

Open all hours - Virtual Classrooms that effectively impact learning in and beyond the Physical Classroom

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This paper is reporting on research conducted in March and April of 2007, primarily in the USA, UK and Finland. The aim of this research was to visit key schools and universities, renowned for best practice, that are using virtual classrooms to support the teaching and learning that is occurring in traditional classrooms.

In days gone by, many organisations and businesses, such as banks had set hours and if you wanted to interact with these businesses you had to work within these set hours. Schools generally fell into this category. Students were able to access school resources, submit assignments, and communicate with their teachers and fellow students during the core hours of nine to three. Today, people expect to be able to bank and work at a time that suits them using the technology available. Many schools, to meet this demand and need are developing Virtual Classrooms to support the teaching and learning that occurs in the physical classroom in and out of school hours.

Virtual classrooms could be defined, in their simplest form, as any online area dedicated to a specific group of students. Virtual classrooms can take many forms and are usually organised and created using software platforms that have a variety of names and acronyms. The two most popular names being a Virtual Learning Environment (VLE) or a Learning Management System (LMS). Wikipedia describes a VLE as, “software system designed to facilitate teachers in the management of educational courses for their students, especially by helping teachers and learners with course administration. The system can often track the learners' progress, which can be monitored by both teachers and learners.”

LMS is described as, “a software package that enables the management and delivery of online content to learners. Most LMSs are web-based to facilitate "anytime, any place, any pace" access to learning content and administration.”

Other terms to describe this type of software include Learning Content Management System (LCMS), Content Management System (CMS) and a Blended Learning Management System (BLME).

For simplicity the term VLE will be used to describe a computer based teaching and learning tool that organises information, provides access to activities, assessment information, serves as a place to submit work, as well as

organises other resources into a managed structure, eg year groups, subjects, classes etc. VLEs usually incorporate communication and assessment tools such as chat, wikis, forums, instantly marked quizzes etc.

Though VLEs can be used as a means for delivery of distance education, this research is focused on schools and universities that are using VLEs in classrooms and as a means to opening the classroom door beyond the hours of nine to three or to give greater opportunities within these hours.

As a starting point, it is appropriate to explore what is arguably the most important feature of schools that have been successful in creating effective virtual classrooms. Surprisingly it is not a technology, hardware or software feature or trend. The schools that were successfully using virtual classrooms as an extension of the physical classroom all had an observable positive learning culture. A culture where the teachers and learners are focused, interested, inspired, motivated, enthusiastic and hardworking. There was no identifiable trend as to whether the virtual classroom projects came about as a result of the positive learning culture or whether the positive learning culture came about because of the virtual classroom projects.

Characteristics of the strong learning culture included a strong desire for success being demonstrated by staff and students, high expectations of all staff and students and strong leadership in all areas of the school. Each leader within the school - the principal, the management teams, teachers and student leaders - all had a unity in direction, purpose and goals. They shared a common vision and were travelling the same road for the same reasons. Responsibility was distributed and this responsibility brought with it accountability.

Some commonalities between most of the VLE designs, irrespective of which software was being used include access to email, personal files, shared files and resources, access to timetables, news, course and school calendars, access to forums and blogs, merit and demerit information (including house point information), e-portfolios, help files, course materials and assessment tasks.

Some schools used their VLE as a resource bank that could be used by teachers. Other schools had a far more structured and organised approach, using it as the back bone of their teaching and learning both within and beyond the

classroom, with very detailed and structured content in a learning sequence. Other schools were using a VLE as a means of linking their students with other students for a broader educational experience or as a way to structure content for distance education.

The schools that were using their VLE as a resource bank simply had a collection of resources such as links to web pages, documents, images, mp3 files, presentations etc grouped together under a subject banner, eg Year 9 History. Beyond that there was no standard set by the school or faculties which meant that some subjects had a lot of resources in a folder whilst some would have none. Though useful and helpful to collate these resources, the lack of structure and lack of consistency across the school meant that student use appeared to be as inconsistent as the VLE usage.

By far the best examples of how a VLE was being used in and beyond the classroom was when the VLE contained detailed and structured content that reflected accurately the learning sequence of a unit of work being taught. That is to say, the VLE reflected the scope and sequence of a unit of work and all key teaching and learning moments was represented within the VLE. This representation could be as brief as a heading to remind the students of a classroom discussion or activity. It could be a forum reflecting upon a classroom activity or discussion. The representation could be a copy of work sheets, video files, presentations, images, mp3 files or links to websites used in class or a quiz or activity relating to the course content. This was completed for all courses, even if the students did not have access to a computer during class time for a subject.

In discussion with teachers who were using a VLE in this way, the teachers reflected that organising their subject within the VLE in a detailed and structured format was not difficult. In many ways they were organising existing resources rather than creating new resources, publishing them in a logical and sequential way for students to access and utilise at any time, anywhere. Teachers identified benefits in publishing resources in this format for both themselves and their students. They commented that using the VLE to reflect the learning sequence helped them to be more organised and encouraged them to assess the sequence of learning activities and content presented more frequently. The

format enabled them to easily refine a course from one year to the next without having to duplicate the work each time. When teaching a course for the first time, they had a very useful resource already created for them by the teacher of the course in the previous year that was practical and well organised. The teachers reflected that having all course content published in the one location also reduced their work load, removing the need to re-photocopy work sheets etc for students that had lost them, as the students could print them off themselves.

Teachers also felt that the use of a VLE enabled them to better cater for the individual needs of students, allowing them greater flexibility in the type of material they could make available to students and giving students greater choices in the content and activities.

The students articulated that they felt more organised as a direct result of the ready access to course material, which also enabled them to easily review content that had been covered in class. They liked the fact that the VLE allowed them to independently revise ideas and concepts as required, being able to revisit the content as often as they needed. The students recognised the benefits of being able to access their course's content at a time and place that suited them, whether that be at school or out of school hours.

VLEs were also observed as a means of linking students from around the world. Virtual classrooms of students from a variety of schools and countries create a cultural and language learning teaching resource without the interaction of video conferencing. This was observed in Orivesi in Finland where an innovative teacher is running an e-twinning program. The VLE acted as the means for the students to communicate and work collaboratively on tasks with other students from around Europe without having to be online at the same time. A similar program linking schools internationally is being run in Australia through a website called "Beyond Borders."

As schools increasingly used virtual classrooms to support physical classrooms the expectation of students having access to technology outside of the classroom hours obviously increased. Some schools have supported their students and families in facilitating this by increasing the opening hours of their school library into the evening to ensure their students have access to

technology. Some (government) schools visited have loaned their students an ultra mobile PC that they are able to take home to use. Others have entered into contractual arrangement for PC suppliers to secure PCs at a subsidised cost with a payment plan for families in their school community.

Virtual classrooms have many benefits for teachers and students in traditional and less traditional classrooms. These benefits include, as discussed, the development of a positive learning culture, the organisation and structure of courses and course materials, for both staff and students, in well thought out learning sequences, the ability to cater to the individual needs of students (differentiating) in and beyond the classroom, the ability to involve and engage students that may be physically distant from each other and their teacher as well as giving students access to experts with whom they would not normally have interactions. Virtual classrooms also provide opportunities to students to study courses they may not normally be able to access.

Virtual classrooms provide a wonderful structure for teachers to use their imagination, to be creative in the way in which they present and teach their courses. They also provide brilliant opportunities for students.

Schools and teachers should be strongly encouraged to strategically implement their use, with support and resource provision, as part of a whole school or school system approach, to improve the learning that occurs within the classroom and to provide opportunities that may not be met without them. These changes should help schools achieve and maintain a strong learning culture where there is a relentless focus on learning, which is a great goal.