

Can policy makers listen to researchers? An application of the design experiment methodology to a local drugs policy intervention

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This article reports the UK's first design experiment, a qualitative form of policy evaluation using feedback from intensive observations of an intervention to improve its implementation. The application presented in the article is a local authority programme of intensive support and diversionary activities for a small group of problematic substance users. The article discusses how the experiment took place and focuses on the reluctance of policy makers to use feedback from researchers, who found that advocacy and one-to-one support were more beneficial than diversionary activities. Nonetheless, in time the project's workers responded to these signals in their day-to-day decisions. To address the feedback gap, the conclusion stresses the importance of ensuring multiple information flows within design experiments.

The randomised controlled trial (RCT) is commonly regarded as the gold standard for evaluating policy (Shadish et al, 2002; CRD, 2009). This is because, when properly conducted, it can separate out the impact of an intervention from other factors that may influence a policy outcome. By randomly allocating eligible participants to two or more groups, treating according to assignment and comparing the groups with respect to outcomes of interest (CRD, 2009: 34), the researcher and policy maker can make an authoritative adjudication on the success or otherwise of the policy. RCTs have found a wide application in crime, education and health, in the US, UK and elsewhere. In spite of their advantages, they are not a universally applicable means of evaluating public policy. There are two main reasons for their relative rarity. The first is that the circumstances needed for a successful trial do not always apply (Torgerson and Torgerson, 2008). For instance, the policy environment may be too uncertain to carry one out, creating violations to the design by allowing influences to the outcomes not attributable to the intervention. There may not be an easily identifiable population to have as a control group. The RCT may only be applicable at a particular point in the policy process when the policy has bedded down, not at the very early stages when the policy can be changed. An appropriately implemented RCT must ensure that the groups being compared are similar in all respects other than the intervention, that measures are taken to avoid attrition bias and that the researchers measure outcomes validly and consistently across several time points. All these requirements can be undermined in the implementation process. The second reason is that many policy makers, especially those in the UK, are often reluctant to carry out experiments because they perceive risks associated with randomisation. While interventions, such as pilots and special-purpose projects, are familiar experiences in the public sector, the randomisation of human participants or communities may offend against the core value of treating people

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alike. These powerful ideals of entitlement and fairness embody the egalitarian principles behind the welfare state. They persist in spite of longstanding variations in the current arrangements that arise from decentralisation, the postcode lottery and the pilots themselves.

To suggest an intermediate phase before a RCT, when the decision-making process is at a very early stage, Stoker and Greasley (2005) and Stoker and John (2009) propose the design experiment. Rather than relying on randomisation, the design experiment seeks to make an inference from observing how the intervention changes over time. Policy makers use feedback from the researchers to make adjustments to the design of a new policy, which researchers then observe to see if it has made a difference. It has much in common with action research, but it also aims to mimic the experimental process through manipulating the intervention, seeking to find out what works and isolating different factors in the process. It takes advantage of aspects of the policy process that impede the implementation of some RCTs. In this sense, the design experiment may be regarded as a complementary form of evaluation to RCTs when the gold standard is not available. The design experiment appeals to policy makers because it helps them at the early stage of policy making, often occurring in a small-scale context. Above all, the design experiment embodies usable knowledge in the social sciences, which is not based on a one-off authoritative adjudication, but emerges from the acceptance of the limits to researchable questions and the integration of social science research with practical knowledge (Lindblom and Cohen, 1979).

The published output on design experiments is either on the theory or reports of education experiments carried out in the US (for reviews, see Stoker and Greasley, 2005; Stoker and John, 2009). So how does the design experiment work in the wider policy-making environment and does it live up to its expectations? This article reports on the experience of the first design experiment conducted in the UK, which was a local drugs policy intervention targeted on an estate in a northern town of England, to show how the method transplants to a social policy intervention. The idea was to see whether intensive interactions between policy makers and researchers took place, and to find out what challenges design experiments encounter when faced with the constraints of implementing a new policy. The article provides a discussion of the methodology, outlines the background to the intervention, reports its core findings and then explores different elements to it, in particular the experience of feeding back information to policy makers. The conclusion assesses the implications of this example for the development of the methodology.

Design experiments

The design experiment uses the qualitative methods of extensive interviews and detailed observations of an intervention to find out if it fulfils its objectives. Design experimenters provide feedback to relevant policy makers and practitioners throughout the research. The staging allows for tinkering with the project through a design-redesign cycle, allowing for learning by identifying mistakes. In this way, it claims to offer a viable approach for developing research-informed policy making as practitioners and researchers can update relevant information in a timely fashion.

Design experiments were first tried in education environments in the US. Researchers in teaching practice see them as ‘a form of interventionist research that creates and evaluates novel conditions for learning’ (Schwartz et al, 2005: 2). They derive from seminal papers by Brown (1992) and Collins (1992), which set out the approach, claiming that researchers could depart from the classic features of the experimental method without breaching the high standards of social science enquiry. These early studies have been followed by extensive theoretical commentary (eg Edelson, 2002; The Design-Based Research Collective, 2002; Cobb et al, 2003; Bell, 2004; Collins et al, 2004; special issues of *Education Researcher* [vol 32, no 1], *Journal of the Learning Sciences* [vol 13, no 1] and *Educational Psychologist* [vol 39, no 4]).

What happens in an education design experiment is the ‘engineering’ of the learning experience (Cobb et al, 2003). The use of this tag is deliberate because proponents of design experiments are inspired by the approach of applied science. The methodology involves tinkering with the design of the intervention and learning from mistakes so the final product is finished to the highest standard. Just as with product design, the practitioners and researchers make minute adjustments to the specification, which are tracked in detail and may be further adjusted later on. Collins and colleagues echoed this in the design experiment principles by writing that ‘the design is constantly revised based on experience, until all the bugs are worked out’ (Collins et al, 2004: 8). The belief in the validity of the design experiment derives from a sceptical view of the efficiency of expert programmes of learning, for example of those based on software developed in laboratories, which often fail in the classroom, whereas those implemented in an iterative and incremental way can succeed (Hsi, 1998). As the results are based on best practice, the innovation can be introduced into other settings. At the same time, it is highly likely that the aims of the instigators will shift as the design is implemented and adjusted (Brown and Campione, 1996).

Design experiments neither use the language of recent policy evaluation nor the ‘theory of change’ model (cf Pawson and Tilley, 1997; Mackenzie and Blamey, 2005). However, the approach is similar in that a design experiment works with one or several theories, which can derive from social science theory and/or the intentions of those carrying out the intervention, and it seeks to develop a practical understanding about what could work. As Brown (1992: 143) writes when contrasting design experiments to laboratory-based research,

Even though the research setting has changed dramatically, my goal remains the same: to work toward a theoretical model of learning and instruction rooted in a firm empirical base ... I attempt to engineer interventions that not only work by recognisable standards but are also based on theoretical descriptions that delineate why they work, and thus render them reliable and repeatable.

Design experiments explore and test hypotheses in a manner that is similar but not identical to experimental research. Instead of a conclusive hypothesis test, in the form of a statistical verification in a RCT, there is a quick turnover of research questions linked to the main hypothesis, with rapid redesign of the experiment, what Cobb et al (2003: 10) call ‘conjecture driven tests’. The theory is more practice driven than classic social science. That is, the aim is not to test general theories but to seek to

understand the practical limits and possibilities of a particular innovation. Design writers (Collins, 1992; Collins et al, 2004) start with the distinction that Herbert Simon (1969) made in *The sciences of the artificial* between theory building in physics and biology, and that in the design of artificial sciences, such as engineering and computing. In the latter, theory building is more closely allied to the tasks at hand, standing somewhere in between grand statements from first principles and accounts of practical relationships on the ground (diSessa, 1991).

Education design researchers regard the classroom as an interactive space where the experiment takes shape in the form of a 'learning ecology' (Cobb et al, 2003: 9). The classroom setting is a system of interactions, whereby one small change affects all the other inputs and outputs. As Brown (1992: 143) writes:

Just as it is impossible to change one aspect of the system without creating perturbation in others, so it is difficult to study any one aspect independently from the whole operating system. Thus we are responsible for simultaneous changes in the system, concerning the role of students and teachers, the type of curriculum, the place of technology, and so forth. These are seen as inputs into the working whole.

This integrated approach contrasts with laboratory-based studies of learning. Thus, Collins (1999) sees design experiments as complex and hard to research: there may be more than one dependent variable; it is not possible to introduce controls; there is 'flexible design revision' rather than fixed procedures; the participants interact in their social world rather than being isolated as in a laboratory; the researcher develops a profile rather than directly tests hypotheses; and the participants take part in the design. The classroom teaching styles and the composition of classes may change from day to day, which would violate a classic RCT design. As Brown (1992: 152; emphasis in original) writes:

[M]aking this shift involves an increasing trade-off between experimental control and richness and reality. The classroom is not the natural habitat of many experimental psychologists, and our methods did not evolve to capture learning *in situ*.

There is also a sophisticated understanding of scientific practice, which does not always involve experimentation, but much time preparing for an experiment, in the form of introducing and calibrating instruments. This process is called instrumentation and it may be the case that 95% of scientists' time is spent on it rather than on making inferences from the experiments themselves. Above all, the approach is concerned with identifying causal mechanisms. As The Design-Based Research Collective (2002: 6) writes:

[D]esign-based research can generate plausible causal accounts because of its focus on linking processes to outcomes in particular settings, and can productively be linked with controlled laboratory experiments or randomised clinical trials ... by assisting in the identification of relevant contextual factors,

aiding in identification of mechanisms (not just relationships), and enriching our understanding of the nature of the intervention itself.

The role of the researcher resembles that of a participant. And there is no reason why practitioners cannot be researchers. Many design experiments are practitioner-run projects where there is close collaboration with researchers. In fact, sometimes design experiments are known as design partnerships (www.soe.berkeley.edu/sandhtdocs/guide.html). In general, the person carrying out the design experiment participates in the innovation and in the evaluation. As Brown (1992: 141) writes, 'As a design scientist in my field, I attempt to engineer innovative educational environments and simultaneously conduct experimental studies of those innovations'.

The design experiment is not a remedy for all evaluations. It is likely to work best with targeted policies in well-controlled environments. The intervention should be an innovation rather than a standard policy. It should focus on a particular aspect of human behaviour, which allows the researchers to drill down to find out what works and what does not. Rather than coming to conclusive findings, the research tends to be exploratory. This does not mean that the research findings are not valuable or warrantable, but that researchers acknowledge the context and state of play of their results. One key task of the design experiment is to distinguish between the findings that are likely to be particular to the setting and those that are more general.

So far, design experiments have come from the education research field. Here special conditions prevail, such as the frequent innovations in curricular design, and interventions take place in the relatively controlled environment of the classroom. One question this article poses is whether the method can survive transplanting to a wider policy environment, such as policy interventions in communities. In their favour, many social policy interventions are focused and controlled. They are also often located in neighbourhoods, which are relatively small and close-knit micro-societies, suitable for an intensive approach. In contrast to the classroom, however, communities contain diverse influences on policy outcomes. There may be different kinds of feedback to the intervention, where community leaders and politicians shape and react to changes. They are complex sites to study and it is hard to make claims about the reasons for the success or otherwise of public sector interventions. With these considerations in mind, the next section examines an intensive drug treatment intervention to find out how the methodology works in practice.

Intensive drugs support: the intervention

This design experiment was an intensive drugs support intervention on an estate in a northern town of England. The neighbourhood has about 800 households and 2,000 residents. It is within the top 4% of neighbourhoods in terms of Indices of Multiple Deprivation rankings, which means that it is one of the most deprived Super Output Areas in England. It suffers from a range of drug and drug-related problems including injecting, the consumption of many different kinds of substances (polydrug use), 'heavy-end' alcohol consumption and high levels of crime. An attempt to tackle broader economic regeneration issues would not have been effective without an effort to address the endemic use of drugs. A high percentage of problematic drug users on the estate were in treatment despite the local authority's good record of

implementing treatment-based services. Officers and elected representatives had come to believe that its existing programmes, such as methadone prescribing, had a limited effect on changing long-term lifestyles and behaviour. The local authority became attracted to the design experiment methodology because it believed it could test out a new approach to treatment.

The project was developed in response to locally conducted research by Smith and Honor (2004). Subsequent to the publication of the findings, the local authority began a programme of activities to tackle drug and alcohol problems on the estate, which aimed to offer a more intensive, flexible and community-based approach to supporting problematic drug users. The project aimed for a holistic or a rounded rather than a purely treatment-based approach. It aimed at changing lifestyles as well as working towards reducing substance misuse. Caseworkers responded to personal circumstances, such as the particular form of drug dependence and the associated psychosocial problems. This approach is supported by a wide body of research that finds psychosocial therapies combined with clinical prescribing improve a range of outcomes for clients in treatment (McLellan et al, 1998; Witton, 2004; Wanigaratne et al, 2005; Gossop, 2006). The council's approach was to place the individual at the centre of the treatment, which included helping with housing needs, devising household budgets and seeking to encourage support from families and friends.

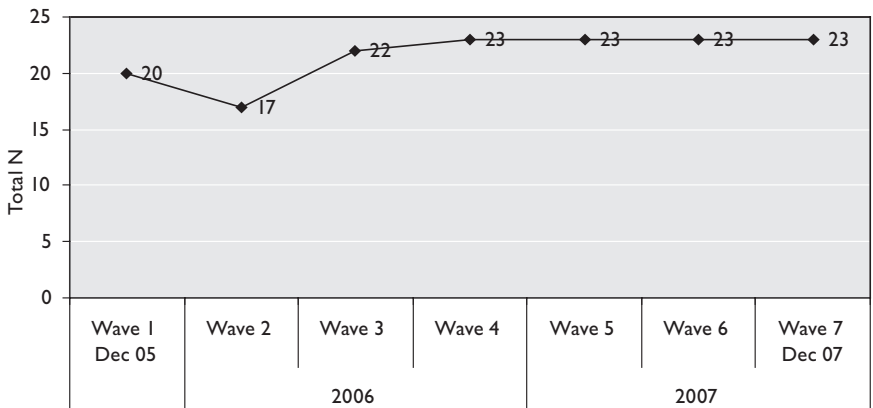
The project wanted to shift the way that drug services were offered. It sought to 'give what the clients want', not merely state that 'this is all we can offer'. The intervention aimed to establish respectful relationships between caseworkers and those people recruited to the intervention programme. This approach is supported by Meier et al (2004) and Millar et al (2004) who find that good client-worker relationships improve the satisfaction of clients and help them remain in the programme, thus increasing the likelihood that they will improve their wellbeing across a range of outcomes.

The introductory meeting between the researchers and the local authority took place in December 2004, but the intervention did not admit anyone until January 2006. This was partly because of the need to follow the internal procedures required to authorise the project. The project in any case needed a series of monthly meetings to scope out the intervention and to design the research instruments. The project officially ran from April 2005, but there was a nine-month lead-in period to review the research design and to carry out recruitment. The intervention programme was launched in January 2006 and was completed at the end of December 2007. There were five members of staff (hereafter called 'caseworkers') who looked after 23 clients within the intervention, providing intensive support. The clients largely stayed in the programme for the duration of the project (see Figure 1 for the numbers in the intervention at different periods).

Methods and approach

Research objectives

The objectives were threefold: (a) that constructive, multiple information flows emerge between the project staff and the researchers; (b) that the intervention group experiences an improvement in outcomes; and (c) that individual improvements vary

Figure 1: Number of clients on the intervention over time

according to particular packages of interventions. This methodologically orientated article is mainly about (a), but (a) depends on (c) being done correctly and for (b) to occur at least in part. Both (b) and (c) are hard to achieve, and limited progress can be an obstacle to a design experiment because it needs some initial success on which to build. On the other hand, a perfectly implemented project would remove the need for a design experiment. Some initial failures would seem to be integral to the learning experience, a kind of 'grit' that can produce the eventual 'pearls' of innovation and improved performance, which can set off the design experiment on a virtuous design–redesign cycle.

Attractive for the design experiment, the local authority did not have a hierarchy of expected outcomes from the project. It wanted to address drug and alcohol dependence by a variety of means: encouraging the clients to acquire more settled lifestyles, fostering their self-confidence, promoting better family relationships and facilitating their entry into the labour market or to voluntary activities. The policy makers recognised that clients would find it hard to abstain from using drugs and reducing the consumption of alcohol. The local authority strongly believed that there would be a link between diversionary activities/support and an improvement in outcomes. This would imply a gradual shift of impacts, starting with improved social relationships, then moving to the reduction of the use of drugs. The lack of a particular model of change that the local authority was committed to meant that it was possible – in theory – for both researchers and practitioners to learn as they went along and to adapt their strategy gradually. The other aspect of the project was that the methodology was at an experimental stage. The researchers reflected on the method itself and sought to improve it. This made it a three-level experiment: the intervention itself, the design experiment and then the reflection upon the method itself. All these elements interacted with each other.

The governance of the design experiment

There were three groups of people involved in the design experiment project: the research group from the university; the practitioner team, which included the local authority's drugs business manager and the project staff (the five caseworkers); and

the Advisory Group Committee of senior academic researchers in the fields of substance misuse, social policy and political science and a representative from the National Treatment Agency (NTA). The local authority set up monthly meetings chaired by the drugs business manager, which included the research and practitioner teams, where the agenda included both project and research issues, with discussions ranging between both. This was the main decision-making forum where research and policy were considered together and interdependently. The researchers presented interim results from the regular surveys, interviews and monitoring reports so that they could feed into decisions made by the monthly meetings. These meetings were supplemented by regular away-days in December and half-days in the summer, which also received reports from the research team. The local authority delegated decision making to this group. The Advisory Group Committee, which met every six months, oversaw the project, and received both research and operational reports and approved major changes in strategy. In short, the entire design experiment governance group consisted of members of the research team, the practitioner team and the Advisory Group Committee. The project also maintained close contact with the community to manage expectations, using a local community board (overseeing regeneration in the neighbourhood) to involve residents.

The questionnaire and data collection

The researchers developed a baseline questionnaire completed by both the intervention and the comparison groups (the comparison group will be discussed in greater detail later in the article), which was repeated every four months. The questionnaire included measures of the use of drugs and alcohol, and also a wide range of other outcomes including health, accommodation, crime, self-esteem, family relationships and attitudes to service delivery as well as personal details. The questions were developed with support from the Advisory Group Committee. The small numbers in the project meant that a statistical inference could not be made to a wider population, nor was one attempted. The results, presented without confidence intervals, show how the group and the individuals within it changed over time in response to the intervention. These regular survey results were presented to the meetings of the design experiment governance group.

Another important instrument was the monthly monitoring data sheet recording the interventions. This was divided into three categories: advisory, diversionary and one-to-one support, which were in turn broken down into type of activities: remote or face-to-face advocacy; different diversionary activities (eg confidence, appearance and indoor recreation); and the type of one-to-one support, including family support, motivational work and care plan sessions. This allowed the design experiment governance group to assess how the intervention changed over time.

Qualitative research

The first stage of qualitative research took place between July and November 2006. This involved semi-structured interviews with project workers and clients, observations of diversionary activities as well as three case studies of individual experiences. The second stage of qualitative research took place between February

and April 2007. As well as follow-up interviews with the clients, the researchers carried out interviews with professionals working closely with the project, including those working in the criminal justice team, the community drugs team and local housing authority. It also incorporated views from a 'concerned others' group, such as local residents, which was set up by the project. In addition, some of the comparison group were interviewed about local drug treatment support in general. This helped to establish the wider impact of the intervention.

The comparison group

The local authority's community safety team recruited a comparison group. This group of people accessed drug treatment services in a different area of the borough but did not receive this particular intervention. The group acted as a useful forum to test out ideas about what precisely worked and did not work in the intervention. The community safety team recruited the comparison group via the community drugs team, doctors' surgeries and drug support services in the area, using lists of people. The local authority collected data on the comparison group using questionnaires also administered at four-month intervals to investigate trends over time within and between groups. However, the questionnaire data from the comparison group were not presented alongside the intervention group because of changes in the composition of this group caused by high attrition. A wide body of literature outlines the difficulties of retaining substance-misusing clients in treatment (Simpson et al, 1997; Gossop et al, 1999; Meier et al, 2004). What was particularly useful was the qualitative research, the individual and group interviews that assessed personal circumstances and ascertained their views of the services they received.

Implementation in the field

As this was the UK's first design experiment, it is hard to work out whether the long start-up period occurred because the researchers and practitioners were learning about this new methodology or because of something intrinsic to design experiments – it was probably an element of both. Many forms of evaluation rely on custom-made research techniques, which can be applied to familiar situations. Even though design experiments use some of these standard methods, the environment is rather different. It has to be set up in such a way that feedback can be examined and responded to; and there is space for developing good relationships between the researchers and practitioners so they can work together on the research. There needs to be effective governance of the project so as to allow learning and effective representation of different views. The authority should consider its theory of change so that the researchers can understand the putative causal mechanisms and assess how the research instruments can capture them. All these elements to the project took time to establish.

Establishing the causal mechanisms

With the qualitative research, the research was able to find out what aspects of the intervention worked, particularly as the quantitative data did not show a dramatic

decrease in the use of drugs. Progress and success varied considerably for each client because each one had different drug-related and general problems. This supports other research detailing success in drug treatment (Parker, 2004; Gossop, 2005, 2006). The impacts on each individual depended on particularly tailored packages of interventions, which were allowed owing to the nature of the intervention, with its high resources, and willingness to assess the needs of each client. Thus, the research indicated that the positive outcomes of the project were based on individual successes, which were wide ranging and dependent on personal circumstances. Clients receiving the intervention experienced improvements in self-confidence and in wellbeing, largely due to their close relationships to their caseworkers, and from better relationships with their friends and families. For example, one client re-established contact with her children, who had been taken into local authority care. The caseworkers helped secure substitute prescriptions that helped improve the health of the clients. An in-depth analysis of individual substance use patterns from the questionnaire data indicated that all of the 23 clients on the intervention reduced their drug use during one or more of the waves. Furthermore, 12 abstained from their main drug during one of the waves. In the final wave, two abstained from all substances and another two clients from heroin but not amphetamines.

The design–redesign cycle

So far, the discussion has been about carrying out a project with good research support. There is no doubt that overall it was an implementation success and a partial outcome success. The key question here is ‘How successful was it as a design experiment?’. Overall, the basic mechanisms were in place in the form of meetings and continual interaction between researchers and practitioners, which worked well. Both sides were committed to the design experiment idea and described the project as such. The project had a high level of support within the local authority as well as being enthusiastically championed by both the practitioner and the research teams. The decisions of the group meetings were based on the data and progress reports about the intervention.

The next question is ‘How much interaction was there on the basis of evidence?’. Overall, there was less feedback than expected at the outset, in spite of the willingness of both the local authority and the researchers. There are several possible reasons for this relative failure. First, it takes time to carry out the research, and then to write it up and to feed it back. Interviews need planning, transcribing and summarising. The analysis of the data from surveys is painstaking. In any case, the intervention often moved ahead on the basis of the expert views of the caseworkers and managers, responding to day-to-day problems rather than to the research results. Given that a lot of the interview data were gathered from the caseworkers, it was not surprising that they came to the same conclusions and adjusted the intervention accordingly before the researchers reported.

The intervention and the research created a large amount of data, which assisted the debates about policy options conducted by the entire design experiment group. At the monthly meetings and the away-days the discussions moved forward on the basis of mutual knowledge about what worked. Design experiments seem to progress

in a drip-drip rather than in a revelatory fashion, with research helping to build up the tacit knowledge that is so important in crafting the implementation of a policy.

There was one major attempt by the researchers to use their findings to prompt a rethink. A key part of the intervention's philosophy was the idea that lives could be improved by diversionary activities, which would encourage clients to think beyond their drug dependencies and self-reinforcing lifestyles. Examples included fishing, bowling and gardening. Early on in the project, it became clear from the monitoring data and from the observations that these activities had a limited impact. Few diversionary activities took place, especially in the early days, which were mainly physical recreation. The caseworkers outlined the difficulty of arranging ad-hoc activities for clients, such as trips to the cinema and bowling:

'It is sometimes hard to plan activities as clients don't always turn up on the day. One example was a trip to the cinema, six clients had said they would go but when it came to the day five didn't go and it was not worth two workers going out with one person. Transport is difficult because if they book a coach and clients don't turn up then it is a waste. Two staff are required to be in the car with clients, there are only three project workers who have cars so this makes places to go limited.' (Caseworker)

Some of these activities were hard to get off the ground because the caseworkers faced the challenge of helping clients gain control over their lives. As a result, the caseworkers spent most of their time on advocacy. Even the later diversionary activities were not very successful, especially the group excursions (with some exceptions such as a trip to the beach). As time went on, advocacy declined and there was an increase in one-to-one support, but overall the amount of diversionary support remained low. This was surprising because diversionary activities were core to the underlying thinking behind the project. In contrast, one-to-one support was not part of the initial project plan; it developed because it was successful and other interventions, like advocacy, became less necessary. The interviews with clients revealed the benefits of one-to-one support. The clients highlighted the importance to them of the intensive nature of the project and they viewed diversionary activities as a less important part of the service. The clients valued the caseworkers' sensitivity and understanding of individual circumstances, their availability and willingness to be approached to talk about problems and practical help these workers could provide, such as arranging to pay bills and dealing with their accommodation problems.

'It gives me more confidence, whereas I used to sit there and nod my head and agree with what doctor says. I come out of my shell more.' (Client receiving advocacy support)

This finding is consistent with previous research on client satisfaction in treatment (Phillips and Bourne, 2008). The caseworkers and other professionals also highlighted the value of one-to-one support as they felt it allowed them to spend time with clients so they could direct support to where it was needed.

‘Some clients need a lot more intensive support. Teaching life skills, cooking... There are people who want to change and the extra support really helps those who are really vulnerable.’ (Criminal justice worker)

The individuals interviewed within the comparison group all had opportunities for diversionary activities within drop-in groups and day centres but they outlined their desire for more intensive client-focused support to deal with their problems. One respondent outlined:

‘It’s not the drugs that the problem, the drugs are disguising the problem, it’s what is hiding it. I would rather have someone to talk to and face my demons than be on methadone.’ (Client from the comparison group)

The research team used this evidence to argue that diversionary activities should be stopped and the focus should be based on one-to-one support and advocacy. The research team did not attempt to argue that diversionary activities had no positive benefits to this client group, but rather that they were a subsidiary part of this particular intervention. A well-established local drop-in and diversionary support service for substance users was already operating in the same building as the project. The research team suggested that clients could be referred there for activities. The research showed that positive results of this project came from casework, personal supervision and the personal interest in the client by the caseworker. The local authority and the practitioner team were opposed to this change and believed that these findings resulted from early implementation difficulties, which would not be so salient as the project progressed.

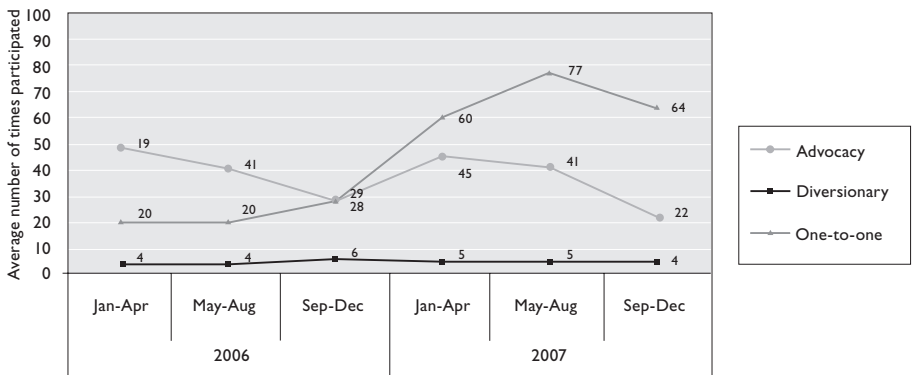
It is true that some activities did get off the ground later on. Partly as a result of the observations by researchers, the practitioner team did seek to recalibrate this part of the intervention, devising new activities. Some did work, such as the ‘cook and taste’ sessions. Here, in the first interviews, clients reported their enjoyment and appreciation of this most popular diversionary activity. Attendance was between around five and eight clients a week. It was useful as it helped clients prepare healthy balanced meals and gave them a chance to socialise with other people. However, it only had a limited lifespan. As the same clients attended each week, the number of skills that could be conveyed soon became exhausted and the attendees began to drop off. Many clients found other diversionary activities useful, such as kickboxing and bowling. It may be the case that diversionary activities had symbolic value not in proportion to their frequency and smooth introduction, and gave more of a glow to the project as well as encouraging positive activities that were not based on substance use.

Nevertheless, the researchers continued to say that the impact of such activities was limited. They examined their records on each client in detail to see if success was associated with diversionary activities. Based on all the repeated measures of outcomes, it would be expected that there would be a relationship between positive results and their involvement in the diversionary activities, but the results were inconclusive.

The researchers presented these results in the Advisory Group Committee meeting, involving external stakeholders in December 2006, stressing the value and growing

importance of one-to-one support and the limited value of diversionary activities. The local authority and the practitioner team remained sceptical about these findings, continuing to believe that the diversionary activities would take off later in the research. After the December meeting, however, the one-to-one activities continued to increase. As shown in Figure 2, clients' average participation in one-to-one activities nearly doubled in the period after December 2006 whereas the diversionary activities remained negligible. It is not clear whether this was a result of the team learning on the spot or an example of the drip-drip effect of evidence (in contrast to the 'big meeting' approach). In some way, through research and/or 'learning by doing', the message had got through to how the project operated, but not quite in the way the researchers imagined the design-redesign cycle would work.

Figure 2: Participation in the intervention activities over time



Conclusions

The UK's first design experiment was an implementation success in the sense that the drugs project was an innovative piece of policy analysis based on the new methodology. The collaboration between the practitioner team and the research team was based on intensive research. The participants in the frequent project meetings and discussions were able to use a welter of evidence and knowledge very fruitfully. The mutual knowledge helped the research and the practitioner teams make decisions on the basis of a shared understanding and respect for each other's point of view. Just as the writers about design experiments envisaged, it was hard to make the distinction between researchers and practitioners who integrated each other's activities. Both public sector professionals and researchers can be satisfied that a design experiment is a feasible form of intervention, where both researchers and practitioners feel comfortable with the concept and the practice. Further design experiments can build on this good experience.

The deeper question is whether the experiment fulfilled its wider objectives. While the design experiment engaged the policy makers in terms of the language and day-to-day planning of the project, the researchers found it more difficult to respond to the practitioner team in a timely way as the research tended to produce

conclusions that the policy makers already knew about, confirming how they thought the project was going, and highlighting the difficulties in the project. When the researchers did come up with new ideas about what worked and what did not, it was difficult to challenge the superior general and day-to-day knowledge of the practitioner team.

The main finding from the research was that the diversionary activities did not work as envisaged and that the one-to-one support was the key to the project's success. Even though the project's leaders were cautious about this idea, the researchers found it in the evidence they collected from interviews and from the analysis of questionnaires. The local drugs project shows that knowledge transfer does not operate in a revelatory sense but in a gradual adjustment of the intervention guided by evidence that accumulates across a wide range of sources ranging from day-to-day experience to the findings from questionnaires and qualitative interviews.

Future design experiments could work in different ways, with more of an effort at real-time responses and ensuring that the results do not come as a shock to the project leadership. This could be achieved by ensuring multiple information flows and an open organisation to a project. Sometimes the presence of many actors in the decision making offers more room for researchers to influence and adjudicate between competing views. In contrast, this local drugs project was highly organised and cohesive, which made it harder for the researchers to break into the decision-making process. Had the project been more fluid in organisation, perhaps evidence could have come to bear more closely. Even the intervention could have worked differently. Instead of the project being entirely implemented in the first instance, it could have been built up gently, gradually introducing new stages as the clients gained more stability in their lives.

Yet the intervention was a success. Clients in the intervention improved in a number of aspects, in particular their wellbeing and relationships with their families as well as successful attempts at reduction of drug use and abstinence from drugs. The findings support existing evidence that shows that drug treatments should incorporate a holistic package of support, which focuses on individual psychosocial problems as well treating substance misuse itself. The design experiment offers an opportunity for policy makers and researchers to learn these kinds of lessons by adjusting their interventions.

Note

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