Becta
ICT Research

Project 1: models of online in-service training

The investigation on which this summary is based was carried out by the School House Partnership.

Introduction

The focal point of the research was the development and impact of an online in-service training (Inset) day held in November 2002. The online Inset was aimed at Key Stage 2 and 3 teachers who taught music but who were not music or ICT 'experts'. The idea was to promote the effective use of ICT in music by giving teachers access to experts in the support of music through ICT experts by means of a virtual conference[1]. Teachers also had guided access to downloadable resources and materials written to support Becta's publication: *Music Technology in Action* (see Further information).

The project set out to explore the potential of the internet to bring together practitioners for a virtual, nation-wide training event: a training event that sought to support practitioners working in isolation by giving them the opportunity to develop contact with colleagues and to have ongoing access to practical classroom materials and ideas.

The aims of the online Inset day were to:

- extend and elaborate print-based materials to form a rich online resource as the focus for an online seminar
- provide a one-day online forum for teachers to discuss, question and explore ICT ideas and materials for music teaching and learning
- stimulate non-expert participants to use ICT ideas and resources in their classroom, and thus have a positive effect on teaching and learning in KS2 and KS3 music lessons
- engage the interest and commitment of participants so they could confidently develop ICT-focused activities in their music teaching
- establish a legacy resource of materials and conference discussion for music and ICT.

The conference and its support materials were organised around four main forums:

- midi and vocal work
- music and the internet
- sound processing and recording
- teaching music with electronic keyboards.

The virtual conference also had a 'novice corner', a 'social' area and a 'guest-book' facility.

The specific aims of the research project were to evaluate this model of online professional development. In particular:

- its effects on the attitudes and behaviour of participating teachers
- its impact on classroom practice.

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[1] The discussion threads and materials are still accessible online [http://forum.ngfl.gov.uk/WebX?13@237.KFdbaVbBcGF.22@.ee9f314].

Any number of unknown teachers and advisers may have benefited from the Inset event either on the day or subsequently (by browsing messages and downloading materials). This evaluation, however, concerns itself with a small number of known participants.

Methodology
Participants

Becta invited Key Stage 2 or 3 teachers who were members of the Teachers Online Project (TOP) to participate in the online Inset event and to take part in the evaluation. The final 56 respondents were randomly split into two groups with 29 teachers in Group 1 and 27 in Group 2. Group 1 was invited to attend an introductory meeting and offered funding for supply cover; Group 2 received all information by email.

Data collection

There were three stages to the data collection:

Before the event – Group 1 attended an introductory meeting during which they learned about the project, the materials, met the online conference leaders, explored the conference website and completed an initial questionnaire and success criteria form. Group 2 received all their preparatory information by email – the briefing materials about the format and content were short and there was no contact with conference leaders - they received the same initial questionnaire and success criteria form. In addition, to ensure the integrity of the data, 10% of respondents (five teachers) were chosen at random from the entire cohort and interviewed in their schools.

During the event – during the day a researcher monitored the online interactions. At the end of the conference 15 participants were sent a questionnaire asking for their immediate views. Other researchers visited two training centres to observe and interview teachers who were participating in the online conference and working with the materials.

After the event – visits took place to six schools and to the teachers who were interviewed at the training centres. The purpose of these visits was to discuss and observe the work stimulated by the online conference. Three weeks after the event all teachers were asked to complete a self-review sheet by email to establish whether their expectations of the training (based on the personal success criteria they set previously) had been met or exceeded. A final questionnaire about outcomes from the Inset day was sent by email to all participants. Comments about the materials arising from the project were also collected.

Process

In addition to being asked to complete questionnaires and respond to emails, all participants were asked before the Inset to define what personal success would look like after the Inset. This was so they could judge progress against their own criteria. Teachers were given 'cues' around which to formulate their expectations of success and a form on which to submit their chosen criteria to Becta. Six weeks after the online conference these success criteria forms were returned and individuals were asked to state (using a 4-point scale) to what extent the training had supported their success criteria.

Response

Not all teachers who agreed to be part of the evaluation completed all elements of the survey. Group responses can be summarised as:

	Group 1 (number of responses)	Group 2 (number of responses)
Total number of participants	29	27
Questionnaire 1	29	12
Success criteria	29	10
Online views	10	5
Questionnaire 3	11	4

As this table shows, significantly fewer responses were returned by the group who received their preparatory material by email.

Eighteen from Group 1 and 13 from Group 2 contributed to the online discussions. (Other teachers from the evaluation reported that they had logged into the conference but were passive participants.)

Four of the evaluation returns were received from advisory teachers and one from a music lecturer in initial teacher training (ITT).

Overview of the participants

Age and experience – 31 participants were from primary schools and 25 from secondary schools. The ages of the cohort were spread evenly between 20 and 59 years. Only six participants had less than five years teaching experience.

Confidence with ICT before the Inset – responses indicated that the teachers' confidence in teaching with ICT was divided evenly between low, moderate and high. However, none expressed a 'low' level of confidence in their personal ICT skills. The majority of teachers recognised the importance of teaching and learning with ICT. Nearly three-quarters of the teachers named ICT as a performance management target.

Confidence with music - the majority of teachers reported good skills in music. Nearly three-quarters of the teachers named music as a performance management target. Music featured in the school improvement plan in seven schools and in the Ofsted action plan of fourteen schools.

Equipment and internet access - all teachers said that their schools were generally well equipped with ICT but most said that there was relatively much less equipment and software for teaching and learning music with ICT. Nearly all the teachers said that they had easy access to the internet at home, at school or both.

Key findings

Because of the size of the sample and the single subject focus these findings may not be representative of the outcomes of all online in-service training events. However, some of the findings do accord with those of Her Majesty's Inspectors (HMI) in the report, *Continuing Professional Development for Teachers in Schools*[2]:

[Paragraph 9]
> *'Course attendance was the main vehicle for professional development in most of the schools. However, inspectors noted evidence of a growing awareness of the value of*

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[2] Report HMI 410, published by Ofsted, March 2002
[http://www.ofsted.gov.uk/publications/index.cfm?fuseaction=pubs.summary&id=29].

> *other forms of CPD. These included, in particular, sharing the expertise of teachers in the same school, sharing knowledge and skills with teachers in other schools…'*

[Paragraph 12]

> *'Teachers' judgements about the effect of CPD activities on their work were usually based on broad statements about what they felt better able to do, or the increased confidence with which they now undertook their work. The expected effects in terms of pupils' gains in knowledge, understanding or skill, or specific improvements in the teacher's performance, were rarely stated explicitly when the development activities were planned or used as criteria for judging their effect.'*

Response to the online training

The views collected immediately following the online conference and those collected subsequently unanimously speak of the quality of the content and the participants' enthusiasm for the online learning experience. More than half the teachers revisited the site for their own purposes and five reported that they were using the site to train either student teachers or colleagues from their own school or a feeder primary.

When criticism was expressed it was mostly about the website's navigation, which, it was considered, required 'too many clicks'. Teachers also commented about the lack of a sense of community online. This lack of a sense of community may have arisen because the interactions on the day were largely question (from the participant) and answer (from the online 'expert'), with relatively few exchanges between the participants themselves. It may also reflect a lack of awareness or preparation on the part of the participants.

Where the opportunity arose to train with colleagues, either in their own school or in training centres or in a City Learning Centre (CLC), teachers were very positive about the 'sharing' aspect of the experience. Overall, teachers responded very favourably to the event and cited learning and confidence gains among the outcomes. However, they tended to view the event as access to a discussion-enriched, online resource centre rather than as attendance at a training conference or seminar. In the main, the participants seemed prepared to acquire resources and information but not to contribute.

At the end of the conference one teacher reported that he had followed the unfolding discussions, read all the material in the forums and visited a few websites. He had not interacted in any forum but nevertheless considered that the experience had been the best Inset he had undergone in a long time.

Success criteria - gains in teaching and learning

Ratings for progress towards self-defined success criteria (see Process above) were overwhelmingly positive. Teachers reported that the most significant successes were in 'enthusing' colleagues and in increased personal and professional skills and confidence. They also reported improvements in planning lessons and in delivering lessons with ICT.

As well as reporting that they had gained skills and confidence in large measure, all teachers commented positively on what children had gained from lessons which included ideas from the Inset. As previously stated, the participants had a very favourable view of the online event and of the quality of the online materials.

Therefore, according to their own definitions of success, participants made gains in personal and professional development, and their students' motivation, enthusiasm and progress improved in

lessons that incorporated ideas from the event. It is significant, however, that the follow-up interviews and questionnaires showed that the majority of participants had not incorporated the learning gained from the day into their subsequent practice. Neither had they planned to accommodate these new ideas in future work. With notable exceptions, the reported personal and professional enrichment had not influenced classroom practice in any lasting way.

Two teachers indicated that they had embraced ideas from the Inset and had used them extensively. Both reported increased enthusiasm and personal gains in confidence, knowledge and skills, which they then carried into their teaching. Consequently, they reported pupil response and progress in music lessons as 'good'. (These teachers are music specialists working in schools that do not appear to be marked by any significant features in their curriculum arrangements. However, it may be worth noting that both report good ICT facilities and 'sympathetic' ICT co-ordinators.)

In summary, teachers enjoyed the experience and had tried some of the ideas in their teaching before the end of 2002. However, for most teachers, this work went no further - lack of time was frequently cited as the reason.

Impact on teacher expertise

The evidence indicated four areas in which the online Inset had a positive effect:

- impact on teacher expertise in music and ICT
- impact on groups of teachers working together
- impact on classroom practice
- impact on attitude towards ICT-enriched music teaching.

As noted above, the strand of the evaluation in which participants were asked to define and measure their own success revealed a positive attitude change. In addition, all teachers who originally said that ICT in music was unfamiliar territory subsequently said that they felt motivated and equipped to take this aspect further.

From the responses it became apparent that teachers valued the opportunity to gain professional development online and then to share new ideas and materials with colleagues. Teachers training together in their school or in centres reported that they had enjoyed the experience and valued the ability to talk to others about the information and online interactions.

Three teachers training together in a primary school reported that at different points during the day, each one had excitedly called the others to see something on their screen or to direct attention to a page of the conference, or to a website. It seems that such collaborative work has many advantages for primary school teachers - not least because it fosters a team approach to staff development.

In a City Learning Centre (CLC), where groups of both primary and secondary teachers came together for the online event, many participants commented on the enjoyment and advantage of sharing ideas with colleagues. In one case, a music specialist with few ICT skills said he had gained a great deal from watching colleagues at work on the site, and much appreciated the opportunity to ask for help in solving navigation and download problems. Local networks for teacher development also appeared to have been strengthened as a result of the shared experience. By training together teachers felt that they were connecting with colleagues on a

personal level in the training room and at a distance via the conference. No other teachers commented on a sense of community or on a collaborative network for learning and sharing.

One teacher who had accessed the online day by herself reported that she would find many of the features useful for her music teaching, but doubted if she would have the time to show or encourage other colleagues. Another teacher was directed by his headteacher to follow the training. He commented that, as a recently trained music specialist, the ideas and materials were well known to him. However, he felt that his school was not yet equipped with sufficient ICT resources to follow up the training day, and that colleagues would need considerable support to develop their own skills and confidence to teach music with ICT.

Teachers reported that the conference site had been particularly useful for subsequent work with colleagues in school. Two experienced secondary teachers used the site, and materials from it, for face-to-face training with teachers from feeder primary schools. They reported both success and enthusiasm.

However, nearly all the teachers reported that, although they enjoyed the day and gained much in personal and professional terms, they had not implemented new ideas or materials in their teaching. Thus, while there is evidence that the online Inset had a positive effect on the expertise of the participants, there is no clear evidence that these gains have had a lasting impact in the classroom. There may be many reasons for this outcome, but the reasons offered by the participants were a lack of time and a lack of continuity of support.

The weight of teacher opinion in this evaluation suggests that teachers prefer an element of personal contact in the training process. Their opinion tends to be corroborated by the differential rate of response and participation between Groups 1 and 2 illustrated by the table above (see Methodology)). At this time it would seem that these teachers favour online in-service training as part of a package that includes face-to-face interactions. This view was characteristic of those for whom the training was a 'shared' experience and for the members of Group 1 who also had an element of face-to-face input.

ICT as a mechanism for delivery

As the use of ICT was central to the project, both in the delivery of the conference and the content of the teaching ideas, it is hard to see how any impact would have been achieved without the participants having a minimum of ICT skills. Therefore, the skills and insights gained by teachers must be seen in the light of their prior ICT capability.

Throughout the study, teachers universally responded with music teaching uppermost in their minds - ICT played an invisible but catalytic role. The confidence and expertise gained from the online day were not mentioned in teaching and learning routines where music making was seen as the most important outcome.

Teachers who by their comments at the online conference were very skilled ICT practitioners, found the site and its content less than original. However, although many of the participants professed internet competence, a significant proportion of interactions during the conference took place in the 'novice' area. (Might this indicate that many still lack sufficient confidence or competence to use ICT-enriched activities to deliver their teaching?)

Other observations

Before the training day, Becta received 124 expressions of interest; on the day, the level of participation was reported by Becta officers to be significantly higher than expected. (Website statistics for the day show more than 80 people participating. There were 520 messages and 32,000 page hits. Of the 720 unique visitors that day, 308 had registered with the site at some time in the past and 412 were new registrants on the day.)

Responses to emails, faxes, and phone calls also suggested that follow-on activities in the classroom were a low or non-existent priority. For some, commitment to evaluation may have been seen as the simple completion of questionnaires for the actual day in November.

Because of the small numbers involved it was not appropriate to make comparisons between the two groups of participants. However, if the level of response is taken as a simple, if crude measure, it is clear that those in Group 1, who underwent an element of face-to-face training, were more willing to participate in the process of evaluation than those in Group 2.

It is interesting to note that about half of the participants reported that they were seen as 'progressive' by colleagues and that they intended to act as 'multipliers' in their schools.

Conclusions

Within the project's short timescale, it was not possible to ascertain significant curriculum integration or any continuing classroom application of benefits from the online day. As indicated, all the teachers reported that they learned new skills and ideas and were more confident. However, this reservoir of professional gain appears not to have been systematically applied to planning and delivery.

The teachers who attended the introductory day (Group 1) appreciated it not only because it provided an element of face-to-face contact but also because it explained the project, the materials and explained the concept of the success criteria. However, the introduction did not focus on a task or preparatory work to be completed before the event or explain what teachers should expect to do or contribute during the online conference; neither did it touch on follow-on activities. In view of participants' subsequent comments about the lack of follow-on activities precluding them from systematically translating personal and professional gains into their planning and teaching, it would appear that consideration needs to be given to incorporating follow-on activities into online Inset.

Clearly, briefing meetings for the participants in online Inset would also benefit from explanations concerning preparation and participation (not to mention guidance about criteria with which to measure the tangible benefits of the training to their teaching and their students' learning). Given the strong preference of these teachers for an element of personal contact during the training process, it is reasonable to conclude that the face-to-face element plays an important role in ensuring continuity of interest and classroom impact.

This would tend to indicate that online, virtual briefings are unlikely to achieve the desired results (at least in the short-term while online Inset events are an unfamiliar training genre). This in turn suggests that the recipients of specific online training have to be identified in advance. Implicit throughout these conclusions is the provision of local arrangements that allow teachers adequate

time to participate in all stages of the training and, if practicable, to join with colleagues to follow the training.

All participants were asked if they thought that this sort of online development experience was worthwhile and all respondents agreed strongly that it was a very positive experience. Participants said they would recommend it as a means of professional development.

"Thank you for giving me the catalyst that has sparked a regenerated and more enthusiastic/confident approach to teaching music through the use of ICT. A very good use of my time and a good investment on behalf of the school."

Recommendations

Organise a future online Inset day using the original online resource as a focal point and incorporating the lessons learned from the November 2002 event:

- identification of a specific audience or audiences
- preparation with intending participants
- a face-to-face element (preferably before the conference)
- a defined follow-up interaction so that the learning experience and its impact can be discussed and evaluated.

In planning future online teacher development, consideration should be given to the nature of intended impact. Online conferences should be planned with clear objectives.

Consideration should also be given to teachers who are involved as individuals but who will need support as multipliers. In Key Stage 1 and Key Stage 2 all teachers in a school may benefit from conference ideas and resources. Conferences should provide materials or online support for colleagues who have not directly participated in the online enrichment event.

The establishment of a website or separate discussion area should be part of the follow-up; participants from online training could then add comments or views at times appropriate to them. Such a focal point for gathering emerging reactions has the advantages of low cost and low effort. Research information would be available for longitudinal studies and a clearer picture of the effects of online Inset would emerge.

Further information

Music Technology in Action, was published by Becta in 1998 (ISBN 1 85379 418 X) as part of the DfEE's Music IT Support Project. The publication is no longer in print but it is available on the web as downloadable PDF files.
[http://forum.ngfl.gov.uk/WebX?13@237.KFdbaVbBcGF.17@.eef36ae]

The forums from the TOP Online Inset event are also available.
[http://forum.ngfl.gov.uk/WebX?13@237.KFdbaVbBcGF.21@.eebc723]