Advancing educational research in Singapore schools through the development of a School-University Partnership (SUP) model

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OVERVIEW

• Introduction: current MOE-NIE partnership
• Methodology: A systematic literature review
• Literature Review
  o 3 case studies
  o Key characteristics of an effective SUP
• Proposed School-University Partnership Model
MOE-NIE PARTNERSHIP
MOE-NIE PARTNERSHIP

• 1950: Teachers’ Training College (TTC) provided training for non-graduate teachers

• 1973: TTC became the Institute of Education (IE)
  o catered to non-graduates, graduates, and practising teachers; to meet the need for trained teachers

• 1991: NIE was established as part of NTU
  o 4-year degree courses with Diploma in Education
  o NIE supports different stages of teacher’s career
    ▪ from pre-service to in-service teacher education
MOE-NIE PARTNERSHIP

• Pre-service teacher education
  o Design of curriculum
  o Practicum experiences in a school setting

• In-service teacher education
  o Input provided by MOE
  o Designed to meet school’s needs, e.g. AR
MOVING MOE-NIE PARTNERSHIP
BEYOND TEACHER TRAINING

• Many scholars allude to the need for deliberate school and university partnership to bridge research and practice

• More effective practices & improved outcomes for students, teachers and schools

  (Cooper, Levin, & Campbell, 2009; Evans, Lomax, & Morgan, 2000)
CURRENT RESEARCH ON SUP

• Focus on the challenges of SUP or on the impact of specific interventions

• Little insight into partnership designs, structures or processes (Coburn and Penuel, 2016)
METHODOLOGY
A SYSTEMATIC LITERATURE REVIEW
METHODOLOGY

A SYSTEMATIC LITERATURE REVIEW

• Answers defined research questions by collecting and summarising all empirical evidence that fits pre-specified eligibility criteria

• Process involves
  o framing questions for searching literature
  o identifying relevant studies
  o assessing quality of studies found
  o summarising studies
  o interpreting findings (Khan, Kunz, Kleijnen, & Antes, 2003)
METHODOLOGY
A SYSTEMIC LITERATURE REVIEW

Research Questions

1. What are the *various forms of SUP* in research and practice?
   (beyond pre-service training)

2. What are *examples* of effective and sustained SUP?

3. What are the *characteristics* of effective and sustained SUPs in
   research and practice?
METHODOLOGY
A SYSTEMATIC LITERATURE REVIEW

• Academic databases and journals
• General online search for existing SUPs
• Literature on SUP from 1999 onwards
• Local literature on SUP was limited and focused on practicum or the role of mentor teachers during practicum
METHODOLOGY
A SYSTEMATIC LITERATURE REVIEW

• Most studies adopted a mixed-method approach
  • surveys, interviews and document analysis
  • focus on qualitative data and case study
• Narrowed down to 23 studies
• Across countries, namely Hong Kong, Australia, New Zealand, the United Kingdom, and the United States
LITERATURE REVIEW
LITERATURE REVIEW

• A wide variety of SUP, differing in goals, structures and contexts
• A shift in emphasis towards research partnership and collaboration, building on the expertise of teachers (Baumfield & Butterworth, 2007)
3 FORMS OF SUP

Service
- One dominant agenda by
  - school or
  - university partner

Complementary
- Agendas of both parties (school & university partner) are present but each is implemented in a parallel fashion

Collaborative
- A common agenda
  - Negotiated
  - Mutually agreed

(McLaughlin & Black-Hawkins, 2007)
MINTZBERT’S FRAMEWORK

- Executive Leaders at Strategic Apex
- Middle Line of Managers
- Operating Core of Workers
- Technostructure
- Support Staff

Multi-tier Partnership Model
EFFECTIVE AND SUSTAINABLE SCHOOL-UNIVERSITY PARTNERSHIPS

• Definition of an effective and sustained SUP:
  1. Involved at least 5 schools (outreach)
  2. Sustained for at least 2 years (duration)
  3. Involved in-service teachers in the research collaboration (scope)
  4. Some evidence of effectiveness or impact (outcome)
CASE EXAMPLE 1: STRATEGIC EDUCATION RESEARCH PARTNERSHIP (SERP)

• Founded in the States in 2003 to bridge the worlds of education research, practice and design
• SERP works through long-term partnerships with school districts (executive leaders) to address critical problems of practice identified by the district partners (involving middle line of leaders)
• SERP helps to recruit researchers from various universities and involves designers in the generation of solutions (technostructure)
STRATEGIC EDUCATION RESEARCH PARTNERSHIP (SERP)

• Teachers are involved in every stage
  o problem definition is refined through the collaboration of researchers and teachers (operating core)

• Outcome: website is a testimony to the new knowledge generated
  o materials designed for use by teachers
  o the principles behind the pedagogy and the design of the materials explained
CASE EXAMPLE 2: RESEARCH CONSORTIUM IN THE UNITED KINGDOM

- Consisted of three local education authority partners, six schools and the University of Newcastle
  - Beyond engaging the executive leaders (the local education authority), the middle line of leaders (the school principals) were also engaged.
- Projects were negotiated between the partners prior to developing research proposals for funding
- Each school assigned a teacher (the operating core) to be the school research coordinator and to work with a university faculty who acted as a critical friend.
RESEARCH CONSORTIUM IN THE UNITED KINGDOM

• Teachers carried out the action research, refined the pedagogical strategies with the university partner and even co-authored publications

• Outcome:
  • From observations and document analysis there was a shift in teachers’ focus from teaching to learning.
  • Teachers interviewed reported an increase in their confidence and in their enthusiasm for teaching and learning.
CASE EXAMPLE 3: CENTRE FOR UNIVERSITY AND SCHOOL PARTNERSHIP (CUSP)

- Established in 1998 to foster a mutually beneficial relationship between the Chinese University of Hong Kong (CUKH) and schools
  - It established partnership with over 1,000 primary and secondary schools.

- School principals (the middle line of managers) and teachers (the operating core) are involved in identifying their challenges and designing solutions for improvement.
CENTRE FOR UNIVERSITY AND SCHOOL PARTNERSHIP (CUSP)

• CUSP also provides consultancy teams (the technostructure) to work with their partner schools
• assist in developing school-based curricula
• CUSP website provides access to their projects, with materials designed for use by teachers, and with a listing of seminars organised
IDENTIFIED CHARACTERISTICS OF EFFECTIVE AND SUSTAINABLE SUP

1. Leadership at national and institutional levels
2. New enabling roles and structures that span the boundaries of school and university
3. Provision of dedicated expertise, manpower and time
4. The formal integration of the partnership activity into both institutions’ work and recognition process
5. A symbiotic relationship that is mutually beneficial and reciprocal in nature
6. Sharing of roles and responsibilities
7. Strong relationships built through communication and “sustained interactivity” (Campbell & Fulford, 2009, p. 3)
PROPOSED SINGAPORE SCHOOL-UNIVERSITY PARTNERSHIP MODEL
SINGAPORE EDUCATION CONTEXT

• Strategic Apex: Leadership at the national level
• State schools are grouped into four zones, each led by a zonal director
• Schools within each zone are further clustered, with each cluster consisting of 10-14 schools facilitated by a cluster superintendent
• The Academy of Singapore Teachers (AST) was established with the mission to build a teacher-led culture of professional excellence
  • Working through teacher leaders
  • Networked Learning Communities (NLCs) across schools
  • Professional Learning Communities (PLC) within schools
PROPOSED SINGAPORE SUP MODEL

- NIE engage AST and cluster superintendents (strategic apex) to extend their outreach to school leaders (middle line managers) and ultimately the school teachers (the operating core)
- Collaboration with AST also extends NIE partnership to the pedagogical leaders (the technostructure) and to existing structures
  - Master Teachers, Lead Teachers and the Senior Teachers
  - NLC, PLC
PROPOSED SINGAPORE SUP MODEL

• Leadership at the institutional level
  • School Staff Developer
  • Senior and Lead Teachers
  • Heads of department
PROPOSED SINGAPORE SUP MODEL

• Third spaces, including structures and roles, which the boundary between
  the university and schools
  o In Singapore, MOE education officers seconded to NIE can serve this
    boundary-spanning role as knowledge-brokers
  o NIE recently invited Master Teachers to be Research Partners of the
    Office of Education Research
  o Existing NLC structures can be expanded to include university
    researchers
PROPOSED SINGAPORE SUP MODEL

**University**

- Strategic Apex
  - National Institute of Education

**Ministry/School**

- Strategic Apex
  - Cluster Superintendent
  - Academy of Singapore Teachers (AST)

**Techno-structure**
- Research Scientists
- Lecturers

**Middle line**
- Associate Deans
- Faculty Heads

**Support system**
- Collaborators
- Consultants

**Techno-structure**
- Master teachers
- Lead teachers
- Senior teachers

**Middle line**
- School leaders
- HODs
- SSD

**Support system**
- NLC/PLC
- School/Subject clusters

**Technical Operating Core**
- Research Scientists

**Boundary Spanners**
- e.g. Teaching Fellows,

**Technical Operating Core**
- Teachers

**Desired Outcome**

- Improved Teachers’ and Students’ learning
THANK YOU!