.1 STAFF SURVEY	09
4.1.1 Use of ergometers in curriculum and extra curriculum time	09
4.1.2 The incidence of injury	09
4.1.3 Teachers perceptions of the value of using indoor rowing ergometers with pupils	10
4.2 PRIMARY SCHOOL PUPIL SURVEY	12
4.2.1 Use of rowing ergometers during lesson time and out of lesson time	12
4.2.2 The Incidence of Injury	13
4.2.3 Children’s perceptions of indoor rowing in comparison to other sports	13
4.2.4 Primary pupils likes and dislikes in relation to indoor rowing	13
4.3 SECONDARY SCHOOL PUPIL SURVEY	14
4.3.1 Use of rowing ergometers in curriculum and extra curriculum time	14
4.3.2 The incidence of injury	15
4.3.3 Pupil perceptions of indoor rowing in comparison to other sports and exercise	15
4.4 FOCUS GROUP DISCUSSIONS	16
4.4.1 Safety of rowing ergometers within Schools	18
4.4.2 Benefits for health and fitness	18
4.5 TEACHER INTERVIEWS	19
4.5.1 Perspectives on the Concept2 programme and training	19
4.5.2 Value of rowing ergometers and benefits to health and fitness	21
4.5.3 Safety	22
5.0 CONCLUSION	23

1.0

Executive Summary

THE CONTEXT

This report describes the findings of an evaluation, undertaken between April 2007 and March 2008 by the Institute of Youth Sport (IYS) (Loughborough University), which investigated the use of Concept2 rowing ergometers in primary and secondary schools in the United Kingdom.

Concept2 have introduced an indoor rowing programme to primary and secondary age children with the purpose of promoting physical activity, improving fitness, and of encouraging children to participate in sport. The indoor rowing programme includes provision of ergometers to schools, and the provision of appropriate training (including resources) for staff in safe indoor rowing techniques and safe and appropriate exercise programmes.

Data Collection Methods

A total of 54 staff from different schools, 154 primary pupils from 15 schools and 82 secondary pupils from 12 schools returned a survey. Six pupil focus groups and staff interviews were also undertaken at 3 secondary schools.

Results: Staff Survey

- 92% of staff reported that the programme had helped to promote physical activity within schools
- 91% of staff reported that the programme had improved pupil fitness
- 87% of staff reported that the programme had increased pupil confidence in those disaffected with traditional school PE
- 87% of staff reported that the programme had helped to engage those not currently active
- 84% of staff reported that the programme had increased pupil confidence
- 79% of staff reported that the programme had raised the status of PE within school
- 74% of staff reported that the programme had helped to support the delivery of high quality PE and school sport

With new sporting programmes in schools injury risk is an issue which must be considered. For the Concept2 Rowing ergometer programme 0% of staff reported a pupil injury that required medical attention. 11% of staff reported minor injuries including blisters and minor bruising due to the rowing ergometer seat sliding into the back of the legs. These reported injury rates are very low in comparison with other sports over a similar time duration. For example over one season the percentage of girls with one injury or more was 83% for hockey and for volleyball, 74% for basketball and 73% for soccer (Rauh et al., 2007).

Results: Primary Pupil Survey

- 91% of pupils gave as reasons for liking rowing that it made them fit and healthy and that rowing was fun
- 76% of pupils had used the ergometers as an extra-curricular activity

- 64% of pupils had used the rowing ergometers in school PE and 76% of pupils found this very enjoyable
- 49% of pupils had increased their physical activity since trying indoor rowing
- 29% had used the ergometers in another lesson, with 89% enjoying this very much with Science being the most common lesson cited
- The incidence and types of injury reported were low and very similar to those reported by staff

Results: Secondary Pupil Survey

- 91% of pupils had used the ergometers in school PE and 69% of pupils found this enjoyable or very enjoyable
- 86% of males and 83% of females gave as reasons for liking rowing that it made them fit and healthy
- 57% of pupils had used the ergometers in extra-curricular time and 4% in other lessons such as Science
- 49% of pupils had increased their physical activity since trying indoor rowing
- 46% of males and 67% of females gave as reasons for liking rowing that it was fun
- 44% of pupils felt more confident participating in sport and exercise since trying indoor rowing
- 33% of females felt rowing was more fun than other sports
- The incidence and types of injury reported were low and very similar to those reported by staff

Pupil Focus Groups And Teacher Interviews

Male pupils stated that they particularly enjoyed the competitive elements of indoor rowing such as challenging themselves to beat previous times and competing in the indoor rowing league. Female pupils cited the opportunities to take part with friends and the impact on health and fitness (including improving muscle tone and losing weight) as important reasons for taking part. Pupils felt that rowing ergometers were safe when used correctly and most could remember being introduced to correct techniques prior to participating. Rowing on the ergometers was described as safer than other sports due to the 'non-contact' nature of the sport. Teachers valued and appreciated the training provided by Concept2, but would have appreciated more advice on school-club links. Teachers particularly valued the programme because the rowing activity is suitable for children of different abilities in that different programmes, work loads and intensities could be set. Teachers particularly felt the programme appealed to relatively inactive or overweight young people.

In summary the Concept2 rowing ergometer programme has been well-received by staff and pupils in primary and secondary schools. The activity is considered safe by staff and pupils and has contributed to increasing physical activity, delivering high quality school PE and Sport, to promoting health and fitness in schools and to increasing confidence in the ability to undertake sport and exercise.

2.0

Introduction

This report describes the findings of an evaluation, undertaken between April 2007 and March 2008 by the Institute of Youth Sport (IYS) (Loughborough University), which investigated the use of Concept2 rowing ergometers in primary and secondary schools in the United Kingdom.

2.1 THE CONTEXT

Concept2 have introduced an indoor rowing programme to primary and secondary age children with the purpose of promoting physical activity, improving fitness, and of encouraging children to participate in sport. The indoor rowing programme includes provision of ergometers to schools, and the provision of appropriate training (including resources) for staff in safe indoor rowing techniques and safe and appropriate exercise programmes.

Indoor rowing may have a number of advantages over other modes of exercise, such as walking and running, as it is an indoor activity where the body weight is supported, and it can be undertaken in a private environment. Therefore, an indoor rowing ergometer programme may provide a means of exercising which appeals to difficult to reach groups of young people such as individuals with low activity levels, overweight young people and those from some ethnic groups.

3.0

Data Collection Methods

3.1 STAFF SURVEY

A staff survey was designed and sent to 311 schools: 102 of the schools were involved in a physical activity intervention supported by the Primary Care Trust in the city of Birmingham (the “Heart of Birmingham” initiative); 83 of the schools were provided with ergometers by the “Steve Redgrave Trust”; and the remaining 126 schools had purchased indoor rowing ergometers directly from Concept2. Of the 311 schools, 30% were primary schools, 62% were secondary schools and 7% were primary and secondary schools.

The Purpose Of The Staff Survey Was:

- to determine the number and demographic characteristics of the young people involved in the Concept2 programme;
- to establish the extent to which the rowing ergometers were used in the curriculum and during extra-curricular activities;
- to determine generally the incidence and severity of injury attributable to use of the indoor rowing ergometers;
- to gain an insight into teacher perceptions of the value of using indoor rowing ergometers for pupils, including any benefits for health and fitness.

3.2 Pupil Surveys

Pupil surveys were designed and distributed to all primary schools, all primary/secondary schools and 50% of secondary schools. The secondary schools were selected by stratified sampling considering population density, percentage of white British people residing, indexes of multiple deprivation and of educational deprivation, based on the school postcode and the associated lower layer super output area. Ten pupil surveys were distributed to each school. The schools were directed to ask 5 girls and 5 boys, if applicable (or 10 pupils of a single sex) who were actively participating in the programme to complete the survey.

The Purpose Of The Pupil Surveys Was:

- to investigate pupils’ perceptions, opinions, and experiences of using indoor rowing ergometers in curriculum and extra-curricular time (including using indoor rowing ergometers or associated information in subject areas other than PE).
- to determine pupil’s likes and dislikes with respect to indoor rowing ergometer activities, and to investigate how these compare with other sports and exercise.

3.0

Data Collection Methods

3.3 Pupil Focus Groups and Staff Interviews

Focus groups with pupils and interviews with staff were conducted in 3 secondary schools involved in the Concept2 indoor rowing ergometer programme. The purpose of these discussions was to build on the findings of the surveys by obtaining more detailed, in-depth information about pupil and staff experiences and opinions of being involved with the Concept2 indoor rowing ergometer programme.

Throughout the focus group discussions (which typically lasted ~30 minutes), the researcher used a Focus Group Schedule, which was designed to prompt and encourage discussion relevant to the study. Two focus groups were held within each school. Each focus group consisted of a group of six pupils of the same sex and of similar age. Within each focus group all pupils were encouraged to participate.

In each of the 3 schools an interview was also conducted with the lead member of staff responsible for supervising the School's Concept2 indoor rowing programme. All focus group discussions and teacher interviews were digitally recorded and transcribed. Each transcript was read and reviewed several times to optimise accuracy. Data was organised into emerging categories and themes (Ritchie & Lewis, 2003). The researcher maintained an open mind, seeking passages of importance and interest arising from the transcripts.

4.0

Results

4.1 STAFF SURVEY

Fifty-four members of staff completed and returned the survey: 16 of these teachers were primary school teachers and 38 were secondary school teachers. Most of the responding teachers (73%) indicated that the Concept2 indoor rowing programme was introduced at their schools in 2006.

4.1.1 Use Of Ergometers In Curriculum And Extra-curricular Time

Most teachers (89%) indicated that the indoor rowing ergometers were primarily used within core PE lessons. Over three quarters of staff (86%) reported curriculum time rowing sessions were between 21 and 60 minutes in duration.

Eighty-two per cent of teachers also indicated that the rowing ergometers were used in extra-curricular time. The two major uses of the indoor rowing ergometer in extra-curricular time was for fitness training (69% of respondents) and for school based indoor rowing clubs (59% of respondents). Typically extra-curricular rowing sessions took place at lunchtimes and after school, although use of the rowing ergometers did take place to a lesser extent before school, in morning sessions and breakfast clubs. The majority of extra-curricular indoor rowing sessions (74%) lasted between 21 and 60 minutes.

There was a range in the number of rowing ergometers at each school, with 73% of schools having between three and six indoor rowing machines. Just under half of the teachers who completed the survey (43%) suggested that their rowing ergometers were used primarily during the winter term at school. However, a similar number of teachers (42%) noted that their rowing ergometers were used to a similar extent throughout the school year.

4.1.2 The Incidence Of Injury

With new sporting programmes in schools injury risk is an issue which must be considered. For the Concept2 Rowing ergometer programme 0% of staff reported a pupil injury that required medical attention; 11% of staff reported minor injuries including blisters and minor bruising due to the rowing ergometer seat sliding into the back of the legs. These reported injury rates are very low in comparison with other sports over a similar time duration. For example over one season the percentage of girls with one injury or more was 83% for hockey and volleyball, 74% for basketball and 73% for soccer (Rauh et al., 2007).

Teachers appeared to be confident about ensuring that the correct rowing technique was adopted by the young people in their care, with 69% of the survey respondents indicating that they were 'very confident' in this area (on a 5 point scale with the label for 1 being "not confident", for 3 being "reasonably confident" and the label for 5 being "very confident"). Furthermore, when teachers were asked how they rated the safety

4.0

Results

of the rowing ergometers, 91% considered the rowing ergometers to be safe, with 48% feeling they were 'very safe'. The remaining 9% of teachers believed the rowing ergometers to be 'reasonably safe'. None of the teachers who completed the survey felt that the rowing ergometers were unsafe.

The majority of teachers (91%) reported undertaking warm-up sessions prior to using the indoor rowing ergometers.

4.1.3 Teachers Perceptions Of The Value Of Using Indoor Rowing Ergometers With Pupils

Teachers considered that the Concept2 indoor rowing programme had helped to raise the status of PE and sport within schools, with 79% of staff agreeing that the status of PE had been raised at least to some extent. Furthermore, 92% of teachers considered that the indoor rowing programme helped to promote physical activity within schools (Figure 1).

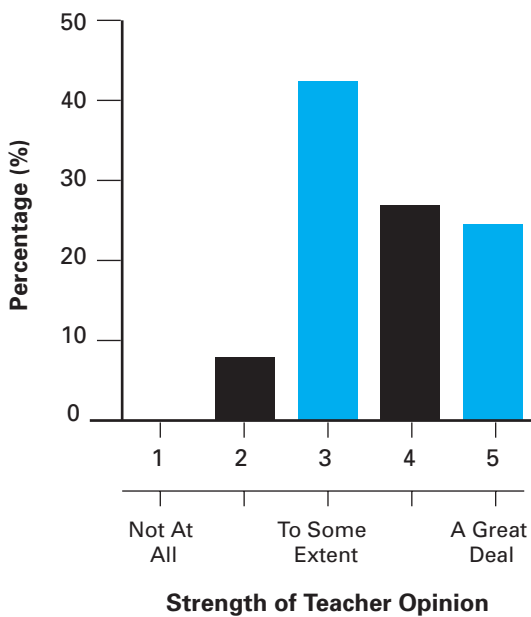


Figure 1. Teacher perceptions of the value of the Concept2 indoor rowing programme in helping to promote physical activity at school

Teachers also believed that the introduction of the indoor rowing ergometers had improved pupil confidence, with 84% agreeing that this had been achieved at least to some extent. Teacher reports of enhanced pupil confidence were particularly strong for those pupils disaffected with traditional PE, with 87% of staff agreeing that confidence had been improved in this group of pupils.

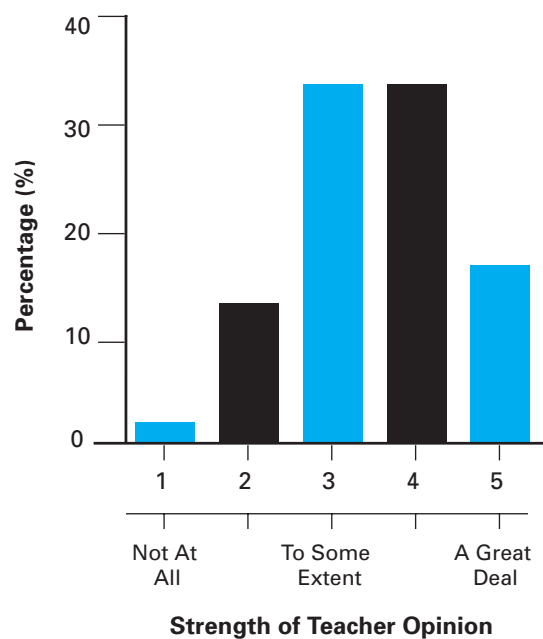


Figure 2. Teacher perceptions of the value of the Concept2 indoor rowing programme in improving children's confidence in pupils disaffected with traditional PE

Almost 9 in 10 teachers (87%) believed that the Concept2 indoor rowing programme helped to engage young people who were not currently active (see Table 1). This is encouraging given the government's drive towards increasing physical activity opportunities for children and young people (DfES & DCMS, 2003).

The majority of teachers (74%) also believed that the Concept2 indoor rowing programme had helped to support the delivery of high quality PE and school sport.

4.0

Results

Table 1. Teachers' perceptions of the value of the Concept2 indoor rowing programme in helping to engage young people who are not currently active

Teacher's Perceptions		% Of Teachers
1	Not At All	2%
2		11%
3	To Some Extent	43%
4		29%
5	A Great Deal	15%

Teachers also held positive views concerning improvements in the fitness of young people at their school following the Concept2 indoor rowing programme. Approximately 9 in 10 teachers (91%) felt that the Concept2 indoor rowing programme had resulted in improvements in fitness 'at least to some extent' with 38% rating the improvement as 4 or 5 (fitness had improved a great deal).

4.2 PRIMARY SCHOOL PUPIL SURVEY

One hundred and forty-four primary school children responded to the pupil survey. These pupils were drawn from fifteen different schools, from school years 4, 5 and 6, and 54% of the respondents were female and 46% male.

4.2.1 Use Of Rowing Ergometers In And Out Of Lesson Time

Just under two thirds of the primary pupils (64%) indicated they had used rowing ergometers within a Physical Education (PE) lesson. Of these children, 76% stated they found it 'very enjoyable'. Three-quarters of the children (76%) used the rowing machines out of lesson time, in a lunch-time for example, or as part of a school club (for 76% of these children, at least once per week). A further 29% of children stated that they had used the ergometers in a lesson other than PE. The majority of children (89%) indicated that they had enjoyed this experience when it had occurred. Science was the main subject area in which the rowing machines were used outside of PE.

4.2.2 The Incidence Of Injury

When asked if they had ever injured or hurt themselves when using an indoor rowing ergometer 84% of pupils replied “no” they had never been injured or hurt. In the 16% of pupils who reported an injury the reported nature of the injury varied from “pulling too fast” to “fell off seat”. There did not appear to be a consistent pattern to these reported injuries and all were minor in severity.

All year four pupils (100%) reported that they warmed-up prior to using the rowing ergometers. However, it appeared that as pupils aged they were less likely to complete a warm-up as 79% of pupils in year five, and just 53% of pupils in year six reported that they performed a warm-up prior to exercise. Three quarters of the male children (76%) who responded to the survey reported that they warmed-up prior to using a rowing ergometer, compared with 59% of the female pupils.

4.2.3 Children’s Perceptions Of Indoor Rowing In Comparison To Other Sports

Half of the primary pupils (50%) reported that they found rowing easy in comparison to other sports. Male pupils seemed to be more likely to report this as 58% of them suggested rowing was easy compared to other sports, compared with just 43% of females. Twenty-six per cent of the female pupils perceived rowing to be harder work than other sports, compared with 15% of the male pupils. Just over a quarter of all the primary respondents (28%) reported that indoor rowing was more fun than other sports. A greater proportion of female pupils (33%) reported that they found rowing more fun than other sports compared with 15% of male pupils.

The majority of pupils (61%) considered that they did similar levels of physical activity as other young people, with only 3% of the pupils who completed the survey reporting that they did less. Half of the primary pupils (49%) stated that since they had tried indoor rowing they had increased their physical activity levels. A greater proportion of the male pupils reported this (male vs. female: 60% vs. 38%).

4.2.4 Primary Pupils Likes And Dislikes In Relation To Indoor Rowing

When asked what they liked about indoor rowing the primary pupils noted reasons such as they were able to do the activity with friends, and among the male pupils, that they were able to do competitions (the findings are summarised in Table 2). Both male and female primary pupils thought that indoor rowing was fun, and both sexes felt that it contributed to making them fit and healthy.

4.0 Results

Table 2 – Reasons primary aged male and female pupils gave for liking indoor rowing

Reasons Primary Pupils Gave For Liking Indoor Rowing	% Of Male Pupils	% Of Female Pupils
I can do it with friends	71%	84%
It makes us fit and healthy	91%	91%
It's fun	91%	92%
It makes me look better	42%	29%
I can do competitions	75%	43%
It's challenging	69%	57%

When asked what they disliked about indoor rowing 40% of the pupils reported that they disliked it because it was hard work, and 52% of the female pupils (compared with 44% of the males) disliked indoor rowing because it made them hot and sweaty. One of the main reasons males reported that they disliked rowing was that it was not a team sport or contact sport. Thirteen per cent of the pupils indicated that there was nothing they disliked about indoor rowing.

4.3 SECONDARY SCHOOL PUPIL SURVEY

4.3.1 Use Of Rowing Ergometers In And Out Of Lesson Time

Eighty-two students, from 12 different schools, responded to the secondary pupil survey. Just over half of the respondents were male (56%). Almost all of the pupils (91%) had used the rowing ergometers in their PE lessons. Over two thirds of pupils (69%), described the experience as enjoyable or very enjoyable. Just 4% of pupils indicated that they had used the rowing ergometers, or information from rowing ergometer based activities, in subject areas other than PE, for example, science, maths, information and computer technology.

Over half of the pupils (57%) reported they had used the indoor rowing ergometers out of lesson time, with 76% of these pupils indicating that they participated in such sessions once a week or more. The main reasons given by pupils for out of lesson time usage of the rowing ergometers, was as part of a rowing club (60%), or for fitness training (58%). The reported duration of these extra-curricular rowing sessions varied: a third of pupils (32%) reported that typically sessions lasted between 6 to 20 minutes; just over a third of pupils (36%) reported sessions of 31 to 40 minutes, and 16% of pupils suggested typical sessions ran for over 40 minutes.

4.3.2 The Incidence Of Injury

When asked if they had ever injured or hurt themselves when using an indoor rowing ergometer 89% of pupils replied “no” they had never been injured or hurt. Among the 11% of pupils who responded “yes”, the nature of injuries was minor eg “ankle hurt by pushing too hard in competition”, “went too far back and twisted ankle”. Over half of the secondary pupils surveyed (59%) stated that they warmed-up prior to using an indoor rowing ergometer. Male pupils seemed more likely to perform a warm-up, with 70% saying they warmed-up before rowing sessions; only 44% of female pupils indicated they did this.

4.3.3 Pupil Perceptions Of Indoor Rowing In Comparison To Other Sports And Exercise

Indoor rowing appears to be a popular activity with many students: a third of female pupils (33%) and 21% of male pupils “agreed” or “strongly agreed” that they thought indoor rowing was more fun than other sports, although 36% of males and 53% of females gave a neutral response (“neither agree or disagree”) to this question. Similarly, 36% of females and a quarter of males (25%) indicated that they enjoyed indoor rowing more than other sports and exercise (34% of males 39% of females ‘neither agreed or disagreed’ when posed this question). A number of the secondary pupils (41%) did suggest that rowing was easier compared with other sports, and this view seemed more prevalent among the female pupils (50%) than the male (34%). Nevertheless, just under half of the pupils (49%) “agreed” or “strongly agreed” that indoor rowing was more challenging than other sports and exercise, and 61% of the male and 50% of the female pupils indicated that the challenging nature of using the rowing ergometers was one area that they particularly liked about the activity.

Since the introduction of the Concept2 indoor rowing programme, 49% of pupils believed that they had increased their levels of physical activity outside of lesson time. This view seemed equally prevalent among the sexes as 47% of female pupils “agreed” or “strongly agreed” that they had increased their physical activity levels outside of lessons in comparison 51% of male pupils. Interestingly, 44% of pupils reported increases in their confidence in participating in sport and exercise since the rowing ergometers were introduced at their school.

When asked what they liked about indoor rowing the secondary pupils noted reasons such as it made them fit and healthy, and particularly among the female pupils that it was fun and they were able to row with their friends (*the findings are summarised in Table 3*).

4.0

Results

Table 3 – Reasons secondary aged male and female pupils gave for liking indoor rowing

Reasons Secondary Pupils Gave For Liking Indoor Rowing	% Of Male Pupils	% Of Female Pupils
I Can Do It With Friends	49%	72%
It Makes Me Fit And Healthy	86%	83%
It's Fun	46%	67%
It Makes Me Look Better	23%	22%
I Can Do Competitions	26%	39%
I Am Good At Rowing	37%	50%
It's Challenging	61%	50%

When asked what they disliked about indoor rowing the main dislike among secondary pupils appeared to be getting hot and sweaty, which was reported by 43% of male and 53% of female pupils. Also, a third of female pupils (33%) indicated that they disliked indoor rowing because there was a lack of variety in the activity.

4.4 FOCUS GROUP DISCUSSIONS

Pupils were positive about the Concept2 indoor rowing programme and there was general agreement that it had been an enjoyable experience. As one pupil stated "It was fun, it's something different that we don't usually get the option to do" (Male pupil, February 2008). Another pupil explained "it's really good, it challenges you" (Female pupil, February 2008). A number of the male pupils indicated that they predominately enjoyed the competitive element of indoor rowing. One pupil remarked:

"I can assess myself to see how fast and long I can go" (Male pupil, February 2008).

Another pupil commented:

"You can set yourself challenges, say, if you get a good time one week you can add to it the next week and make it better than it was" (Male pupil, March 2008).

The female pupils primarily enjoyed the Concept2 programme due to the fitness element, in addition to being able to participate with their friends. Having friends watching and encouraging played a key role in the female pupils' enjoyment of indoor rowing activities.

As explained by one pupil:

“Your friends encourage you more when you are rowing, they encourage you to go faster. In other sports it can just make you worse if your friends are watching and you are not very good, which doesn’t really make it fun and then you don’t want to do it” (Female pupil, February 2008).

Some of the pupils reported that indoor rowing activities were limited within curriculum time, but that there were additional opportunities for indoor rowing activities during extra curriculum time. However, it was highlighted that some schools do not have specific after school or lunchtime indoor rowing sessions for the pupils to attend. Approximately half of the pupils would like to attend an extra curriculum club if it were offered at their school, while half of the pupils would not.

Pupils highlighted that many of their schools are involved in the Concept2 school indoor rowing league. A large proportion of the pupils were first exposed to indoor rowing through involvement in the rowing league. The league has helped to develop pupils participation and enthusiasm with indoor rowing. As one pupil commented:

“I enjoy it because you can work as a team together and its different, its not like doing all the same sports all the time like football and you can do new stuff like rowing where its like team related and we can all work together to improve, especially in the league” (Male pupil, March 2008).

Another pupil explained:

“Its great because like in primary school I wasn’t introduced to rowing and I don’t think anyone here was, so it’s a good new sport to learn” (Male pupil, March 2008).

When asked how pupils rated indoor rowing in comparison to other sports and exercise both male and female pupils ranked indoor rowing on average “seven out of ten”. Many of the male pupils highlighted that they preferred sports such as football and basketball, one of the main reasons for this was that they found indoor rowing “hard work” and a tiring activity.

The female pupils however, had mixed responses to how they rated indoor rowing in comparison to other sports. A number of the girls favoured sports such as netball as they enjoyed going outside and playing as part of a team. Other girls were more body conscious and preferred indoor rowing as they considered it to be a good activity for improving muscle tone and losing weight. The girls highlighted that they liked monitoring the amount of calories they had burnt, as it gave them something to focus upon. In addition, a number of male and female pupils stated that they sometimes find a lack of variety in indoor rowing activities and so preferred sports that involved tactics and changing environmental conditions.

4.0

Results

4.4.1 Safety Of Rowing Ergometers Within Schools

The majority of pupils reported that they considered the rowing ergometers to be safe when in general use within schools, provided that they are used correctly. Pupils only experienced minor injuries, for example, falling off the ergometer seat and developing blisters through participation in indoor rowing activities. As commented by one pupil:

“I think its pretty safe, but if you’re going at a fast speed you sometimes fall off the seat” (Female pupil, February 2008).

As commented by another pupil:

“Yeah its safe, you don’t get tripped over or pushed or anything like you do with other sports” (Female pupil, February 2008).

Another pupil explained:

“I think it all depends how you use it, if you use it according to how you’re supposed to use it I think it’s safe, but if you misuse it I don’t think its very safe” (Male pupil, March 2008).

In addition, pupils were not aware of any friends or other pupils within the school who had experienced any injuries when using the rowing ergometers. Many of the pupils identified indoor rowing as safer than other sports due to it being non contact. More than half of the pupils could remember being introduced to the correct rowing technique and the machines safe use prior to beginning. Some pupils commented that teachers had put up diagrams from the Concept2 resources onto the wall so that they could refer back to how to row correctly and look at the correct rowing technique. Pupils found this to be a “good reminder” (Male pupil, March 2008) and beneficial. Pupils recognised the importance of a warm up before participating in rowing activities. As one pupil stated:

“it’s safe as long as you warm up, and do some easy rowing to start off with before you go really fast. Because you could hurt yourself if not” (Male pupil, February 2008).

4.4.2 Benefits For Health And Fitness

Pupils identified that indoor rowing activities helped to keep them fit and healthy. However, some of the pupils struggled to articulate precise improvements that they had noticed. One pupil commented:

“I think my fitness has improved because at the beginning I couldn’t go that long on the machine, but now when we’ve finished I can go longer” (Female pupil, February 2008).

Another pupil stated:

“It enables you to have a good workout and build up your stamina and strength and things like that as well” (Male pupil, March, 2008).

Another pupil commented:

“It was good for me to start rowing fitness wise because when I first started rowing in Year 7 I had asthma and towards the end of this year I’ve grown out of it and I think that’s because of rowing” (Male pupil, March 2008).

Pupils felt that the Concept2 could have a positive effect on the promotion of healthy lifestyles. Indeed, over half of pupils indicated that the Concept2 programme could help encourage young people who are inactive to get involved in rowing activities. As explained by one pupil:

“It’s like with sports like basketball you work as part of a team, and if you are not very good and don’t like passing etc you can get picked on, but that doesn’t happen with rowing, you can do your own thing” (Female pupil, February 2008).

Another pupil commented:

“Yeah I think it could, it just depends whether they enjoy rowing or not. And like with people that are shy they can just do it by themselves so that might encourage them more” (Male pupil, March 2008).

It was considered that the Concept2 programme has a limited impact on pupils in terms of their behaviour and attendance at school. As one pupil stated “It would depend on which pupils, but I’m not sure that it would really make any difference really” (Female pupil, March 2008).

4.5 TEACHER INTERVIEWS

4.5.1 Perspectives on the Concept2 programme and training

The Concept2 programme was successful in increasing teachers’ enthusiasm for indoor rowing and confidence to deliver indoor rowing activities to pupils. Teachers believed that the Concept2 programme had helped support their understanding of the activity and increase their knowledge of appropriate sessions to deliver.

The training received from Concept2 was appreciated by the teachers and there was agreement that it had positively contributed to raising their enthusiasm for indoor rowing.

As one teacher commented :

“It gives you reassurance that you are doing the right thing and helps give suggestions about indoor rowing use in school” (Male teacher, March 2008).

Another teacher stated:

“It was good to have a new activity to get the kids involved in at school!” (Male teacher, March 2008).

4.0

Results

The support materials provided by Concept2 assisted teachers and were “a useful reminder of good practice” (Male teacher, March 2008) and a helpful point of reference. In addition, teachers highlighted that Concept2 provided effective support and advice to schools following the training. In particular the post training support, such as mechanical back-up and advice was considered by the teachers to be very good. As one teacher explained:

“We got everything we wanted from Concept2. If I had a problem they were always at the end of the phone and were helpful. Yeah , really good. In fact I had a phone call last week to remind me about certain upgrades and downloads that we could do” (Male PE teacher, February 2008).

A limitation to the Concept2 programme identified by the teachers was they felt that they needed more help in ways and ideas of how to promote the programme within the school. One teacher suggested more guidance was needed on creating links with local rowing clubs and additional ways of developing interest in the programme within the school would have been beneficial. Nevertheless, within one school a teacher explained how they had created links with Birmingham rowing club and this had proved to be beneficial in providing a pathway for the pupils to participate in outdoor rowing activities outside of school time.

The success of the Concept2 programme was highlighted at one school where one of the male pupils had gone to Eaton on a scholarship on the basis of the Concept2 rowing programme. In addition the school had also held a number of charity events using the rowing ergometers to raise money for South Africa. Furthermore, the teachers valued the Concept2 indoor rowing school league, where pupils race for their school in year group teams. Teachers emphasised that the numbers of pupils involved remained at relatively the same levels throughout the winter and spring terms, demonstrating the pupils on going interest and enthusiasm in taking part.

4.5.2 Value Of Rowing Ergometers And Benefits To Health And Fitness

Teachers' believed that as a consequence of the Concept2 programme there had been noticeable improvements in a wide variety of the pupils physical and social skills. In particular the inter-school indoor rowing competitions enabled pupils of different age groups to interact and socialise together. As one teacher stated:

"We entered the lads for the national champs and we noticed a lot of the lads, the year 10s for example interacted with the year 8s a lot more than they would have done prior to that. You tend to find the year 10s cheering on the year 8s and I found a couple of the younger lads talked to the older lads that they wouldn't have done prior to the rowing.....definitely helped with awareness of other lads in the school, which I think is great" (Male PE teacher, February 2008).

A number of the teachers indicated that they found indoor rowing beneficial as the pupils were able to set different programmes, workloads, and intensities to encourage participation for pupils with differing levels of ability. Teachers emphasised that this was particularly helpful in engaging pupils who are not currently active, as the rowing sessions could be set to a suitable level. At one school for example, some of the boys who participated in the rowing activities' were not considered particularly "sporty", however as the teacher explained, **"they were all chatting about it (indoor rowing) were keen to take part and really got into it and really enjoyed it. It didn't deter them as it was at the right level" (Male teacher, February 2008).**

Furthermore, teachers believed the Concept2 programme has helped to direct pupils who are demotivated with traditional sports offered at school, such as athletics and team sports like football. This was thought to be because it gave pupils the opportunity to work individually at their own level. In addition, as one teacher commented:

"It's also good for some of the larger kids. It isn't as uncomfortable for them as other sports and they tend to find they are very good at rowing as it is a non weight bearing form of activity" (Male teacher, March 2008).

Some teachers were of the view that the Concept2 programme helped to encourage pupils to adopt a healthy lifestyle beyond school. Teachers suggested that by participating in rowing activities within school they are more likely to continue their participation beyond school in leisure centres and gyms, which could be beneficial in developing lifelong physical activity habits.

4.0

Results

4.5.3 Safety

All the teachers perceived the rowing ergometers to be safe and felt confident in allowing their pupils to use the machines. Teachers emphasised that they considered the ergometers to be safe as they can be set to suit the differing abilities of the individual pupils. As explained by one teacher:

“I would say very safe, however I would never allow the lads to be left on their own during lesson time as a school policy. As long as they have had some form of introduction of how to use them”. (Male teacher, February 2008).

Another teacher commented:

“You can change the resistance so that they are suitable for the differing abilities of the pupils” (Male teacher, March 2008).

There was no reported incidence of major injuries through general use of the rowing ergometers and teacher reported only a very low occurrence of minor injuries such as blisters and occasionally a sore back. Teachers explained that the training and resources had helped them to recognise and identify correct rowing techniques and suggest ways to correct them. As explained by one teacher:

“At the beginning we had a couple of the pupils pulling the chain from side to side but after we showed what they were doing wrong they were able to easily correct it” (Male teacher, March 2008).

In addition, teachers highlighted that the maintenance of the rowing machines is minimal and whenever they required any assistance they could contact Concept2 and the problem would be quickly resolved.

5.0

Conclusion

The Concept2 rowing ergometer programme was reported by school staff to have raised the status of PE and helped to promote physical activity and the delivery of high quality PE and Sport in schools. In addition the programme was reported to have raised pupil confidence in undertaking sport and exercise, particularly in the less active pupils and in those pupils considered to be disaffected from traditional school PE and sport. Indoor rowing was considered to be a safe activity with a low incidence of injury in comparison with other sports. Staff valued the training provided and would have appreciated more guidance with school/club links.

Pupils reported that they had used the ergometers in PE time, in extra-curricular activities and, particularly for primary age pupils, in other classes such as Science. Male pupils, particularly in primary school, enjoyed the competitive elements of indoor rowing and females enjoyed the opportunity to take part with their friends. Half the pupils felt that their physical activity had increased since trying indoor rowing. All pupils appreciated the value of the activity for health and fitness and simply as a fun activity. Pupils reported a very low injury incidence in comparison with other sports, but highlighted the need for appropriate training on the ergometers, which they had received on this programme.

In summary the Concept2 rowing ergometer programme has been well-received by staff and pupils in primary and secondary schools. The activity is considered safe by staff and pupils and has contributed to increasing physical activity, delivering high quality school PE and Sport, to promoting health and fitness in schools and to increasing confidence in the ability to undertake sport and exercise.

References

Rauh, M.J., Macera, C.A., Ji, M., and Wilksten, D.L. (2007). Subsequent injury patterns in girls' high school sports. *Journal of Athletic Training*, 42(4):486-494



Vermont House, Nottingham South & Wilford Industrial Estate, Ruddington Lane, Nottingham, NG11 7HQ.
Tel: 0115 945 5522 • E-mail: Info@concept2.co.uk • www.concept2.co.uk

