Teacher reflection on practice: evaluating TROPIC

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Abstract

This paper is an evaluation of 'TROPIC' (Teachers Reflecting On Practices In Contexts), a professional development program developed by teachers for teachers in the vocational and technical education sector. TROPIC is based on the 'classroom profiling' program developed by Mark Davidson in Education Queensland. The objectives of TROPIC are to assist teachers to employ a broader range of strategies particularly in relation to behaviour management, and to encourage teachers to be more reflective of their practice and to engage in professional conversation with colleagues using a framework of structured peer observation and feedback. The evaluation of the early stages of implementation indicates that participants in the TROPIC program have found it provides effective learning experiences with potential to bring about positive changes in teaching practices on a wide scale. (This paper is a revised and condensed version of a paper submitted for the requirements of a Master of Learning Management at Central Queensland University).

Introduction

This paper is an evaluation carried out by a practitioner researcher, of the early stages of implementation of the 'TROPIC' (Teachers Reflecting On Practices In Contexts) program. Initial participants in the program are 15 TAFE teachers representing eight different vocational training areas, drawn from eight campuses across three regional TAFE Queensland Institutes. Levels of experience of these teachers range from three or four years to more than twenty years. Vocational training areas include business, civil construction, commercial cookery, community services, engineering, hairdressing, natural therapies and performing arts. The overarching purpose of the program is to promote professional conversation amongst teachers, by opening teaching practice through a structured non-judgmental peer observation and feedback process. Another important aim of the program is to provide teachers with practical behaviour management skills. While this may seem an unusual aim in an adult education context, there is ample anecdotal evidence that such skills are needed, particularly with the diversity of clients in TAFE, and the number of teachers and trainers entering the system with limited and in some cases no teaching experience or teacher training.

The initial TROPIC participants have undergone a two day training program to enable them to share with and promote to colleagues, a set of strategies for promoting positive supportive interactions with students, and to reinforce use of these strategies by engaging in confidential, non-judgmental peer observations and feedback on a voluntary basis. The observations are structured through use of instruments with the aim of ensuring consistency across different observers. Once they have had some time to develop their skills members of this group will contribute to training of vocational and technical educators on a broader scale, and to continuous improvement of the program. Improvements will include developing greater validity and reliability of the observation instruments as well as improved coaching and mentoring skills in

providing feedback. Participants in TROPIC are potentially practitioner researchers as all are gathering and sharing data on teaching practices.

Literature review

Behaviour management
While there is an extensive literature on behaviour and classroom management in the schools sector (see for example the survey of approaches and theories provided in Porter (2000), there is virtually no published research on behaviour management skills for TAFE teachers, and no references could be found to professional development programs similar to TROPIC. Davidson and Goldman (2004) trace the development of TROPIC from the 'classroom profiling' program created by Mark Davidson and used in Education Queensland over the past ten years. The classroom profiling program is grounded in the work of Glasser (1990), Porter (2000), Richmond (1996) and Rogers (1995). Above all it is grounded in Mark Davidson's own extensive first-hand experience and observations of hundreds of primary and secondary school teachers, and in the shared knowledge and practice of over 200 'classroom profilers' – practicing primary and secondary school teachers trained by Mark over a period of ten years. (For more information see http://www.ieta.ash.org.au/behaviour). The TROPIC program is based on the classroom profiling program, using the same fundamental principles of positive supportive behaviour management strategies and structured voluntary, confidential, non-judgmental observation and feedback, but it has adapted the techniques and instruments to suit adult, vocational and technical education contexts.

Evaluation of training
The evaluation approach adopted in this project is based on Donald Kirkpatrick's (1998) four-level model of training evaluation. This involves measuring **reaction** (participants' reactions to the training); **learning** (the extent to which the desired skills, knowledge and attitudes were learned as a result of the training); **behaviour** (the extent to which learning led to desired changes in behaviour); and organizational **results** (usually couched in financial terms such as increased profits but can also include improved staff morale or better quality of work life). Kirkpatrick first proposed his four-level model over forty years ago, and it remains one of the most influential models in use today (Athanasou 2000; Nickols 2000; Downing, Griffin, Humunicki and Maric 2003).

Reaction to the initial two-day training program was sought from all participants through surveys conducted at the conclusion of each of the two days. Information concerning all four levels was collected in case studies of individuals at each of the three institutes.

Workplace learning
TROPIC is intended to provide a form of workplace learning. According to Stephen Billett (1995; 2006) there are three ways in which workplace learning commonly occurs: engagement in work tasks; close guidance of other workers and experts; and indirect guidance provided by the setting and practices within the setting. Billett (2004:318) asserts that workplaces have different "invitational qualities" or "affordances" for participation and learning, which serve the needs of particular interests. For example there may be "contestation between institutionalized interests,

such as those of workers and management" (Billett 2004:319). Individuals' agency and intentions also determine and shape participatory practices. Early implications of the case studies are that the combination of workplace affordances and individual agency will be a key factor in the success or otherwise of TROPIC.

Billett (personal communication May 2006) suggested that workplace learning of teachers, like that of doctors, is primarily "private" because their workplace practice is mostly directly with clients (patients or students), away from other workers. Further research could explore to what extent this is true and whether certain aspects of TAFE teachers' learning at work (for example audit compliance) are less private and more subject to the close guidance of other workers or to indirect guidance of the workplace setting. A major aim of the TROPIC program is to develop a community of practice in which teachers share learning and experience which otherwise remain private and individual.

Communities of practice
A community of practice comprises three characteristics according to Etienne Wenger (1998): firstly the **domain**, or identity defined by a shared interest; secondly the **community**, in which members build relationships that enable them to learn from each other; and thirdly the **practice**, in which members build a shared repertoire of resources and knowledge through sustained interaction.

According to Lesser and Storck (2001:833) the "social capital resident in communities of practice leads to behavioural change – change that results in greater knowledge sharing". Social capital is defined by Nahapiet and Ghoshal (1998, cited in Lesser and Storck 2001:833) as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit". The TROPIC program aims to develop a cross-institute community of practice of teachers although to some extent a tension emerges between the goals of a community of practice of teachers and the goals of the organization.

Research method

Surveys and case studies framed around Kirkpatrick's four-level model were used to evaluate the extent to which TROPIC achieved its objectives. The first level, reaction, is important for two reasons. Firstly, as Kirkpatrick (1998:20) points out, while positive reaction does not ensure learning will take place, "negative reaction almost certainly reduces the possibility of its occurring". Secondly, participation in TROPIC is on a voluntary basis and positive reaction is needed for the individual agency and intention described by Billett as noted above. Surveys were conducted at the conclusion of each of the two days of the initial training to gauge reaction.

For the other three levels case studies were used because they allow empirical inquiry of a contemporary phenomenon within its real-life context, where "the boundaries between phenomenon and context are not clearly evident" (Yin 2003:13). This allowed the researcher as participant-observer to explore the interplay between different levels of 'affordances' for workplace learning in different settings, and the different levels of individual agency and intention; as well as the extent to which a community of practice was formed. The main source of evidence for the case studies

is from interviews using open-ended questions, which sought information on participants' self-assessment of the effects of TROPIC on their own teaching practice, that of their colleagues, and on the potential they saw for organizational change. Notes were taken at each interview and written summaries checked with each interviewee. In addition, where possible the researcher co-observed teaching sessions with participants and had the opportunity to observe first-hand participants' learning, by comparing items noted on the instruments used in the structured observation process.

Findings and discussion

Surveys

Fifteen responses were collected on day one of the training session. Responses were:

Table 1: Day one training survey responses

	Strongly agree	Agree	Undecided
"enjoyed today's session":	60%	33%	7%
"learned things/apply at work"	67%	33%	
"presented in interesting way"	53%	40%	7%
"main facilitator good job"	53%	40%	7%
"co-facilitator good job"	47%	53%	
(Nil responses to 'Disagree' and 'Strongly disagree')			

Fourteen responses were collected on day two. Responses were:

Table 2: Day two training survey responses

	Strongly agree	Agree
"enjoyed the training"	79%	21%
"topics interesting/relevant"	86%	14%
"facilitators did a good job"	79%	21%
"good understanding of TROPIC"	21%	79%
"confident to observe/feedback"	29%	71%
"positive difference in institute"	71%	29%
(Nil responses to 'Undecided', 'Disagree' and 'Strongly disagree')		

Qualitative responses (optional written comments) were mainly positive and participants emphasised the value they placed on peer interaction and discussion. See Appendix A for full survey results.

Case studies

Reaction

Teachers interviewed indicated they valued the focus on teaching, learning, and relating to students, with one participant indicating it was "the first educational PD" he had had in five years. Another indicated that he considered the training and subsequent opportunity to observe other teachers "a motivator". Participants valued the connections made with other teachers, firstly at the initial training session which not only brought together teachers from three widely dispersed institutes but in several cases also built ongoing connections between teachers from different vocational areas in the same campuses or institutes who previously had not met.

Connections were also built during observation sessions that participants subsequently carried out with other colleagues.

Learning
Participants indicated that the training affirmed practices they already engaged in, taught them some new strategies, and gave them a shared language for talking about the strategies – in other words, a shared repertoire of resources and knowledge, which is one of the characteristics of a community of practice as defined by Wenger as noted above. Teachers interviewed indicated that engaging in observations subsequent to the training exposed them to techniques and strategies they could then incorporate into their own practice, and also led to greater self-reflection. One interviewee pointed out that having a structured approach for conducting observations provides teachers with a framework allowing for continual learning.

Behaviour
The training, subsequent observation and feedback sessions in individual institutes, and ongoing community of practice have led to some changes in teaching practice and to greater sharing of teaching and behaviour management strategies with colleagues. A total of 19 observation and feedback sessions had been conducted as of September 2006 (three months after the initial training) which otherwise would never have occurred. One interviewee indicated that colleagues told her that simply agreeing to be observed led them to become more reflective of their practice, and that the feedback sessions which followed opened "very extensive conversations" about teaching practice.

On the other hand, participants also reported that many teachers they approached were reluctant and in some cases outright hostile to the idea of allowing another teacher to observe them. Generally this was seen by participants to be based in a lack of trust, and a perception that peer observations – and to some extent a focus on teaching and learning – are not a 'normal' part of the organizational culture. One of the interviewees planned to use regularly scheduled staff meetings to present information on the teaching and behaviour management strategies but when interviewed was concerned about a "group cultural reaction to that hour" – that is, a perception that the meetings serve the needs of managers and are not education-focused, therefore talk of educational matters may be viewed with cynicism. Subsequently he did give the presentations and they were well received.

Results
It is too early to know if TROPIC will sustain momentum and bring about organizational change. All participants who took part in the training (apart from two who have since left TAFE) have remained involved in the cross-institute community of practice, communicating by email, wiki, videoconference and face-to-face meetings where possible. Some have focused their energies on their immediate team, campus or faculty. Generally participants agree that a culture change is needed for peer observations to become common practice. Teachers interviewed suggested that the TROPIC program should be incorporated into the induction of new teachers. The community of practice aims to train a much wider base of teachers to engage in TROPIC.

A common theme to emerge in the interviews and in conversation with participants is a tension between the need for organizational support, and a desire to retain teacher ownership and autonomy without managerial interference or control.

Implications of the study

Overall the evaluation indicates that the TROPIC training has provided participants with a shared repertoire of behaviour management strategies they did not previously have, and a process for conducting structured peer observation and feedback sessions to reinforce these. A community of practice has formed, although it remains to be seen to what extent participants will sustain involvement and activity in a purely voluntary program, which to some extent is viewed with suspicion by colleagues, and where support and recognition by management are needed without managerial control. However, participants have expressed enthusiasm for the program and the community of practice, and a range of ideas for sustaining and growing both. So provided opportunities can be found to put some of these ideas into practice and to encourage further participation, the program should bring about some positive changes for individuals and for the organization as a whole.

Recommendations for further research

Apart from tracking the case studies and the development of the TROPIC program over the next 12-18 months, it would be useful to research how teachers learn in the workplace and whether TROPIC can provide a useful framework for enhancing workplace learning, for both beginning and experienced teachers. Because the TROPIC observations involve detailed quantitative and qualitative observations of teaching practice, they could themselves provide a platform for research into teaching and learning practices in a range of topics. For example, with additional training, TROPIC observers could research topics such as levels of questioning used by teachers and students. It could be possible for TROPIC observers to also be formally trained as practitioner-researchers, without losing the non-judgmental, confidential and voluntary basis of the TROPIC program.

Conclusion

TROPIC has achieved its initial aims of establishing a community of practice of teachers engaged in the processes of peer observation and feedback, professional conversation, and sharing of behaviour management and other teaching strategies with colleagues. The evaluation indicates that the members of this community are committed to these aims and see real potential in the TROPIC program for bringing about positive change in teaching practice in the vocational and technical education sector on a wide scale.

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Appendix A – TROPIC training survey results

Please give your honest reactions to Day One of the TROPIC training program.
(Day 1 responses – total of 15)

	Strongly agree	Agree	Don't undeci
I enjoyed today's session.	9	5	1
I've learned things that I can apply in my work.	10	5	
The information was presented in an interesting way.	8	6	1
The main facilitator did a good job.	8	6	1
The co-facilitator did a good job.	7	8	

Today I particularly liked… "listening to others' experiences" | "discussion and reflection" | "peer interaction and participation" | "the wide ranging discussions" | "the information provided" | "the participative group sessions and lively discussions" | "the inclusiveness of the group" | "the scenarios/discussion/interaction" | "the many opportunities for discussion with whole group" | "pretty much everything" | "I enjoyed the interaction. It was like beginning teacher refresher program" | "discussing issues affecting all of us"
Today I didn't like…"bit slow/facilitator appeared not on task/bit unorganized" | "the food" | "I enjoyed the whole day" | "enjoyed all" | "I enjoyed all of the day" | "the 'pole'"
I am confused or need more information about… "purpose/process to do TROPIC at work" | "the differences between 'delivery' and measures to shape behaviour" | "not yet" | "filling in frequency sheet" | "I need to sort out strategies on teacher strategies form" | "the role of the profiler and relationship with management" | "the rest of the 'recording' process" | "nothing" | "[need more information about] everything but I'm not confused" | "it was all good"
Comments and suggestions: "I like the idea of observation across the range of instructional skills to incorporate active listening, questioning techniques etc – which often form the basis of lessons in an adult environment – thank you great day" | "maybe a bit faster moving with focus on the issues kept as objective" | "keep up the great work and spread the word" | "none at this stage" | "a time schedule could be given to participants (session times)"

Please give your honest reactions to the TROPIC training program overall.
(Day 2 responses – total of 14)

	Strongly agree	Agree	Don't undeci
I enjoyed the training. *Please note anything you particularly enjoyed/did not enjoy:* "honest reflection and sharing of strategies" "enjoyed the activities and interaction"	11	3	

"and meeting other teachers" "all" "good practical examples and discussion"			
The topics covered were interesting and relevant. *Please note anything that was/was not particularly interesting or relevant:* "all great" "all"	12	2	
The facilitators did a good job. *Please note any comments you have about the facilitators:* "excellent – I liked the way all views were valued and accommodated" "yes held the group and discussions together well" "today much improved" "both" "very positive discussion and comments"	11	3	
I believe I now have a good understanding of what TROPIC is about. *Comments:* "better now – was confused re subjective and objective aspects" "yes now need lots" "definitely – thought-provoking" "I feel I will, once I've practiced and reflected. Not quite yet"	3	11	
I am confident that I can now observe and give feedback to colleagues. *Comments:* "yes but am still negotiating forms and not entirely confident with them" "yes" "will need to rehearse a bit more" "I will need practice" "That obs will occur after revision of the folder and will improve over time" "over time and within a number of contexts"	4	10	
I get the feeling that TROPIC can make a positive difference to teaching in my institute. *Comments:* "how it is promoted will make the difference" "there are many positives – building trusting relationships" "absolutely"	10	4	

Any other comments or suggestions?

"very enjoyable and valuable to have this discussion"

"I believe that how feedback is provided is as important as the recording of skills. I think some additional info on empathetic listening/effective questioning/positive regard would be valuable. I agree that the link between microskills and observation skills is important. Like the concept, still struggling with forms. Thank you!"

"really got a lot out of it – thanks Martha and Susan"

"truly found this very enriching, excellent way of developing effective teaching strategies"

"team approach was very good"

"thank you – see you in July"

"will be pleased to trial TROPIC and get together in 3 months for feedback etc"

"still seems to be some grey areas eg definitions and recording. Though a terrific concept that is worth developing more. Well done."

"1. Provide a day by day timetable – even if it's not followed slavishly. 2. 2 days is not enough to quench my thirst for this. I understand why Ed Q takes 2 weeks. I'd at least double the duration. THANK YOU MARTHA!"

"positive group involvement helped make the 2 days enjoyable, informative and interesting"

Appendix B – Interview Schedule (TROPIC 2006)

Question 1: Do you believe the TROPIC training has had any effect on your teaching practice?

Question 2: Do you think your teaching practice is likely to change in the future, as a result of your involvement with TROPIC?

Question 3: Has the TROPIC program had any effect on your colleagues' teaching practice? Is it likely to in future?

Question 4: What facilitates your implementation of TROPIC (ie conducting observation sessions, using the micro-skills, or teaching micro-skills to colleagues)?

Question 5: What obstacles or barriers are there to your implementation of TROPIC?

Question 6: What do you think could make TROPIC successful in your institute? In TAFE Queensland?