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# CHEMNET

## Smith and Georg

## Background

Smith and Georg (SG) is a small registered training organisation (RTO) in South Australia. It's main business is to provide a level three course in chemical safety. Primary producers and people in allied industries must complete this course in order to purchase and apply some of the more hazardous chemicals used in their industries. Most participants completed the course by attending face-to-face courses that were held in country locations. SG also offered the course by home study (correspondence) and RPL (recognition of prior learning).

### Why an online course?

SG became interested in offering the course online because (1) SG continually looks for new ways to meet the needs of its clients, many of whom live and work in regional and remote areas; and (2) SG wanted to maintain its market share for training in chemical safety – if SG does not offer the course online, someone else will.

### What we wanted to achieve

SG did not want to enter the project to fix a problem with it was currently doing. Instead, the project was an opportunity to build on successes achieved. SG started the project by analysing those features of its current training that were valued by clients, with the aim of replicating those features in online training.

### Face-to-face courses

The success of SG's face-to-face courses can be attributed to the knowledge and skills of presenters, all of whom are primary producers and therefore use chemicals in a commercial environment. Presenters have high credibility with clients, and they have 'walked the talk'. In addition, presenters customise the content of each course they deliver to match the needs of the participants. They also work as a team to continually improve the course, its content and presentation methods. There is also a social element to SG's face-to-face courses. People in regional and remote areas often value the opportunity to get together and discuss issues that are relevant to them.

SG wanted to replicate these features in its online course, as well as provide course participants with opportunities to interact directly with course presenters and other participants, in an online situation. SG also wanted presenters to facilitate the online learning and to learn how to produce and modify the online teaching and assessment tools, so that customisation and improvement could occur easily and rapidly.

### Home-study course

This option was popular because many course participants were living in regional and remote areas, and found it difficult to travel long distances to attend a course. Furthermore, many participants were primary producers and small business owners, and



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were therefore time-poor, especially during normal working hours. Many valued the opportunity to complete the course section-by-section when they could, often out-of-hours at home. SG wanted the online course to be flexible so participants could move in and out of the course when it suited them.

**RPL option**

People accredited to the level three chemical safety courses were required to reaccredit every five years by completing a refresher/update course. The RPL process gave people who have attended a course previously, and who already have good skill levels, to reaccredit without having to attend a course.

**Administration and management of our course**

Client satisfaction which leads to repeat business, involves far more than what participants experience at a course.  t involves the whole experience from marketing to first contact, enrolment, attendance at the course, follow up and issuing of results. The SG office staff were also primary producers with good knowledge of the course and excellent communication skills. Phone conversations with clients often go beyond how to enrol, how is the recent weather affecting your crops and other business and human related topics.

Course participants usually receive their results within one to two weeks of completing the assessments. SG wanted to maintain empathetic rapport with clients through quick issuing of results via the online course. The aim from the outset of the project was to produce an online course that provided the best of what SG was already doing, and provide a few extra features. In summary, SG wanted the online course to:

- Be presented in a way that capitalises on the personalities, knowledge and credibility of our presenters (ie not simply written text on a screen).
- Be as engaging and challenging as the face-to-face course (and in some instances, to offer experiences that cannot be provided in a face-to-face course).
- Be as flexible as the home study course, allowing participants to log on as many times as they wanted/needed to, in order to complete the course at times that suited them.
- Provide robust, relevant and engaging assessments.
- Track the progress of participants through the course, and alert us to participants who may need help, either because they were not participating regularly in the course, or because they were not successful in the assessments.
- Provide hyperlinks to the many online resources that were provided by businesses and organisations in the chemical, farming and allied industries.
- Provide ongoing updates for participants, so they didn't need to wait five years for the next reaccreditation course to learn about new developments/laws/opportunities.
- Allow participants to revisit the information in the course, at no extra cost, for a five-year period.
- Provide for RPL.
- Encourage interaction between participants and the presenter/facilitator, other participants, and key industry personnel, via:
    - An online forum.
    - Scheduled 'chat' sessions or online classrooms.
    - Webinars presented by industry specialists on topical issues.

The aim was not to just 'get people through a course', but to also provide them with the opportunity for continually updating their knowledge and skills. SG would like to work with industry to do this.

## What was done

SG chose Moodle as the learning management system (LMS). The reasons for this choice were:

- It was free. As SG were not guaranteed a minimum number of enrolments, and therefore a guaranteed income from the online course, the was a need to use as much free software as possible.
- It provided many features that was required, including:
    - Ability to host a wide range of learning objects, including video and powerpoint presentations.
    - Good tracking and reporting of student progress.
    - Ability to handle enrolments, including payments via Paypal.
    - Facility for forums and other interactions between participants and facilitators.
- It was well supported by a large community of users, and free advice was readily available.

SG originally planned to use a lot of video presentations for the course. The attraction to use this medium was that users could easily record a presentation at a face-to-face course, upload it to a free hosting site such as YouTube or TeacherTube, then incorporate it into the course by linking to it from Moodle. If a topic changed, then users just had to change their face-to-face presentation, record it, then replace the old video in the course with the new one. SG abandoned this idea early in the project, because:

- Recordings of our face-to-face presentations were not suitable for online learning – there were too many distractions with questions from participants etc. If SG wished to pursue the use of video in our online course, written scripts would be needed and presented to the camera.
- SG was restricted in the use of video as many of its potential course participants did not have adequate bandwidth to view video online. The Government has plans for improving bandwidth in the future, when this happens, video for teaching may be of much more use.

For the time being SG have opted to use video at the start of many of its teaching topics to help stimulate interest in the topic, as well as using powerpoint for main presentations.

SG investigated many **differe**nt e-learning tools, switching from one to another, searching for the best tools. SG felt like a lot of time was wasted in trying different tools, without a good system for evaluating them. In hindsight, if a simple table such as the one below was used to evaluate the tools, SG would have reached decisions about the right tools for our project in a more efficient manner.

| E-learning tool | Advantages | Disadvantages | Use/reject |
|---|---|---|---|
| eg<br>TeacherTube, a site for hosting video | • Free hosting of our video presentations<br>• Not as well-known as YouTube, so not likely to have problems with businesses barring access by their employees | • The site was often off-line, therefore not available to users | Reject |

During times of frustration, SG sensed many tools did not and could not do everything required. SG learned to ask the following questions when evaluating e-learning tools:

- What does it do and what doesn't do?
- Is it free?
- Is it reliable?
- Will lack of bandwidth cause problems?
- Is it simple to use?
- Is there good support for users of the tool?

Tools that evaluated included: Slideshare, Moodle, Audacity, powerpoint, video, YouTube, TeachTube, FileZilla, C-Panel, iSpring, GoogleDocs. From the trainer's point of view, they desired a simple-to-use tool that did everything they wanted, so that they can get on with the training. Unfortunately, there was no such thing, and it seemed that SG may be stuck with cantankerous tools with minds of their own for some time to come!

SG researched other online courses for examples of good e-based courses that it could emulate:

- SG was restricted in the courses that it could sample, as many were only accessible via a paid enrolment fee.
- There were very few e-courses that were directly relevant to the field of safe chemical use.
- SG research should have concentrated more on ideas and tools, rather than course content.
- SG should have done more research into other e-learning courses; however, at the start of our project it felt ill-equipped to make good judgments regarding their suitability.

SG produced most of its online teaching/learning sessions using powerpoint with some text, photos, animations and other visuals, and voiceover. SG produced scripts for the sessions and learned:

- Producing the scripts takes about 80% of time and production of the teaching/learning sessions about 20%. Thorough preparation and planning are essential; otherwise the time spent in production is wasted.
- A robust process to draft and check scripts is essential.
- "*You don't need an instructional designer to do the creating. You all have the skills as educators to put the learning objects together*." (Rhys, SG e-learning consultant).

A business analysis for offering the ChemNet program online is interesting. Within South Australia, the traditional 'catchment' for chemical safety training, there is very little scope for increasing market share by offering the course online. Any gain in numbers of participants in the online course will result in a decrease in the number of face-to-face participants. At best, it will prevent loss of market share to other RTOs (possible in other states) who might offer the course online.

SG's best chance of increasing the overall number of participants in our chemical safety courses (face-to-face and online) is to offer it interstate or overseas. To offer the course interstate would require extra research and development of the course to account for variations between states in the legislation that governs use of chemicals. In addition, to be successful SG would need to build partnerships with existing providers of chemical safety training in each state.

To offer the course in other countries would require even more research and development to present the information, assessments, etc in formats and language that are culturally-appropriate. There are those who believe that it should be cheaper to complete an online

 

course than a face-to-face course, because the facilitator does not have to be present in a particular location for a specified time, and because of this assumption that facilitation of online training will be automated and therefore efficient. This is not the case, as much of the online facilitation will be one-on-one with learners. Furthermore, the total cost of developing the online ChemNet will be around $100,000. As the course fee is only around $300 per participant (of which around $100 is paid to third parties for materials and accreditation) it would take a long time to recoup this investment.

## Benefits experienced by the team

SG encouraged all of its staff to be involved in all stages of the project; the planning, production and facilitation of the online course. The advantages were:

- Staff now have good 'buy in' to e-learning from their participation in the project. They feel that they have been part of the development of the program and are keen to continue involvement.
- The ability to change the program quickly and easily in response to changing needs by SG instead of waiting for a consultant.
- It was cheaper to develop and maintain the e-learning program by SG, rather than pay a consultant to do it.
- The old saying 'give a person a fish you feed them for a day; but if you teach them how to fish, you feed them for a lifetime' could be paraphrased to 'give your course facilitators an e-learning program and you may satisfy their needs for a short time; but if you teach them how to develop, modify and manage an e-learning program, then you empower them for life'. (Dave, Project Manager).

## Lessons learnt

### Management of the Project

The project was well planned, with roles assigned to various team members. It started well but lost momentum as the general workloads of team members increased, leaving less time for the project. Lessons learned about project management included:

- It was important for the project manager to meet with team members regularly, but only if the meetings have a purpose and only if there were productive outcomes.
- Engaging an external project facilitator, whose role is the day-to-day management of the project, was essential for SG, as its regular employees were too distracted by their normal duties to give that role the time and energy that it required.
- The project facilitator must be given clear directions on both the expected outcomes of the project and the methodologies to be used.

## The results

### Have SG achieved what it set out to do?

Yes it has, although not quite in the time-frame intended. Timing aside, SG now have a team of competent e-learning developers, producers, facilitators and managers; and will soon have an engaging course delivered and assessed online. The course will have all the features listed earlier, with the exception of RPL. SG already has a very effective model for assessing RPL, involving a comprehensive telephone conversation with the client. The SG RPL process is quick, does not require presentation of extensive evidence by the client, and is robust – SG believes that this process cannot currently be replicated online.

### The future

SG will continue to develop the ChemNet program. Many of SGs first attempts at producing learning objects for the program have not been as good as preferred. During the first year of offering the online course, SG will review all aspects of it, with the likely result that large sections of it will be redeveloped. SG will aim to strengthen its interactions with industry, so that its course participants will have links to a wide range of supporting information that will be provided and updated by industry. SG will invite course participants to provide suggestions, information, anecdotes, photos etc that may be used to improve the program for future participants. SG's vision is to create an online community that will take some ownership of the course. SG will actively pursue new markets for online chemical safety training, to both recoup its initial investment and to support continuous development of it.

There have been times when SG's project manager has asked 'has it all been worthwhile?' If looking at just the cold economics of the project, it is hard to believe that the investment will be repaid, let alone profitable. However, in terms of surviving economically in the future, and in terms of meeting the needs of our clients in the future, it has been a valuable, even essential, project. Only time will tell how valuable it will be.

## Reflections and suggestions

### Advice for organisations that are producing an e-learning course for the first time

- Plan, plan, plan!
- Get good buy-in from the whole team; from those who will be developing the online course, as well as those who will manage and facilitate it – ideally these will be the same people.
- Meet as a team regularly. Evaluate progress, celebrate successes, redirect efforts if necessary, set goals then make them happen.
- Identify what it is that your clients, or potential clients want from you; in terms of course content, delivery, and learning support. Make sure that you provide this in your online course.
- Make your LMS as efficient as possible. Provide good client support, but don't make a rod for your back by promising support that you cannot deliver.
- Don't forget that although the tools and technology you use are inanimate, your clients are humans.
- Work hard to implement your plan early in the life of your project. Relax if you can, but put in a huge effort at the start of the project.
- Try to develop a complete learning object early in the project. Learn from this experience and produce a template for successful and efficient production of the remaining learning tools
- Enjoy the journey!

## Framework connection

The national training system's e-learning strategy, the Australian Flexible Learning Framework (Framework[1]) funds and supports E-learning Innovations projects which aim to

[1] http://flexiblelearning.net.au

[2] http://www.flexiblelearning.net.au/flx/go/home/projects/2006/newpractices2006/pid/369

[3] http://flexiblelearning.net.au/designing

embed e-learning into the national training system by supporting and enabling innovation in training design and delivery, at the state and territory level. In engaging in this E-learning Innovations project, the following Framework products and resources were used.

- ARED[2]
- Designing e-learning (updated 2008)[3]
- Copyright Kitchen[4]

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## For more information

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[4] http://flexiblelearning.net.au/copyrightkitchen

 