

## Diffusing Education Innovations at Different Levels of the System

### Perspectives from Ecological Leadership

Jeanne Ho, Chua Puay Huat, Norhayati Munir, David Ng and David Hung

#### KEY IMPLICATIONS

- To diffuse an innovation across and within schools, stakeholders at various ecological levels need to enact leadership: teachers, key personnel such as heads of department or senior teachers, school leaders, the cluster superintendent and ministry personnel such as Master Teachers and Curriculum Division officers.
- The findings suggest three interrelated leadership roles, as proposed by Complexity Leadership Theory (CLT) (Uhl-Bien, Marion, & McKelvey, 2007):
  - ◊ Administrative leadership to structure, control and co-ordinate organisational activities.
  - ◊ Enabling leadership to create conditions which support the informal emergence of creative problem-solving, adaptability and learning.
  - ◊ Adaptive leadership is enacted through creative, adaptive and learning actions that emerge when stakeholders interact in environments that encourage such actions.

#### BACKGROUND

Recognising difficulties in diffusing educational innovations to schools, this study examined one cluster's effort to diffuse a mathematics innovation to 6 primary schools.

#### FOCUS OF STUDY

This study sought to understand how leadership was enacted at various ecological levels, at the ministry, cluster, school/department, and teacher levels, in the diffusion of an innovation across and within schools.

#### KEY FINDINGS

1. Leadership was enacted by both formal leaders with official positions and by informal leaders. Leadership involved a mix of deliberate planning and influence by individual agents and leadership emerging from interactions amongst interdependent, heterogeneous agents.
2. Formal leaders such as the cluster superintendent and school leaders possessed the authority to provide what CLT refers to as **administrative leadership**: actions that structure, control, and co-ordinate organisational activities to align them to the organisation's mission, key strategies, and structures.
3. In addition, formal leaders practised **enabling leadership**, which enables conditions to support the informal emergence of creative problem-solving, adaptability and learning. **Enabling leadership** was also enacted by teachers, seemingly unplanned and likely not recognised by the teachers as leadership.

4. **Adaptive leadership** was observed in the evolution of the cluster community to incorporate recent Ministry's initiatives, and in the schools' and teachers' adaptations of the innovation.
5. Main enablers included structures providing opportunities for interconnections, a supportive culture to explore the innovation, and the development of social capital.
6. A key inhibitor was a perceived high-power distance which constrained leadership by those who were lower in the hierarchy, particularly the teachers who felt obliged to change their lessons despite not agreeing with some suggestions.
7. A key tension felt by teachers was their desire to implement the student-centric innovation and their conflicting desire to be efficient in completing the syllabus and achieve results.

## SIGNIFICANCE OF FINDINGS

### Implications for practice

It is important for leadership to be distributed and for formal leaders to create conditions to support this distribution. There needs to be more cross lateral dialogues amongst personnel in the three career tracks.

### Implications for policy

There is a need at the system and cultural level to encourage teachers to implement more student-centred pedagogies and to develop the confidence to assert their pedagogical reasoning for their instructional decisions.

## Proposed follow-up activities

Since leadership needs to be enacted by stakeholders across levels, it would be useful for leadership-related professional development to involve management teams rather than individual roles. CLT can be used as a lens to help leaders consider their potential leadership contributions.

## PARTICIPANTS

Six schools, 10 school leaders, 12 key personnel and 31 teachers were involved in the study.

## RESEARCH DESIGN

This qualitative case study was bounded by the innovation and stakeholders concerned. It included observations of cluster community sessions and interviews/focus group discussions. Social Network Analysis was applied to understand further the relations amongst actors and the implications of their interactions.

## REFERENCES

- Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly*, 18(4), 298–318. doi:doi 10.1016/j.leaqua.2007.04.002

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