Darlington College: Sport Science lab improves learner engagement

Summary

Darlington College used Technology Exemplar Network (TEN) funding to enhance their Sports Science laboratory with human performance laboratory equipment. The equipment is used to test, monitor and record the fitness levels of test subjects and students learn to critically analyse and interpret the data. Working with the equipment has increased learner engagement and understanding of the subject. Knowledge of how to use this type of equipment can also give learners an advantage when applying for jobs or looking for a place at university.

About Darlington College

Darlington College has been graded outstanding by Ofsted and awarded Beacon status in 2010. It offers a wide range of courses including: Construction; Engineering; Health and Care; Hair and Beauty; Sport, Hotel and Catering; Basic skills and ESOL programmes; and more.
The challenge

Sport Science involves the scientific study of human performance in sport and exercise. Simon James is Sport Science lecturer at Darlington College and teaches the BTEC National Diploma and Foundation degree courses.

Simon identified the need to improve the College’s Sports Science laboratory to meet the curriculum and health needs of his learners. He steadily developed the laboratory over the past five years and he wanted to introduce human performance laboratory equipment for use in the laboratory and outdoor activities.

- Sport science can be difficult to understand and working with this equipment underpins the scientific knowledge.
- The equipment would also be used to monitor general health and fitness of the learners to make sure they are fit to partake in fitness tests.
- It would make the step to university or a job smaller where learners are expected to work with and understand these technologies.

Simon James said:

“This is the type of equipment that students will come across in the workplace or at university. So having access to, and learning how to use it, at college gives the students an advantage when applying for jobs or a place on a higher level course”.

The activity

Darlington College is part of the Technology Exemplar Network and has been involved in the development of e-learning for over fifteen years – including the application of VLEs, interactive whiteboards and mobile technologies, such as hand held video cameras, e-readers and mini net books.

When the College received funding through the Network, it was invested in the Sports Science lab and the following human performance equipment was purchased:

- VO2 stand and collection Douglas bags which are used to collect expired air. The air is analysed to measure the ability of the body to utilise oxygen during exercise.
- Hand held Lactate-pro monitors and Glucose monitors which monitor fatigue and why this comes at different stages for different people.
- Pre-screening equipment such as micro-spirometer which monitors lung function.
- Tanita Body composition scale which gives ideal body fat percentages and weight.

Wireless heart rate monitors which are linked to a wide screen monitor with associated analysis software.

The outcomes
The College has an industry standard laboratory fitted with high quality human performance equipment which is used intensively by the Sports Science students on a daily basis.

It is also utilised to conduct health checks for the rest of the College and visitors during the College’s open days. Sport Science students measure general fitness and give recommended advice based on bench-marks set by the health authorities such as the ACSM.

The College is planning to use the lab for other courses such as Health and Social Care, for example to illustrate the impact of diet on health.

The impact

The technology has enhanced the learning experience and learning engagement has significantly improved.

Student BTEC L 3 Extended Diploma Sport and Exercise Science, said:

“Being able to actually use the equipment, take measurements and produce our own results is much more interesting than just reading descriptions and explanations from a text book”.

“I intend going to Uni after this course, so it’s great to have the opportunity to become familiar with the type of equipment I’ll be using at Uni and probably in my future job”.

Tips from Charles Sharp, e-learning Manager:

“When considering the purchase of equipment such as this it's worth looking at how it might be used in other ways – for example, across other curriculum areas or, as in this instance, to provide a cross college service to both students and staff”.

“When budgeting for the purchase of monitoring and analysis equipment like this, don’t forget to consider the cost of any necessary consumables – such as special printer paper for monitoring devices etc.”

Useful links

Darlington College

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