

Enhancing deliberate reflective practice through role play by using situated technology-enhanced learning with tablets

Abstract

Situated technology-enhanced learning (STL) is a form of mobile learning requiring mobile hardware, storage of user generated data on web-based servers and wireless access to the internet to enhance learning in situated learning environments.

The STL project reported in this paper used tablet videoing capability to record role-plays of hospitality students learning and practicing front-office procedures. Check-in and check-out procedures encompass complex customer relationship competencies requiring the learning of specialised practical skills and adoption of dispositional attributes. The pedagogical principles underpinning this project include deliberate practice, reflective learning, learner self-evaluation and appropriate peer or tutor feedback procedures. Effective deliberate practice, as described by Ericsson (2006) requires effortful engagement from learners and precise, timely feedback from peers or trainers. Practice underpinned by learner self-reflection and evaluation and motivation are also important contributors towards transformation of learners' innate dispositional traits.

Workroom / workshop observations, student focus group and evaluations and tutor interviews were conducted as the project progressed. Through analysis of data collated from four courses of the role-playing learning activity, guidelines have been produced. These guidelines assist students' learning of self-evaluative skills; extend tutors' use of role-playing as teaching strategy; and inform educational developers on creating appropriate STL activities.

This paper represents work most relevant to the conference theme: The impacts of VET research on individual learners and groups of learners.

Introduction

Front office / reception services skills cover a broad spectrum of practical, application of knowledge and dispositional skills. Hospitality training has a strong focus on utilising situated learning approaches to induct students into hospitality's culture of service. At CPIT, learning activities organised for hospitality students, revolve around practical 'learning by doing' through participation in simulated / realistic workplace activities in physical learning environments reflecting real-world hospitality settings. Learning activities are focused on providing students with ample opportunities to 'learn to become' (Hodkinson, Biesta & James, 2008). Since 2010, CPIT has introduced tablets (i.e. ipads and Android tablets) into workshops and workrooms as situated technology-enhanced learning (STL) initiatives. These projects (Chan, Fisher & Sauer, 2012) provided an opportunity to build capability with vocational educators and CPIT learning technology support, to implement the affordances presented by establishing mobile learning capability into situated learning environments, instead of shifting students from familiar and comfortable workshops into computer suites.

In the project presented in this article, tablets were used to collect photos and videos of students' beginning a series of formative role-plays for checking-in or checking-out guests. The use of videos replaced a teacher-led learning activity, with a student-focused/directed 'learning contract' model. Students studied initial video recordings of role plays involving the checking-in or checking-out of guests provided by the tutor. As students produced their own videos, aspects of practice requiring improvement were identified through structured and tutor facilitated group peer feedback, tutor feedback to individual student and whole class tutor guided feedback. Refinement of interpersonal communication, self-presentation skills, service orientation disposition (Cran, 1994) and hospitality /tourism content knowledge through both tutor and peer guided reflective analysis of gathered evidence was achieved.

Cran (1994) proposes the learning of hospitality industry skills and knowledge to be relatively straight-forward but learning, acquiring and then continuing or sustaining practice of ‘service orientation’ is challenging. Service orientation is defined as a set of individual dispositions that assist with service personnel to provide courteous but not obsequious responses or assistance to customers and workmates (Cran, 1994). The learning and practice of ‘service orientation’ skill sets is challenging for learners and trainers / tutors as performance of dispositional or attitudinal skill is dependent on intrinsic motivation, often requiring the transformation of internal belief systems. Therefore, the introduction of videos to record students’ learning, through role play, of key hospitality skill and dispositions requires careful consideration, planning and implementation.

Literature informing pedagogical framework

In this section, the key pedagogical frameworks informing the project are introduced and discussed.

Improving students’ self-evaluative skills using videos of role play practice and structured feedback.

Role play as a learning strategy

Role play as a method for assisting the skills development has varied in popularity over the last four decades and includes skills, issues, problem-based and speculative-based approaches (Armstrong, 2003). Advantages of role play relevant to this project include:

- providing practice in various types of behaviours/skills;
- opportunities for communications skills, other than written text to be practiced;
- immediate feedback is possible;
- being generally student- centred to address needs of the learner as they learn a skill;
- replicating real-world situations; and

- providing a technique to change dispositional outlook (adapted from van Ments, 1989).

These advantages, match the learning outcomes required for the skills required of front-office occupational roles, which are to learn the skills of being a front office receptions including the adoption of dispositions congruent with a ‘service orientation’. Armstrong (2003) suggests role play is used as a training method in the tourism management industry due to its emphasis on participatory, experiential learning approaches and application to real-world practice. These learning approaches align well with learning check-in / check-out processes that require students to combine motor skills (data entry, credit card processing) with customer service and orientation (greet and interrelate with guests).

Disadvantages of using role-play include:

- the requirement of a large component of time for practice;
- dependence on quality of observers to provide appropriate feedback;
- may sometimes rely on students having requisite skills/knowledge to perform adequately during role play; and
- may dominate the learning to exclusion of other learning outcomes (adapted from van Ments, 1989).

In this project, role play was used as the learning activity for students to learn and develop through deliberate and reflective practice, hotel front-office/receptions check-in and check-out procedures. Therefore, a skills approach is utilised. An adaption of the steps for role play by van Ments (1989) was used to structure role play activities for students to learn and deliberately practice how to check-in and check-out guests from Poly Towers (a CPIT virtual hotel). Additionally, the precepts discussed in the sections below on deliberate practice, structured feedback and reflective practice were incorporated into role play sessions.

Video as tool for improving reflective learning

The process of using videos to collect student learning and then use these videos to encourage reflective learning is now widely used in sports skills acquisition (Summers, 2004) and becoming more common in teacher education (Rich & Hannafin, 2009) and training and education (Fukink, Trienekens & Kramer, 2011). However, the use video technology to improve learning in the vocational education sector is infrequent and examples available emphasis research approaches using video to study vocational education (for examples see Chan & Leijten, 2012 and Filliettaz, 2010) rather than improvement of skills learning.

Advocates of using video feedback for learning (exemplified by Darden, 1999) recommend a structured framework for introduction and use of video feedback with students. Staged or scaffolded / teacher assisted learning activities are important to maximise the advantages of video feedback.

Two pedagogical principles underpin our use of videos to help hospitality students learn customer interaction skills. These are:

- **Deliberate practice** as defined by Ericsson (1993, 1996, 2006) and detailed in application to using video to improve student's skill learning (Williams, Farmer & Manwaring, 2008).
- **Reflective practice** as described by Schon (1983) and applied to student teacher learning (Harford, MacRuairc & McCartan, 2010).

The role of deliberate practice

Through undertaking a series of cognitive psychological studies on experts in chess, musical performance, the visual arts and sciences, Ericsson (1996, 2006) and with others (Ericsson, Krampe & Tesch-Romer, 1993) defined the premises for deliberate practice. The seven principles of deliberate practice to achieve expertise include:

- a) Informative and immediate feedback is fundamental towards assisting learners to define knowledge and skills.
- b) Measuring and analysing current performance is required to improve on performance
- c) Practice activities need to be specifically defined to improve performance aspects that require improvement
- d) Practice activities need to be repetitive to allow for reflection on outcomes and processes
- e) Learner motivations to improve performance is a prerequisite to achieving expertise
- f) Time and effort are required to attain expertise
- g) Teachers and coaches play a crucial role in guiding individual development (Van de Weil, Van den Bossche & Koopmans, 2011)

In an effort to assist law students to learn negotiation skills, Williams et al. (2008) described an intervention using student generated videos by applying the principles of deliberate practice as detailed in the above paragraph. In the past, video analysis of student learning involved:

- 1) Instructors watching the role plays and giving feedback during or after the event
- 2) Arranging for video recordings and then having instructors review the videos with students
- 3) Assigning students to write reflective journals about their learning and providing self-feedback

In adopting the use of deliberate practice as a framework, Harford et al. (2010) undertook to;

- Identify common, observable and discrete skills required (in their case, negotiation skills between student and ‘clients).
- Identifying these skills would meet a) and b) for deliberate practice to be initiated.
- Feedback on the identified skills would be elicited from students, meeting requirement c).
- Feedback to student from teachers or other students would also assure items d) and e) were met.

To the above items, our project also included clear guidelines to students and tutors for the provision of feedback as based on the work of Hattie and Timperley (2007) and applied effectively to assist students learning welding (Chan & Leitjen, 2012). The use of three forms of feedback are advocated, these are:

- Feed up – are the learning objectives being met.
- Feed back – what is the performance level on learning?
- Feed forward – what does the learner need to do improve learning or move to the next objective?

In implementing the above process, students were then encouraged to undertake a cycle of reflective practice, now discussed in the next section.

Reflective practice to bring about dispositional change

Many models of reflective practice have been recommended with one of the most recognised based on the work of Schon (1983). Schon advocated the importance of practice but also emphasised the need to supplement practice with reflection. In becoming efficient problem solvers, learners need to also learn how to identify or frame a problem, implement appropriate strategies to solve the problem and then evaluate the effectiveness of strategies and approaches used.

One model which connects well with the feedback guidelines as described in the above section is Rolfe's framework for reflective practice (Rolfe, Freshwater & Jasper, 2001). The process can be (over-)simplified as:

- What? (Describe the situation.)
- So what? (Theory & knowledge building.)
- Now what? (How to improve the situation.)

In this project, students were encouraged to use the feedback loop and to ensure they included the elements of 'so what' to improve understanding of the impact of their actions on customer service. In doing, students' own beliefs about 'service orientation' (Cran, 1994) was challenged, leading to a shift from just 'compliance or identification' to 'internalisation' of individual students' personal realignment of previous beliefs.

Research approach

The main objective was to find out '*how to assist hospitality students' to improve on self-evaluative skills*'.

Data collection for this aspect of the project was carried out through focus groups and class room observations. Four cycles of focus group and class room observations were undertaken

to firstly introduce students to the concept of 'self-evaluation' to improve the learning of 'customer skills'. Secondly to improve teaching strategies to support students as they engaged with using videoed performance to improve communication skills and 'customer-focused' dispositions. Interventions used were documented and thematically analysed for applied teaching and learning processes contributing towards helping student become critically reflective learners. From these findings, guidelines to assist students to use video as a tool to enhance critical reflection were produced.

Findings

Learning front office skills

Here, technology was a tool used to collect evidence of students' developing front office practice and customer relationship skills. Students were learning and practicing how to check-in and check-out guests. The check-in/check-out processes required students to learn a set sequence of tasks. During the check-in/check-out sequences, students had to maintain a pleasant customer service orientated demeanour. Tasks included:

- issuing guests with guest check-in forms to be filled in,
- using a desk-top computer running the Opera Reservation System to find and allocate rooms,
- processing credit card and cash payments from guests
- retrieving and returning pre-checked in guest forms to a card index filing system
- issuing keys
- providing guests with information about hotel services etc.

Using video to assist the learning of front office skills through role play

The net tablets were used to video individual's role playing check-in or check-out practice and to share role play performance. Students worked in groups of three, cycling through roles as receptionist, guests and video recordist. Viewing of individual student's role plays was supported by checklists and feedback sheets. The checklists sheets were informed by the need to identify task components for deliberate practice and included aspects of multitasking (e.g. entering data or searching database while maintaining pleasant communication and interaction with guest).

Feedback processes

Videos of individual student's role plays were appraised by each individual student, in student groups of three and through whole class teacher-led learning activities. Feedback sheets included feed up, feedback and feed forward (Hattie & Timperley, 2007) framed as 'what?', 'so what?' and 'now what?' questions (Rolfe, Freshwater & Jasper, 2001).

Findings on using video to assist learning of front office skills through role play and appropriate feedback

The opportunity for students to view and receive detailed feedback for each performance assisted in learning. The main improvements in learning were through:

- accelerated learning of the front office check-in/check-out process and
- improved student's self-awareness of their customer skill interactions.
- increased ability of students to identify and then deliberately practice check-in/check-out activities that required multitasking, for example, entering guest information into computer while maintaining a pleasant conversation with the guest.

- visibility of students' 'service orientation' through 'body language' signals and these were discussed in peer feedback, tutor to group feedback and tutor to whole class feedback sessions.
- development of a vocabulary to describe aspects of 'service orientation' students were initially unaware of
- learning of 'judgement' as to appropriate behaviours contributing to the required level of 'service orientation' required of front office receptionists

Summary

The findings from this sub-project support the use of videos to support role-play learning activities of real-world tasks. In particular, videos are helpful when the tasks is:

- complex,
- has multiple steps and
- includes occasions when students have to prioritise process tasks with customer service orientation focus.

Video footage of practice captures each motor skill step, students' actions and student and 'guest' interactions. Each aspect of check-in or check-out is analysed and accompanied by directed and prompt feedback. Students' learning repertoire was extended and hastened by the opportunity to learn from their own performance and from watching the performance of the tutor and other students. Immediacy of feedback reinforced good practice and targeted areas for improvement. The video record also provided a progressive record for individual students of their building confidence.

Discussion

In the above literature review section, van Ments (2005) warns of several disadvantages of using role play as a training method. These disadvantages include a large component of time for practice; dependence on quality of observers to provide appropriate feedback; may sometimes rely on students having requisite skills/knowledge to perform adequately during role play; and may dominate the learning to exclusion of other learning outcomes. Each of these is now used to discuss if using videos assisted in working through these disadvantages.

Time required for practice

As discussed above, deliberate practice to learn a set of occupational skills requires time to practice, diligence and support. In this project, the student feedback indicated willingness to work through the necessary skill acquisition through repetitive role plays. However, only three to four role plays were videoed for the purposes of peer and tutor feedback. The immediacy of feedback provided by using tablets to record role play practice and the ease with which the recorded role play could be shared with peers, tutor and the whole class, enhanced opportunities for learning through viewing exemplars and learning from mistakes. There was also increased development of 'judgement' on what was to be 'good practice' especially for hard to describe dispositional 'service orientation' traits.

Dependence on quality of observers to provide appropriate feedback

We applied previous work on improving feedback with trades students (Chan & Leijten, 2012) to ensure that students were ready to provide feedback. We also used 'team building' exercises to ensure the class environment supported students and assisted with building the confidence to accept feedback from their peers. Students who did not want their videos shown to the whole class would change their minds, once they saw the benefits they could

obtain from having their performance critiqued by other students. Therefore, providing a safe and supportive learning environment was a key to the success of using videos to improve the learning of 'service orientation' type skills and dispositions.

Students having requisite skills/knowledge to perform adequately during role play

Providing an exemplar through tutor and then class critique of the tutor's performance assisted students to learn the language of feedback pertinent to the front office context. The tutors' video was also a model from which students and peers could gauge performance. A check list of check-in / check-out procedure provided students prompters for each step in the process. Therefore, guided and scaffolding of learning activities were important.

Role plays dominating the learning to exclusion of other learning outcomes

The curriculum for the course required a range of learning outcomes to be completed. Time provided for tutor contact with the class was at a premium. Using net tablets to video student role plays actually maximised tutor contact time as students could undertake role plays outside of timetabled class time, using their independent learning time to practice and record check-in or check-out processes.

Future plans

Plans to move beyond what has been achieved with this project include setting up a video drop-box on the CPIT learning management system (LMS) for students to archive their videos. The tutor is then able to provide feedback between classes to students. Immediacy of feedback is important but providing written instead of oral feedback, means a record is kept of feedback, providing students with a reference source to access and work through.

Conclusion

From this project, the following guidelines are presented to assist with the use of videos to accelerate the learning of complex skill sets within situated learning environments.

Set up culture of trust

The most important recommendation is to set up culture of trust in the classroom environment to encourage engagement with the role play learning activity, involved participation in providing and accepting feedback and commitment to individual dispositional service orientation transformation.

- Establish a culture of sharing and inclusiveness of valuing each student's contributions.
- Tutors need to model how to provide and accept feedback – this can be done through a short session using a 'neutral example' i.e. feedback on tutors' example.
- Value students' contributions.

Prepare students

As with all learning activities, it is important to ensure the tutor is prepared, the students have the requisite skills to undertake the activity and the class room climate fosters a learning environment. The ability to provide and accept feedback is a skill to be learnt. Provision of a structured session on 'how to give feedback' (Leijten, 2012) provides student with confidence and procedures.

Student preparation includes the following:

- Plan learning activity around the concept of 'critical reflection' and 'peer feedback' BEFORE the first role play begins.

- Provide learning activities to learn how to feedback and how to accept feedback assist students to maximise the benefits of role play learning activities.

Learning through feedback

Ensuring students' were ready to provide and receive feedback on their role-play performance was an important aspect of this sub-project.

- Provide students with opportunities to practice providing and accepting feedback in small groups and with one-one tutor sessions BEFORE undertaking whole class feedback
- Provide students with a structure for 'critique' so that feedback is focused on the procedures to be learnt
- Tutors must model the 'language' of good feedback and encourage students to use correct protocols and processes.

The project reported in this article, exploited the video capabilities of net tablets to improve the outcomes of role play in learning skills and attributes important to the vocational outcomes for the student participations. Pedagogical frameworks of deliberate and reflective practice were important in informing the development and deployment of the concept. The use of video to record role play activities and structured frameworks for providing peer and tutor feedback accelerated the learning of front-office reception checking-in and checking-out processes.

References

Armstrong, E. K. (2003). Applications of role-playing in tourism management teaching: An evaluation of a learning method. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 2(1), 5-16.

Chan, S. & Leijten, F. (2012). Using feedback strategies to improve peer-learning in welding. *International Journal of Training Research*, 10(1), 23-29.

Chan, S., Fisher, K. & Sauer, P. (2012). *Developing Interactive eTextbooks on net tablets*. Ako Aotearoa Southern Hub project. Retrieved 28th February 2013 from <http://ako.aotearoa.ac.nz/ako-hub/ako-aotearoa-southern-hub/resources/pages/situated-technology>

Cran, D.J. (1994). Towards validation of the service orientation construct. *The Services Industries Journal*, 14(1), 34-44.

Darden, G. J. (1999). Videotape feedback for student learning and performance: A learning-stage approach. *Journal of Physical Education, Recreation & Dance*, 70(9), 40-45 & 62.

Ericsson, K. A., Krampe, R. T., Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance, *Psychological Review*, 100(3), 363-406.

Ericsson, K.A. (1996). The acquisition of expert performance: An introduction to some of the issues. In K.A. Ericsson (Ed.) *The Road to Excellence: The Acquisition of Expert Performance in the Arts and Sciences, Sports and Games*. Mahwah, NJ: Lawrence Erlbaum Associates.

Ericsson, K. A. (2006). The Influence of experience and deliberate practice on the development of superior expert performance. In K. A. Ericsson, N. Charness, P. J. Feltovich & R. R. Hoffman (Eds.),

The Cambridge Handbook of Expertise and Expert Performance(pp. 685 – 705). Cambridge, United Kingdom: Cambridge University Press.

Harford, J., MacRuairc, G., & McCartan, D. (2010). Lights, camera, reflection: Using peer video to promote reflective dialogue among student teachers, *Teacher Development*, 14(1), 57-68.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112.

Hodkinson, P., Biesta, G., & James, D. (2008). Understanding learning culturally: Overcoming the dualism between social and individual views of learning. *Vocations and Learning*, 1(1), 27-47.

Leijten, F. with Chan, S. (2012). *The effectiveness of peer learning in a vocational educational setting*. Ako Aotearoa Southern Hub project. Retrieved 28th February 2013 from <http://ako.aotearoa.ac.nz/ako-hub/ako-aotearoa-southern-hub/resources/pages/effectiveness-peer-learning-vocational-educational-setting>

Rich, P., & Hannafin, M. (2009). Scaffolded video self-analysis: Discrepancies between pre-service teachers' perceived and actual instructional decisions. *Journal of Computing in Higher Education*, 21(2), 128 – 145.

Rolfe, G., Freshwater, D. & Jasper, M. (2001). *Critical Reflection in Nursing and the Helping Professions: A User's Guide*. Basingstoke, UK. Palgrave Macmillan.

Schon, D. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Van de Weil, M. J., Van den Bossche, P., & Koopmans, R. P. (2011). Deliberate practice, the high road to expertise: K. A. Ericsson. In F. Dochy, D. Gijbels, M, Segers & P. Van Den Bossche (Eds.)

Theories of Learning in the Workplace: Building Blocks for Training and Professional Development Programs. London, UK; New York, NY: Routledge.

van Ments, M. (1989). *The effective use of role-play*. London, UK; New York, NY: Kogan Page.

Williams, G. R., Farmer, L. C., & Manwaring, M. (2008). New technology meets old teaching challenge: Using digital video recordings, annotation software and deliberate practice techniques to improve student negotiation skills. *Negotiation Journal*, 24 (1), 71-87.