

PACYP 50

Ymchwiliad i weithgarwch corfforol ymhlith plant a phobl ifanc

Inquiry into physical activity of children and young people

Ymateb gan Ysgol Basseleg

Response from Bassaleg School

**What do we know about physical activity levels in children in Wales? How robust is the data on this issue?**

We know through research conducted by Sport Wales through the bi-annual school sport survey and the national active healthy kids-Wales report card 2016.

The school sport survey 2015 found that 48% of pupils in Years 3-11 are hooked on sport and take part in extracurricular or community club sport on three or more occasions per week. In 2013, the figure was 40%. Similar proportions of primary and secondary pupils are hooked on sport – 49% of primary pupils in Years 3-6 and 48% of secondary pupils in Years 7-11. The 2015 survey has shown increases in participation levels amongst pupils in Wales in Years 3-11. Long standing differences in participation levels continue to be observed, with female pupils and older pupils taking part less frequently in PE and sport.

The data collected for the school sport survey has become far more robust since 2011. The data collection process has been simplified for all schools and the level of pupil participation has now grown to 116,00 pupils which gives a more accurate sample size and findings. The survey now also takes into account pupil voice.

The active healthy kids Wales report 2016 found overall Physical Activity Levels 15% of children and young people aged 11-16 years met the recommendation of at least 60 minutes of MVPA every day of the week. In another survey, 35% of children aged 4-15 years participated in MVPA for at least 1 hour every day. This analysis implied that Wales is succeeding with less than half of children and adolescents (20-39%).

This data collected from the active healthy kids Wales report card 2016 has limited research available for children across the age range. This needs to be addressed through systematic robust data collection methods. The effect of interventions to increase physical activity and improve physical literacy needs to be quantified.

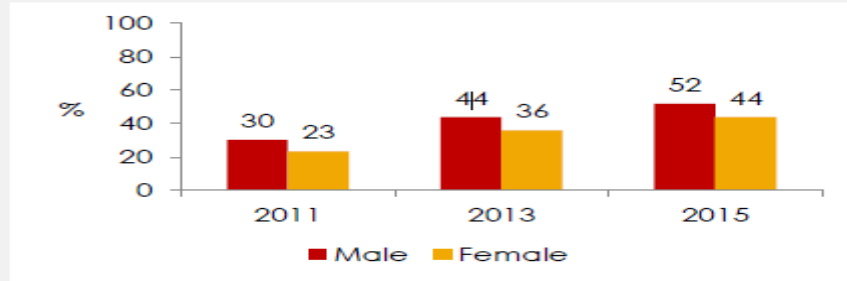
**Differences in gender-based attitudes towards, and opportunities for, participation in physical activity in Wales.**

Results from the 2015 school sport survey have highlighted there remains a gender difference in participation levels. 52% of boys compared 44% of girls are hooked on sport. The recent data has suggested that both genders have increased their levels of participation.

Sport Wales have reacted to the information collected to closing the gap for girl's participation through 'us girls' campaign to increase awareness and aspiring role models. The WRU have HWB school rugby officers promoting and growing the levels of participation of girl's rugby in Wales.

We have to use the responses from the school sport survey to drive change. We have already utilised the evidence from our pilot projects at the school to listen to learner voice and implement the good practice in to increasing girl's participation and enjoyment of physical wellbeing. We feel that this could be further developed in other areas outside the school setting.

**Figure 2: Hooked on sport by gender from 2011 to 2015**



### What sports are pupils taking part in?

#### Extracurricular sports

Table 1 shows the top ten activities most likely to be participated in across Year groups 3 to 11, by gender, and the corresponding percentage of pupils who took part in 2013 and 2011.

**Table 2: Extracurricular sports most likely to be participated in: pupils in Years 3-11**

Sport/Activity	Girls			Sport/Activity	Boys		
	2011	2013	2015		2011	2013	2015
Netball	28.6	32.0	31.9	Football	41.4	51.3	56.7
Swimming	11.8	20.5	22.1	Rugby	31	35.1	35.1
Athletics	16.1	17.5	22.1	Athletics	18.1	20.3	23.8
Rounders	17.7	19.6	21.9	Dodgeball	n/a*	22.1	23.4
Football	14.5	17.4	21.5	Running/jogging**	n/a	n/a	21.8
Dance	22.9	22.0	21.0	Swimming	11.7	20.9	
Running/jogging**	n/a	n/a	19.0	Cricket	18.3	19.2	20.9
Gymnastics	10.3	11.6	14.9	Rounders	14.2	18.6	20.5
Dodgeball*	n/a*	13.0	14.9	Tennis	17.5	20.6	20.5
Tennis	12.5	14.0	13.9	Basketball	14.6	19.5	18.7

\*Dodgeball was not included in the 2011 survey \*\*Running and jogging added to survey in 2015

There has been little change in the sports that appear in the top ten extracurricular activities in the last three surveys. The option 'running or jogging' was a new addition to the survey in 2015, to reflect activities asked about in the Active Adults Survey and to have a wider measure of activities that have seemingly increased in

We have to improve the provision of these activities for all young people in schools and communities to improve their overall participation levels over the longer term.

#### **Barriers to increasing the levels of physical activity among children in Wales, and examples of good practice in achieving increases in physical activity, and in engagement with hard to reach groups.**

The key to increasing levels of physical activity is through educating them on the benefits, which they perceive, will help them in the short term. Young people do not see the bigger picture of the longer term benefits at a young age. We have to provide stimulating programmes that they tell us through pupil voice and provide facilities to deliver these ideas (please refer to the pilot project evidence attached)

<b>Settings and Influences on Physical Activity and Health</b>	
<p><b><u>Family and Peer Influence</u></b></p> <p>31% of adults reported being active for at least 30 minutes on 5 or more days a week <sup>[2]</sup>.            41% of the adult population take part in sport <sup>[8]</sup>.            27% of mothers, 36% of fathers, 39% of brothers, 31% of sisters, 35% of other family members and 64% of peers take part in sport <sup>[3]</sup>.            There is an increased probability of children being 'hooked on sport' if their parents or friends are also involved in sport <sup>[3]</sup>.</p>	<b>D+</b>
<p><b><u>School</u></b></p> <p>60% of primary &amp; 80% of secondary schools provide a wide variety of extracurricular sport and dance opportunities to all pupils <sup>[3]</sup>.            70% of primary &amp; 62% of secondary schools agree that the school has sufficient access to facilities and 73% of primary &amp; 71% of secondary schools agree that they have access to sufficient equipment, to provide quality PE and sport <sup>[3]</sup>.            77% of primary &amp; 85% of secondary schools reported teachers are confident in delivering quality PE lessons <sup>[3]</sup>.</p>	<b>B</b>
<p><b><u>Community and the Built Environment</u></b></p> <p>54% and 38% of parents with a child aged 1-10 and 11-15 years, respectively, were satisfied with the play facilities in their local area <sup>[6]</sup>.</p>	<b>C</b>

One major factor in hard to reach groups is deprivation and the cost of provision. We believe that schools are the centre of the community and should be better available to service the community through the facilities being available through the week so that this issue can prove to be cost and time effective. The results from the active healthy kids report above demonstrate that this is an area that could be developed with family participation and improved facilities for the community having a positive effect on participation.

### **Physical activity guidelines and how we benchmark physical fitness in children**

We have included two examples of good practice we have completed with the backing of sport Wales and University of South Wales that have been developed to improve participation, engagement and provision for target groups in 11-15 year olds.

The use of the Dragon testing as a measure of physical literacy is prohibitive due to the cost and availability of specialised outside agencies.

We have developed a system, with the cooperation of our physical literacy officer at the school, to use the dragon testing protocol as a basis for which we can identify pupils that require ongoing individual support to become physically literate through their school life and beyond. This requires the support of the parents/guardians currently in implementing this plan. We would like to support parents/guardians on being more responsible for their children's physical literacy through regular reporting on their child's physical literacy journey, reporting on areas of strength and areas that need to be improved.

### **The role of schools, parents and peers in encouraging physical activity, and the role of Sport Wales, NHS Wales and Public Health Wales in improving levels of physical activity.**

Through the use of fitness trackers and the results from our pilot we see there is a great amount of potential and implementing this on a greater scale for identified target groups (refer to fitbit alternative act CS)

It has already been identified in the school sport survey that children are more likely to participate in physical activity if their peers and family members are physically active themselves. Children are a captured audience for 18% of their time in school, the remaining 82% spent with parental or family members. We need as multi agencies to improve this time spent at the central hub of the community, the school site, where the facilities and expertise could be made available to give the children, their peers and family members time using facilities to improve their physical, mental and social wellbeing.

This would require financial backing, but if all agencies were to pool some of their resources and create these physical literacy and well being hubs we feel this would have a long lasting effect to get the young people of Wales to the improved levels of physical literacy we are all striving to achieve.

## Annex 1

### Dragon Challenge Case Study

This projects outcomes are to *reduce the gap in physical competency amongst year 7 pupils*. To gather baseline data, I used the services of Happy Healthy Education to run the Dragon Challenge for all year 7 pupils. From these results I can identify pupils that could benefit from intervention to increase their physical competency. After intervention, these pupils will then run the Dragon Challenge again to compare their results, and hopefully see improvements in their scores.

Unique Pupil No.	Score Oct 16	Unique Pupil No.	Score Oct 16
06	21	58	18
08	20	63	24
09	25	68	15
13	21	74	21
29	15	76	25
92	20	139	22
105	14	153	24
110	22	225	22
119	18	236	23
121	24	253	20016
123	24	255	24
130	18	263	20
131	20027		
181	21		
194	39996		
195	21		
210	16		
214	20		

The 30 pupils above were selected to take part in the Dragon Challenge (DC) case study after scoring 25 or less in the challenge carried out in early Oct 2016. The pupils highlighted were injured or had an error during data input (119, 130, 131, 253). After discussion with PE staff about the pupils, and observations made by myself it was suggested that they also be a part of the DC group. Pupil 194 in green took part in the challenge, however is severely autistic and is statemented at the school, requiring a constant one to one. When suggested that he take part in the DC group, staff discouraged this idea as they were waiting on an assessment from OT to establish what intervention he would be able to take part in.

Letters and messages were sent to the parents/guardians of all the pupils above able to take part, informing them of the process and case study. The original plan was to remove pupils during their PE lessons to take part in alternative sessions with myself. However, this proved problematic as there were limited facilities in which the session could take place. With numerous lessons on at the same time and exam period effecting space, sessions were unable to go ahead.

I then decided to run the club as 'additional' activities in an after school club. This way, I have been able to support pupils during their lessons as well as providing additional activities after school. This has worked well for the most part; however, I have experienced some issues. The after school club required parental consent, trying to achieve this resulted in a number of pupils unable to attend after school clubs for a number of reasons, as anticipated. I did receive 18 responses allowing pupils to attend. On one or two occasions, the club had to be cancelled, again due to lack of space within the school during exam period.

However, when sessions were able to run, and pupils could attend they were very productive. Pupils were organised into three bands, already set in school, over a two-week timetable as seen below. Initially giving some information to the pupils of what we would be doing together over the next few weeks, to provide an understanding. Then, for each session, we focussed on individual fundamental skills. For example, travel movements and patterns, rolling and throwing balls, throwing and catching, balance etc. In some cases, I was able to give the pupils choice of what they would like to work on in the session which again proved beneficial. Although sessions were successful, attendance levels did suffer due to the sessions being after school. With pupils struggling with arrangements to get home and also remembering to attend as it is after school.

WEEK 1	Mon	Tues	Weds	Thurs	Fri
	BAND A	BAND C			BAND B

WEEK 2	Mon	Tues	Weds	Thurs	Fri
			BAND A	BAND C	BAND B

## Dragon Challenge Feb 17

For the re-run of the Dragon Challenge, all pupils identified from the first run were invited to take part in the re-run. This included pupils who had not been able to attend the sessions after school, but had receive support during lessons from me. Out of the 28 able to take part and invited, 17 turned up to take part. I received notes from parents excusing pupils from the challenge and also had pupils point blank refuse to take part, along with absent pupils. However, out of the 17 pupils that took part, the data showed that 13 of them had improved their scores, as shown below.

Unique Pupil No.	Score Oct 16	Score Feb 17	Score Change
06	21	25	+4
08	20	37	+17
09	25	22	-3
13	21	32	+11
29	15	34	+19
92	20	18	/
105	14	18	/
110	22	18	/
119	18	18	/
121	24	36	+12
123	24	42	+18
130	18	18	/
131	20027	18	/
181	21	18	/
194	39996	18	/
195	21	20	-1
210	16	18	/
214	20	16	-4

Unique Pupil No.	Score Oct 16	Score Feb 17	Score Change
58	18	25	+7
63	24	37	+13
68	15	22	+7
74	21	32	+11
76	25	34	+9
139	22	18	/
153	24	22	-2
225	22	18	/
236	23	18	/
253	20016	30	+
255	24	32	+8
263	20	18	/

Pupils have shown improvements through the evidence above. I and other staff have noticed increase in confidence from pupils during lessons. Whilst working with pupils during lesson time, all again showed increases in performances throughout the course of the PE block of lessons. Other pupils who perhaps didn't show increase in the DC re-run, have been involved in lessons and other clubs within school.

## Limitations

As discussed there have been a number of limitations to the case study. I feel that offering 'additional' sessions as opposed to 'alternative' sessions have worked better for the individual pupil. They are fully involved with their national curriculum lesson, with my support when required, as well as attending the after school sessions focussing on particular fundamental skills. But, the attendance to these sessions have been poor, due to pupils and parent's commitments outside school preventing them from attending, or pupils forgetting. Again, another issue has been facility/space for the club to run. Within a busy secondary school there are several other clubs both within PE and Music, as well as exam period take up all the facilities on offer. This had a direct effect on the number of sessions that were able to go ahead. But, as mentioned I have had access to pupils on a regular basis within lesson time.

## Annex 2

### Fitbit Case Study

The outcomes for this case study were to select a target group, provide a means of tracking activity and offering alternative activities for them to participate in. After discussion with 2 female members of staff, we were able to identify 14 girls in year 10. This group included a number of able pupils, pupils who brought kit but lacked motivation, and pupils who very often don't bring kit and are disruptive in lessons.

We had also decided on using Fitbits to track the activity of the pupils during this project. The devices can track all the activity and a number of other pieces of data that can contribute to the project. The pupils would be given the device for the duration of the project to track all activity. With this device, once an account is created pupils will receive a weekly summary of their activity, and can also use the phone app to monitor their own activity. There is also an option for pupils to join/create groups via the app to add some competition to process who would like it, and allow myself to monitor their progress.

The alternative activity on offer will be from 'U Do It Dance' company, who will lead the girls PE lessons with the rest of the girls not in the project in the lesson. The other option is to work with myself, leading an option of activities during the lesson for those who are not interested in the dance lessons.

### Using the Fitbits

Letters of agreement and consent to take part in this project were issued to the 14 pupils on 5/1/17. The following day, the girls were to sign up and create accounts online. 2 of the girls decided not to take part in project resulting in 12 girls taking part, however, another pupil was unable to take part due to absence whilst setting up the devices and accounts. In agreement with the school, and data protection, it was agreed that the girls used their own school email accounts to create their profiles to use with the devices and apps via their phones. The 11 girls all successfully signed up to Fitbit and created accounts, in preparation to receiving the device first thing on Monday 9/1/17.

Pupils were given the devices on the Monday, and take part in a 'normal' PE lesson and week. This would create the baseline data to which all other data could be compared against. However, there was a problem that had occurred regarding the emails. Unfortunately, even though it was agreed to use the school emails, these emails were blocking all correspondence from Fitbit. With the help of the ICT co-ordinator at the school, we looked at several avenues on how to get around this problem. However, we were unable to work around this issue. This then prompted me to design a questionnaire for both pupils and staff to gauge the impact of the fitbits as well as the alternative intervention.



## Alternative Activities

As previously mentioned, the main alternative activity on offer to the group, and all the girls in the lesson, was the dance session lead by U Do It Dance, and primarily street dance. The majority of the girls were more than happy with his new alternative, but I had a small group of girls who suggested other activities. This group in particular included 3 girls who very rarely brought kit or took part in lessons.

During the first lesson of alternative activity, the girls decided that they wanted to do some running. So, together we agreed on a run course, times, rest periods and had planned a running sessions for them to take part in, and myself merely facilitate and help with timings. The next few sessions included activities such as football and tennis, and the use of the fitness equipment indoors. All the sessions were positive, and girls active and had a say in what they wanted to do. The use of the fitness equipment became a popular option. Two of the girls were very reluctant to use the treadmill, but with my help, gained confidence to use it by themselves. Another girl, by our last fitness session, had pre planned a session she wanted to do herself, again with me just facilitating. I feel that this doesn't only show an increase in participation in activity, but also the confidence and motivation to take part in physical activity. Feedback from the female members of staff during the street dance was also positive, with all girls showing enthusiasm.

## Questionnaire

Both questionnaires, for pupils and staff, were designed via Google Forms, as this was an easy option to distribute and collate the questionnaire/responses. In total, all 11 pupils were questioned and 6 PE staff.

The pupil's questionnaire was split into 3 sections, before Fitbit use (for norm data), using the Fitbit and alternative activity. It included a number of closed and open questions, providing data that can be easily compared along with data providing reasons and opinions for particular closed questions. This questionnaire can be accessed here <https://goo.gl/forms/TR2XVaFpQg7ixvgr2> .

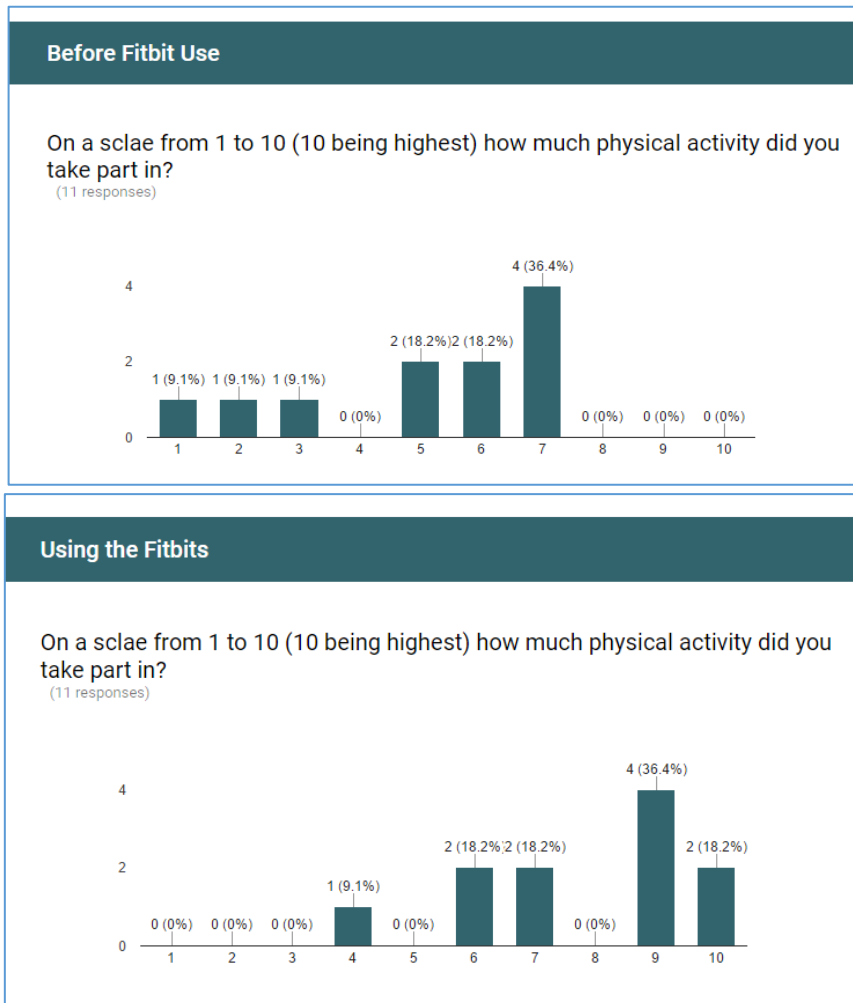
The staff questionnaire was one small section, this aimed to question them of the use and impact of the Fitbit devices in all their lessons, and the effectiveness of the alternative activities/support from myself. This questionnaire can be accessed here <https://goo.gl/forms/XXLhsS0wOclMP1o13> .

The questionnaire for the pupils took place at the end of the project, after their final PE lesson with alternative activity on Monday 13<sup>th</sup> February. The staff also completed their questionnaire during the same week.

## Results and Findings

### Pupils Questionnaire

The same question was asked at the start of two sections, asking the pupils to rate their PA level on a scale from 1-10. This was asked for before the use of the Fitbit and alternative activity and during. Below are the screen shots of the results from these two particular questions.

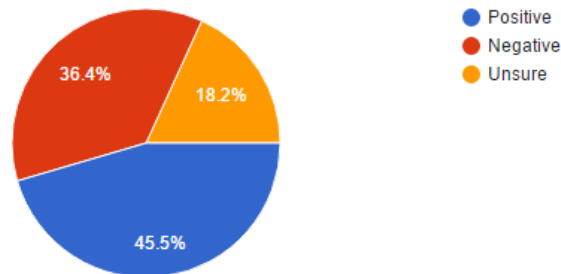


As shown in the above tables, there has been an increase in perceived physical activity levels whilst using the Fitbits and during the time of alternative activity. With 6 pupils rating their activity levels at a 5 or more before intervention, and then with 10 pupils scoring themselves at 6 or higher during the intervention.

The next question in section one (Before Fitbits/intervention), asked about their attitudes towards their PE lessons.

Which would best describe your attitude towards physical activity?

(11 responses)

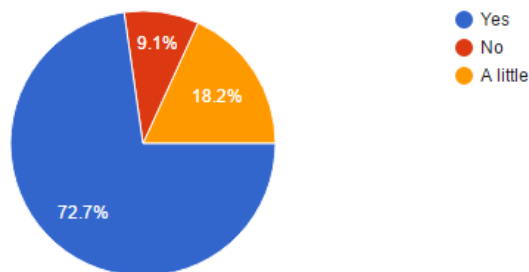


Over half of the pupils were unsure or held negative views to their 'normal' PE lessons. The follow up question asked to explain their reason for this answer. Responses suggested that the PE lessons were boring, girls didn't like doing in it in front of large groups and that the options were poor. Some responses did show a positive attitude on the other hand, but these came from the 'more able' pupils within the group.

In contrast to this, a similar question was asked in section 2 (During Fitbit/intervention).

Has the use of the Fitbit changed your attitude/motivation to take part in physical activity?

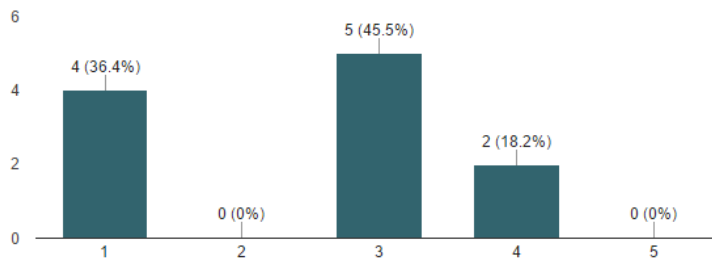
(11 responses)



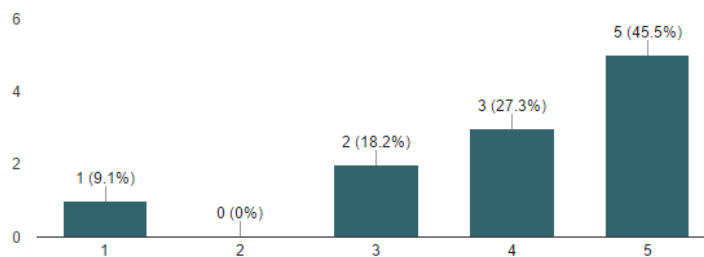
With nearly 75% saying it had changed, and less than 10% saying it hadn't, the follow up explanation question offered supporting responses. Things such as being in a smaller group and with friends made them feel as though they were taking part in more PA. Many commented on the effect of the Fitbit, in terms of competing against each other and getting their target number of steps up.

In section 3 pupils were questioned about the alternative activities, be it the street dance or sessions with me. Again, comparative questions were asked to highlight any difference between 'normal' PE lessons and the alternative activities available in terms of enjoyment, these graphs show this below.

In terms of enjoyment, how would you rate your 'normal' PE lessons?  
(11 responses)



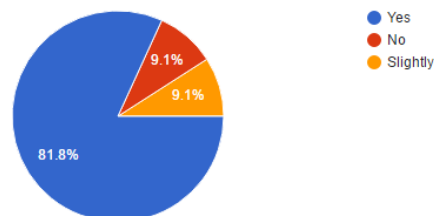
In terms of enjoyment, how would you rate your PE lessons with alternative activities?  
(11 responses)



Pupils were asked to give a star rating for the two questions, 1-5 stars with 5 being the best. As evident from the graphs, over half of the group gave the normal PE lesson a rating of 3 or less, whereas the alternative activities received 10 of the 11 responses as 3 stars or more. Showing that during the intervention, pupils clearly enjoyed the option or alternative activities as opposed to their normal lessons.

Pupils were also asked if they felt their activity levels had changed during the intervention, results below.

Has your activity/participation levels changed since the change to alternative activities in lessons?  
(11 responses)



Again, this question was followed up by an explanation question to provide reasoning's for their answers. Please see the screenshot below.

Please provide a brief explanation to the previous question. (11 responses)

normal lesson

I still hate games.

yes they have because i never used to do anything.

I did more interesting things with the fit bit

i motivates me to bring in my PE kit

we chose what we would like to do..

more fun

i never used to take part much before i was entered into this fitbit challenge

i found that the lessons are more enjoyable with alternative activities

I took part a lot more as we did dancing and I do dancing as a hobby so I did enjoy it but some lessons were quite boring but I still put effort in. I wouldn't of wanted to take part if it was an activity such as netball or hockey and even if I did take part, I wouldn't of wanted to!

If I didn't have the Fitbit on then I don't think I would have enjoyed the street dance so much. It helped me to put more effort into it but if I didn't have the Fitbit on then I don't think this would have been the case.

As we can see from the responses above, the majority of the pupils felt the alternative activities were positive, and had effected their participation and enjoyment levels. During a later question, when asked would they like to continue the set-up of alternative activities and options, 81% replied with yes and the reaming with maybe, depending on the activity.

### Staff Questionnaire

The staff questionnaire looked at their professional opinion of the effect of the Fitbit devices in all their lessons, and also any impact the alternative activities or my influence has had on lessons and pupils.

Since the devise were brought into school, staff have used them in a large number of lessons, and also a variety of lessons in terms of topics and age ranges. When asked if they had noticed a change in pupils when using the fitbits, 83% answered yes and the remaining with some. When asked to expand on this answer they gave the following responses.

pupils are more motivated and competitive about how far they have travelled and calorie burning

Pupils work harder to achieve higher steps/ calories etc...

many enjoy going outside using them

Pupils are more engaged within the lesson as the fitbits allow pupils to compete against each other and individually

Pupils are excited to use them. They are intrigued by the data that they generate but don't quite understand it well enough to be motivated by it within individual lessons yet.

they like to compare data against each other

When asked if they found the devices had been useful in lessons, all staff replied with yes, and provided these answers.

Please provide an explanation to your previous answer. (6 responses)

they have provided objective data on how well pupils have achieved and the tracking of their activity levels

Motivates pupils

The girls enjoy monitoring their progress but many still need structured courses/ tasks set as the less able can sometimes use it as an easy option

It allows the pupils to take more accurate readings of HR and distance

Very useful and valid way of teaching about heart rates and short term effects of exercise. It also helps with lessons on calories. With older groups (KS4) it has allowed provided motivation and focus for those pupils not normally engaged in team games to walk around the site.

competition and fitness awareness

Finally, staff were asked about the impact that the alternative activity or my intervention had had on their lessons and pupils, including those not involved in this case study.

What impact, if any, has any alternative activities and/or assistance from Mr Lang had on your lessons/pupils?

(6 responses)

Mr Lang has enabled the target pupils to achieve greater progress through one to one teaching/support, focusing on specific areas to improve both in curricular and extra curricular activities

Removing a small group of very extroverted able girls in year 11 has had a massive impact on the rest of the group who found this group intimidating

The girls really enjoy Mr Langs' support in the lesson and many seem motivated to learn

Mr Lang has been useful in providing pupils with extra assistance during lessons. He allows all pupils to make progress throughout the lesson.

Having a PE specialist to support lessons has been hugely beneficial to the progress of pupils. It means that specialist jobs can be delegated and target groups can be worked with.

supports staff in developing fitness in challenging and less able pupils.

## Summary

Overall, the use of the device along with the intervention proved successful in positively effecting pupil's physical activity levels, as well as their motivation to take part in lessons. Although there was an issue with the Fitbit profiles and email accounts, the alternative activity set out what it aimed to achieve, and encouraged the girls to do more and become more active, and even plan their own sessions showing confidence. Giving the pupils the choice of what they can do as a PE lesson has a great influence on their motivation to take part, thus their activity levels. Obviously there are restrictions at KS3 PE in terms of choice, however at KS4 this could be an option.