The Interactive Teaching and ICT project examined deeply interactive or ‘dialogic’ teaching in schools, in which pupils have more influence over learning than with more direct, ‘authoritative’ teaching. The project was designed to probe possible links between deeper interactivity in teaching, the use of ICT, and learning. It also aimed to explore how engaging in reflective dialogue with researchers contributed to changes in teachers’ thinking and practice.

- A higher proportion of dialogic teaching is beneficial for learning. Good teachers use ICT to stimulate and support reflective and dialogic interaction
- ICT can help learners to engage with lesson content and influence the course of lessons, but not always in the way intended
- The potential of ICT to support group work is not widely recognised
- Reflective dialogue with an observer concerning lesson activities and resource evaluation is valuable for teachers’ professional development
- Resources and professional development for teachers to encourage ICT that supports dialogic interaction should help to improve learning
- Teachers should be aware of the need to intervene during ICT tasks so that pupils achieve learning objectives in addition to task outcomes
- Research on the role of ICT in supporting forms of talk in group work should be built upon with more resources and professional development
- Teachers benefit from mentor support to explore resources, gain skills, and reflect on their teaching with ICT.

**Further information**

An extensive website (www.interactive-teaching.org.uk) has been developed in English and Welsh to provide more detailed information about the project and its findings, including case studies of lessons.

A book in the TLRP/Routledge Improving Learning series has been proposed, with the provisional title Improving learning through interactive teaching with ICT.

Papers in academic journals include:


There was consistent engagement with research users to ensure relevance. This involved heads of the schools, members of the advisory group (from national and local government, teacher education, and teachers from other schools), and engagement with the research community through papers, and presentations at conferences and to networks of colleagues within and beyond TLRP.

Our research design was built on a theoretical base which was developed specifically to account for the mediating impact of ICT on teaching and learning. This framework characterises learning as a process of change during participation in social activity and subsequent reflection on action, and defines teaching as a dialogic process of setting goals for learners and orchestrating features of the environment to make it feasible to reach them with some effort.

The conduct of the project involved teachers and pupils as participants, joint lesson observation by two researchers, the reflexive sharing of perspectives, reflective dialogue with teachers and pupils, and the evaluation of evidence for possible claims across classes, subjects, and the phases of the project.

Furthermore, the results demonstrated coherence across all methods of data collection, which included teacher interviews, pupil interviews, lesson observations, reflective dialogue, and comparison of attainment data.

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**The warrant**

TLRP involves over 60 research teams with contributions from England, Northern Ireland, Scotland and Wales. Work began in 2000 and will continue to 2011.

**Learning:** TLRP’s overarching aim is to improve outcomes for learners of all ages in teaching and learning contexts across the UK.

**Outcomes:** TLRP studies a broad range of learning outcomes, including the acquisition of skill, understanding, knowledge and qualifications and the development of attitudes, values and identities relevant to a learning society.

**Lifecycle:** TLRP supports projects and related activities at many ages and stages in education, training and lifelong learning.

**Enrichment:** TLRP commits to user engagement at all stages of research. It promotes research across disciplines, methodologies and sectors, and supports national and international co-operation.

**Expertise:** TLRP works to enhance capability for all forms of research on teaching and learning, and for research informed policy and practice.

**Improvement:** TLRP develops the knowledge base on teaching and learning and policy and practice in the UK.

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The research

Project design and data collection

The project involved a total of 41 teachers from 21 primary and secondary schools and involved two phases. Each teacher worked in pairs to plan a six-month period of teaching in one subject (mathematics, science, or Welsh) with a particular class in each year-long phase of the project. In phase 1, one teacher worked with ICT and one without. In phase 2, all teachers used ICT as a resource when it was considered most useful to each way to teach each topic. Five teachers taught through the medium of Welsh. Teachers using ICT worked with the resources that were available to them. All had an interactive whiteboard, but there were many variations in the type of board and in the other items of equipment that were used by pupils.

Teachers were asked initially about their perceptions of interactive teaching and the effects of ICT. The pupils were all given an initial assessment covering the topic or topics being taught. A group of pupils from each class was also asked about their perceptions of ICT, both before they learned from this, and how ICT helped. After a classroom action research with two researchers (which was recorded by two cameras), the teacher selected a particular theme of the project. We expected that teachers would change their beliefs and their practice. Some experienced users were conscious of a shift to more dialogic pedagogy. In a dialogic lesson, the teacher at the whiteboard.

Impact on learning and attainment

In Phase 1 we found an overall pattern of ‘newness’ and ‘discomfort’ commonly taught with and without the use of ICT. This corroborated the indications from the qualitative data that although ICT generated attention and interest, few teachers saw it as the main feature of interactive teaching, and that as quizzes were particularly popular, the visual style and rapid feedback on their ideas were also seen as valuable in classroom practice.

Some teachers found that ICT helped them to identify any changes in their pedagogical practice in terms of using ICT resources by teachers and pupils, which influenced learning. This suggests that a CPD strategy based on identifying teachers who use ICT to support dialogic approaches, and training them to mentor their colleagues within a school or cluster, might be more effective than external courses or specialist ICT trainers.

There was a clear balance of evidence, from both observation and assessment data, that more dialogic interactivity, rather than the use of ICT in itself, was the main factor in improving learning and attainment. There was widespread agreement between teachers and pupils that pupils need to participate actively and influence the course of activity, including whole-class teaching episodes, in order to improve learning. Those teachers who recognised a change in their pedagogy had more responsibility for the activity of cases of a particular phenomenon. This can help them to learn inductive concepts.

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