

The Knowledge Building Community Odyssey:

Reflections on the Journey

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This paper reports on a journey that began in 1997 when a small group in the Faculty of Education at the University of Wollongong agreed to trial an alternative model of teacher education known as the Knowledge Building Community (KBC) Project. This alternative model of teacher education was based upon three learning principles, Community Learning, School-based Learning and Problem-based Learning. Since the first students began in 1999 the original model has undergone several revisions and is now best described as a “negotiated-evaluation- of-a-non-negotiable-curriculum-based-on-a-constructivist-model of-learning-and-knowledge-building”. The aim of the KBC Program has been to deal with the perennial problem of contextualising students’ professional learning, by linking abstract theory as closely as possible to the contexts and settings to which it applies, i.e. the primary school classroom.

INTRODUCTION

KBC is an acronym, which stands for Knowledge Building Community.

Over the last six years we’ve been on our own educational odyssey (an evolving, wandering, journey of discovery). We’ve been exploring and mapping how the theory and practices inherent in the concept of a Knowledge Building Community can be applied to the pre-service preparation of primary level (K-6) teachers in a typical Australian university.

In that time the terrain we’ve mapped has been both exciting and frustrating. Exciting because we’ve wandered down trails and arrived at destinations that have been surprising, rewarding and affirming. Frustrating because we come up against territorial barriers (and some hostile native tribes) that we’ve had to negotiate our way around, in order for the journey to continue. During the course of this odyssey we’ve also experienced some evolutionary changes in our understandings of knowledge,

knowledge-building, knowing, learning, understanding, teaching, and most importantly, what is meant by the concept of a learning community.

Our purpose in this paper is to describe what was involved in this journey.

THE ORIGINS OF THE KBC ODYSSEY

In late 1997, a small group initiated an informal, but searching series of discussions within our faculty. The outcomes of these discussions can be summarised thus:

- Given that the rapidity at which socio-political change was impacting on all levels of the education system, as teacher educators, we faced a “double whammy”. Not only was it becoming obvious that schools, more than ever, would need increasing numbers of teachers who were both knowledgeable “thinkers” and highly flexible “doers”, but it would be our responsibility to lay the foundations for their life-long professional growth and development.
- Like most pre-service teacher education providers we had both anecdotal and empirical evidence which indicated that many of our graduates arrived at schools after graduation very much unaware of how school and classroom cultures operated, were unable to see the relationships between what they had studied in the courses they’d completed, and how it should be translated into effective classroom practice.
- We were also aware that the system which employed most of our (and other providers’) graduates, The New South Wales Department of Education and Training (DET), had a long-standing concern that teacher education graduates in general did not know how to solve the kinds of problems which would confront them on appointment to schools, and that as the main employing authority, they were looking for ways to reduce the cost, both in terms of time and personal stress, of the ‘induction period’ that many newly graduated teachers seemed to need.
- That our program, after several long, drawn-out restructurings, was at best an eclectic mix of key features of what Reid and O’Donoghue (2001) refer to as the “traditional dominant models”. This means it was based on a strong underpinning of basic, non-negotiable skills and knowledge, to which we’d added layers of a teacher-as-skilled artisan ethos, and wrapped it all in the mantle of (so-called) standards of professional competency.
- Despite this our graduates didn’t seem to change in ways that were commensurate with the constantly changing needs of the profession and/or the systems which employed them.
- We therefore needed to explore, design, trial, and evaluate alternate models of pre-service teacher education.

Given this rationale, the faculty supported a proposal to design a research project which would

“Investigate, as a pilot, an alternative approach to initial teacher education through implementation and evaluation of an inquiry and problem-solving approach such as that used in medicine and the health sciences and greater integration of the practical field-based component of the teacher education program with the theoretical” (UOW Challenge Grant Proposal 1997, p. 3).

This project was informed by a wide ranging review of relevant literature (Kiggins 1998). As a consequence of this review we concluded that we needed to begin a process of challenging, and subsequently changing, the traditional paradigm of pre-service teacher education to which we’d been wedded for as long as we cared to remember. We decided that given the complexity of effecting such change, given our particular University/Faculty socio-political context, our best chance for starting and maintaining such a shift would be to design a project which would produce at least the following changes:

- A shift in the mode of program delivery from the traditional campus-based-lecture-tutorial mode to a problem-based learning-within-a-school-site mode;
- A shift of from the traditional clinical supervision model of practice teaching to a problem-based-action-research-mentoring model that brought the relationship between the specialised knowledge in Education courses and the nature and culture of schools and how they do business, closer together; and
- A shift in the traditional roles and responsibilities the major stake holding groups in teacher development, namely, the professional employing authorities, e.g. NSW DET, and local non-government school systems, the university, and the Teachers’ Union (NSWTF), so that a new form of School-based Learning might be developed.

We argued that if we set these three processes in motion, an important by-product would be the opportunity to identify and explore the logistical, cultural, and political barriers to effecting change in:

- The teaching/learning culture of undergraduate teacher education (in our context); and
- The traditional mindset and culture associated with practice teaching - the practicum (in our context).

In 1997 the faculty agreed to support the proposal “*in principle*” provided that any structural and/or procedural changes that were set in place were:

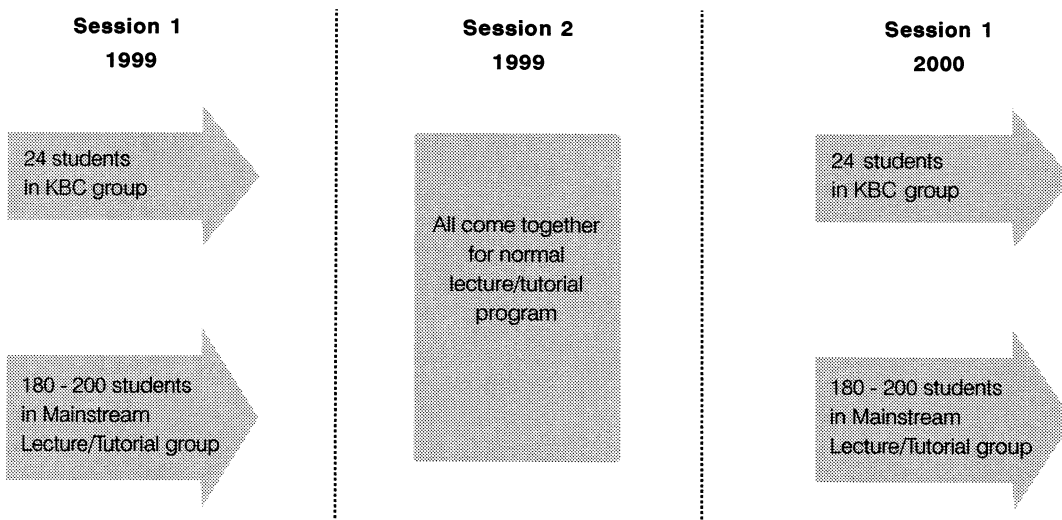
- resource-neutral;
- maintained academic standards, and met professional standards of competency; and

- maintained equity of workload, assessment procedures, with respect to students/staff locked into the mainstream program (*"in the pipeline"*).

This "in principle" support meant that the format of the project could not exceed the faculty budget in terms of staffing or physical resources. It was also an expectation that any proposed alternative course would maintain the standards and attributes of a Wollongong University graduate. The faculty also stated that any proposed alternative course must maintain equitable working conditions for staff as well as student assessment strategies. Considering that the program would eventually be founded on the principles of Problem-based learning this last constraint required careful planning and implementation of all assessment tasks by the KBC facilitators.

Following the attainment of the "in-principle" faculty support another two years of formal and informal meetings with the major stake-holding groups, including senior management within the NSW DET Directorates, local superintendents, principals, whole-school staffs, individual teachers, faculty committees, diverse university power brokers, and the teachers' union took place. In these two years different formal committees, working parties, and reference groups, met, negotiated and discussed for an estimated total of between 1200 and 1500 hours.

By the beginning of the 1999 academic year a pilot program had been designed. We were ready to begin.



WOLLONGONG'S KNOWLEDGE BUILDING COMMUNITY PROGRAM: GETTING STARTED 1999

We soon realized that the prospect of implementing a new program with a full cohort of more than 240 incoming first year students, while at the same time maintaining the pipeline of second, third, and fourth year students who were already enrolled in the existing program, was logistically impossible. We therefore decided to impose two caveats.

1. We would begin with a small sub-group comprising approximately 10% of the new intake, to a maximum of 24 students. This model became known as the Knowledge Building Community Program (KBC).
2. The KBC model would operate only in those sessions when practice teaching was scheduled, (Session 1 in first and second year, Session 2 in third year). This meant that the 10% of students who were admitted to participate in the KBC version of the program would be engaged in this form of pre-service professional training for approximately half their total program. For the other half they would join their mainstream peers and engage in the traditional "lecture + tutorial + formal examination" form of program delivery. Figure 1 below is a schematic representation of this caveat showing the year-by-year progression for the cohort of 24 students who became part of the KBC project, vis-a-vis the other 90% of their mainstream peers.

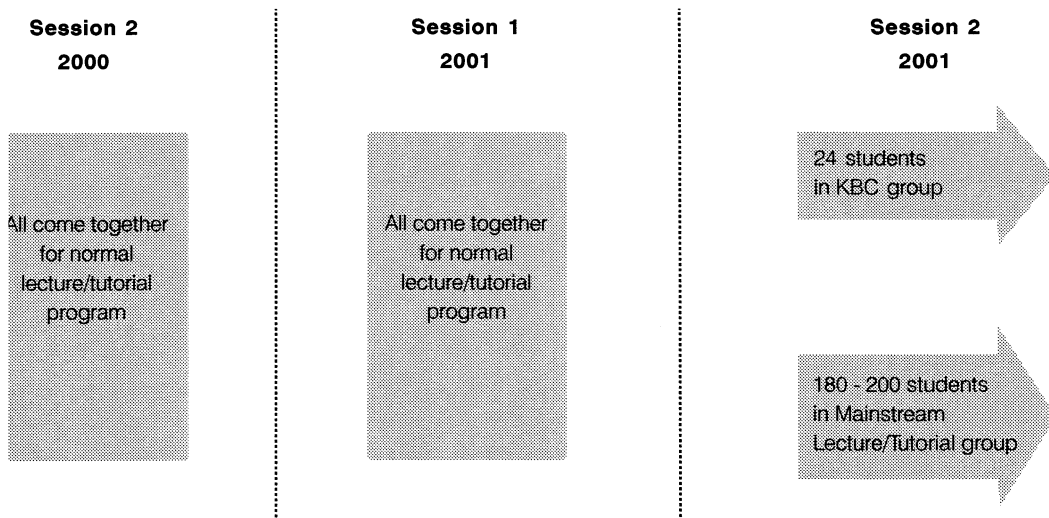


Figure 1: Year-By-Year Progression

Given these caveats we felt compelled to anchor our project to a robust, constructivist theoretical model we therefore chose a theory based on the concept of a Knowledge Building Community (Hewitt et al. 1995).

WHAT IS A KNOWLEDGE-BUILDING COMMUNITY?

Kiggins (2001) defines a KBC thus: "a community of individuals who are dedicated to sharing and advancing the knowledge of the collective" (p. 3). She cites Hewitt et al. (1995) to support this definition.

What is defining about a Knowledge Building Community is a commitment among its members to invest its resources in the collective pursuit of understanding (Hewitt et al. 1995, cited by Kiggins 2001, p. 3).

While the concept of learning communities has been around since Dewey's time, generally it has been restricted predominantly to school settings. We decided to see whether we could apply these principles at the pre-service teacher education level.

UNIVERSITY OF WOLLONGONG'S VERSION OF A KNOWLEDGE BUILDING COMMUNITY

The Knowledge Building Community is a teaching model specifically designed to deal with the issue of contextualising the delivery of instruction. One of its important tenets is that instruction should be linked as closely as possible to the contexts and settings to which it applies in the real world. Furthermore KBC's are based on the creation of learning environments that:

- i) Support the continuous social construction of knowledge,
- ii) Through the constant construction, de-construction, and reconstruction and sharing of meanings, so that
- iii) The community's knowledge needs are advanced and maintained

In the University of Wollongong's KBC these principles were applied through the creation of a setting that provided opportunities to engage in three modes of learning:

- i) Community learning (CL)
- ii) School-based learning (SBL)
- iii) Problem-based learning (PBL)

Figure 2 below is a schematic representation of the relationship between these three modes of learning and Wollongong's KBC concept.

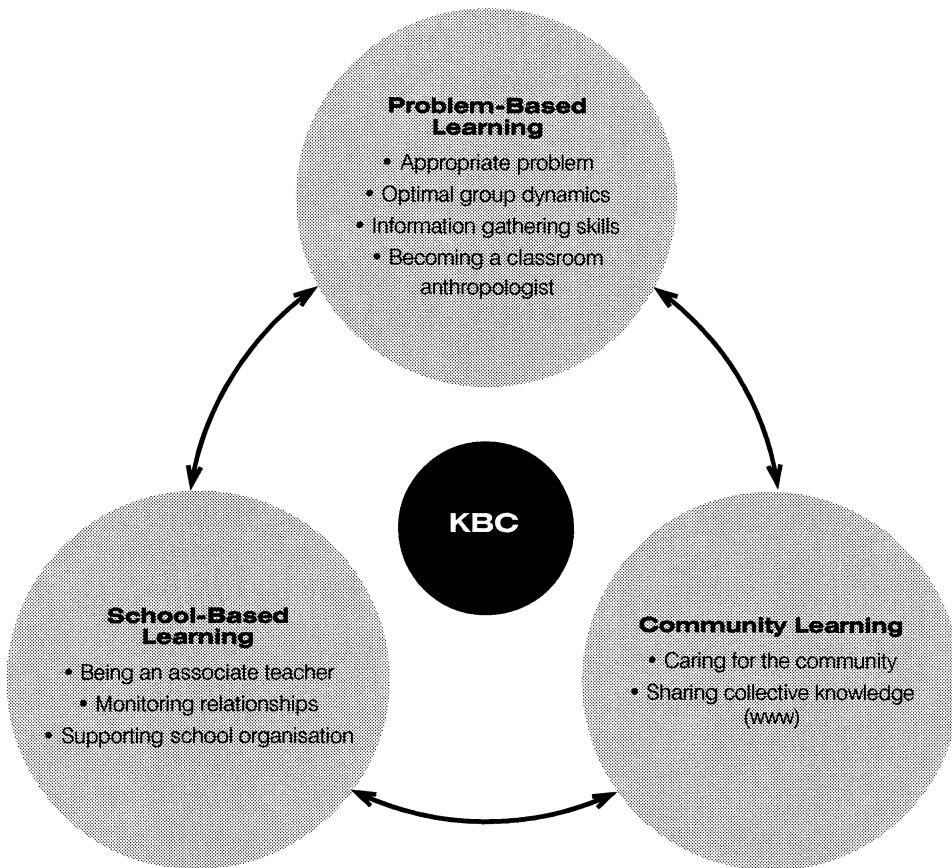


Figure 2: Wollongong's KBC Components

COMMUNITY LEARNING (CL)

This mode of learning constitutes a major shift from traditional teacher education models. It necessitates the development of a community of learners. In Wollongong's case this community was made up of three distinct groups:

- i) Pre-service teacher-education students
- ii) School-based teachers
- iii) Faculty lecturers who acted as facilitators on campus

It was the expectation that this community would establish a sense of trust and caring for other community members as they studied and learned collaboratively.

SCHOOL-BASED LEARNING (SBL)

Part of Wollongong's KBC concept is the strong conviction that schools are more than buildings and people. Rather they are ecological settings in which individual cultures have evolved in response to the needs and purposes of the individuals who regularly enter them (Barker 1967). This component of the KBC structure aimed to develop a more than rudimentary understanding of school-based culture. It also aimed to heighten awareness and familiarity of how schools do business, to reduce the reality shock that beginning teachers' experience when they begin their careers, and finally, to increase preservice teachers' understandings of teachers' real roles in both classrooms and schools.

PROBLEM-BASED LEARNING (PBL)

Current theory asserts that PBL encourages and motivates students to learn to learn (Duch 1995). Furthermore this theory argues that PBL challenges students to take charge of their education (Duch 1995).

The motivation to become efficient Problem-Based Learners was created by:

- abolishing the traditional lecture, tutorial, exam and the power relationships which typically accompany them; and
- changing the lecturer's role from expert-who-transmits-facts-to-novices to that of co-learner, i.e. one who actively facilitates AND participates in, the learning and knowledge-building of the community.

THE EVOLUTION OF WOLLONGONG'S KBC PROJECT. 1999-2003

UOW's program has been evolving for almost 5 years now. Although we've had to abandon some of the original organizational and procedural ideals we started with in 1999, the underlying constructivist rationale and philosophy has remained firmly in place. (Those who are interested in the details of some of these organizational and procedural changes should refer to Kiggins 2001).

Since 2001 KBC students have been given the responsibility of negotiating their assessment tasks. These assessment tasks must be based on collaborative analysis of the non-negotiable curriculum i.e. the subject outcomes which mainstream students are expected to acquire. The students then undertake negotiations with the teaching staffs of the school where they are Teacher-Associates to ensure that the tasks they have devised are appropriate and achievable in their particular SBL setting. While the program is still delivered along the original guidelines of the KBC ideals (i.e. CL, SBL, and PBL), a significant addition has been the addition of what we call, "the four pillars of professional wisdom" which now frame and guide the KBC learning process.

These four 'pillars' of UOW's KBC are: taking responsibility for own learning; learning through professional collaboration; identifying and resolving professional problems and becoming a reflective practitioner.

When the expectation that all members of the KBC have to acquire skills in using, and demonstrating conceptual understandings of these four pillars is made explicit, it sets in train a range of complex interactions within any particular knowledge-building community. These interactions in turn serve to drive and guide the community. One important thing these pillars provide is a set of structures, processes, and a form of discourse, for constructing and completing the assessment tasks.

CONCLUSION

UOW's KBC program has been operating for five years now. Our pioneer group graduated in December 2001. This cohort's results were very affirming.

- Of the original 22 who began in 1999, 18 graduated.
- Of this 18, seventeen (17) graduated with High Distinction.
- Of this 18, six (6) re-enrolled as fulltime 4th year Bachelor of Education students. (Therefore they didn't sit for the DET's targeted graduate interview program)
- Of this 6, four (4) went into the Honours program
- Of the 12 who were interviewed, six (6) were targeted by the DET

The general consensus from all of the stakeholders who have been involved from the very beginning, (students, lecturing staff and schools) is that the program has both tangible and intangible benefits that make it preferable to the traditional mainstream mode of delivery. The tangible benefits include:

- Students who develop the skills, knowledge, and understandings of effective teaching to a much higher degree, in a much shorter time;
- Students who are perceived by experienced teachers to be more committed, enthusiastic, confident professionals, than mainstream students in the same cohort;
- Students who are perceived by other mainstream lecturers to be more skilled at identifying and resolving professional problems, who are more effective and productive team members, who are more autonomous learners and more reflective than most of their mainstream peers; and
- A much stronger partnership between the University, the local schools, the major employing authority, and the teachers' union.

The less tangible but equally as important benefits include:

A subtle but significant change of the culture of the practicum experience for the schools involved. This shift is essentially from a Clinical-supervision-one-classroom-teacher-to-one-student model to a Mentoring-whole-school-participates model. One unexpected spin-off of this change is the perception of teachers at the KBC schools of

their own professional growth as they responded to the many probing questions about the rationale for the many school and classroom practices which KBC students continually asked as they sought data for their research tasks. In his paper, Marks (2001), reporting on this aspect of his school's involvement in UOW's KBC program writes:

Research strongly supports the conclusion that reflection does enhance teaching and learning. In our school experience since 1999, reflective practices amongst the staff have developed:

1. as a result of taking on mentoring roles for the KBC program, and
2. as a result of collegial management and supervisory styles becoming the philosophical base of our school.

In essence the KBC program operated as the vehicle for the implementation of reflection through the mentoring role (p. 9).

From a personal perspective, after five years of being facilitators, co-learners, and participants in each KBC's learning journey, we can honestly state that we much prefer this way of teaching. To be blunt, we don't ever want to go back to the mainstream mode of delivery.

REFERENCES

- Barker, R. G. (1967) *Ecological Psychology*, California: Stanford University Press.
- Cambourne, B. L., Ferry, B., Brown, I., Kiggins, J., Temmerman, N., Turbill, J., & Fox, C. (1997) *Problem-Based Learning (PBL) As An Alternative Mode Of Delivery In Initial Teacher Education*, Challenge Grant Application, University of Wollongong, NSW.
- Duch, J. B. (1995) 'What is Problem-Based Learning?', *The Newsletter for the Centre for Teaching Effectiveness*, University of Delaware.
- URL: <http://www.udel.edu/pbl/cte/jan95-what.html>
- Hewitt, J., Brett, C., Scardamalia, M., Frecker, K. & Webb, J. (1995) *Schools for thought: Transforming classrooms into learning communities*, Paper Presented at the American Educational Research Association Annual Conference, San Francisco. URL: http://csile.osie.utoronto.ca/abstracts/kn_build/ (cited in Kiggins, J, 2001)
- Kiggins, J. (2001, December) *From Project to Program: The Evolution of an Alternative Teacher Education Model*, Paper Presented at the AARE Conference, Fremantle.
- Kiggins, J. (1998, unpublished) *Problem-Based Learning & Mentoring In Pre-Service Teacher Education: A Review of the Literature*, Faculty of Education, University of Wollongong, NSW.
- Marks, W. (2001) *My thoughts on KBC an alternate mode of teacher training*. Paper presented at "Challenging Futures Conference", University of New England, Armidale, NSW.
- Reid, A. & O'Donoghue, M. (2001, September) *Rethinking Teacher Education Policy*. Paper presented at ATEA Conference, Melbourne.