**Knowledge Building Classrooms**

A Continued Journey of 21st Century Classrooms

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**What is Knowledge Building (KB)?**

KB can be described as an approach of learning through *collective idea improvement* among students. This approach treats all ideas as improvable and develops in our students an appreciation for the hard work needed to improve a promising idea.

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**1. KB Pedagogy**

Knowledge Building is grounded in 12 workable principles that are the foundation of the pedagogy. These principles guide teachers’ decisions in class (routines, activities, rules of engagement) and serves as the basis for their actions and behavior:

- Real Ideas, Authentic Problems
- Improvable Ideas
- Idea Diversity
- Epistemic Agency
- Democratizing Knowledge
- Pervasive Knowledge Building
- Rise Above
- Symmetric Knowledge Advancement
- Knowledge Building Discourse
- Transformative Assessment
- Constructive Use of Authoritative Sources
- Community Knowledge

KB pedagogy facilitates a collaborative learning environment for students to explore *authentic problems* related to the world around them and more importantly, problems that they care about. These ideas and problems are *shaped by teachers in relation to the key ideas* within and across sets of the curriculum. Students read and *build-on each other’s ideas* and seek information about these problems to improve their explanations to these problems. In doing so, they naturally *deepen the understanding* of the topics surrounding the problems. Your students’ mind will be challenged and stretched as they embark on the exciting and meaningful journey of knowledge building.

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2. KB Environment

**Fostering a KB Culture**

Culture is key to creating a healthy and thriving Knowledge Building community in the classroom. KB is fundamentally a social and collaborative process, and thus it requires the nurturing of a classroom culture that values inclusivity, deep thinking, diverse ideas, honesty, and risk-taking. KB environment must be grounded in a culture of **psychological safety** — students must feel safe that they can contribute their ideas and thoughts without judgment. Teachers can use the 12 KB principles to build a vibrant and healthy KB environment and community (refer to page 4).

One method of fostering a KB culture is by setting ‘**Rules of Engagement**’ that all students must adhere to throughout all KB lessons. E.g.:

- **Rule #1**: Everyone’s idea is important (listen to others respectfully)
- **Rule #2**: We need to work with different ideas to learn better (accept idea diversity)
- **Rule #3**: No single person can learn more than what the whole class can learn together

**KB Design Principles**

In the building of a KB environment, teachers are encouraged to design activities and interactions by reflecting on the 12 KB principles. For instance:

1. **Real and authentic problem** - teachers can think through if the problems they introduced in class are those that students really care about and/or find interesting.
   Are the problems discussed in class initiated by students or by the teacher?

2. **Idea Diversity** – teachers can think through if they have given a chance for students to examine different ideas about a topic.

3. **Epistemic agency** – teachers can reflect on whether they are modelling the thinking/KB scaffolds in class or doing the thinking for students.

Similarly, students connect to these principles by reflecting on their learning and their role as learner:

- Are we really asking questions to help our class learn better?
- Are we examining the environment around us carefully enough?
- What do we understand now and what else do we need to do to know more?
- Have we learned everything about the topic?

**KB Talk** is a common activity in a KB environment. In these talks, making students feel safe to share ideas and to think hard about what is useful for the class is more important than having accurate answers in each response.

These are the phrases that you would commonly hear from either teacher or students in a KB classroom:

- “What’s that? How does it really work? What do you really mean? I need to know...”
- “What can we do to find out about this question?”
- “After hearing what you said, I think we can try to take this in a different way altogether”
- “Let’s test out our ideas!”
- “I saw my mum making pineapple tarts and I remember what teacher say...”
- “How should we write this together as a class?”

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3. KB Technology

**Knowledge Forum (KF)** is a collaborative online platform workspace designed for students to share information, questions, and ideas, and build networks of new ideas collaboratively. Every student can read and share their ideas shared to the entire class. KF captures and archives ideas as written notes, making students’ thinking visible and making it possible for teachers to trace idea development.

KF consists of **Views**, each view is a space on KF that can be used to organize students’ **Notes**.

**KF Scaffolds** are embedded in notes to help students build knowledge. These scaffolds are sentence starters that students can use to start their notes, and serve as thinking routines for knowledge building. KF provides 6 theory-building scaffolds.

These 6 scaffolds can be modified/customized according to teachers’ preferences, but the KB trajectory should always be maintained.

**Why use KF?**
- KB captures and archives every idea in writing, so Notes and Views serve as direct reflections of students’ ideas.
- KF facilitates the linking of different ideas together, which reflect interactions and diversity.
- KF allows for explicit tracing of how ideas develop and how consensuses are reached over time.

<table>
<thead>
<tr>
<th>Scaffolds</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>My idea, I think, I believe, I predict that</td>
<td>My idea, I think, I believe, I predict that</td>
</tr>
<tr>
<td>I wonder if, I wonder what, I wonder why</td>
<td>I wonder if, I wonder what, I wonder why</td>
</tr>
<tr>
<td>I learned, I found out, I see</td>
<td>I learned, I found out, I see</td>
</tr>
<tr>
<td>I think maybe... I am not sure if...</td>
<td>I think maybe... I am not sure if...</td>
</tr>
<tr>
<td>I would like to add that, I would like to make a connection</td>
<td>I would like to add that, I would like to make a connection</td>
</tr>
<tr>
<td>We used to think; now we understand... We conclude that...</td>
<td>We used to think; now we understand... We conclude that...</td>
</tr>
</tbody>
</table>

If you need to simplify the KB scaffolds, it is always good to have in mind how each scaffold can lead students through similar KB trajectories (e.g. the scaffold ‘my idea’ can be equated to ‘my theory’).
Throughout the process, teacher and students constantly reflect on their learning and growth in the KB journey.

Does any part of Knowledge Building classroom RESONATE with you? Which part of it are you already ENGAGED WITH in your practice? What are some of the NEW IDEAS you picked up? How can you DEEPEN YOUR PRACTICE in accordance with KB?