GOOD CoP: WHAT MAKES A COMMUNITY OF PRACTICE SUCCESSFUL?

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ABSTRACT

We have established a community of practice focussed on student learning in first-year science. It is recognised that transition, whether from school to university or other possible transitions, is an issue that is a concern for the entire sector, and this is acknowledged both at Faculty and University level. One of the factors to which we attribute the success of this CoP is that we are working within the context of a well-established set of transition pedagogies which have been strongly promoted and supported within UTS. There is also an internal grants scheme that provides small amounts of funding for initiatives aimed at improving transition and engagement as part of the widening participation strategy. Another factor for the success of this group is the leadership and active engagement of a senior staff member. This CoP has not evolved organically as a grass-roots group, nor has it been commissioned from on-high. The Faculty of Science has also recently appointed an academic developer to support course renewal and the mapping of graduate attributes, and this role includes the support of initiatives like setting up CoPs.

INSTITUTIONAL CONTEXT

The University of Technology, Sydney (UTS) has responded to the national agenda on widening participation in higher education by students from non-traditional groups including students from low socio-economic status (low SES) backgrounds by investing significantly, in both appointments and programs, that support transition to higher education. It has been identified that it is critical to put support in place to retain these students once they have commenced higher education studies. Even for well-prepared students there are significant difficulties associated with negotiating the transition to higher education, whether that transition is from school, from a TAFE college, from a considerable hiatus in study, or from the world of work. There has been considerable work around transition pedagogies, particularly that by Kift, Nelson and Clarke (2010), and UTS has appointed a coordinator to work with Faculties to ensure that the transition pedagogies are embedded in their first-year practices. The First-Year Experience grant scheme, though fairly small in overall scope and size of individual grants, has been an important stimulus to work on improving the first-year experience for all students and particularly those of low SES background. Some funding has also been granted to Faculties to appoint a Faculty-based transition coordinator (fractional).

WHAT ARE CoPs?

One of the most straightforward definitions of a community of practice (CoP) that is widely quoted is: Communities of practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis (Wenger, McDermott, & Snyder, 2002; p.4).

Many workplaces use teams to achieve objectives and there is a strong literature on teams and teamwork but CoPs differ from teams or work groups in the following ways: membership is voluntary; the goals of a community are less specific and more changeable; results are not easily discerned or measured; the community exists as long as its members participate (Wenger & Snyder, 2000).

As a CoP evolves, it will create its own way of operating and, to some extent, develop its own culture. Some ways in which a CoP defines itself are:
- Local lore, shared stories, inside jokes, knowing laughter;
- A shared discourse reflecting a certain perspective on the world;
- Shared ways of engaging in doing things together;
- Very quick setup of a problem to be discussed;
- Jargon and shortcuts to communication as well as the ease of producing new ones;
- Certain styles recognised as displaying membership (Wenger, 1998; p.125).

CoPs have become commonplace in educational institutions as a means of bringing staff members together to discuss matters of common interest, as well as being used in educational practice itself. Examples include: nursing education (Garrow & Tawse, 2009); CoPs in a design studio / architecture (Morton, 2012); CoPs in university libraries (Sánchez-Cardona, Sánchez-Lugo, & Vélez-González, 2012); and supporting doctoral studies (Lahenius, 2012).

THE FIRST-YEAR SCIENCE COMMUNITY OF PRACTICE AT UTS

Initially ignorant of the background literature on communities of practice but attracted by the notion of community, particularly the resonance that community has with collegiality in an educational context, and recognising the importance of achieving improvement in the sphere of first-year experience, we decided to launch a first-year science community of practice (FY Sci CoP) at the University of Technology, Sydney (UTS). The focus on practice was also an attraction in that we felt that we would be able to convene an effective group that considered improvements to current practice.

Some of the major issues that motivated the formation of the FY Sci CoP were:
• Significant failure rates in certain first-year science subjects;
• High attrition rates in Science courses (for 2012 just under 20%) with most attrition occurring in first-year i.e. failure rates in first-year subjects and attrition were strongly linked;
• Institutional support for projects that investigated improvements in learning & teaching in first-year as part of the Widening Participation Strategy, for example First-Year Experience grants;
• Awareness of the transition pedagogies enunciated by Kift, Nelson and Clarke (2010) and an interest in exploring application of these principles in our subjects and courses.

We entered this enterprise with a clear view that there were significant issues to address and that it was very important than the FY Sci CoP was participant-driven not management-driven. Colleagues within the Faculty of Science had been very successful in applying for First-Year Experience grants (FYE grants) which were made available internally at UTS as part of the Widening Participation Strategy. The idea to establish the CoP was inspired by this clear groundswell of interest in first-year science teaching and learning in the Faculty of Science and to share experiences across Schools within the Faculty and even across subjects within Schools. Within Science we tend to work within silos called Chemistry, Physics, Microbiology, Environmental Science, etc. There are often barriers to openly sharing our expertise particularly within local academic units where hierarchy issues might be present.

In terms of our initial ideas about the purpose of the CoP, we believed that the CoP would provide a forum for the discussion of several current issues, including:
▪ Discussing transition pedagogies;
▪ A platform for Faculty-wide initiatives;
▪ Sharing good practice;
▪ Identifying common issues;
▪ Collaborating on FYE projects;
▪ Aligning assessment for the first-year cohort;
▪ Developing strategies to address weaknesses in background;
▪ Increasing engagement;
▪ Arresting attrition.

The proposal for the CoP was timely because there was some internal support offered for communities of practice that were related to the Widening Participation Strategy. A small amount of funding was made available for catering a morning tea / light lunch as part of the meeting. Providing some catering is thought to be a factor in attracting good attendance at CoP meetings. The Faculty of Science has certainly been in the vanguard with an active CoP running for some time now. We are pleased that attendance at meetings is always around 20 members. Colleagues from other Faculties with specific responsibility for first-year and transition have also been attending our meetings to observe our CoP in action.

The meetings are not very formal though there is usually a pattern of a presentation followed by discussion, with two or three different presentations per meeting. One of the themes that has been prominent in the meetings of the CoP has been discussion of audience response systems to achieve

student engagement, particularly in large lecture groups. There have been a variety of approaches to implementing this strategy and the CoP has certainly been a stimulus for science academics to adopt these methods. In terms of a success measure, trialling an audience response system in several subjects has been a direct result of the exploration of the applicability of these systems at meetings of the FY Sci CoP. As an example of engaging outside expertise which is thought to be an important way to stimulate a CoP (Probst & Borzillo, 2008), we had a presentation from the developer of an audience response system and were able, from our experience, to make suggestions for improvement. At one stage, it looked like the CoP could be overwhelmed by discussion on audience response systems so we deliberately introduced discussions on other topics.

After the first three CoP meetings we invited members to opt-in to a survey (that coincidentally allowed them an experience of an audience response system) to gather feedback and suggestions on the operation of the CoP. We have met monthly but some members have expressed concern that this is too frequent in semester time and we have extended the frequency to approximately six-weekly. There are no designated positions in the CoP though the authors of this paper generally plan the meetings in consultation with members, organise the catering and circulate the agenda and appropriate reminders.

The initial meeting had a number of participant activities, designed by a Faculty outsider, that were highly structured with set time-lines and the necessity to report back from breakout sessions etc. Participants found this approach too restrictive and we have settled on a much more organic approach. It might be argued that the foundation meeting with considerable input from outside the Faculty actually motivated the science staff to take responsibility for the CoP themselves, that is, helping establish ownership of the CoP within the Faculty.

A notable feature of the CoP has been the level of discussion and debate. We gather around a common interest in teaching first-year science students and a further commonality is that many of the members share the same cohort of students. So the focus of the work of the CoP is the general issue of enhancing teaching and learning in first-year science but more immediately, there is a concern for the learning of the current cohort of first-year science students who will be studying Chemistry 1, Physical Aspects of Nature, Mathematical Modelling, Cell Biology and Genetics etc.

Several papers in the early part of 2013 were either reports on First-Year Experience grants that had been completed in 2012 or were commencing in 2013. Through discussing these projects members of the CoP developed a clear idea of the particular interests of other members, and importantly, innovative practices they have introduced or are considering.

WHY CoPs SUCCEED OR FAIL

Anecdotal evidence suggests that some CoPs are extremely vibrant with a great deal of debate and discussion occurring in regular meetings. Through sharing insights, practices, ideas and innovations the members of the group become more effective practitioners and, in an educational setting, the students ultimately benefit. Other CoPs are launched but fail to achieve buy-in from participants, there is little discussion or debate at meetings, membership dwindles to the point that meetings are no longer sustainable. The CoP folds and people involved might think that they have wasted their time. A study of CoPs set up within a trade union in Canada concluded that "CoPs cannot be deliberately planned and configured" (Harvey, Cohendet, Simon, & Dubois, 2013). Quoting Wenger (1998), those authors point out that the proper features: mutual engagement; joint enterprise; and shared repertoire, must be in place or the CoP will fail. We are interested in trying to identify what factors lead to a successful CoP because when they do work in an educational context, the benefits are substantial both to the members and the students with whom they interact.

Probst and Borzillo (2008) have written about CoPs established within industrial settings and have identified factors that characterise successful and unsuccessful CoPs. Some of those factors are not relevant to a higher education context but, of those that are relevant, the following are reasons for success that we can identify as being present in the FY Sci CoP:
- to strategic objectives;
- Support the CoP with external expertise;
- Promote access to other internal and external networks;
- The CoP leader has a driver and promoter role;
- Overcome hierarchy-related pressure.

In terms of reasons for failure of CoPs, Probst and Borzillo (2008) include:

- Lack of a core group;
- Low level of interaction between members;
- Lack of identification with the CoP.

SUCCESS FACTORS

The transition pedagogies (Kift, Nelson & Clarke, 2010) provided a good framework for the CoP. Some of the other factors that made this FY Sci CoP a success include:

- First-time provision of an on-going forum to discuss learning & teaching issues in the Faculty of Science;
- Early establishment of ownership of the CoP by the members;
- Informal nature of the meetings;
- Creation of a 'safe environment' in which to share ideas: communities of practice help foster the process of storytelling among colleagues which, in turn, helps them strengthen their skills on the job (Seeley Brown & Duguid, 1991);
- No designated leadership positions, though significant leadership;
- A core of 'regulars' who are active in presenting and/or leading discussions: "typically it has a core of participants whose passion for the topic energizes the community and who provide intellectual and social leadership" (Wenger & Snyder, 2000);
- Institutional support for the CoP: "although communities of practice are fundamentally informal and self-organizing they benefit from cultivation. Like gardens, they respond to attention that respects their nature" (Wenger & Snyder, 2000);
- Not management-driven: "it's not particularly easy to build and sustain communities of practice or to integrate them with the rest of the organization. The organic, spontaneous, and informal nature of communities of practice makes them resistant to supervision and interference" (Wenger & Snyder, 2000);

MEMBER COMMENTS

Drawn from the evaluation data, some comments by members about their participation in the FY Sci CoP were:

- I like hearing what other academics are doing;
- It's good to hear about how others are addressing teaching issues such as engagement, student feedback and assessment and then looking at how to incorporate both new approaches and new technologies…;
- Wide variety of ideas to try with my teaching, opportunity to catch up with like-minded people;
- I like the informal nature of the meetings;
- The recognition of the scholarship of teaching and learning;
- We should be working towards joint projects that would attract… funding;
- More interactive i.e. less on presentations and more discussions.

In terms of measuring outcomes, impact might be seen for a curriculum change in the pass rate at the end of semester but the influence of the CoP is likely to be longer-term and perhaps it will prove difficult to identify specific impacts. There may be incremental adoption of good practice and in the longer-term there may be a substantial change in culture. Overall, very positive responses were received about FY Sci CoP and strong agreement that it should be maintained. It will run as long as there is sustained member interest.

REFERENCES

Garrow, A., & Tawse, S. (2009). An exploration of the assessment experiences of new academics as they engage with a community of practice in higher education. *Nurse Education Today, 29*(6) 580-584.

Harvey, J.-F., Cohendet, P., Simon, L., & Dubois, L.-E. (2013). Another cog in the machine: Designing communities of practice in professional bureaucracies. *European Management Journal, 31*(1), 27-40.

Kift, S. M., Nelson, K. J. & Clarke, J. A. (2010). Transition pedagogy: a third generation approach to FYE: a case study of policy and practice for the higher education sector. *International Journal of the First Year in Higher Education, 1*(1), 1 – 20.

Lahenius, K. (2012). Communities of practice supporting doctoral studies. *International Journal of Management Education, 10*(1), 29-38.

Morton, J. (2012). Communities of practice in higher education: A challenge from the discipline of architecture. *Linguistics and Education, 23*(1) 100-111.

Probst, G., & Borzillo, S. (2008). Why communities of practice succeed and why they fail. *European Management Journal, 26,* 335-347.

Sánchez-Cardona, I., Sánchez-Lugo, J., & Vélez-González, J. (2012). Exploring the potential of communities of practice for learning and collaboration in a higher education context. *Procedia – Social and Behavioral Science, 46*, 1820-1825.

Seely Brown, J., & Duguid, P. (1991). Organizational learning and communities-of-practice: toward a unified view of working, learning, and innovation. *Organization Science, 2*(1), 40-57.

Wenger, E. (1998). Communities of practice: Learning, meaning, and identity. Cambridge, England: Cambridge University Press.

Wenger, E. & Snyder, W. M. (2000). Communities of practice: The organizational frontier. *Harvard Business Review, 78*(1), 139-145.

Wenger, E., McDermott, R. & Snyder, W. M. (2002). Cultivating communities of practice. Boston: Harvard Business School Press.