Effective Inservice for Computers in Education


Inservice education is a major vehicle for increasing the appropriate and effective use of computers in schools. But most inservice education is not nearly as effective as it could be.

Over the past four years, I have spent a great deal of time studying and practicing in the area of design and implementation of effective computer inservice. I have taught two graduate courses on effective inservice, done a number of inservices on effective inservice, and written a book on the topic. Now, I believe I have a clear understanding of some of the major problems that computer inservicers face and what can be done to overcome these problems.

Here are a few overriding ideas:

1. Inservice is a vehicle for school improvement and change. (Not all change leads to improvement.) If a school is to improve, the teachers and administrators must make a concerted commitment to work together towards the desired improvement.

2. The inservice designer, coordinator, and/or facilitator is a key change agent in our school system. This person has important leadership responsibilities.

3. There are many research-based models for school improvement; many of these are heavily dependent on inservice.

4. A great deal is known about effective inservice practices; systematic use of these practices will greatly improve inservice.

5. But education is political, and reality dictates many non-optimal choices in the design and conduct of inservice.

The most common type of inservice is a group inservice, with a number of people coming together for one or more sessions. A highly effective and often cost effective alternative is the one-on-one or very small group inservice.

The list given below is a conceptual model for the key design features of a really good group inservice.

1. Needs assessment based on possible participants.

   An inservice facilitator can base a needs assessment on introspection, knowledge of educational research on school improvement, talking to colleagues, careful study of district educational goals, long-range planning that the school or district has conducted, and so on. But it is very important that substantial attention be paid to the potential participants in the inservice. Information can be gathered from potential participants by one-on-one interviews, groups interviews, questionnaires, and so on. Often use of a combination of these is desirable.

2. Design the inservice; prepare and/or obtain handout materials; make arrangements for time, place, refreshments, credits, and so on.
A substantial amount of work needs to be done before the inservice begins. Pay careful attention to details. Lay out a timeline that has plenty of flexibility. For example, it may take months to arrange for district or university credit for participants in an inservice. It may take a month or more to obtain software and print materials.

3. Recruit actual participants. Gather baseline data on participants and their students, school computer facilities, and so on, so that you will be able to do summative evaluation after the inservice ends.

Often it takes a substantial “sales effort” to recruit participants. Every effort should be made to have a critical mass of teachers from each school that is participating. In general, it is far better to reach a large number of teachers in a small number of schools, rather than vice versa. Be aware that the research strongly supports having school administrators participate in the inservices for teachers.

If your evaluation is going to include measures of change in participants and/or their students, quite a bit of baseline data will need to be gathered before the inservice begins and/or almost simultaneously with the first inservice session.

4. Hold an inservice session and do formative evaluation as appropriate.

The research strongly supports the assertion that “one-shot” inservices are seldom effective. However, sometimes the choice boils down to having a one-shot inservice or no inservice. If the inservice is two or more sessions in length, it should include relatively formal formative evaluation that provide information for mid-course corrections.

5. Participants implement ideas in their classrooms; they have support from peers and/or inservice staff.

The underlying goal of the inservice is to improve the education being received by the students of the participants in the inservice. This means that the participants must appropriately and effectively implement some of the ideas covered in the inservice. In a multiple session inservice, implementation should occur between sessions. Support for this implementation should be provided. It might be provided by a combination of peer coaching and inservice facilitator coaching.

6. Repeat 4 and 5 as needed.

It is highly desirable that an inservice have multiple sessions, with time for implementation between sessions. Remember, the goal is to have participants implement the new ideas that they are learning. For most educators, the type of changes we are talking about require multiple inservices and a substantial amount of follow up support.

7. Do summative evaluation at the end of the inservices on perceived quality and effectiveness.

Ask participants what they think and feel about the content, quality, and effectiveness of the inservice. Be aware that such evaluation tends to encourage participants to think about what they have learned in the inservice; it encourages them to apply what they have learned.

8. Provide short and long-term follow up support of participants as participants implement what they have learned.

Participant support can come from colleagues, from the inservice provider, or perhaps from other people in the school district. (One reason for strongly encouraging participation of
school-level administrators is that they can provide follow up support and encouragement.) The key idea is that participants continue to receive support and encouragement to implement and to continue to use the new ideas that they have learned.

9. Do short and long-term evaluation of residual effect of the inservice on the participants.

   The key idea is that you want some “residual effect” to continue to persist long after the inservice is completed. The mere process of attempting to measure it is apt to contribute to it. (If participants know that you will be visiting their classrooms a few weeks after the inservice is over in order to see what they have been doing, they are apt to be doing something.)

10. Do short and long-term evaluation of the effect of the inservice on the students of the participants.

   This is only possible if baseline data has been gathered before inservice participants begin to implement ideas they are learning in the inservice. By and large, it requires a relatively carefully designed and implemented research effort to adequately determine short-term and long-term effects on students. Relatively few inservice projects make any significant effort to do so.

   Think about the computer education group inservices that you help to design and facilitate. Do you follow the ideas in the above list? If not, chances are that there is substantial room for improvement in these inservices.