

Transforming practice from the middle: Middle-managers leading KB Practice.

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Abstract: To sustain an innovative practice such as knowledge building practice in a school, each layer of player within the organisation, students, teachers, teacher-leads, head of department, school leaders, play different but critical role in creating, contributing and advancing the vision and practice of the innovation. In this study, we look particularly at the role of the middle managers in deepening and sustaining knowledge building practice as the innovative practice for 21st Century classroom. We particularly look at KB practice as this was a practice that did not particularly receive top-down or bottom-up support at the start of the project. The decision to embrace and experiment with the practice was taken by the middle manager and so much of the navigation, strategizing and advancing within the organization relied on the middle managers as well. In this paper, we interviewed and gathered written reflections from three middle manager to understand some key qualities of their role, their strategies and approach in sustaining knowledge building in their school.

Introduction

“Leadership from the Middle” is defined as an adaptation of strategies that increases the “capacity and internal coherence” of the middle layer within an organization with the goal of achieving better performance (Fullan, 2015). In this case, particularly more innovative teaching and learning practice for the 21st Century. This middle leadership is conducive in forging an effective partnership upward towards the more senior management within the organization to gain support and downward to a team or a community to sustain practice. The goal of this ‘middle leadership’ is to strengthen the coherence within the organization in relation to an organisational goals and/or community needs. It mobilizes the middle to develop pervasive capacity, while at the same time the middle works within its schools more effectively and becomes a better and more influential partner upward to the center.

What we defined as “leading from the middle” in this paper, we focuses on he leadership that emerges from expertise and not from position. The nature of initiative is more likely to be one that easily garner support from top management or from team. The case study is derived from a seven-year knowledge building initiatives in a Secondary School in Singapore. We traced the role played by Head of Department in school in leading the Knowledge Building initiative within the school since 2010. In tracing the trajectory of this middle leadership, we derive important roles in sustaining innovative practice within the context. In this paper, we attempt to study the key qualities that are at the heart of every level of effective school ‘middle’ leadership to derive the strategies necessary for an effective leadership from the middle.

Background

The innovative practice we focused in this study is on knowledge building practice. Knowledge building is not a new term. Knowledge Building has been defined as the generation and and continual improvement of collective ideas in a community. When translated to a classroom, Knowledge Building practice signifies a practice that places students’ ideas at the centre of teaching and learning activities (Scardamalia & Bereiter, 2006). Knowledge Building has been pushing classrooms into the knowledge creation paradigm where the teaching and learning culture focuses on research, development, generation and shaping of new practice knowledge (See comparison of dimension between knowledge deepening and knowledge creation in Table 1) (Kozma, 2008). Most of the quality practice in educational setting resides mainly on the knowledge deepening paradigm.

Figures and Tables

All figures and tables must be referred to in your text (see Table 1). Color figures may be included. All figures and tables should be centered. Table captions are underlined and aligned left *above* the table. Figure captions are centered and placed *below* the figure.

Table 1: Sample of the Continuum from knowledge acquisition to knowledge deepening to knowledge creation paradigm (Kozma, 2008)

	Knowledge Acquisition Paradigm	Knowledge Deepening Paradigm	Knowledge Creation Paradigm
School Process & Structures	Process & structure focuses on increasing ICT skills, and school-based and national exams results, mainly on building strong numeracy and language literacy.	Process & structure focuses on improving the understanding and problem solving skills of students and connecting their learning to real world problem and contexts.	Process & structure focuses on research, development, generation and shaping of new practice knowledge.
School Alignment Across Curriculum, Pedagogy and Assessment	<ul style="list-style-type: none"> • The curriculum emphasises on students' acquiring facts and concepts within different subject. • ICT is included as a subject in the curriculum. • Teaching is focused on delivery of content. Didactic teaching are common though information may be presented in a variety of forms. • Instruction can be individualized and self-paced. • Assessments are composed of brief tasks on recall of facts and the application of principles to solve simple, one-part problems. • Accuracy is emphasized. • Students are tested frequently and receive 	<ul style="list-style-type: none"> • The curriculum identifies key interrelated concepts and principles that organize the subject area. It emphasizes understanding of these within and across subjects and their application to solve complex real-world problems. • Curriculum implementation is responsive to local contexts. • Teaching is conducted in the context of complex, open-ended questions and problems; and it is anchored in real-world contexts. • Classroom activities involve the application of key concepts and principles to analyze systems and solve problems across subjects. Internships and apprenticeships can be an important way to connect school learning to the real world. • Assessments are composed of a few extended, open-ended, multipart problem- based projects. • These projects embed key concepts and principles and correspond 	<ul style="list-style-type: none"> • The curriculum is flexible and responsive to student goals and local contexts. • It emphasises the development of 21CC and Learning how to learn is key. • Teaching consists of challenging students to build on their knowledge and explore new topics. • Collaborative projects and investigations involve searching for information, collecting and analyzing data, generating knowledge products, and communicating with experts and audiences to share results. • Assessment tasks consist of investigations, reports, presentations, creative works, and other knowledge products. • These products are evaluated through self, peer, and public review, as well as expert review. Assessments also emphasise student goal setting and self-monitoring.

Method

The questions to be addressed in this paper is: What approach and strategies can such ‘middle leadership’ design and adopt to achieve a strong system with capacity and commitment in sustained improvement in Knowledge Building practice? The ‘middle managers’ first indicated where their school and their department were on the continuum of the three paradigms stated in Table 1. They then reflected on the following questions based on how they score their school and their department. What does it mean to be a knowledge building in the school? Is there a difference between being a good student and a knowledge builder?

- a. How might we measure shifts in student engagement and ownership of learning?
- b. How might we measure shifts in teachers’ engagement in teaching and learning?
- c. What does success in my department look like? Who should have the main say what it looks like?
- d. What role might students, teachers play in identifying areas for improvement in the learning culture of our school? What say do these groups have in developing and implementing knowledge building and analysing outcomes?
- e. What role do parents, family, and the wider community play in influencing and supporting the knowledge building culture of the school?
- f. How might we challenge ourselves to develop different ways of working and learning together to support knowledge building, which means a different ways of working and learning alongside our students?
- g. Why must I/we do knowledge building?
- h. What approach and strategies can I/we adopt to achieve a strong system with capacity and commitment in KB?

Findings

The questions seemed obvious but it was a struggle for the middle manager to answer the questions as they reviewed the necessary shift from knowledge deepening to knowledge creation and was caught in a constant dilemma of the need to move to the knowledge creation paradigm to accommodate the adaptation of knowledge building technology and pedagogy. Indeed, knowledge deepening paradigm would be sufficient for many educational needs today and if taken from a practical lens. knowledge creation paradigm might not be most relevant. Following were derived as characteristics of the decisions of three middle managers in a particular knowledge building initiatives. In this study, all middle managers working on Knowledge Building rated their department further ahead in the knowledge creation paradigm as compared to their overall school approach (Figure 1 below).

School Alignment Across Curriculum, Pedagogy and Assessment	x	o
<ul style="list-style-type: none"> • Teaching is focused on delivery of content. Didactic teaching are common though information may be presented in a variety of forms. • Instruction can be individualized and self-paced. 	<ul style="list-style-type: none"> • Teaching is conducted in the context of complex, open-ended questions and problems; and it is anchored in real-world contexts. • Classroom activities involve the application of key concepts and principles to analyze systems and solve problems across subjects. Internships and apprenticeships can be an important way to connect school learning to the real world. 	<ul style="list-style-type: none"> • Teaching consists of challenging students to build on their knowledge and explore new topics. • Collaborative projects and investigations involve searching for information, collecting and analyzing data, generating knowledge products, and communicating with experts and audiences to share results.

Figure 1. Screenshot of how these middle managers rated their own department (o) and their school (x) in the continuum of school alignment across C, P, and A.

An intense interest and focus on understanding KB practice. These middle managers used modeling of the pedagogical practice as way to address resistance to change. A common characteristic we found in these middle managers is their interest and focus in knowledge building classroom. They willingly took on the challenge to design and implement knowledge building lessons in their class and even took on the challenge to work with the tougher class, i.e. academically weaker classes. The mentor their teachers by partnering them in class, took time to systematically study and analyse students' notes with their teachers. In doing so, they ensure that their teachers understand their role in implementing knowledge building practice. Based on their personal understanding of KB, they then navigate the way to explain the practice to their senior management and to their peers.

Responsive to students' identity, motivation and learning: Unwavering interest in students' motivation, identity and learning. These middle manager, though remained apprehensive of the challenge and obstacle in bringing knowledge building to their teachers, showed unwavering commitment to improving students' quality learning. Following is one of the middle manager's reflections on how KB pedagogy is necessary for her normal technical students (the least academically inclined students in school). Their goal remained fixated on promoting innovation and ensuring that ICT supports and enhances students' learning. Their measurement of shift usually revolved around 21CC. Example, "we might measure the way students begin to be more curious and asking more question. They are not afraid to let their ideas be heard. They are also eager to hear their peers' ideas". The following snippets of interview shows how the middle manager reflected on the impetus for her to get onto the KB trajectory.

"...teacher's part and student's part. I have all the resources. I have all my resources there. Touch of a button I've got powerpoint, worksheet, everything. I'll deliver a good lesson. My children will have outcome when I look at their worksheet, if I look at their assessment I'll know how much I've done and I'll analyse it and I can make them do amendments and ensure it's all done. But I think ...I can't do, I almost think it's a static lesson. I want something more dynamic for my children. A little bit (more), wherever possible I want them to do a little bit more of thinking for learning. I think that's the onus on me, for later on even when they go to the poly or JC I think this is important"

Adapt Connected Strategies to realize school's capacity for change. Successful middle managers understand how change processes work in their school and how people within the school respond to changes. With this knowledge, they then put in place planning and resourcing including mentoring structures, professional learning conversation, defining Syllabus Instructional Objectives, research partnership. One of the most important move by successful middle managers is to align knowledge building to existing school initiatives.

"We've had a school-based initiatives on "assessment for learning" and on "communication". This is a school wide practice so I have to get teachers to see that they are working on KB and also working on these initiatives. I am very much guided by the need to include everybody in identifying their own practice with KB. They need to know they are already doing it then work on it more... Teacher need to monitor and evaluate students' progress to identify AFI's in learning. Students can also be train to chart and track their own progress (Self-monitoring) to identify their AFI's in learning."

Insight into teachers' current beliefs and practices, getting buy-in is more important than getting things to happen. These middle managers constantly bring in their knowledge of their teachers' current belief and practice so as to help the teachers engage with knowledge building ways of teaching and working. These middle manager usually emphasized on building relationships based on trust and their priority is to make the teachers feel supported and understood. They are never in a rush to introduce just another "innovative pedagogy".

"It is important for my department teachers to work and collaborate with one another to share ideas and build ideas to have a good KB lesson. I want the teachers to also be a community of knowledge builders as well to sharpen our competencies."

Emphasize on Evidence to Convince and Sustain practice: These middle managers continuously seek and uses evidence to inform change and develop practices with the aim to improve students outcomes. They engaged long hours of conversation with researchers to understand outcome and to formulate ways to

improve the implementation. They would also almost for sure set up their own data collection mechanism to understand impact of KB on their students.

“When I asked my students to rate their learning experience using KF. Many gave the positives. They liked the idea of being able to read their friends inputs, discover new thoughts and built upon ideas. That in itself created the dynamism and synergistic learning. I also noticed a certain level of maturity in my students’ acceptance of ideas as they progressed on in their KF lessons. Their willingness to work on ideas as a collective rather than as individuals and in working out new ways of thinking. “

Conclusion

Leading change is complex and involves a number of stages (Fullan, Cuttress, and Kilcher, 2005). Analyses of middle managers’ written response to the survey indicated that they also engaged in extended discussions related to knowledge building practice through the implementation.

In general, these middle managers’ work aligned closely with the knowledge building principles in the following ways: (i) They identified problems in the implementation phases that needed attention, they would generate possible solutions, revisit issues they have faced at different points in time, and show a genuine interest in the work of their students and teachers. One of the key things they do is to constantly revisit the relevance of Knowledge Building in education and learning. (ii) A great deal of their work is negotiated within a community model, celebrating small success with their department teachers, these are also consistent in their meetings with teachers (Which are not included as data in this study). (iii) Finally, middle managers’ involvement reveals many connections between community and individual work which serve to deepen and sustain the practice within the school. They are always creating opportunities and strcutures for teacher to help to influence and develop other teachers.

References

- Fullan, M., Cuttress, C., & Kilcher, A. (2005). Eight forces for leaders of change. *Journal of Staff Development*, 26(4), 54.
- Fullan, M. (2015). Leadership from the Middle. *Education Canada*, 55(4).
- Kozma, R. B. (2008). Comparative analysis of policies for ICT in education. In *International handbook of information technology in primary and secondary education* (pp. 1083-1096). Springer US.
- Scardamalia, M. Bereiter (2006). Knowledge building: Theory, pedagogy, and technology. *Cambridge handbook of the learning science*

