

### **Implementing a Moodle Learning Management System (LMS)**

This report discusses the change to the learning management system used at Casula High School. The change involves a two-step deployment; initially the LMS will be used as an add-on option to the existing manual paper-based system and then progress to a more integrated part of subject delivery. This change was selected, as it will cause no or relatively small initial disturbance to the teachers and students.

To assist with the implementation Action Learning principles and Change Management methodologies were used as proven techniques to assist with learning about a process or technology while implementing it (Wallace, 1990) and introducing a change while ensuring its success and user acceptance (Gotsill & Natchez, 2007) respectively.

In addition to how the system was implemented, techniques used to engage participants will also be discussed, including how people responded to the change and the methodologies used to implement it. Finally measurable outcomes and responses from staff are also included.

### **Implementing the Action Learning**

The concept of action learning was first created in 1945 by Revans (2007), however Revans has never given a 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 be responsible for implementing intended change within a chosen area while developing skills or knowledge in the area of change (Smith, 1997).

Action learning principles will be used to help develop and implement the new LMS as action learning helps to empower staff members in the problem and change (Mumford, 1991).

The new LMS has a unique advantage compared to other changes, in that it can be used to deliver the training in its use and such it is the absolute epitome of action learning. The key construct to aid action learning in the use of the new LMS will be to build a prototype of the Moodle to allow the team to experience it in action (and learn), the Moodle will have three courses installed, the first course being an interactive courseware in the use of Moodle features and the second courseware a more demonstrative one based on video tutorials on using Moodle. Both are free creative commons courseware for a Moodle on how to use a Moodle, and as such are free to deploy and use. The third one is a sandbox that group members can use to build and experiment with their own Moodle courseware (learning by doing).

### **Implementing the Change Management**

There are various theories in implementing change, one of the most successful is Kotter's eight step process for implementing change (Kotter, 1996) which has been used around the world successfully in a variety of organisations including Norfolk Southern, LeadCap.org and Centerlink (Case Studies, 2011). Due to the success of these case studies the process was used for the change to the LMS at Casula High School in the following manner.

**Creating urgency**

Creating urgency is a concept that stimulates interest in the change and motivates people to accept the change or assist with its implementation. Creating urgency assists to create ownership of the change, which makes people feel the change is coming from within instead of being forced upon them. Change that comes from within is more easily accepted (NHS Institute for Innovation and Improvement, 2005).

To create urgency a pitch on the proposed system was given during a team meeting. Initially the focus was on the failings of the current system and people were given the opportunity to voice problems. This generated a lot of interest and emotion and created the perfect environment to discuss the importance and advantages of the new system. An open dialogue ensued and this assisted to engage staff in the change, and created an emotional ownership to the change (Marquardt, 2006).

**Powerful Coalition**

Change management needs to be lead or driven, not just managed; therefore strong leadership needs to be identified. This leadership does not have to follow traditional organisational hierarchy as 'change leaders' can come from anywhere within the organisation (Payne, 2005).

The Casula High School LMS change management team is referred to as a set to align with action learning principles (Weinstein, 1999). The set at Casula High School included staff from management and teaching and met the recommended size of 5 - 6 people suggested by Dilworth (1998). The members were selected due

to their interest in the project as well as their technical skills, knowledge of the LMS or leadership qualities. Set team meeting where held initially once a week for 30 minutes to assist with the action learning and change management (Spence, 1998).

### **Vision for change**

The vision is design to give everyone a clear understanding of what they are working towards and helps to filter any ideas that may be off track. It should be short, clear and easy to understand. When ideas are raised they need to be compared to the vision to see if they align with it or not (Kotter, 1997).

The vision created by the set at Casula High School was to implement a LMS (Moodle) to assist with improving the education experience for the learners and teachers. Throughout set meetings the vision was used to ensure that ideas and suggestions offered by members conformed to the goal of this change.

### **Communicating the vision**

Once the vision is created it needs to be communicated as often as possible, to assists with keeping the momentum and to prevent it being forgotten in the flood of daily communications (Lee, 1996). Actions need to be followed through to show people that things are moving forward which adds to the changes momentum (Kotter, 1990). Communicating the vision also gives people outside the LMS set, the opportunity to discuss the change and have their insecurities and concerns addressed before they escalate.

For the change to the existing traditional delivery system of education, communicating the vision was relatively easy due to having a sample Moodle

already built with courseware and a sandbox that could be used to demonstrate to the set members that haven't had any Moodle experience.

### **Remove obstacles**

The fifth step aims to remove barriers such as people resisting the change, school processes or policies or even organisational cultures (Kotter, 2007). Obstacles can be harmful to the momentum created earlier and can quickly derail or halt a change. Identifying barriers is a continual process and once they are spotted they must be quickly removed.

The obstacles faced in this change were the staff's limited exposure to Moodle LMS and their ability to visualise its use. This was discussed in a set meeting and it was found that this obstacle could be removed by implementing a fully working prototype of Moodle that team members and executive staff could have access to during the process.

### **Short-term goals**

To keep the team motivated, success in short-term goals along the way is crucial. This will motivate the team to strive for more and by completing goals the team will be motivated to complete the larger goal. This also assists in removing resistance, especially from people critical of the change. It is important that these goals be small and achievable early in the change if they are to be effective (Kotter, 1993). When targets are reached it is also important to celebrate what has been achieved in order to maintain participant's commitment (Kotter, 2008).

The implementation of a fully working prototype of Moodle that staff could have access was a great success. Once the system was active the LMS set team was given numerous positive feedbacks that school staff was excited. This milestone was acknowledge by the School Principal who through his thanks and excitement of seeing the new system in action encouraged and motivated the set to work towards the completed system.

### **Building on Change**

In order to implement real change it must be deeply imbedded into the processes and culture of the organisation or department. The short-term wins need to be continually built upon and turned into lasting change. Feedback is also very important at this stage and this can be obtained from within and outside the set, but more importantly this feedback must be actioned.

This process was cyclic, in developing and reviewing the change, and demonstrates the cyclic nature of action learning which can be summarised as implementing a change or action, followed by a review phase or reflection (Dick 2000). However, Mitchell and McKenna (2008) view this cyclic nature as a four-step process - experience, reviewing, concluding and planning.

During this stage Moodle accounts and sandboxes were created on the prototype for all teachers so that they could become more familiar and versed in the use of the LMS without fear that it would be published for the student body.

### **Anchor the Change**

The purpose of this final stage is to incorporate the change into the everyday work of the organisation. If the change is to survive then it must be accepted and incorporated into the culture of the organisation where it can then take on a life of its own and no longer need to be driven by change leaders (Sabri, Gupta & Beitler, 2007). Changing the culture of an organisation can be very difficult, especially if people have been entrenched in the old culture for many years. Hence this stage is vital to the success of the change being implemented.

This final step, was quite easy to complete at Casula High School, the prototype has generated very few problems and has been used as the basis for the production build of the LMS with very few changes. The momentum generated early in the change and the open lines of communication meant that people were very happy to accept the change. The use of the production build of Moodle has now become ingrained in the school primarily as an add-on but with momentum building it should become an integrated resource during the next year. The success of the change, seen by its rapid acceptance by staff, could not have been achieved without the use of Kotter's Eight-Step Change Model.

### **Engaging Participants**

The use of action learning principles and change management processes greatly assisted in engaging participants in the change. The key processes or steps of action learning and change management, which have been identified as engaging participants, are presenting a pitch to staff, creating a vision, ownership and rewards.

During the pitch using the techniques of highlighting the issues staff and students faced with the traditional system, drawing out their emotions against it and then proposing the new enhanced system while including staff in its inception stage greatly assisted with the acceptance and approval of the change (Kotter, 2008a). This momentum quickly had all staff in agreement with the change with many of them willing to assist with its implementation. Due to this rapid acceptance the approval from management to implement the change was easily gained.

It was found that the vision was very beneficial to keeping the change on track. When someone wanted to implement an idea it was compared to vision to see if it aligned with the statement. If the suggestion did not align with the vision, it could be used as a buffer to gently let people know that although their idea was valid it could not be implemented (Kotter, 1996).

Creating an environment where people were engaged and willing to participate in the change meant that people took ownership of the task at hand and wanted to see it succeed. As every member of the set felt that they shared ownership of the change this greatly increased people's commitment to the change and its success. By allowing all set members to be a change leader, no matter their role within the department, this added to the ownership of the change.

Kotter's (1990) suggestion of rewarding staff, even in the form of congratulations, support, acknowledgement and thanks from management was found to greatly assist in engaging participants. Although rewards were not of a material or monetary



value, they still assisted in encouraging set members to participate and continue their work.

Initially people's responses to the use of action learning principles were that for hesitation and cynicism. Action learning, was seen with a bit of scepticism, when it was first introduced as a concept and methodology, but since the Moodle training was actually delivered through the Moodle itself the staff actually got to see action learning in practise and now have a better grasp of action learning, which is hoped that they will also use in their own learning design for their subjects in the future.

Once the change was under way set members started to see action learning principles as a simple way to formalise the concept of learning through doing in a controlled manner. People also saw the formalisation of action learning as a way to guide a learning activity once it had lost its steam or if it was not known what to do next.

As teachers, some participants also saw how action learning could be applied as a way to engage students in learning new concepts or skills through doing and experimentation as opposed to being shown and demonstrated how to complete a task.

### **Measurable Outcomes**

Three main measurable outcomes have been identified from this change. First is the reduction of the printed-paper used to manually record student data. Although the amount of initial reduction of printing and paper is low, during the LMS initial add-on

stage, there is an expectation that when it is more widely used as fully integrated part of the learning environment the reduction should be substantial and also seen as a positive step especially with greening program currently being adopted within NSW DET (TAFE NSW, 2010).

The amount of time needed to organise the learning resources will also be reduced in the future because the resourced can be re-used or set as templates for other terms or even subjects. With the new system now in place there is very little effort needed to reset the system for the next term, saving hours if not days in work preparation. The amount of time needed to manually mark and record assessment will also be reduced and in the future because these resourced can be re-used, automatically be marked, and recorded. Again any amount of time saved is of benefit to increasing productivity.

Moodle offers multiple communication options from email, chat, forums and even polls. These are both convenient and track-able, the student population is well versed in such technologies and has taken up the services with little need for encouragement, and some staff need may need more training and encouragement before they become truly competent in their use.

### **Response**

Staff responses to the change and the way it was implemented were overwhelmingly positive with all staff happy with the new system and its implementation. When the new Moodle LMS was mentioned to a staff member from another school they saw

the system as very innovative and suggested that it should be something that they also do.

The successful use of action learning and change management to assist with this change has assisted all people involved, by seeing that change has benefits and hopefully these experiences will make them be more innovative in the future.

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