Process and design of a collaborative research project

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Purpose of this presentation

- To share an example of a collaborative study on teaching and learning in Icelandic schools.

- An analytical framework, the "evidence production-to-use system", is used to describe the project.

Point of view:

- Academic researcher

- Former teacher and administrator in school system

The study:

- **Teaching and learning in Icelandic schools 2009-2011**
- www.starfshaettir.hi.is

- In twenty elementary and lower secondary schools (6 – 16 years old)

- Directed from The University of Iceland – School of Education

Research team / consultation group:

- Ca. 20 academic researchers from two universities in Iceland, a group of master and doctoral students, representatives from three municipalities, from an ICT company and an architectural firm.

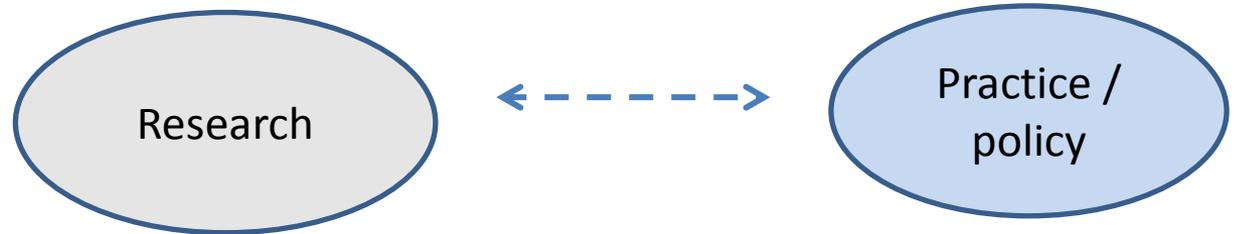HÁSKÓLI ÍSLANDS

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Aims:

1. To investigate how schools have developed their internal strategies towards individualised learning and student collaboration.

2. To encourage and support school development based on results

3. To establish a database for longitudinal research, accessible for future researchers and for schools to evaluate effects of school development
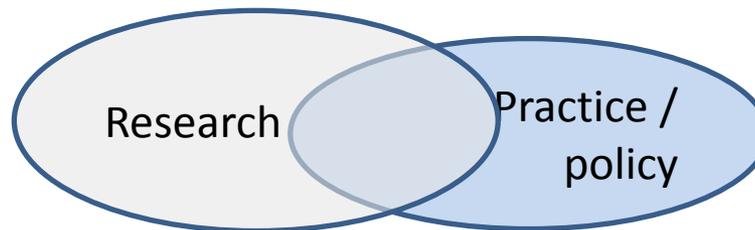
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- Separated

Research

Practice / policy

- Partly linked

Research

Practice / policy

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Research questions:

- *What kinds of teaching and learning strategies are currently practiced in schools, in terms of the research model?*

- *How have school practitioners adjusted their practices and student learning following social changes?*

- *Is there a relationship between various school practices and student academic outcomes, as measured by national tests?*

- *How are national and regional policies evident in school practices and to what extent have predictions made about school development in recent decades been realised?*

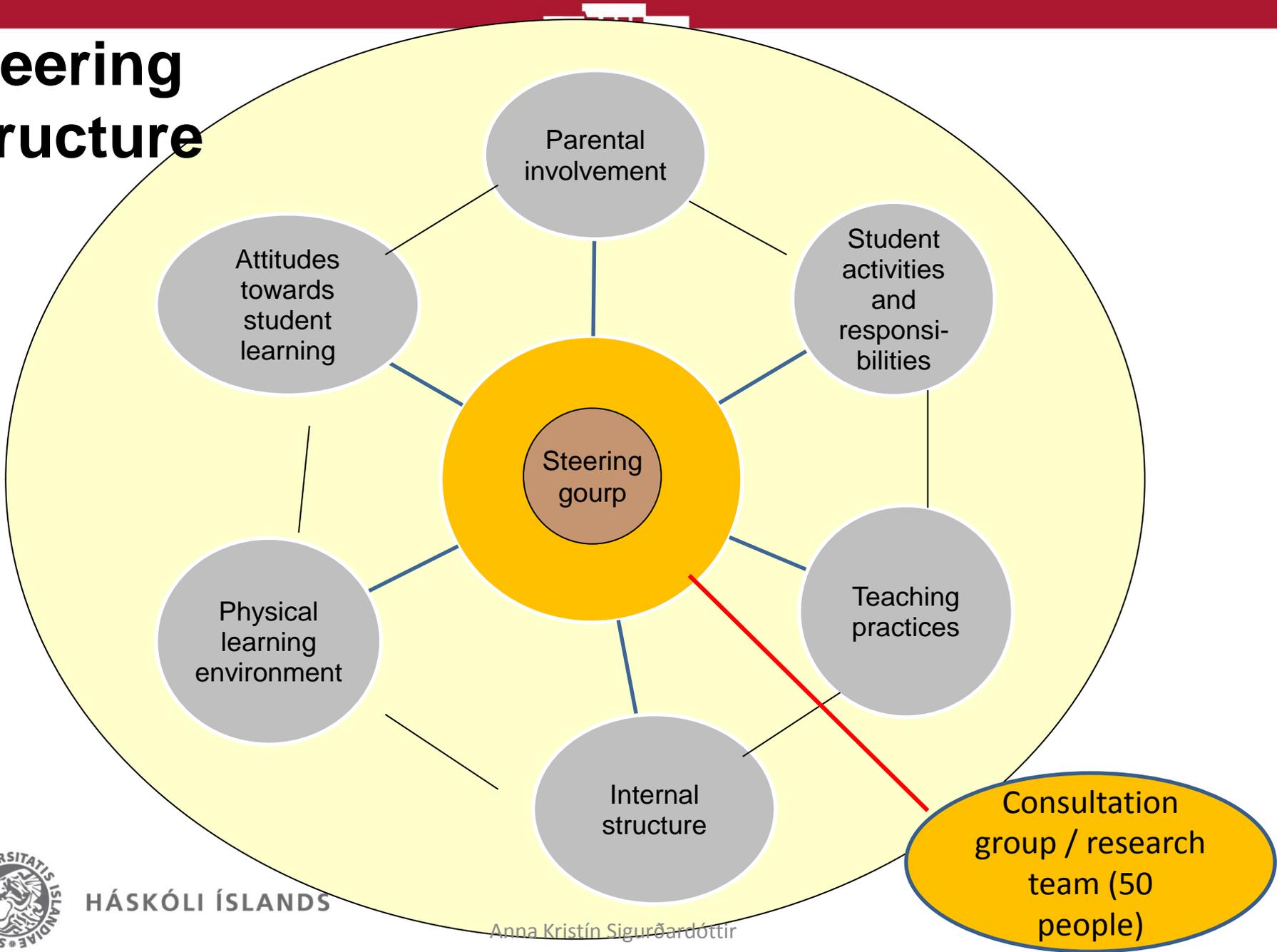HÁSKÓLI ÍSLANDS

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Methods

- Twenty schools in four municipalities participated, seventeen schools randomly selected, three schools purposively selected.

Data collection

- <u>Focusgroups / interviews</u> with teachers, principals, students and parents (around 200 interviews)

- <u>Classroom observations</u> (for approx. 100 schooldays, 400 – 500 lessons)

- <u>Electronic questionnaire survey</u>:
  - staff (860, 80%-93%), - aprox. 600 items
  - students (2100, 86%)
  - parents (5200, 67%)

- <u>School environment observations and photography</u>

- <u>Document analysis</u>

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Steering structure

Parental involvement

Attitudes towards student learning

Student activities and responsi-bilities

Steering gourp

Teaching practices

Physical learning environment

Internal structure

Consultation group / research team (50 people)

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Analytical framework

1. **Internal structures in school based** planning and administration.
2. **Physical learning environment:** The environment within classrooms and in the school building as a whole.
3. **Attitudes towards students learning:** The attitudes of students, teachers, administrators and parents towards strategies, national policy, the role of the school in student learning and school devleopment.
4. **Teaching strategies and practices:** Teacher roles and practices.
5. **Student activities and responsibilities:** Student assignments and learning, classroom climate, students voice.
6. **Parental involvement:** The involvement of parents in school practices and school-community relations.
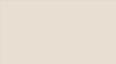
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Measurement Tool
on Individualized and Cooperative Learning
©Reykjavík City Department of Education 2005

1 Internal Structures

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Students divided into classes and groups by age		Cooperation within grade levels		Cooperation across grade levels
Students always work in closed classrooms		Some areas outside classrooms also used as workstations		The whole school building is divided into workstations
Curriculum organized by subjects		Cross-curricular themes during theme week; students have a choice in some subjects		Curriculum usually organized into themes across subjects; students have a choice
One teacher responsible for one class		Two or three teachers share responsibility for students within a grade level		Two or more teachers responsible for a group of students, across grade levels
Each staff member works independently		Formal cooperation of some teachers and paraprofessionals during preparation – within or across grade levels		Formal teams of teachers and paraprofessionals work with students
Timetables divided into lessons of 40 minutes		Occasional rearrangement of timetables		School day always divided into 3–4 work periods

2 Learning Environment

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Individual tables organized in rows, facing blackboard in all classrooms, teacher in front of class	Some teachers have workstations in their classrooms	Work stations within classrooms – students work mainly in their own classroom	Most students work at workstations and move between areas	The whole school is divided into workstations – all areas used, including hallways, students move between areas
Students' work is not displayed – empty walls		Students' work is displayed in some classrooms		Students' work visible all over the school building; material accessible to students
No openings between classrooms		Doors "half open" between areas		Openings between some areas
One computer per classroom; computer room	12–16 students per computer	9–11 students per computer	6–8 students per computer	3–5 students per computer; mixture of laptops and desktops
"Closed" library, only for loans		"Open" library, used as workstation for classes		Information centre with workstations and computers, used by individuals and groups, great variety of books and other material

3 Attitudes Towards Students' Learning

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Teachers' teaching is the central issue		Debated whether teaching or learning is the central issue		Students' learning is the central issue
School is considered to be the workplace of teachers		School is considered to be the workplace of teachers and other staff		School is considered to be the workplace of students, teachers and other staff
Some students can't learn – school is not for all students		Believed that some students can learn in regular classes, others in special classes		All students can learn and the school is for all students
Students within grade levels supposed to learn the same material, in the same way, at the same rate		Some teachers accept differentiated progress, e.g. for short periods or in some subjects		It's accepted that individuals are different; various learning methods, goals and progress rates accepted
Teachers' preparation, responsibility and continuing education on an individual basis		Teamwork by some accepted for short periods; shared continuing education acknowledged up to a certain point		Teamwork, shared responsibility and shared continuing education seen as a matter of course
Teachers make their own decisions, except for work hours		Acknowledged that the principal manages some tasks		The principal is regarded the professional leader of the school and coordinates cooperation among staff
One-way information delivery to parents seen as sufficient		Information delivery considered to be important and parents always welcome to visit the school		Parental involvement in students' learning taken for granted and part of daily work

4 Teaching Strategies and Practices

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
The same study plan for a whole class		2–3 different study plans for a group of students in the same class	Individual study plans for some students	All students make their own individual study plans together with teachers and parents – and set goals for a study period
Same assignments for all students in a class		Same theme for a whole class but different assignments for different groups of students		Same theme for a large group, different assignments chosen by individuals and groups
Same teaching and learning strategies for a whole class		Different learning strategies allowed within a class		Students' learning strategies according to individual goals
No formal, regular, personal interviews with students about their learning and feelings		Interviews with students twice a year about their learning and feelings		Personal interviews with all students every week/two weeks about their learning and feelings
Exams within grades approx. twice a year		Continuous and individualised evaluation of the progress of only some students		Individualised and continuous evaluation of the progress of all students
Limited recording of students' progress – no data processing		Some recording of students' progress, limited data processing and information delivery		Recording of students' progress in a database and specific data processing and information delivery

5 Students' Activities and Responsibilities

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Teachers are responsible for students' learning		Students are told to be responsible		Students are responsible for their learning
Goals for learning presented in the national curriculum not known by students or parents		Students and parents know the goals for learning set for the class		Students set their own goals of learning for a certain period of time together with parents and teachers
Students take no part in organizing the study plan for the class		Students take some part in organizing the learning but on conditions set by the teacher		Students design their own plans to reach their goals and evaluate their progress together with the teacher
Learning strategies are not the central issue		Teachers talk about various learning styles and strategies to support students		Students know their own learning style and various learning methods
Students work according to the teachers' instructions		Sometimes students work independently, alone or in groups and choose on their methods and strategies		Students work independently, alone and in groups, collect information, evaluate, analyze and present their results in various forms
Students have no curricular choice		Students have some choice in some subjects		Students choose subjects and assignments
Students do not take part in any planning in the school		Older students participate in planning events and social life		Students participate in planning the work of the school as a whole

6 Parental Involvement

| Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Parents get no study plans; no formal participation in their children's learning		Parents receive study plans for a whole class		Parents are active partners in their children's learning
Information to parents only through test results and formal parent-teacher interviews		Information to parents through newsletters, meetings, interviews, school websites, e-mails and telephone calls		Interactive information exchange using the net and through interviews and meetings
Parents visit school when invited to an interview or a meeting		Parents take part in events; regular interviews with parents		Parents participate in the daily work in school – can follow daily activities on the net
Parents do not take part in evaluating students' progress		During interviews parents have the opportunity to listen to teacher and student evaluations of learning		Parents participate in evaluating the progress of their child

Stage 1	Stage 2
Individual tables organized in rows, facing blackboard in all classrooms, teacher in front of class	Some teachers workstations in their classroom
Students' work is not displayed – empty walls	
No openings between classrooms	
One computer per classroom; computer room	12–14 students computer
"Closed" library, only for loans	

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The evidence production-to-use system – location of the mechanisms
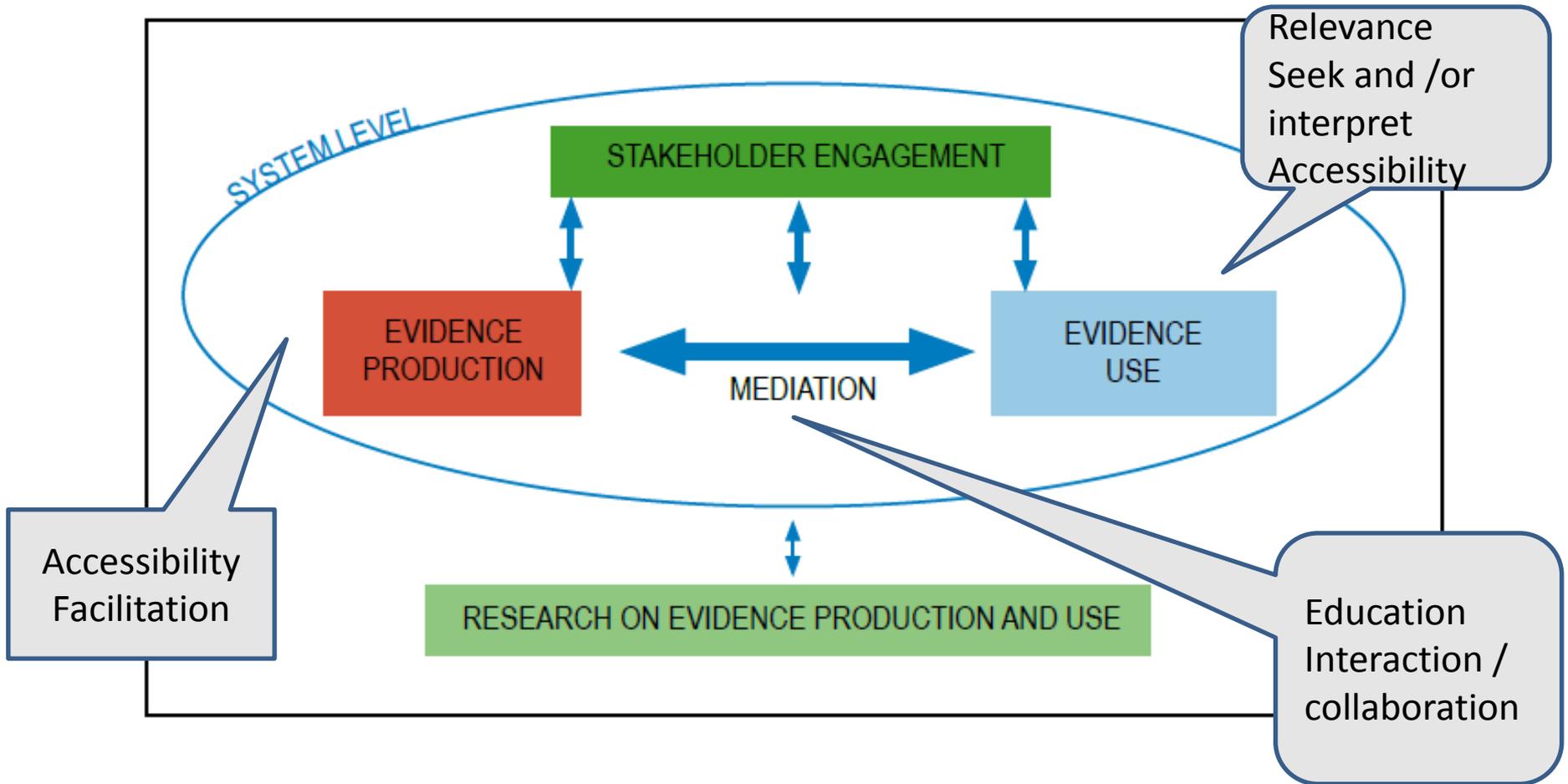
From:
Gough D, Tripney J, Kenny C, Buk-Berge E (2011) *Evidence Informed Policy in Education in Europe: EIPEE final project report*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Mechanism and activities

Mechanism	Activities
Accessibility	Results were made available along the way, reports with results from questionnaire surveys were made for each school. Data analysed at school level presentation/ consultancy. Researchers get access to data on "real life".
Relevance	The aims focus explicitly on educational policy. Analytical framework was created by school leaders to use in self evaluation.
Education	Consultation and networking.
Facilitation	Joint application for grants, consultancy.
Seek and/or interpret	Schools were offered consultation / support from researchers in analysing or interpreting the results and in making development plans.
Interaction / collaboration	Collaboration at all levels of the study, two-way flow of information. Regular meetings with the school leaders.

Some benefits and considerations

- All partners were highly interested in the results.

- School leaders were "active" partners in data collection.

- Good access to schools /classrooms, high response rate on questionnaire surveys.

Some benefits and considerations

- Relatively few schools have accepted consultancy from researchers, two of them have started formal school development projects based on the results.

- Qualitative data seem to be more useful or understandable for schools than the quantitative data for several reasons (it takes longer time to analyse the qualitative data and there are also problems with confidentiality)

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