A survey of the use of non-contact days for design and technology training

Abstract
This article describes research based on data collected from secondary design and technology teachers and explores:

- the effectiveness of the systems used in their schools for planning and monitoring non-contact days and the implications for management strategy of staff development
- how non-contact days or 'pupil-free' days are used and how the use of non-contact days has been decided
- design and technology teachers' perceptions on the adequacy of subject in-service training (INSET) and balance of time allocated between whole school and departmental issues on non-contact days
- teachers'/middle managers' confidence in planning and leading subject specific design and technology INSET for themselves and for their teams, and resources which might be produced to support them.

Background
The following data was collected by questionnaires sent to secondary schools in November 1996. A very high response rate demonstrates that professional development and the use of non-contact days are very important issues for design and technology teachers.

Of the 14 schools surveyed a wide range of types of secondary schools were represented including comprehensive, independent, state boarding, special, single sex, 6th form centre, technology colleges and so on. The majority of questionnaires were completed by heads of department/faculty or by those with posts of responsibility in the design and technology department.

The impact of national policies for professional development
It was only recently recognised at a policy level that the quality of education relies on the supply of teachers who have opportunities for further training and professional development, and that INSET could enhance pupil learning by improving in school and teacher performance. Non-contact days ('Baker' days) or pupil-free days were introduced as part of national policy in 1988.

"If we are to raise standards in teaching and learning, drawing whenever appropriate upon the lessons of research, we need a climate in which teachers are encouraged to reflect on their own practice and to experiment with different approaches to teaching, always with the aim of achieving the most effective learning for their pupils and students" (National Commission on Education, 1993, p103)

Devolution of responsibility for professional development to schools has occurred at a time when there is national control over the agenda of education. Schools now have opportunities to make decisions and administer the finance for professional development but the priorities are set at a national level. Since the late 1980s the purpose of professional development has been clearly focused on implementing national education policy changes at an institutional level. For example, in-service programmes and training days have been filled with activities which address school-based management, National Curriculum, student performance standards, extended forms of assessment for students and new forms of accountability.

This has meant that localised needs and wider needs identified by teachers have been overlooked (Ehrich, 1994) and at a time when there was a stark need. Recent changes, particularly the introduction of the National Curriculum, have raised individual teacher expectations of professional updating to assist them in the process of translating curriculum documents into successful learning activities in the classroom and evaluating their current practice.

The dilemma that faces many schools is how to balance professional support (National Curriculum focused in particular),

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Design and technology teachers as adult learners and the importance of lifelong learning

"Everyone must be entitled to learn throughout life and be encouraged in practice to do so" (The Commissioners Vision, National Commission on Education 1993)

All staff development should be seen as adult education. Here the teacher is a professional and an adult learner. If a school operates from this basic premise then it has important implications for the way professional development is conceived, implemented and managed.

Effective adult education is based on the following features: (Whitaker, 1993; Brookfield, 1988; Connors, 1991; Jarvis, 1983; Rogers, 1986; Sellars, 1994)

- adult learners are facilitated towards self-directed learning - to take control of the learning process and make their own choices
- adult learners collaborate and learn from one another
- adult learners engage in learning because they want to
- adult learners bring their own experiences
- adult learners have different educational biographies and therefore may learn at different speeds, identify different needs and bring different degrees of motivation
- adult learners have preferred teaching and learning styles
- some adult learners are more adult than others; some seek dependency, others autonomy
- a relationship of respect needs to be established between adult teacher and adult learner
- adults learn best when the self is not under threat.
- adult learners can participate in job related tasks and examine real work settings.

Eraut (1972) distinguishes between in-service training in which a teacher-employee is told 'what to do and how to do it' and in-service education in which a teacher-professional is supported in his task of trying to answer the questions for himself. The existence of a culture in which teachers are able and motivated to collaborate is emerging as a key precondition for schools to have successful staff development programmes.

"Much of the best professional development appears to happen by osmosis. Of course this is not so, but where staff are involved in the planning and decision making and where everyone, teaching and non teaching staff alike, has access to quality training opportunities, then colleagues enthusiasm and inspiration transmits itself to others and becomes a significant motivating factor" (Nicholls, 1993)

The view of teachers as adult learners accords well the view of schools as ‘learning organisations’ or establishing a positive learning culture. The ‘self developing school’, the ‘collaborative team’, the ‘reflective teacher’ can be seen as an interlinked structure. (Oldroyd, 1991)

School-focused INSET, as adult education, is rooted in the practical and professional realities of teachers’ life and work – it reflects what teachers consider they need and they assume ownership of their own INSET. (Kirk 1992) The focus is defined by them and, while people from outside the school may play a key role in the provision ofInset, the nature of that provision has to be what the staff value. Such INSET is integral to the school’s self-evaluation, the
systematic examination of its operation to bring about improvement. The self-evaluating school has been characterised as the 'creative school', the kind of learning environment in which staff are committed to analysing their own practice collectively:

"To cope with discontinuous change professional development activities at all levels need to encourage the development of 'meta qualities' (Burgoyne 1978) which transcend the requirements of particular activities but improve individual capability to respond to a variety of ever changing demands on professional and managerial expertise" (O'Neill, 1994)

However, Everard (1986) supports the view that too much training focuses on transferring information rather than analysis of individual experience, personal behaviour and interpersonal relationships. This passive type of adult learning fails to address the need for individuals to engage in learning which encourages self-awareness and self-analysis (Coulson, 1985). Nor do they promote the benefits in terms of the shared insights of group work (Turner et al, 1988) to be gained from collaborative forms of professional development. The kind of activity intended to change practice and attitudes is far more difficult to manage and is therefore avoided by some schools.

"Teachers will need active, planned support from key colleagues if they are to move, for example, through processes of reviewing (deconstructing) in a descriptive way what they do, to a consideration of how and why this is so within personal and organisational contexts (i.e. to confront their practice and the reasons for this at social and ethical levels) to planning (reconstructing) how they might do things differently" (Day, 1994)

The management of professional development
The school leadership has a crucial role to play in ensuring that professional development meets the needs of individuals, the school and the system. Leaders will need to see their role as one of an adult educator – they must pay more attention to individuals as adult learners.

"Just as teaching is concerned with the betterment of students, so too is the principalship concerned with the betterment of teachers" (Ehrich, 1994)

Leaders can explore the current form of professional development by examining the type of relationships, interactions and dynamics in their school.

- What purpose does professional development serve – how is the balance between corporate and individual needs managed?
- How is staff development planned and put into practice in the school – how are decisions about resources, planning, structures made?
- Is the climate for professional development collaborative and supportive? Is the relationship based on equal and democratic footing?

The research carried out across the 14 schools provides some evidence of design and technology teachers' perceptions of the way staff development is conceived, planned and managed in their schools.

Teachers' involvement in planning
Fourteen design and technology teachers were asked to identify who plans and organises the programme for non-contact days in their schools (Figure 1), how the topics were chosen (Figure 2) and whether they were personally involved in the planning or able to influence the content and nature of these days (Figure 3).

- In most of these schools the responsibility for organising the non-contact days rests with the Senior Management Team or Staff Development Team (82%). It was worrying that one experienced teacher did not know who was responsible in their school!
Figure 1: Who plans and organises programme for non-contact days in your school?
0  Head
3  Deputy
9  Senior Management Team
4  Staff development team
1  Don't know

Figure 2: How are topics for these days chosen and planned?
4  Didn't know
1  At random
1  Senior Management Team
1  Staff survey/consultation
6  Development plan

Figure 3: Are you personally involved in this planning?
Are you feel that most staff are able to influence the content and nature of these days?
6  Yes
7  No
1  Minimal

Figure 4: Does your school have a staff development plan?
8  Yes
3  I think so/I don't know
2  No

- The teachers were not always involved in the planning: 30% didn't know how topics were chosen, 7% said they seemed to be chosen at random, 7% said that it was the Senior Management Team who decided without consultation. However, 7% used consultative mechanisms such as a staff survey, and 46% indicated that the school development plan was used to identify priorities.

- 50% of the respondents felt that they were not able to influence the content and nature of the days, 7% said they had a minimal impact and 42% said that they were personally involved and able to influence.

Some dissatisfaction was expressed by the teachers and is demonstrated by the nature of their comments and terminology used when describing the way topics are chosen in their schools:

"appear to be whatever is flavour of the month"
"at whim of organiser"
"at random it seems, often as a knee jerk reaction to current issue"
"by SMT generally in isolation"

(teachers)

Yet the importance of involving teachers on an equal basis is widely recognised.

"Where teachers are involved in planning INSET programmes and producing teaching material for themselves, greater long term benefits are apparent" (DATA, 1996)

These findings are supported by other research which found that many teachers did not feel that their schools had a clear and effective system for identifying needs and that INSET was determined by a top down approach by the Senior Management Team (Harland, 1993).

Use of staff development plans
Many schools now have school development plans. These can be used as a mechanism to involve teachers in the planning and evaluation of effective staff development based on needs analysis and can include a formal staff development plan.

When asked about staff development plans and the relationship of the plan to staff development days it was found that

- only 61% schools had a staff development plan, 23% responded that they weren't sure, 15% did not have one at all (Figure 4)

- when asked how close they felt training was matched to the plan, 41% said close, 25% not very close, 33% didn't know (Figure 5). Some schools provided evidence and documentation of very effective development planning based on regular review of:
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Figure 5: How closely linked are the topics and areas chosen for training to staff development plan?

- 5 Close
- 3 Not very close
- 4 Don't know

Figure 6: Is there a monitoring system so that training provision is matched against staff needs, if so please describe how this system works in your school?

- 5 Yes
- 9 No

Figure 7: When has D&T specific training taken place in your school in the last 2 years?

- 12 After school
- 10 Non contact/Pupil free days
- 9 Lunch times
- 1 not at all
- 6 Training days – whole staff are released together

Where are we now? Where are we going? How are we going to get there? What will it cost? What are our training needs? How do we know when we’ve arrived? What next?

"It isn’t linked at all – It is a very general document which doesn’t really address staff development issues, more of a timetable of jobs to be done throughout the year" (teacher)

"My guess is that days are planned with no reference to the plan" (teacher)

Monitoring systems

When asked what kind of monitoring system is used to check if training provision is matched against staff needs (Figure 6)

- 35% said there was no monitoring system
- 64% teachers said there was a monitoring system. These included departmental/staff development plans, evaluation sheets, staff surveys, appraisal system, and needs analysis documents. Some teachers were encouraged to keep a personal portfolio showing what they had achieved. Where monitoring was done well, it was evident that it was thorough and effective and highly regarded by teachers.

"Senior teacher monitors and approves applications for staff development, all staff development is evaluated and feedback to her, appraisal is used to identify individual needs, HODs construct training needs analysis documents which are also fed into the system" (teacher)

But many schools still need support in developing appropriate systems for determining the effectiveness of INSET and its contribution to raising pupils’ achievements. (DATA, 1996)

"We have to complete evaluation forms but I don’t know what happens to them" (teacher)

"Despite calls for such monitoring, it does not happen" (teacher)

These findings support recent ones by OFSTED that in too many schools there is no planned strategy for staff development. (OFSTED, 1996) and this is having a profound impact on the teaching profession.

The National Commission (1993) recommended that:

- all schools should have a policy for staff development as part of School Development Plan
- all teachers should have personal development plan and be involved in formulating it, appraisal will be used to identify needs and fulfil potential
- every teacher should be entitled to 2 days personal development (not training to cope with national initiatives).
We are still a long way from achieving these recommendations in many schools.

Professional development – keeping up to date with the subject
“The need for support and INSET has never been more apparent than now” (DATA 1996)

The school curriculum is bound to continue to change, reflecting the development of subject knowledge, and design and technology by its very nature is a fast-changing subject area. It is evident therefore that during the professional lifetime of teachers they will need to update personal subject knowledge in order to stay ahead of the demands. The National Curriculum has been a landmark stage for nearly all teachers. It has been essential to prepare for a new role; to refresh themselves by more in-depth learning about their pedagogic or subject knowledge (Day, 1993). The recent changes in the design and technology curriculum have brought together new teams to teach a new subject. This has meant that design and technology teachers have felt this need more than most other subject teachers. Teachers need to remain enthusiastic about their subject area and this enthusiasm should be fostered; without it their own teaching will lose an important quality.

However, in design and technology much research has shown that this subject-specific INSET so badly needed by teachers has not been happened. (OFSTED, 1996)

During the design and technology curriculum review headteachers were reluctant to invest resources without a clear understanding of the subject area. This resulted in a reduced level of subject-focused INSET, a particularly critical situation for a subject where the knowledge base is developing continually. (DATA, 1996; Pennington, 1994)

“When the INSET budget was controlled by the LEA there was a lot of good quality subject-specific training – weekends, twilight sessions, days etc. This year I had £320 for 6 staff. It was spent to cover 2 staff going to one exam board training day” (teacher)

“We are not being trained in new subject content at all” (teacher)

“Schools run better when students are well taught, students can only be well taught if teachers have a good depth of knowledge and are conversant with the expected outcomes of individual syllabi” (teacher)

“Whilst the college invests considerable sums of money each year to staff development (in excess of £30,000) and this looks to be really effective and well documented it is based upon annual review/forecasts. With changing staff, this can be a real problem (new needs arise) and the changing nature of the subject means that long term forecasts are very difficult to do. A common complaint with the design and technology department is that after whole college issues and national changes affecting exam courses, there is rarely time or finance for hands on development e.g. electronics, control, graphics etc. No team member has experienced formal “how to do it” type practical training in the last 5 years. This has taken a lot of ownership away from staff. They are undertaking training which is forced upon them rather than what they feel they need to improve skills in the classroom” (teacher)

There are a number of opportunities for subject updating – release from school to attend course run by outside providers, in school training (twilight) and the use of non-contact days.

- Of the 14 schools surveyed design and technology training appeared in a variety of forms (Figure 7). The most common form was after school (12 schools) and use of non-contact days (10 schools), lunch times (9 schools) and training days where the whole department was released (6 schools). One of the schools had received no design and technology specific training in the last 2 years.
When asked to quantify the amount of time there had been for design and technology training in the last 2 years, this varied greatly with one school having no time at all, 5 schools less than 10 hours, and 7 schools more than 10 hours. The average was 23.7 hours (Figure 8) in two years.

When asked if they felt this was adequate or inadequate, all respondents said that they felt it was inadequate (even the school with the most time allocated). Reasons given were common to all schools and included keeping up with fast pace of change, the need for substantial curriculum development time, the need for time to work together, the size and skill range of departments (Figure 9). There were also comments regarding the timing of current training and the effectiveness of twilight sessions and non-contact days on the last day of term when everyone is tired.

The value of working together as a team was not in question and some schools used creative ways to gain more time.

"Frequent contact is the most important factor in good design and technology team building and development. A block timetable with preferably a period for meeting weekly in school time is utterly invaluable" (teacher)

"Design and Technology teachers in secondary school need help. They need resources, they need support and above all they need to regain their confidence in teaching the subject... teachers of the subject must remain, therefore, remain enthusiastic, inspiring and up to date in their own skills and knowledge" (DATA, 1996)

How are non-contact days used?
One major source of training time for subject teachers could be the use of non-contact days. Since 1987 teachers in England and Wales have had 5 non-contact days each year. Most teachers assume these 5 days are partly professional development, but there is no requirement that they must be.
"The Secretary of State.... has assumed that full advantage will be taken of the five non-contact days for in-service training. he expects that at least 3 of the these days will be used for this purpose in each LEA" (Notes concerning LEATGS 1990/91 letter from the DES to CEOs May 1989 para 8)

These non-contact days represent a substantial investment in staff development. The way schools can use non-contact time during the day can lead to valuable professional development opportunities. Well-organised staff training days can be an effective mechanism for considering a range of relevant whole school issues. However teachers welcome further subject based training, focused closely on their needs and their school.(DATA, 1996)

A recent survey of design and technology teachers in England has highlighted that not as many non-contact days are used for design and technology training as one might have expected. Out of the possible 10 non-contact days available in the last 2 years, 28% had not used one day for design and technology training in the last two years, 26% had used one, 23% has used two, 9% had used three, 8% had used four, 6% had used five or more (DATA, 1995)

How many non-contact days are used for design and technology specific training
When asked how many non-contact days had been used for design and technology specific training in the last three years

- there were a range of responses from the 14 schools - from the lowest of nil days out of a possible 15 to the highest of 9 days out of 15. This represents an average 3.75 days out of 15, approximately one each year in the last three years or 20% of the time available

- Teachers all considered this to be inadequate, even the school which had 9 days out of 15 (60% of the time available) and it was evident that they were very dissatisfied with this arrangement due to the challenges they faced with so much curriculum change. At the heart of many responses was the desire to improve pupils’ learning through improved teaching.

"better quality programme evaluation, unit development and resource use would dramatically improve student outcomes" (teacher)

"to provide meaningful training time needs to be given over to attend to details of syllabus programming, teachers then need time to practice skills learned and assimilate knowledge, the short time available does not even begin to cover programming let alone development of new skills" (teacher)

Balancing whole school and departmental needs
When asked if they would prefer more design and technology training on non-contact days nearly all respondents wanted more time with their departmental teams, only one school wanted it to remain the same amount (they received 2 out of 5 days every year).

"Although I feel that it is important for the school to combine as one, many teachers would be particularly enthused if the day could be spent allowing faculties to decide upon and act upon their own needs particularly as with larger faculties, just getting together to talk over issues is difficult, design and technology in particular" (teacher)

"to help contextualise whole school priorities" (teacher)

"Five days is a lot of time when given this for INSET/curriculum organisation' (teacher)

"We could use the time more effectively, even if some of that time was directed to the whole school issues" (teacher)

There has been increasing criticism over the use of non-contact days.

Research into the use of these days have found that the content has been almost
exclusively whole school planning and preparation, OFSTED, National Curriculum changes, IT, whole school goals, aims and policies such as behaviour, SEN, PSHE and assessment (Newton 1994). Activities may lack coherence and continuity, with absence of follow-up and with cynicism, frustration and dissatisfaction on the part of the teachers. English (1994), Cowan and Wright (1990, 1991), Thompson (1993) and Kinder et al (1991) report criticisms of too much time spent in whole school meetings, looking at whole school issues that are decided by senior management. Individual needs may not being met by this whole school approach, and time could be better spent addressing subject-related issues.

This is supported by comments from the teachers surveyed:

"There is generally a high level of dissatisfaction from everyone in the school about the value of 'pupil free' days (except the principal). The agendas are mostly a mish-mash of topics reflecting the current dogma issued from the Department of Education, with little regard to the needs of the teaching staff." (teacher)

Ways of planning these days can balance the needs of the whole school and department. For example, the day can begin with a short whole staff session to ensure that all staff are given an overview of the latest school-based development and feel some sense of ownership of the new initiatives. Departmental time can then be given for areas to consider their own needs and work through them in a group. This transforms negative images of prescribed INSET 'doses' into positive opportunities for self-initiated activities. (Burgess, 1993)

All of the staff surveyed were aware of the importance of discussing whole school issues, of working together as a whole school team and also cross-curricular teams, and therefore the need to strike an appropriate balance. Fragmentation, polarisation and balkanisation were all mentioned.

"Opportunities for the whole school to work together are invaluable and very stimulating if set up and planned well and appropriately, encouraging al areas of the school to gain an insight and understanding of each others work is extremely important" (teacher)

However, there were general comments about whole school topics being too long and that non-contact days may not always be the right vehicle for them and that this inefficient use of time was at the expense of their pressing need as design and technology teachers to attend to urgent curriculum issues.

"Most of our whole school issues could be dealt with at staff meetings" (teacher)

"The general feeling during whole school training is - Here we go again, how can this help me and my students?, how will I stop falling asleep whilst listening to another speaker" (teacher)

"If teachers are well trained in their subject area and able to keep pace with the changes then they would be better able to deal with broader issues involved with the whole school and be more accepting of the needs of the whole school and its place within the subject curriculum." (teacher)

There was a general feeling that the benefits of increasing design and technology time outweighed the detrimental effects of reducing whole school time.

Teachers organising their own training

"Often the most productive INSET occurs in the classroom with support for teachers in context or in facilitating groups of subject staff to develop themselves" (Webb, 1989)

Within every staff of teachers exists a considerable amount of expertise and human resource potential. Drawing upon this expertise is a powerful means of meaningfully engaging all staff in the professional development process. Most teachers want to spend time working at a
department level, not marking books or preparing lessons, but involved in high quality INSET that will help them to be more effective in the classroom. (English 1994)

"we really need to come together and ensure that D&T is being taught as meant by the syllabus. We can learn from each other" (teacher)

"The INSET days that stay positively in my memory are ones which have been activity based or which have involved developing work, activities or philosophies about the subject area. Doing something different – exchanging views with a wider range of people is usually productive and stimulating – though provoking. Doing things, being actively involved is far more rewarding than sitting listening – or not!" (teacher)

But how well equipped do the organisers of this INSET feel?
From the responses received it is mainly heads of department who organise departmental INSET. They also use other members of the team with appropriate expertise to lead sessions. (Figure 10) Most indicated that they feel reasonably well equipped, but that there are few resources to help them plan and organise INSET: (Figure 11) Royal College of Art Schools Technology Project is mentioned by 6 schools who have used of the in-service activities in the Course Guide. They also mention that GCSE boards, SCAA, NDTEF, DATA, DITT, have provided useful resources that they’ve used. (Figure 12)

What ready prepared INSET resources would teachers like to have?
Teachers identified sample projects, exemplification materials, IT based INSET, workshop activities, videos, examples of good practice, video conferencing, differentiation materials as all useful resources to use in INSET sessions.

They wanted

"easy entry materials to help staff diversify more and cope with increasingly broad timetable demands." (teacher)

"The problem for some staff teaching D&T is that they don't know what they don't know" (DATA, 1996)
The use of effective outside facilitators or facilitating material is crucial.

Summary

"Research on effectiveness of INSET suggests that schools need to be able to plan in-service education and training which meets local needs, whose processes are based upon knowledge of how teachers learn, and which demonstrate through support mechanisms an understanding of the longer processes of change" (Steadman, 1991)

This research highlights the urgent need to:

- recognise teachers as adult learners and to formulate staff development programmes which are built on the features of effective adult learning.
- provide adequate time and funding for design and technology focused INSET for all teachers to address the critical issue of updating subject knowledge.
- maintain an appropriate balance in the use of non-contact days for effective whole school and departmental INSET and for Senior Managers with responsibility professional development to take account of the particular needs of design and technology departments in the current scene.
- provide appropriate design and technology INSET resources for staff teams to use to facilitate their own training and to actively encourage staff to make use of resources that are already available.

"I hope that from your research that you may be able to convince educationalists that faculty time and giving teachers individual time is extremely valuable and not a waste of time as others may think. I also hope you may encourage the development of particular design and technology training resources which are directly applicable to students and usable in classrooms" (teacher)

The schools where the most satisfaction was expressed regarding their professional development arrangements were characterised by the following features:

- Effective INSET planning and implementation—staff development planning was a formal, well-documented process, with all staff playing an active part in its formulation and monitoring. It was based on needs analysis and addressed whole school, departmental and individual development. All staff had a personal development plan.
- The way time was used represented a balance of whole school, departmental and individual issues and made the most of the short time available. The most appropriate time was chosen for the topic (e.g. there was considered decision to use staff meeting or non-contact day) A minimum provision of 3 non-contact days each year, and 30 hours (twilight, released from timetable etc.) for school-based departmental/design and technology focused INSET. In addition to this teachers are able attend appropriate training courses outside school organised by external providers.
- Activities that provided opportunities for collaborative, reflective, active and hands on experiences based on the realities of the classroom and the school, and are facilitated by external consultants and team members where needed.
- Sufficient funding and flexibility to respond to needs as they arise.

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