

## To be part of a research and development strategy for self-improving education systems

Members of the Lesson Study Community are already benefiting from international collaboration. This paper invites you, as a community, to become one of the links in an international initiative, which is focussed on new ways of working, supported by digital tools which lead to self-improving education systems in developed and developing countries.

### Background

The context for this invitation comes from calls to educators from UNESCO and the OECD to work together to solve global inequalities in education.

Globalisation and mass movement of peoples for economic and security reasons provide imperatives for supporting knowledge sharing so teachers everywhere can enhance educational opportunities for all.

UNESCO (2015) identified a set of sustainable development goals (SDGs) and SDG 4 sets high expectations for the educational entitlement of children worldwide by the year 2030. Irina Bokova, Director General of UNESCO, calls upon educators to act as “change agents” to improve learning outcomes for children in both developed and developing countries:

[...] we need a new focus on the quality of education and the relevance of learning, on what children, youth and adults are actually learning [...] We need an even stronger focus on teachers and teacher educators as change agents across the board (UNESCO, 2015, p.4).

The OECD (2009) calls for the: “creation of “knowledge-rich”, evidence-based education systems [...]”, because “in many countries, education is still far from being a knowledge industry in the sense that its own practices are not yet being transformed by knowledge about the efficacy of those practices” (p. 3).

In April 2016, a Teacher Education Knowledge Mobilisation Summit was held in London to discuss these issues. The recommendations from the summit call for an international networking strategy, which will be forwarded to UNESCO for consideration and include this statement:

The education sector has within it the knowledge needed to improve the education of all children but this knowledge is held in isolated pockets and is not yet accessible to all teachers in developing or developed countries. Connection, collaboration, co-ordination, collecting and indexing of opportunities by an international body are needed, coupled with networking knowledge holders, users, researchers, educators and funders to share and build knowledge across the whole field of education.

Digital tools and collaboration make the vision possible. Imagine if teachers could easily access and contribute to:

- research-based pedagogic knowledge and tools including barriers to learning threshold and troublesome concepts; diagnosis and intervention strategies – in every concept, and subject, for every type of learner across all key stages;

- an evidence base for effective practice that was based on cumulative research over years, providing a wider foundation for practice, rather than being small scale and rarely useful to teachers; and
- educators were able to apply the Stenhouse model for action research – scaling up case studies across different settings.

Could educators across schools, across sectors, regions and countries work together to achieve this vision? Current approaches tend to be rather piecemeal and often short lived: could we connect up creating an inclusive network of networks, providing and respecting a range of approaches, which contribute to the overall goal of improving the evidence base for practice?

Existing models for system improvement in education assume that educators and teacher educators have the knowledge and resources to access a high-quality professional knowledge base. This is not the case; new knowledge is steadily being developed but is not easily accessible. Evidence-based practice is growing in importance. The ease of searching for research on the internet demonstrates a growing body of evidence to underpin practice – but duplication, access and organization are issues. Websites funded by governments often do not last under a new administration and the subsequent lack of a corporate memory can lead to duplication as similar work is re-commissioned with consequent wastage of resources.

New digital tools make possible new solutions to the previously intractable problem of keeping the teacher workforce up to date in the latest subject and pedagogic knowledge and evidence about effective practice.

Digital tools provide new opportunities to realise and expect evidence-based practice in classrooms. Professional knowledge is not static and digital tools provide low-cost solutions to the need to keep updating any professional knowledge base. A consequence of creating access to research is the need to empower teachers to be research literate.

We propose a set of solutions to the challenges of system improvement and knowledge mobilization outlined above which we have called MESH: the Mapping Educational Specialist knowhow initiative, with MESHConnect being the network component and MESHGuides being an example of the knowledge base for teachers published as research summaries. The MESHGuide research summaries are updatable (as knowledge is not static) and are the published outcomes of research and development (R&D) groups of teachers and researchers working in collaboration. The MESHGuide research summaries or digests are published in a searchable database, perhaps not unlike Wikipedia. See [MESHGuides.org](http://MESHGuides.org), for examples, from the pilot development of guides on dyslexia, dyscalculia; teaching of spelling in English; reluctant writers and interventions to support them; strategies for teaching English as an additional language, among others. Alternative summaries already exist in other networks and these should and would be accessible.

MESHConnect is a grass roots network of schools working with universities to create dialogue and communities of practice between teachers and researchers. The aim is to collaborate to build the evidence base for practice, with feedback mechanisms for critiquing and updating the existing knowledge with new research, in order to create a self-critical, self-improving profession. (Founder and associate members from several countries are listed on [www.meshguides.org](http://www.meshguides.org).)

The initiative has developed from decades of R&D in how networking and digital tools for publishing can support the holy grail of lifelong learning for teachers: keeping

teachers up to date over decades and their entire career is a financial and logistical challenge for all countries.

Figure 1 provides a visual representation of what is proposed.

The MESHConnect vision (Figure 1) is for R&D in a self-improving education system which links teachers, and researchers using quality-assured processes to create a robust evidence base underpinning practice.

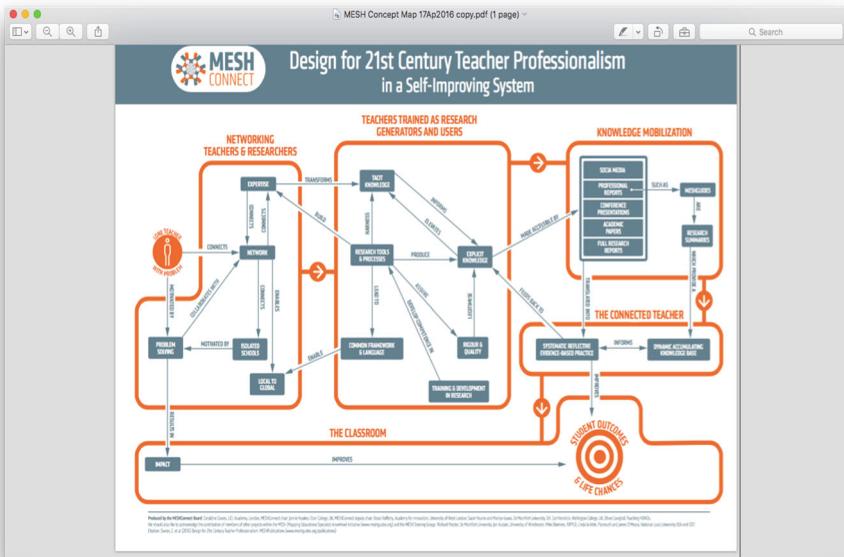
The network does not aim to compete with existing services to achieve this, but rather signpost to and help educators connect with existing practice and test new ways of working to achieve evidence-based practice and an ever-growing knowledge base for the profession.

Figure 2 sets out the vision for the developing relationship between theory and practice as a teacher moves from novice to experienced professional.

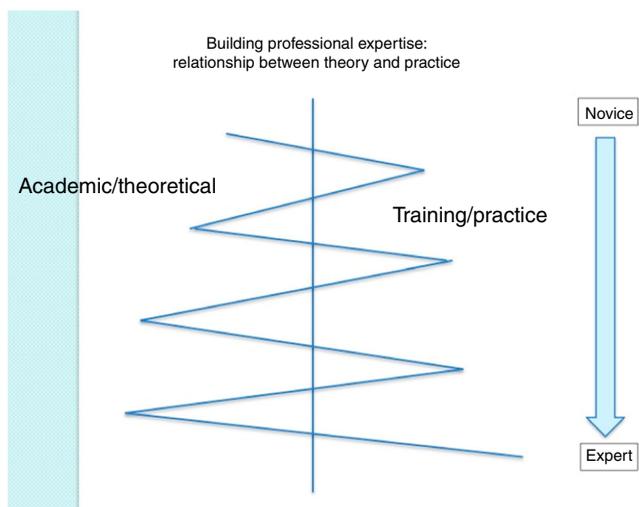
This MESH initiative is timely – new technologies allow low-cost connectivity, knowledge sharing and bridging of the gap between researchers, pedagogic and subject content experts and teachers in their classrooms. To realize the opportunities available through these technologies requires international collaboration and a technological infrastructure which allows a teacher, regardless of location or language, to find a professional network undertaking research, e.g. through collaborative lesson study and linking pedagogic or subject specialist experts who have deep experience and research in an area with general practitioners.

Collective effort with each small group of experts sharing their knowledge for the benefit of all teachers and learners provides a self-sustaining engine for ongoing improvement (see Figure 3).

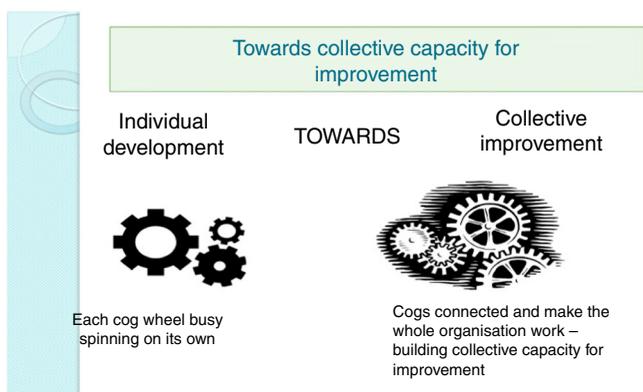
MESHConnect has been designed to take advantage of the new opportunities to meet the needs of teachers and educators to develop, test and share evidence-based practice in education, further developing the profession's knowledge and understanding



**Figure 1.**  
Twenty-first  
century teacher  
professionalism  
in a self-improving  
system



**Figure 2.**  
Professional expertise is a blend of research and practice



**Figure 3.**  
Collaboration provides an engine for sustainable ongoing improvement

of what works. Recognising that knowledge is rarely static, MESHConnect supports the testing of evidence by teachers in their own settings and context and the sharing of that knowledge more widely. In doing so the network will:

- build a growing body of evidence-based research in education, tested, owned and valued by the profession;
- empower teachers to be research literate;
- provide evidence to dispel education myths (which are prevalent); and
- support the increasing drive for school to school, educator to educator learning.

In summary, we propose MESHConnect has a role in:

- connecting teachers, pupils and researchers i.e. providing professional networking for knowledge sharing and mobilization, as well as scaling up promising small-scale research via online fora and associated digital tools;

- providing open access to R&D tools, e.g. six week intervention tools and training (see toolkit examples);
- curating, synthesising and distributing research via a knowledge hub with online guides (e.g. research summaries: MESHGuides – see prototypes);
- identifying gaps in research (for an example see “Areas for Further Research” in each MESHGuide prototype);
- providing events (like TeachMeets) to bring together teachers and academics via organised formal and informal meetings to share best practice, teaching innovations and personal experiences of teaching so that the knowledge hub is updated regularly;
- providing open publications; and
- curating existing networks to facilitate knowledge sharing globally.

To maximize the opportunities for pupils in schools everywhere, MESH members are committed to working to ensure that resources and online communities are open to all teachers regardless of location and wealth as we recognize that existing models of access to quality-assured materials exclude many. An example of a funding model being deployed successfully in education is that of the European SchoolNet which has been sustained over 20 years with core funding from thirty ministries of education set at the level of signoff permitted to a third tier civil servant. The Commonwealth of Learning (COL) provides another example. The COL is an intergovernmental organisation created by Commonwealth Heads of Government to promote the development and sharing of open learning and distance education knowledge, resources and technologies.

A charity (Education Futures Collaboration) has been established to provide governance to support this vision of MESHConnect (network of teachers and researchers) and MESHGuides (research summaries for teachers). Membership is open to those who support the vision. The two teachers below describe their hope for this initiative:

We are all part of a global community and we need a focal point for a global network of learners so we can develop, compare and validate our professional knowledge. The only way to keep improving is to share our knowledge. MESH and the online networking provides us with the infrastructure to do that (Mike Berrill, Executive Principal, Biddenham Campus Trust, UK).

As new networks develop through social media and across academy groups, keen educators are sharing and exploring their collective knowledge nationally and internationally. Connecting them into academic research through a digital platform starts to break down the divide between academia and practice. Using technologies to connect researchers in schools, academics and universities provides opportunity for genuine collaboration and has the potential to accelerate improvement by making evidence about “what works” readily available (Rachel Jones, Education Director, Elliot Foundation, UK).

### **Conclusions and next steps**

The use of knowledge management principles are well known in other sectors, public and private, and now need to be robustly developed in the education sector. The goal is to develop new ways of working, now possible with digital technologies, which can address long-standing improvement challenges faced by education sectors in all countries. One solution outlined here is an initiative involving educators worldwide in

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building a quality-assured Wikipedia of professional knowledge for teaching. This “translational research” initiative is quality assured and tested with teachers and provides advice linked to research and evidence. MESH uses low-costs digital technologies and an innovative knowledge mapping approach to provide personalised, research-based advice and “just in time” learning to support teachers in extending and deepening their professional knowledge, accessible from a mobile device anywhere.

You are warmly invited to participate and join in by contacting [enquiries@meshguides.org](mailto:enquiries@meshguides.org) or any of the authors individually.

**Geraldine Davies, Marilyn Leask, Jonnie Noakes,  
Rosie Raffety and Sarah Younie**

### References

OECD (2009), *Creating effective teaching and learning environments: first results from the Teaching and Learning International Survey*, available at: [www.oecd.org/edu/school/43023606.pdf](http://www.oecd.org/edu/school/43023606.pdf)

UNESCO (2015), “Rethinking education: towards a global common good” available at: [www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Cairo/images/RethinkingEducation.pdf](http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Cairo/images/RethinkingEducation.pdf)

### Further reading

A special edition of the *Journal of Education for Teaching: International Research and Pedagogy*, Issue 5, 2015 on “Translational Research and Knowledge Mobilisation in Teacher Education” contains articles which explain the concepts of knowledge mobilization and translational research which underpin the MESH initiative more clearly, available at: [www.tandfonline.com/toc/cjet20/41/5](http://www.tandfonline.com/toc/cjet20/41/5). These articles provide references to research and development which underpin the concepts here.

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