

North Trafford College

Title: Developing practical skills and underpinning knowledge through blended e-learning

Background

Situated in the heart of Manchester, within walking distance of Old Trafford cricket and football grounds, North Trafford College offers a wide range of provision in specialist vocational areas. The College provides core qualifications for 700-plus learners, together with specialised courses tailored for both industrial and individual needs.

The provision of well-qualified gas engineers is a priority for the College and for industry. The College has a commitment to excellence in vocational provision and has developed substantial links with local employers, and education and training providers in the gas industry, where safety and expertise are of overriding concern. The College's resources for supporting learning and teaching in industrial and domestic gas topics are the largest in the region.

The College is proud of being the first in England to receive Centre of Vocational Excellence (CoVE) status in Gas Services Installation and Maintenance.

Challenge

Brian Keating is course leader for Gas Services Installation and Maintenance, and as part of this he teaches a number of modules, including final year advanced Modern Apprenticeships. Learners enrolled on this course attend the College on a day-release basis. They spend four days a week working for local employers in the domestic gas industry under the guidance of Salford and Trafford Engineering Group Training Association (STEGTA). In order to continue into employment after the course ends, learners must gain accredited Gas Engineer status, where exams test both practical skills and complex theoretical knowledge.

Over recent years, tutors have found that the increasing demands placed on the industry in terms of safety and modern equipment complexity means there is an increasing amount of knowledge required by today's engineers. With learners attending College only one day a week, time must be well managed if they are to maximise learning and achieve the necessary grades. When time is so limited, producing engineers who are well qualified in both theory and practice is a huge challenge for tutors.

Brian was interested in the potential offered by e-learning to ease the workload for learners, without compromising the quality of learning and teaching. When the College implemented a Virtual Learning Environment (Blackboard), he began investigating how e-learning could be used to underpin the large theory component in the course, aiming to develop a blended online solution to complement and enhance classroom-based learning and teaching.

What e-learning offers

From his teaching experience, aided by the use of learning styles analyses, Brian found that most of the learners on the course are visual learners who favour a traditional approach to learning, with the important theoretical concepts and practical competencies being delivered via tutor-led sessions. This often means all learners need to learn at the same pace during the time available. However, some learners need extra time or more tuition to grasp difficult fundamental concepts resulting in increased tutor workload.

The VLE proved to be easy to use and fitted his needs well, particularly in the way that content could be uploaded and structured. This delivery mechanism was well suited to the type of visual content required for effective learning with his group. He began by setting up a 'course area' and enrolled learners into groups defined by the module they were studying. He incorporated a mixture of technologies and resources including notes and handouts, images (diagrams and photographs) and videos showing real-life situations, and embedded NLN materials, practice assessments and discussion boards. Different resources and functions are used to support and reinforce learning at critical times.

In addition to providing support material for learners to work through at their own discretion, Brian wanted to try other innovative ways of blending e-learning with the classroom-based activities and developed content specifically for this purpose.

Each week, learners work through prepared material online, which is linked to relevant sections of course textbooks. The online exercises and examples are intended to expand on concepts discussed in the textbook and there are links to outside web resources with related explanations and further resources to aid understanding. These activities are then made the focus of discussion in the following week's taught session, providing a more in-depth grasp of knowledge to be gained.

Other features include the development of mock examinations delivered online and mirroring the examinations at the end of the course. Learners take the exams in their own time, but with time restrictions simulating exam conditions. The submissions are automatically marked and if a learner performs poorly, the system has built-in feedback, provided by the tutor, which gives an explanation and links to relevant learning materials. Additionally, further feedback and discussion takes place in face-to-face sessions providing a blended learning solution.

Since introducing the online learning materials and VLE-based course support, outcomes have improved. All of the learners who used the online component reported increased confidence in their application of knowledge and there has been a 25% increase in pass rates for this year's group, attributed to the use of e-learning.

Benefits for Learners

The facility to learn or reinforce difficult concepts at their own pace, often from home, and to follow up with in-depth discussion in class, is a feature highly valued by the learners which helps to underpin individual learning.

The use of tests with time limits imposed, delivered through the VLE, to prepare for examinations was also appreciated by learners. This gave them increased confidence as they approached formal examinations.

The development of e-learning has enabled tutors to devote more time to individual learners during their time at College, while also addressing the needs of the whole group.

Newly qualified gas engineer Scott Stacey was particularly impressed with the online key skills component and felt his learning had been greatly enhanced by the use of the online support.

Paul Howarth, Training Officer at STEGTA, believes the course material and support delivered online has been of real benefit to the learners and, viewed from a training provider's perspective, is a very effective technique for re-enforcing knowledge and understanding.

Key Points for Effective Practice

It is vital to remember that e-learning should be used to benefit learners. In order to maximise the benefits of e-learning, the College gives the learners the opportunity to

feedback at the end of each term on what worked well and what did not. The feedback is then used to improve the course for the next and subsequent terms.

Conducting a needs analysis will provide guidance for the development of e-learning components. This provides information to guide the appropriate targeting of resources and for the linkage of e-learning components with face-to-face learning.

Reliable and efficient networks and systems are key, but often forgotten, components of successful e-learning. A poor network and systems infrastructure can greatly inhibit the benefits of e-learning. Learners will lose patience and confidence if the infrastructure is of a poor quality. The systems support team at North Trafford College have worked hard to ensure the systems support for learners is in place. Brian Keating feels this has been an important component in the success of e-learning at North Trafford.

Barriers

There is likely to be an element of trial and error in development of e-learning because of its immaturity, particularly when ascertaining what learners require. This will continue to remain a challenge for the tutor and developer. Trying a variety of methods and finding ones that appeal to different learners is part of the process and it may be that techniques which work with one group do not work with another.

Final word

E-learning has great potential but in order to be effective it needs to make a difference to learners. At North Trafford College, Brian Keating believes his efforts have paid off. As he says "I wanted to make a real difference for the learners, I always believed e-learning had potential for vocational learners and a 25% increase in achievement have proved it works, it's the future for me"

Further details

Brian Keating is happy to discuss his work, in the first instance he can be contacted via email at: b.keating@ntc.ac.uk