

### PAPER 3 ABSTRACT

*Using Different Measures of Teaching Quality to predict Student Learning in Mathematics: An Exploratory Study*, Charalambos Charalambous, Ermis Kyriakides, University of Cyprus.

Introducing the right forms of flexibility could help teachers improve their skills with activities, such as job rotating, networking, teamwork and collaboration. With knowledge retrieval, utilisation and sharing through interpersonal activities the learning capacities of teachers and schools could be improved. The purpose of the paper is to present a case study that examines how flexibility can be applied to help teachers improve their skills through networking, collaboration, knowledge sharing, training or receiving coaching and mentoring from someone who understands these skills. In the case study, the functional flexibility or organizational flexibility was examined. Employees can be transferred to different activities and tasks within schools, among schools and even within the education system. Job rotation, networking and professional communities of practice are labels given to the functional flexibility scheme to be considered. The objective of the case study was to introduce flexibility in the Slovenian labour market of education and to examine how this could help to achieve teachers' development and improvement'. The cross-sectional study involved observations and data analysis of a quantitative survey. Data include observations of network meetings, SPIN analysis and informal conversation with teachers. In addition, a survey was designed to separately collect data from 99 teachers and 75 head teachers. The results demonstrate that schools frequently do not exercise the flexibility. The most frequently used form is the employment for a limited time. In that relation, a negative position of teachers towards that type employment was noticed, since temporary employment contracts do not provide the appropriate level of security. The application of functional flexibility within the case study, however, showed different results. The results show that teachers, included in the case study, improved their skills through networking, collaborating in communities of practice and knowledge sharing. For the purpose of measure, we used the list of ten skills most sought after by employers (Hansen and Hansen, 2014). The most significant progress was noticed at teamwork, planning and organising, flexibility, and problem solving skills. On the other hand, the least progress was noticed in the field of communication skills and computer literacy. As already identified in the preliminary researches (Cheng, 2011 and Retna and Ng 2006), teachers prefer to use interpersonal interactive methods of collaborating and knowledge sharing. The finding indicated social capital that was built in between networks had an important influence on teachers' improvement. The trend of flexibility in the field of education should move away from the fixed term contracts and focus on the use of several different elements of flexibility. Using other elements of flexibility, linked for instance to the organization of work, space, time, etc., could lead to a more effective and flexible teacher, and in the end to a better improvement of teachers.

### PAPER 4 ABSTRACT

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*Combining the best of two worlds: Integrating data-use with research informed practice for school improvement*, Chris Brown, UCL, Institute of Education

Evidence use is needed to deal with the challenges faced by many school systems worldwide (Brown, 2015). To date, approaches to school 'evidence-informed improvement' typically fall into two distinct camps: data-use and research-informed practice. Generally, the first involves the analysis and use of data to improve educational practice (Schildkamp & Poortman, 2015). The second, research-informed practice, represents "a combination of practitioner expertise and [the] best external research" (www.education.gov.uk, 2014). Both, however, share the aim of improving teaching and learning outcomes. There is much overlap between these two approaches. By seeking effective ways to identify, develop and share best practice, for example, both have reached a similar understanding of the need for:

- Collaborative teacher learning processes;
- Cycles of inquiry that involve the identification of need, the development, practical trial, iterative refinement and dissemination of new approaches to teaching and learning;
- The use of tacit knowledge in the process of knowledge creation ,
- Collaborative data/research-informed improvement, in Professional Learning Communities (e.g. Stoll *et al.*, 2006).

Both approaches have proved effective. For example, when research is used as part of high quality ongoing professional development, it can positively contribute to teacher, school and system performance (Cordingley, 2013; Mincu, 2013). Likewise, effective data-use can improve a schools' functioning in terms of increased student achievement (Campbell & Levin, 2009; Lai, *et al.*, 2009). Taken together, both approaches seek to tackle the same goals in similar ways, but each has areas of deficit that mirror the strengths of the other. For example, while data-use teams are effective at identifying educational problems and their underlying causes, they typically depend on their own capacity in designing improvement measures. They thus run the risk of designing improvement measures based on data, which research has already shown do not work. Conversely, research-informed practice ensures that improvement measures to tackle issues of teaching and learning are steeped in what has been effective elsewhere, but it is not always apparent that the improvement measures fit with the context of the specific school, and truly tackle the causes underlying the problems faced by the school.

With this conceptual paper, based on an extensive literature review, we argue that there is both merit and benefit in joining together what are currently two disparate approaches and in bringing together researchers who, until now, have worked separately. We propose a new combined approach to research and data-use that involves:

- Continuous and systematic cycles of inquiry,
- Data-use to identify needs of teachers and learners
- Research-informed knowledge creation to aid the development of improvement measures;
- Refinement and trialing of improvement initiatives using effective joint practice development; and
- Evolving feedback loops in order to ascertain feedback.

While working with this approach, facilitators build conditions of trust and collaboration to ensure maximum benefit, and stimulate knowledge mobilization to aid school and system reform and improvement. Taken together, integrating data-use with research-informed practice is likely to be the best of two worlds, thereby potentially leading to more effective and sustainable educational improvement.

## SE Innovate! Session

Title:	A European project to support leadership development and school self-evaluation
Topic:	Self-evaluation: schools and systems improvement
Abstract ID:	3275
Session:	Parallel Session 4
Session Date and Time:	Friday 8 January 2016 11.00-11.30
Location:	Argyll Suite 2
Author/Speaker:	Fiona Stephens
Company/Organisation:	Canterbury Christ Church University
Co-Authors:	Dr Robin Precey
Presenting Author:	Fiona Stephens
Presentation Method:	Innovate!