Innovating a Learning Management System through action learning

This report covers a proposed change to the learning management system used at Casula High School. It identifies the issues surrounding the current learning management system (LMS) and sets into place a method of planning and implementing a Moodle to assist with improving the education experience for the learners and teachers. In order to effectively implement a new system running on a somewhat foreign technology action learning principles will be used as it will allow a team of people to learn through doing (WALLACE, 1990), enabling them to learn about the technology while implementing it. To assist with the implementation change management will also be used to assist with easing end users in the transition.

Examination of the current system

The existing system is a traditional delivery system of education, set in classrooms with manual delivery of courseware, assessments, marking and recording of progress. Learning programs and schedules plus individual lesson plans are created for each term.

The majority of resources used are paper based but there are some resources which are of an audio-visual type. Practical based resource and technical activities such as ones involved in science laboratories and TAS workshops are also in use.

Communication is almost solely done face to face between student and teachers, mainly in class time, but there are opportunities for access to the teachers during free periods if the teacher is available.

Class times are predefined as periods set at specific times and dates. They are paced to deliver specific learning and if a student has an absence in that particular lesson, it is up to them to source the information missed.

Identified issues with the current system

The current system of has many problems associated with it, such as the amount of paper needed to delivery of courseware, the constant creation and recreation of programs, schedules and lesson plans, the manual time consuming aspect of marking and recording results of assessment, the lack of communication and correspondence available to the students and the necessity of having to attend all classes at set times if effective learning is to be achieved by the student.

The main concerns with maintaining a traditional delivery system of education is the costs, its effectiveness and satisfaction levels to both staff and students. The costs and time involved in designing, editing, printing and modifying paper-based resources were found to be three to four times greater than for developing online courses. (CURTAIN, 2002).

The costs and time involved the creation of programs, schedules and lesson plans, and their availability in the case of a teacher absence and a substitute teacher replacing in a class.

The costs and time involved in assessments such as quizzes and tests which are manually marked and recorded. (CURTAIN, 2002).

Out of class communication between student and teachers is cumbersome and difficult to track, which in this day and age not acceptable.

The synchronous nature and lack of flexibility of the class times and dates to students makes it harder for some student to achieve their full potential when it comes to learning. Traditional delivery systems of education also make delivering multileracies more difficult because of their narrow delivery modes (KALANTZIS & COPE, 2009A & B).

Issue identified for innovation

To create a blended learning environment that maintains the benefits of the classic face to face, classroom environment but also has an online aspect that increases availability and flexibility to both students and staff. This will be accomplished by the use of an online LMS which will reduce costs, increase effectiveness of learning and deliver greater satisfaction levels to both staff and students.

The LMS of choice for this scenario will be a Moodle LMS which has been chosen because it is open source and as such free of costs to the school, it is a popular and well supported platform, there are numerous teacher that already have experience in its use and the school has access to technical staff that are experience in its production and deployment.

The change

The change will involve deploying an online LMS created in Moodle to enhance the traditional learning system and where possible gradually replacing the existing manual-paper based resources with online content. This will allow student, teacher and administration aspects to be delivered in electronic format using the schools existing IT infrastructures locally and externally since the Moodle will be hosted on a publicly available host service and accessed via a web browser. As Moodle is a

collaboration tool it will allow multiple users to access resources at the same time while maintaining data integrity. During a course and or at its completion, the student data (results and progress) can be exported to be manipulated and or imported into other systems (reporting tools, student management systems) through an export function. Moodle has multiple means of communication for users, including chat, forums and email to name a few. The use of Moodle should save a considerable amount of time in manual handling along with a decrease in staff frustration and an increase in organisation and professionalism (SCLATER, BUTCHER, THOMAS, JORDAN, 2006).

The imperative of innovation

The availability of an online system to enhance the current system has been identified as an important change for many reasons. The most important benefit is the cost and time saving that the new system can offer. As outlined above a great deal of time and cost was consumed by creating the resources and manually transcribing the results, the other key benefit should be the greater satisfaction of both staff and students in using this system to enhance the learning process.

Continuous improvement is always a desired imperative in any education environment. This change allows the school to streamline and improve its processes and services

Implementing this change is also seen as a way to change the culture of the school. In most cases people are happier to go on using with what they know has worked in the past, exposure to successful change can inspire them to try out new ideas (SCHABRACQ, 2007). By highlighting the minimal effort to implement the new

system along with its vast positive outcomes it is hoped that people's views on change with start to change.

Action Learning

The idea of action learning was initially posed by Reg Revans in 1945 (REVANS, 2007), however there was no comprehensive statement of what action learning is (KOO, 1999). Action learning is a means of understanding or learning through change or action (DICK, 2000). It requires its participants to develop skills or acquire knowledge in the area of change while also being responsible for implementing intended change within the chosen area (SMITH, 1997).

Action learning principles will be used to help develop and implement the new Moodle LMS as action learning helps to empower staff members in the problem and change (MUMFORD, 1991). As some teachers and most students will be relatively new to the use of Moodle, action learning will allow the participants to implement the change while learning about both the use and management of the technology.

Change Management

Change management is the control of an implementation of change in processes to reduce risk and increase benefits (MURTHY, 2007). Change management is used by many organisations to ensure that change is successful and helps to ensure that the impact of change upon people is controlled. Implementing change management principles helps to ensure that users readily take ownership of the change and create a smooth transition from an old to new. If the impact of change on users is profound, the use of change management can be the difference between success and failure.

Projects that follow formal change management procedures have a 57% success rate compared to 36% for improvised change management procedures (JORGENSEN, OWEN, NEUS, 2009).

As delivering approved education that meets national standards is crucial, the implementation of this change will reduces stress through ensuring the new system is easy to use instead of adding to people's frustrations. Using change management principles to assist with the deployment of the new LMS will ensure that the implementation of the new system is a success. This will be evidenced not only its minimum impact to the existing processes but by the successful adoption and use by the teachers and students.

Participants in the innovation

To ensure that participants are engaged in the change they will first be shown the importance and benefits of the new LMS as outlined in change management and action learning principles (MARQUARDT, 2006). In this initial stage the idea of the new system will be sold to the team so it can be approved. This will aid in giving ownership of the change to individuals, a concept that assists with the successful implementation of change. Feedback will be sort from the participants along with approval to develop and implement the system. Following action learning principles this team (including technical, administration and teaching staff) will participate in regular meetings, around 30 minutes each and be referred to as a 'set' (SPENCE, 1998) to drive the change.

Set meetings will continue to keep all members updated on the progress. These meetings will also facilitate feedback on the system as it progresses, which will aid in additional improvements and changes. Once development of the new system is complete, training will be provided to users of the system during a set meeting. Providing training in the new system is an important stage of change management and will help ensure it is a success.

During and after the deployment of the LMS feedback will be gained from the users and where possible these problems will be sorted on the spot in the form of further training or adjustments to the LMS. Any larger problems or suggestions for improvement will be openly discussed during the next set meeting (SPENCE, 1998) and if agreed upon they will be developed and implemented by set members with further training provided if necessary.

The continual process of Action learning and Change Management

Feedback gained from users of the system is very important as it will provide insight into the usefulness and effectiveness of the system as well as provide areas for future improvement. This process of taking feedback and implementing improvements demonstrates a two-step process of ‘action’, followed by ‘reflection’, this basically is the cyclic nature of action learning, (DICK 2000). However a more complex cycle, outlined by Mitchell and McKenna (2008) is ‘experience’ moving into ‘reviewing’, then ‘concluding’ and finally ‘planning’. This model will be used to assist with the implementation and continual development of the new LMS as it is more comprehensive.

Feedback from the set members is an important part of the action learning process, however it is worthless unless it is fed back into the development of the system for further improvement. Actioning the feedback from end users will further engage them in the change and increase people's ownership of it.

As action learning is cyclic it is envisioned that the new system will continue to evolve and change each term. Some additional features such as the automatic creation of class group lists (sourced for the school's NSW DET Student management database) have already been marked for investigation once the basic system is up and running.

Responses to the proposed innovation

As there have been many frustrations with the existing traditional education system responses to the new system have been positive. Many people in the school appear to be happy to have any form of change implemented in the hopes that it will spur on further change for the better.

As the change assists with the schools continuous improvement this will assist with meeting school's obligation as an effective learning environment that meets all its responsibilities. In addition to meeting the obligations discussed earlier, the school executives have showed a desire to showcase the implemented system to other schools.

Generally all members of the team are glad to see the traditional education system be enhanced by an efficient LMS. The staff members feel that the new system will

make the school look more professional to prospective students and staff, as the use of a paper based system goes against the grain of what is being taught in classes.

Staffs are unanimous in agreeing that the new LMS, once implemented will deliver a significant time and cost saving, add greater satisfaction to the learning process.

REFERENCES

Dick, B. (2000). A beginner's guide to action research. Retrieved August 2, 2012, from http://www.scu.edu.au/schools/gcm/ar/arp/guide.html

Jorgensen, H. H., Owen, L, Neus, A. (2009). Stop improvising change management!. Strategy & Leadership, 37(2), 38-44. DOI 10.1108/10878570910941217

Cope, B and Kalantzis, M. (2009a). *A Grammar of Multimodality.* International Journal of Learning. Retrieved August 3, 2012, from http://newlearningonline.com/multiliteracies/files/2009/03/L09_17649_MultlmodalGrammar_final.pdf

Cope, B and Kalantzis, M. (2009b). *New Media, New Learning.* Multiliteracies in Motion: Current Theory and Practice, London: Routledge. Retrieved August 3, 2012, from http://newlearningonline.com/multiliteracies/files/2009/03/colenewmedianewlearningchapter.pdf

Curtain, R. (2002). *Online delivery in the vocational education and training sector: Improving cost effectiveness.* Retrieved August 2, 2012, from http://www.ncver.edu.au/research/proj/nr0F04.pdf

Koo, L. C. (1999). *Learning action learning.* Journal of Workplace Learning, 11(3), 89-94.

Marquardt, M. (2006). *Action Learning*. Alexandria: ASTD Workplace Learning & Performance.

Mitchell, J & McKenna, S. (2008). *Action Learning and the national training system.* Melbourne: Australian Government.

Mumford, A. (1991). *Individual and Organisational Learning: Balance in the pursuit of change.* Studies in continuing education, 13(2), 115-125.

Murthy, C. S. V. (2007). *Change Management*. Mumbai: Global Media.

Revans, R. (2007). *What is Action Learning?*. Journal of Management Development, 1(3), 64-75.

Schabracq, M. J. (2007). *Changing organisational culture: The change agent's guidebook*. West Sussex: John Wiley & Sons Ltd.

Sclater, N, Butcher, P, Thomas, P, Jordan, S, (2006). *Moodle: enhancing the assessment capabilities of the leading open source virtual learning environment.* Retrieved August 9, 2012, from https://dspace.lboro.ac.uk/dspace-

jspui/bitstream/2134/4421/1/Sclater_N_Butcher_P_Thomas_P_Jordan_S_L1.pdf

Smith, P. A. C. (1997). *Q'ing action learning: more on minding out Ps and Qs.* Management Decision, 35(5), 365-372.

Spence, J. (1998). *Action Learning for Individual Organisational Development*. Columbus: Center on Education and Training for Employment.

Wallace, M. (1990). *Can Action Learning Live Up to Its Reputation?*. Management Education and Development, 21(2), 89-103.