
KNOWLEDGE BUILDING IN ACTION LEADERSHIP



Using Knowledge Building with Teacher Candidates

Written by Barb Van Hatten

Bringing IDEAS to life!

5.3 USING KNOWLEDGE BUILDING WITH TEACHER CANDIDATES

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INTRODUCTION

Barbara Van Hatten is a Contract Lecturer at Thunder Bay's Lakehead University's Faculty of Education, with responsibility for the Junior Intermediate Professional Program On Site Delivery (PPOD) model. Students in this program spend a full day with an instructor in a local elementary school, where they receive instruction in Language Arts, Balanced Literacy, Teaching Literacy, Planning, Evaluation and Classroom Management. They also have the opportunity to work with classroom teachers and students. Barbara is also a CPCO (Catholic Principals' Council of Ontario) District Facilitator with the Leading Student Achievement: Networks for Learning project (LSA).

STARTING WITH THE KB PRINCIPLES

Today's teachers reach beyond classroom walls to participate in collaborative discourse and build knowledge in order to grow as professionals who can incorporate 21st century learning into their practice. Could having teacher candidates (TCs) participate in Knowledge Building Discourse help them become active participants in their own learning? Could this give them the skills they need to create the conditions for children to wonder, explore, inquire and build knowledge comfortably? By working for the LSA project, I have first-hand knowledge of the power of KB in classrooms across the province, and I wondered if KB principles could be applied to the work of the PPOD. With that in mind, I chose to focus on the following Knowledge Building Principles (Scardamalia, 2002):

Democratizing Knowledge: The creation of knowledge is not confined to a few. Instead, all are empowered to create and are recognized as valid contributors to advance community knowledge.

Knowledge Building Discourse: The power is in the discourse — in collaborative interchanges that lead to better solutions, better explanations and better ways forward.

Community Knowledge, Collective Responsibility: Team members produce ideas of value to others and share responsibility for the overall advancement of knowledge in the community.

Constructive Use of Authoritative Sources: To know a discipline is to be in touch with the present state and growing edge of knowledge in the field. This requires respect and understanding of authoritative sources, combined with a critical stance toward them.

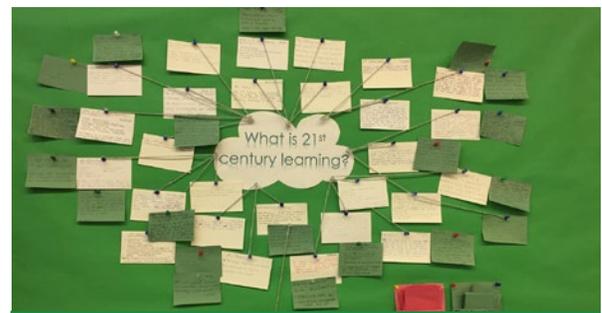
STRATEGIES FOR SUSTAINING IDEA IMPROVEMENT

Move 1: Build Capacity and Use a Process for Discourse

Students were assigned two readings from their course texts, one on classroom management, and the other on 21st century learning. The classroom management reading outlined the characteristics of various management orientations; the most effective being an approach that created an environment that produced self-directed students who had internal motivation, collective responsibility, self-efficacy and a community view of the class. This complemented the reading on 21st century learning that talked about student engagement through intellectual engagement, ways of knowing, making meaning by working with others, constructing knowledge through community interactions and determining what we want students to know, do and be.

Teacher Candidates were introduced to a Knowledge Building Circle by watching a video from the LearnTeachLead site (<http://learnteachlead.ca/projects/knowledge-building/>).

The video featured a Grade 5 class effectively using a KB Circle to share and build knowledge through discourse. The focus for viewing this video was: Identify the characteristics of a KB Circle. Scaffolds used in the video were posted and candidates then participated in a KB Circle to discuss: What is classroom management? What does it involve? The discourse was videoed and promising questions asked were extrapolated and posted beside our Criteria for Thinking rubric.



KB Wall focusing on the big question: What is 21st Century Learning?

What surprised you?

I was surprised by how quickly the comfort level in the room changed once PPOD members got to know one another better. A freer exchange of ideas began and students were actively using KB Circle scaffolds when discussing topics throughout the day. Some of the students used the KB Circle in lessons during practicum assignments, and I saw scaffold charts they had posted in some of the classrooms I visited. A few Associate Teachers, unfamiliar with Knowledge Building, indicated they were going to continue to use the scaffolds and Knowledge Building Circles once the teacher candidates left. I can also confirm what KB teachers have said — students do go beyond curriculum expectations as they explore and investigate their questions.

Move 2: Use KB Discourse Supported by Authoritative Sources to Democratize Knowledge

The following week, after additional reading, candidates used mini Knowledge Building Circles to describe their current thinking regarding transformative classroom environments, using the following provocations: What would you see students doing? What would you see the teacher doing? What would you hear the students saying? What would you hear the teacher saying? What would you see in the classroom? Participants in each mini circle then shared their most important thinking with the large group and provided evidence from their readings to support it.

Candidates were given time and access to contribute to our “KB Wall” on 21st century learning. They were encouraged to add “Evidence to Support” their theories (using green cards) or “Evidence to Discount” their theories (using red cards). They could build-on their original theory or someone else’s theory.

The rationale for sharing knowledge in this way was discussed in relation to what we currently understood about 21st century learning. The principles of Knowledge Building noted above were introduced as integral to creating a 21st century environment. Candidates identified examples of how these principles had been incorporated in the course up to this point.

Move 3: Motivate and Recognize the Importance of Collective Responsibility, Community Knowledge and; Pose Promising Questions

Students reviewed the Classroom Management eReflection assignment due at the end of Term 1. The assignment asks Teacher Candidates to select an area of interest from a list of promising questions that they have created. Candidates are asked to share their learning in Knowledge Building Circles as well as on Knowledge Forum (KF) and independently use the community’s knowledge to address the question in an eReflection.

After reviewing the assignment, candidates were introduced to promising questions using a concept attainment model of examples and non-examples. The questions posted from the KB Circles were used to support the concept.

Using their readings, as well as their experiences during Literacy Coaching sessions where they worked with teachers and students during literacy blocks, TCs recorded their wonders regarding classroom management on individual Post-it notes. In groups of four, they classified the questions as promising (explanation-seeking) or fact-seeking. They then participated in a Gallery Walk and provided feedback to other groups about the classifications or wording of the questions. The questions were revised by the authors based on descriptive feedback and were posted around the room. TCs wrote their names on 3 Post-it notes and identified their preferences by numbering each as 1, 2, and 3. Each Post-it was placed beside the three questions they wanted to explore. The Instructor used these expressions of interest to create Knowledge Building Communities of 4–6 students. Although they were not all able to get their first choice, the Instructor ensured that each of them was able to explore one of his/her identified questions.

Move 4: Use Knowledge Forum to Support Collective Responsibility, Community Knowledge and Democratizing Knowledge

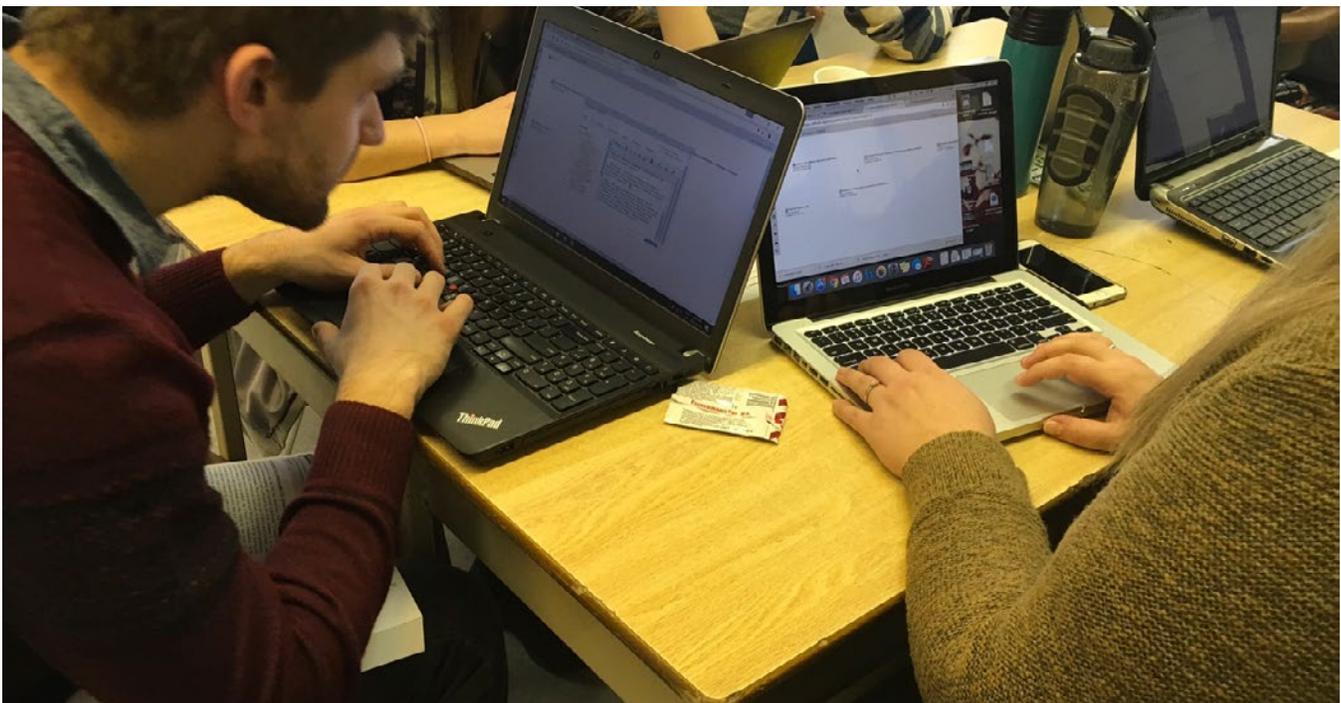
Students were introduced to Knowledge Forum (KF) — the technology that supports KB pedagogy — during class, and were given time to explore the online tutorials (#1, 2, 6, 7 and 8) independently in order to learn the basics of the program. Essentially, a KF community is made up of different discussion spaces, called “views.” Students contribute multimedia notes onto views, which serve as the community’s collective knowledge space. KF views give student ideas a place to live and grow over time, and help make the community’s thinking visible. For this class, a Welcome Page with the question, “What is 21st Century Learning?” was created for students to experiment with KF. At the end of class, a comparison was made between the KB Wall we had used and KF.

The instructor then created five more KF views using the promising questions students had created in Move 3 (five questions in total). Students were asked to make two contributions into the dialogue spaces in Knowledge Forum to help build their community's knowledge prior to the next class.

During the last three classes of the term, students were given class time to meet face-to-face to discuss promising ideas/avenues that needed further exploration, get help with any issues they might be having when posting, conduct research and post additional contributions. The quotes, "All Ideas Are Improvable" and "We Succeed When We All Succeed," were used to support ideas associated with 21st century learning. Before leaving for practicum, students posted their individual responses to the community's question on our D2L (Desire2Learn) site. TCs needed to include and cite notes from the community view that influenced their thinking and explain the note's importance in shaping their current response to their question.

What did I learn about myself?

I learned that I didn't have to be in control of everything. I just had to take a deep breath, jump in the deep end and try Knowledge Building, even though it was messy and a little scary at first. The learning is definitely in the doing and each time I plan activities designed to help my candidates understand it, I deepen my own learning, become more comfortable and even more committed.



Students working on Knowledge Forum

What was your deepest learning?

I had a big Aha! moment from my experiences with KB in the PPOD. Classrooms, whether populated by elementary students or adults, need to feel safe, have a “We Succeed When We All Succeed” atmosphere and encourage risk-taking in order for thinking to move forward.

Many Teacher Candidates found it difficult to participate in KB Discourse at first. They were uncomfortable voicing that they needed to understand something better and were hesitant to put forward a theory. A few admitted privately that they feared judgment.

I had to take a step back in order to address these needs. It was necessary to build trust and establish positive community relationships among the PPOD members. I incorporated many opportunities for candidates to work with a wide variety of individuals during the day, often using random groups in an effort to build a collaborative culture. Each class contained community-building activities to help create the dynamics necessary for this kind of work. Lessons were designed so that random partners and small groups were working with ideas, and much of this work was supported by written and oral descriptive feedback rather than marks. Accountability was built in using Cooperative Learning strategies to encourage candidates to take responsibility for one another’s learning.

NEXT STEPS

I will continue to design activities that demonstrate the remaining KB Principles so that candidates understand what needs to be in place in a KB classroom. We will also explore the concept of “Talking and Thinking Like an Expert” using the scaffolds identified in the Knowledge Building Gallery (<http://thelearningexchange.ca/pdf/knowledge-building-gallery>).

This should help teacher candidates develop a deeper understanding of how to incorporate a wider variety of scaffolds into different subject areas. I am also “tweaking” many of my assessment tools to more accurately reflect and assess Knowledge Building, using ideas I’ve found in the Gallery resource. My hope is that the work we’ve done will help teacher candidates incorporate a Knowledge Building culture in their own classrooms and provide them with a framework to move their future students more deeply into Knowledge Building Discourse.

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- Gini-Newman, G. (2015). *Creating thinking classrooms: Leading educational change for a 21st century world*. Vancouver, BC: The Critical Thinking Consortium.
- Scardamalia, M. (2002). Collective cognitive responsibility for the advancement of knowledge. In B. Smith (Eds.), *Liberal education in a knowledge society* (pp. 76–98). Chicago: Open Court.