Chapter 5

Where do you start a pedagogical action research study?

Introduction

Having hopefully encouraged you that there are sound reasons for undertaking a pedagogical action research project, how do you actually go about it? In this chapter I will describe the stages that you will need to take, by illustrating them with an example from a study I did many years ago and using a hypothetical example. This is to show you how a single research question can be investigated in very different ways depending on the research paradigm you are using and the approach you feel most comfortable with. This issue will be taken up in more detail in Chapters 6 to 8, when I describe research methods and analyzing your data, but for now, I want to show you how to make a start.

The spiral of action research

There is no secret or magic formula for carrying out an action research study; much of it depends on your own professional context and your familiarity with different types of research methodology. The classic advice is to think of action research as a spiral or a cycle where you plan, act, observe and reflect (Kember, 2000). This process was originally based on the work of Kurt Lewin who is generally credited as being the founder of action research (Lewin, 1946). Lewin's approach can be summarised as a series of steps composed of planning, action and then fact-finding about the result of the action taken.

My own interpretation of the action research cycle is that you:

1. observe or notice that something is not as it should be and/or could be improved (observe);
2. plan a course of action which involves changing something in your practice (plan);
3. carry out the change (act);
4. see what effect your change has made (reflect).

Of course, this is an over-simplification of what actually happens and tends to be reified and 'neatened up' when you write it up for presentation at a conference or as a journal article. Researching in higher education is a messy process, where the environment is a complex and social one, and where the problems are ill-defined and ill-structured. Cook (2009) contends that action research is messy as 'its purpose is to facilitate a turn towards new constructions of knowing that lead to transformation in practice (an action turn).' (p.277). In terms of the typical action research process, the researcher goes back and forth in a number of spirals of the action research project, reflecting, reformulating and retesting. Kember's (2000) term of 'fine-tuning' is a helpful way of describing what happens.

A simple process for carrying out action research

Thinking about this in the abstract is likely to put off even the most enthusiastic academic who is keen to carry out a small research project, but a simple six step process remembered by the acronym ITDEM'D will help you to get started. I know this acronym doesn't roll off the tongue but hopefully you can remember it. Once you have begun, you will quickly find you become your own expert, as you find out for yourself more about the benefits, and the drawbacks, of course, of researching your own teaching or learner support practice and the effects that this has on your students' learning.

Step 1 **I**dentifying a problem/paradox/issue/difficulty
Step 2 **T**hinking of ways to tackle the problem
Step 3 **D**oing it
Step 4 **E**valuating it (actual research findings)
Step 5 **M**odifying future practice
Step 6 '**D**isseminating your findings

The forerunner of this acronym was ITDEM, which was first published in a paper I wrote for psychology lecturers (Norton, 2001). Since then I have run a number of workshops using it with colleagues from many different disciplines, where it seems to have been acknowledged as a useful approach to carrying out a pedagogical action research study. I have also added another step to highlight the importance of dissemination. I will firstly describe and explain each step in detail and then use my examples to show how the ITDEM'D process might work in practice.

Step 1: Identifying a problem/paradox/issue/difficulty

A good starting point is to reflect on your own teaching in terms of what currently concerns you. In Appendix D I explore an example of a common teaching issue and a separate student learning issue either of which can be developed by consulting with

colleagues and reading some relevant literature. Some academics have suggested that to start with a concern is too negative; it might be something that already works well and you want to find out how to further improve it. This is a valid point and I think this could equally well be a good first step. From my own experience of doing action research, however, it has been a concern mainly with students and their learning that started me off. Examples include students being unhappy with my feedback, students not applying the theory of learning and teaching to their own understandings of themselves as learners, and students needing more guidance about their essay writing. As soon as I started reflecting on these concerns, they were very quickly translated into an overall question: 'What can I do about it?' Although I was unaware of it at the time, I was getting very close to Whitehead's (1989) more elegantly posed question, 'How do I improve my practice?' I often use this question when presenting workshops on action research as I think it is a useful way of turning a concern that you have into an actionable strategy.

*Step 2: **T**hinking of ways to tackle the concern*

This step is about choosing a method of enquiry. First of all you need to turn your concern into a researchable question. A good pedagogical action research question needs to be derived from the basic underlying question: how do I improve my practice? It should be do-able in terms of size and scale (avoid a question that is too broad or too narrow; think about cost, timescale). It must have due consideration for ethical issues (see Chapter 10). Finally, it needs to be answerable from the type of information you can readily collect and analyze (do you have the necessary skills?) It might be, for example, that if I take my concern that students are not applying theory to their own understandings of themselves as learners, that I formulate a research question: 'What are students' understanding of meta-learning?' The reason I might choose to explore the concept of meta-learning is that I have always been interested in how students understand themselves as learners. Having formulated my research question, I could consider investigating it by using questionnaires, focus groups or interviews with my students. Alternatively, I might think that I know what the root problem is and design a teaching intervention to help them reflect more on their own learning. In this case, my research question might be: 'How effective is the intervention in increasing students' meta-learning?' There are published measures of meta-learning, so it would be feasible to answer this question by designing an intervention and then assessing its efficacy by using a 'before and after' measure of meta-learning (see for example, Meyer and Shanahan, 2004). This would be a straightforward second step which would get you actually started on your own action research study. At this point, I would like to suggest a small activity to help you think about researchable questions.

ACTIVITY

Look at each of the following questions and consider how suitable they would be by ticking Yes or No. I give my answers together with reasons at the end of this chapter.

Number	*Question*	*Yes*	*No*
1	Is there too much information in my lectures and do I go too fast?		
2	How can I make sure I know the answer to every question students might ask me?		
3	What would be the effect of making the assessment tasks easier?		
4	Are marking grids helpful?		
5	How do students use mobile devices in class?		
6	How can I make my lectures more interesting?		
7	Why don't my students read their given texts for seminars?		
8	What would be the effect of withdrawing my tutor presence from the online discussion forum in my module?		
9	What would encourage students to use my feedback?		
10	Why do students have poor numeracy skills?		

Reflecting on this second step I realize that there are other interpretations of thinking of ways to tackle the concern such as looking at it as a function of its context, rather than necessarily just a problem that I have and want to address. 'Students not applying the theory of learning and teaching to themselves as learners' might be a consequence of the curriculum, or what the department or subject privileges, or how the assessment is constructed, rather than anything I have done or could do in my teaching. In this step then, rather than beginning straightaway with a research study such as a focus group with my students, I might first consider a fact–finding mission and consult with colleagues as well as the relevant literature. This step has been called reconnaissance by Lewin (1946) and is more fully described in Appendix D.

*Step 3: **D**oing it*

This step is perhaps a little bald, especially for the practitioner who has not attempted any research like this before. So what do I mean here? This is the step where you think of the practicalities of carrying out your study, having decided on your research question and what method you will use to try and answer it (see Chapter 6). One of the first things you will need to do is to seek ethical approval which, depending on your institutional procedure, might take some time. At this stage it would be wise to ask for advice from an experienced colleague who can not only comment on your ethical application form but can also give you an indication of how long you will

have to wait. Obtaining ethical clearance before you collect any research data is essential, as most ethics committees are very unlikely to give you retrospective approval (for more details, see Chapter 10). Drawing up a timetable with dates for completion will help you to ensure the research is done with due regard to term-times and availability of your potential participants. You may have to consider how you will gain access to your participants. Since they are likely to be your own students, will you be using class time to do your research, or will you approach them at some other time or in some other way (e.g. an email or a Twitter invitation)? Also you will need to build in time to develop your research tools (e.g. questions if a questionnaire or interview; measures of student performance/understanding if evaluating an intervention). If carrying out face-to-face interviews or focus groups you will need to organize a safe and neutral location. All these arrangements take time but the more detailed your planning, the better this step will be when you actually carry out your study.

*Step 4: **E**valuating it (actual research findings)*

This is the step where you analyze your data which, depending on your question and your methods, might produce qualitative data such as responses to open-ended questions in questionnaires; students' written work; transcripts from interviews/focus groups. Equally it might produce quantitative data from closed-response questionnaires; attitude measures; frequency counts of observable behaviours. You may instead decide to use a mix of qualitative and quantitative research analyses – typically known as mixed methods research design (Johnson, Onwuegbuzie and Turner, 2007). Chapter 7 gives more details of how to analyze qualitative data and Chapter 8 gives some basic guidance on quantitative analysis and statistical testing.

*Step 5: **M**odifying practice*

One of the essential characteristics of action research is that it is intended to bring about change in the form of improvement (e.g. Carr and Kemmis, 1986; Eliott, 1991; Gibbs et al, 2017; McNiff, 2017). This is the step where you need to think carefully about what your findings are telling you about your practice and consider what you need to change or improve. Sometimes accounts of pedagogical action research can take the form of intervention, followed by evaluation, followed by refined intervention and so on. In such cases one might ask: 'So how is this process different from that of curriculum development?' My response would be that carrying out action research involves you in questioning what might be taken for granted assumptions in your discipline, particularly in the teaching and assessment of it (see Kreber, 2009). Cameron (2017) reports in an Australian study that while student evaluations were taken account of, rarely was research evidence used or advice sought beyond the disciplines (p.69). This suggests that curriculum development might lack both an evidence-informed and a reflective stance from the teachers, and is a long way

from Lawrence Stenhouse's (1975) original concept of curriculum development as action research. He argued that 'curriculum research and development should belong to the teacher'. Stenhouse's vison of teacher as practitioner researcher has been highly influential in the development of action research. While his work refers to schoolteachers, his arguments equally apply to higher education teachers.

Pedagogical action research demands of you modifications which are based on evidence and on reflection but I acknowledge that the scope might be limited to what 'wiggle room' you have in your own classroom practice. Always the goal is to reach beyond and begin to influence or persuade colleagues to make some changes. One way of doing this is to consider the affordances of disseminating your work, which leads me to the final step of the ITDEM'D process.

*Step 6: 'D**isseminating your findings***

For action research to be considered as 'research', it must be disseminated – which means opening up your findings and conclusions to your peers (see Chapter 11). You might feel that it is too early a stage to report your action research formally and in many respects that would be a reasonable decision. It does your reputation little good if you are too hasty in presenting research that might be poorly designed with questionable findings. If this is your first attempt at an action research study, then it might be wise to hold back a little while you are still learning. However, there are more informal methods of dissemination that may be useful, such as getting feedback from academics you work with. A seminar to interested colleagues in your department or a discussion over a coffee break with a trusted mentor would work well. Many universities run their own learning and teaching conferences, so this would be a wonderful opportunity to share your findings and get some valuable suggestions from colleagues who are particularly interested in learning and teaching; if they are from other disciplines, so much the better. If it is appropriate you might find it fruitful to share your findings with your students, perhaps with a view to getting them more involved as partners in the learning and teaching process (see, for example, Bovill, 2017; Healey, Flint and Harrington, 2014). For those of you who are carrying out an action research study as part a course you are taking, then in a sense you will be disseminating it at least to your tutor. Many programmes also ask for a presentation in class to your fellow students so this is another avenue of dissemination.

Points to ponder

1. How might you think of disseminating your action research informally?
2. What ways might you involve your students as partners?

Having described the ITDEM'D process, I want to illustrate how it can actually work in practice. To do this I have adapted and updated the original examples from the first edition of this book (one hypothetical; the other real) because even though they are old now they are still a useful way to illustrate how you can take two quite different approaches to the same pedagogical problem or concern.

Identifying the issue

Psychology is a discipline that expects students to support their arguments in essays by citing and evaluating up-to-date research most often to be found in journals (O'Siochru and Norton, 2014). Many university teachers will no doubt recognize the following as an issue in their own disciplines, although they may use different terms:

> Students were not using sufficient journals/primary sources in their essays.

Context

The context of this issue was a third-year module on counselling psychology, which I had taught for a number of years. The module was 12 weeks long and was designed to introduce students to the application of psychology theory in the field of counselling. The assessment was constructed to encourage students to consider the strengths and weaknesses of individual therapies applied to hypothetical case studies. I called these Psychology Applied Learning Scenarios (PALS). They were written to represent situations that a professional psychologist might encounter:

> By applying different theories to a PALS case study, students realize for themselves how different approaches to the issues raised are derived from the different theoretical perspective they adopt. This aids them in developing a critical approach to theory and a better understanding of the contingent nature of knowledge.
>
> (Norton, 2004, p.2)

Assessment was crucial to my aim of enabling students to apply their understandings of psychological research to evaluate an appropriate counselling therapy. I set three assignments, which built on each other and helped students to develop the necessary skills and understanding:

1. A team presentation applying a theoretical therapy to a given PALS study (group mark worth 15 per cent);
2. An individual critique of a relevant journal paper applied to the team's PALS study (individual mark worth 15 per cent);
3. An essay applying a theoretical therapy to a second, much more detailed PALS case study (individual mark worth 70 per cent).

In this way I intended to give students practice and feedback in the essential elements of the essay, which was the main assessment task. One of the assessment criteria was demonstrating an in-depth critical understanding of a relevant therapy through applying it to a given PALS case study. The other essential criterion was developing a critical evaluation of the significance and robustness of the research that underpinned their chosen therapy.

In order to do this successfully, students had to engage with journal articles because secondary sources, such as books, would not give them the detail of research methodology that was needed to make such judgments. Despite this careful design in scaffolding the assessment tasks and feedback in their assignments, my students in general were still using very few journal articles. Disappointingly, given my emphasis on the importance of using the most recent journal articles, many of those that had been cited were more than five years out of date. I had told my students that while it was appropriate to cite seminal texts that were older, I was keen for them to concentrate on the very latest research studies.

This was my identified issue, which needed attention; the **I** part of the ITDEM'D process.

There are several different approaches that I could take to this issue, depending on my familiarity and experience with different types of research methodology. To give you an idea of possible research designs, together with their consequences, I have chosen two:

1. Asking the students (a qualitative, interpretivist approach);
2. Designing an intervention (an experimental, positivist approach).

I shall now explore the TDEM'D part of the process using each of these different designs to illustrate how the same issue can be tackled in two very different ways. The first example of an interpretivist approach is a hypothetical description of what might be done. The second example of an experimental approach is the one I actually took and is a description of a real piece of action research.

1. Asking the students: a qualitative, interpretivist approach

Identifying the issue (recap)

'Third year psychology students were using too few up to date journal articles in their essays.'

Thinking of ways to tackle it

There are many ways I could have investigated this issue from an interpretivist perspective. One of the most straightforward enquiries might have been to carry

out an interview study with psychology students at all levels to find out *why* they were not using journals. This would dissuade me from making assumptions about their reasons, which had driven some of my earlier studies in this area. This is one of the consequences of carrying out research following a positivist model. It leads to what is called the first order perspective where the field of enquiry (i.e. your human participants' behaviour) is treated as an objective act influenced only by the experimental conditions and carried out on people who are not trying to outguess you or find out what it is you actually want them to do. I still remember my surprise as a student of psychology many years ago when reading the works of Orne (1962) on 'demand characteristics', to find out the extraordinary lengths people will go to in order to behave in a way that they think you, as the researcher, want them to behave. Human beings are sentient and intelligent and do not behave as objects in the material world, so a first order perspective can only partially explain their behaviour.

The second order perspective is one that acknowledges that how humans perceive the demands of the experiment or research will inevitably affect how they react to any given research situation. Hence the important rise of the phenomenographical approach in research in teaching and learning in higher education (i.e. 'getting inside' your participants' heads and seeing the world as they see it) led by Swedish researchers in the 1970s and pioneered by the work of Ference Marton (Marton, 1981, 1986, 1988).This valuing of the subjective experience has had a profound effect on the way we think about student learning in higher education such as deep and surface approaches to studying (Marton and Säljö, 1976), conceptions of learning (Säljö, 1979), epistemological beliefs (Hofer and Pintrich, 1997, 2004), threshold concepts (Meyer and Land, 2006), expectations and perceptions (Kandiko and Mawer, 2013) and use of digital technology (Henderson, Selwyn and Aston, 2017), to name but a few.

Carrying out an in-depth interview would be taking a second order approach, in which my aim would be to understand the issue from the perspective of the student and not from mine as the teacher/researcher. This type of methodology also sits comfortably within the action research framework, which often favours an interpretivist stance.

Doing it

Asking students to take part in interviews in itself raises different methodological issues that all have to be examined when designing my study. I would have to decide, for example, what sort of interview I would carry out. Should it be structured where all the questions are pre-determined? or semi-structured where an interview schedule determines the main questions but there is scope for probes to elicit more information at certain points? Both these types of interview lean more to the first order perspective of research. Carrying out an in-depth unstructured interview is more likely to establish a

richer picture of the student perspective and might take the form of an opening question such as:

> 'What is your experience of using journals for your psychology essays?'

This gives the interviewees scope to raise their own concerns and issues. However, completely unstructured interviews may be difficult to keep 'on track' so a suitable compromise would be a semi-structured interview, and this is the type most commonly advocated by phenomenographical researchers.

Other design decisions revolve around which students would I ask – all years, or just one? How big a sample? Age range? Gender etc? I might also want to consider whether I should concentrate just on psychology students or broaden my enquiry to students studying other subjects. Thought also has to be given as to who should do the interviewing. If I do it myself there are ethical issues about power; if I ask a research assistant, I lose some of the immediacy in asking the things that I, as the lecturer, want to know about. These are just a small selection of the types of things I would need to consider when designing an interview study. For more details about the interview as a research method, see Chapter 6. For the sake of argument, however, let us imagine, I have decided to carry out a semi-structured interview.

Evaluating it

Having decided on the type of interview, I now have a number of choices about how I will evaluate the research findings. This stage is the crucial one, when thinking about the 'research' element of my pedagogical action research study. Sometimes innovations in higher education are enthusiastically promoted in conferences and websites but lack this essential element of research evaluation. By this I mean much more than collecting student feedback, which undeniably is an important part of evaluating an innovation but should not be the only evidence you seek to collect.

Some of the reasons why you should be cautious about student evaluations have been explored in the literature (see for example, Senior, Moores and Burgess, 2017). My own reservation is more to do with using student satisfaction about interventions as evidence. Simply saying students really valued an intervention, such as the introduction of online marking, and were motivated by it is only part of the story. How did it affect their actual learning performance, for example? Reporting research findings in some detail is, therefore, a very important element of the whole research study. In terms of my proposed interview study, I should be analyzing my data to provide some of the answers to the questions I asked earlier. There needs to be an internal consistency between my research question, my chosen method of enquiry and my interpretation of findings. This is sometimes referred to as the 'golden thread' in research reporting.

Both semi-structured and unstructured interviews lend themselves to qualitative analysis. There are many useful books written on the subject for those who wish to pursue this in depth (some suggestions to get you started are made at the end of Chapter 6). However, the aim of this book is to suggest easy and practical ways for you to carry out your own pedagogical action research project, so I will tell you what I might have done.

I might have chosen to analyze the interview transcripts using content analysis, as it is a technique I am familiar with and enjoy doing. I will return to this method in some detail in Chapter 7. However, a more sensitive qualitative approach, such as phenomenographical analysis, would fit better as it is an approach that would enable me to look for variations in my students' experience of using journals.

Modifying future practice

Since this example is a hypothetical one, I now have to imagine some major findings to illustrate the final step of this action research cycle. I am going to envisage that the most important issue to come out of the interviews was a difference in confidence between first-, second- and third-year students, where unexpectedly the third-year students were less confident than the second-year students. The interview data indicated that the third-year students were acutely conscious that the end of their degree was in sight, and they needed to get good results. They were also realizing how little they knew as opposed to second-year students who thought they knew more than they actually did. In other words, third-year students were more keenly aware of how little they had used journals in their previous two years but felt they could not either admit it or ask for help. This finding would give me the impetus to try and address this situation.

I would now have a new issue, which could lead to another cycle of action research. More importantly, I would need to modify my practice to build in extra support with journal use for my third-year counselling psychology students. I could, for example, devote a class session to literature searching led by one of the librarians; I could set up self-help peer study groups, or I could run one-to-one individual consultations for those who felt they needed it. The range of possibilities is considerable and which one I would choose would partly depend on pragmatic considerations. Perhaps the 'best way' to go, and one which fits in with the true spirit of action research would be to ask the students themselves what would be the most helpful way of boosting their confidence with finding and using journals.

'Disseminating my findings

Since this issue is one that I think will have resonances particularly in the STEM subjects (Science, Technology, Engineering and Mathematics), I might feel encouraged to present my findings at a STEM Higher Education conference. Alternatively I could aim for a more specific psychology in education conference. In such events there tend to be different types of

sessions that you can put in a proposal for. Examples include: a poster; a 'how to …' presentation (short, interactive, 30 minutes); a paper (research-based, 30 minutes) or an interactive workshop (45–60 minutes). These are quite common formats in conferences. While the study would fit a research paper submission, I might feel that it was at too early a stage and that I should wait until I had done one or two more cycles. In terms of the interactive workshop or 'how to' sessions, I would probably consider that these did not fit with my work, although I could perhaps do something on action research! However, I would be most keen to get some external feedback on my research with a view to carrying out another cycle and modifying my practice, so my most likely choice would be a poster.

This has been a description of a hypothetical approach to a pedagogical action research study, but what did I actually do? What follows is a true 'warts and all' account which, I hope, will illustrate how achievable and worthwhile doing a small-scale study can be.

2. Designing an intervention: the pros and cons of using an experimental approach

In this section I show how I used an experimental design to answer my question to fit into a broader action research framework. Because of my psychologist training, I drew on positivist methods as I felt confident in using them, but I was not aiming to establish cause and effect. Instead I used my experimental findings as a starting point for reflection and further action. In this sense I have found an experimental approach, which is not a mainstream action research methodology, to be useful in my own pedagogical practice. It is my aim in this book, to encourage you to adapt *your* chosen methods of enquiry in the same way. Greenwood (2015) analyzed entries in the *Sage Encyclopedia of Action Research* in relation to theoretical concepts used in action research. In a personal note at the end of his article, he takes a similar approach to drawing on positivist principles in relation to his own action research. He goes on to argue that ignoring this type of investigation would be:

> …irresponsible in relation to the needs of the non-researcher stakeholders in AR processes for whom certain kinds of quantitative and positivistic data/analyses may be a critical element in their process of confronting powerholders.
>
> (p.212)

Identifying the issue (Recap)

'Third year psychology students were using too few up to date journal articles in their essays.'

Thinking of ways to tackle it

When thinking about designing an intervention, the range of possibilities is considerable and like all research studies, making the decision is probably the hardest part of the whole process. I could have designed an intervention study and compared students who did have the intervention with students who did not. This is a classic research design in the positivist tradition where the aim is to test a hypothesis by determining an independent variable (the intervention) and dependent variable/s (students' use of journal articles in their assignments), while controlling for extraneous variables as much as possible (ensuring the students in both groups were similar in terms of ability, age, motivation experience etc.).

In the context of real teaching situations (i.e. a module where the assessment under investigation actually counts as part of the overall degree classification), the more controls you put into your research design, the less likely it is that your findings will have any applicability to the real life context. Added to this are further difficulties posed by ethical considerations. Since the assessments count, what happens to the disadvantaged group who have no intervention? Controlled experiments like this are not impossible to do in educational research but they often have limited applicability as they get further and further away from the actual teaching and learning situation that you want to improve.

In the event, I designed an intervention as part of the counselling psychology module, which would hopefully benefit *all* the students in my class. However this did not feel sufficiently robust and the psychologist in me was still keen to compare the results of what I was doing with other groups of students who had not experienced such an intervention. I decided to enlist the support of a fellow psychology lecturer to carry out a post hoc comparison of the outcomes of my intervention with two courses that she taught: organizational psychology and psychology and crime, where no intervention was being offered.

Of course this meant that there was very little we could do in the way of controlling for extraneous variables but it did satisfy us that we were not disadvantaging any students in this design. It was also possible to compare the intervention counselling psychology cohort with the previous year where there had been no intervention. Our hypotheses were:

1. Counselling psychology students will use more journals in their assignments than either organizational psychology students or psychology and crime students.
2. The 2003 counselling psychology cohort (the cohort experiencing the intervention) will use more journals in their assignments than the 2002 counselling psychology cohort (who had had no intervention).

Doing it

The aim of this intervention was to address directly the identified issue that students were not using enough journal articles in their assignments in my module. We thought of two possible explanations worth exploring:

1. 'Our students are not sufficiently skilled in how to search for journal articles.' This was a result of our students repeatedly telling us that they could find 'nothing in the library'. We knew that this was not the case, since two of our research team were former librarians and were able to search out many relevant articles. In a sense, this was not as objective and researcher-driven as some hypotheses, as it came from our actual experience of being practising university teachers, instead of from the research literature. It did, however, fit within the action research model of professionals starting from practical questions that are embedded within their working context, (Bartlett and Burton, 2006).
2. 'Our students do not know how to use information in journal articles.' This came from reflection after a presentation on an earlier cycle from this research at a learning and teaching conference (Norton, B. et al., 2003), when members of the audience suggested that the problem for students was not so much in finding a relevant journal article but in knowing how to use the information in that article to weave into an essay. When we reflected on these comments we realized that what we were expecting students to do was actually quite a sophisticated task. They had to extract from the article relevant information to answer their given essay question, which would have been quite different to the purpose for which the article was written.

Bearing in mind these two potential explanations, my 'intervention' with the counselling psychology students was two-pronged. Given that the module was 12 weeks long and class sessions were only two hours, I did not have a lot of time to play with, so to call it an intervention is actually rather a grand term for what was, in all truthfulness, a fairly small-scale modification to the delivery of the module.

One of the cardinal values of pedagogical action research is that by making small-scale interventions you can often bring about significant pedagogical changes. This is what I did.

1. I spent one hour in a class session on reminding my students how to find relevant journals both in the university library and electronically (I demonstrated a step-by-step guide). I gave instruction about exactly how to write a research critique and gave them an example critique relating to a PALS case study that I had written to act as a model and to help them see what I wanted.
2. I changed the individual research critique assignment from asking students to evaluate three journal articles as in past years, to just asking for a detailed critique on one key up-to-date journal article (i.e. one that had been

published in the last five years) which was relevant to their given PALS case study. I also asked them to present a list of the journal articles they had located that were relevant to their PALS case, fully cited according to the Harvard system.

3. When I marked their critiques, I gave the students detailed written feedback, partly to help them prepare for their presentation, which was related to the same PALS case study, but also to prepare them for the main assignment which was the essay and counted for 70 per cent of their module mark. The criteria I specified were:

    - evidence of an up-to-date literature search;
    - accurate referencing using the Harvard system;
    - critical evaluation of one key journal paper for the PALS case;
    - evaluation of usefulness of chosen key journal paper for the PALS case.

    The essay assignment presented them with a new and much longer PALS case study and they were asked to do the following:

    Choose one or more theoretical approaches which you think would be helpful to the client described in the following PALS case study. Using your knowledge of *the appropriate research evidence* justify why you think your chosen approach (es) might be effective.

Evaluating it

In order to see whether my intervention had worked, a quantitative approach was carried out by analyzing the essays after they had been marked for the number of journals cited in the references list at the end of each essay. The references to journals were subdivided into two categories:

1. recent journal articles (published in last five years);
2. older journal articles (published six or more years ago).

This analysis was carried out by a researcher who went through each essay and from the reference lists counted the number of unique citations to give the total number of journals used, as well as books and web sources. Doing this often reduced what looked like impressively long lists of references to somewhat unimpressive lists when he actually looked at the total number of unique sources used. One example was an assignment where there appeared to be 25 separate references, which actually boiled down to two journal articles and three books. Sometimes it was difficult to decide what were primary and what were secondary sources, given the inaccurate referencing used by some of our students. In such cases he would consult with me and together we would make a best guess. Whilst this process was not 100 per cent accurate, it was as accurate as we could make it.

Looking at the results of this research, we firstly compared the number of journals used in the assignments of the three modules from 2003. We found no differences in the number of journals used between organizational students or crime students who were using five journals on average. But there was a difference with counselling psychology students who used, on average, seven journals – and this was a statistically significant difference (see Figure 5.1).

This was a step in the right direction and some evidence that the intervention was having an effect, but, of course, the difference might have been something to do with the nature of the three types of module assignments rather than anything else. Our next step was to compare the (2003) counselling psychology cohort with the previous (2002) counselling psychology cohort where the essay assignment was virtually the same (see Figure 5.2). Here we found that there was a difference, as the 2003 cohort (intervention) used more journals and, in particular, used more recent journals than the 2002 (no intervention) – and this was a significant difference.

We did the same comparison with the other two modules: organizational psychology and psychology and crime, neither of which had had any intervention. Where organizational psychology was concerned, there were no differences in the number of journals used between 2003 and 2002 but when we came to

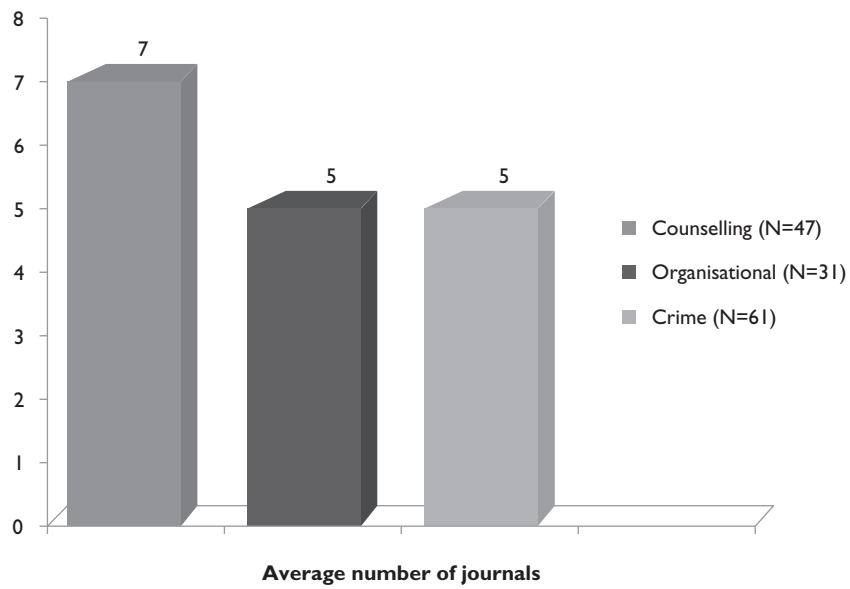

Figure 5.1 Column chart showing average number of journals used in assignments in three psychology courses (2003)

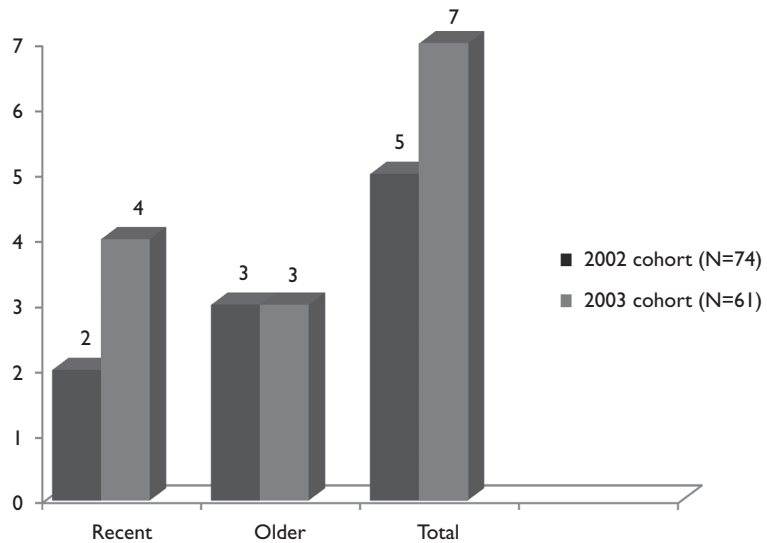

Figure 5.2 Column chart showing average number of journals used in assignment of two cohorts of counselling psychology students

looking at the psychology and crime students' results the picture was somewhat different. Here we saw a reversal where there was a large and significant drop in the number of journals used by the 2003 cohort of crime students compared to the 2002 cohort and this applied to both categories of journals, recent and older (see Figure 5.3).

We really did not know why this had happened. It might have been that this particular crime cohort was not as able as the previous year's cohort, but we did not really think this was the case as there was not much difference in overall grades between the two years. Speculating that it might be something to do with transferable experience, we compared the use of journals by crime students who were also taking the counselling module with crime students who were doing other modules. This was to see if the lessons being learned in counselling would transfer over into the psychology and crime module (see Figure 5.4).

We found that there was no difference in the use of recent journals, which was a little disappointing, but there was a difference in the use of older journals. Students who took counselling as well as crime used an average of seven journals overall in their assignment as opposed to an average of only four journals overall for students who took some other module as well as crime. This was mildly encouraging and gave me some hope that my intervention was having a modest effect.

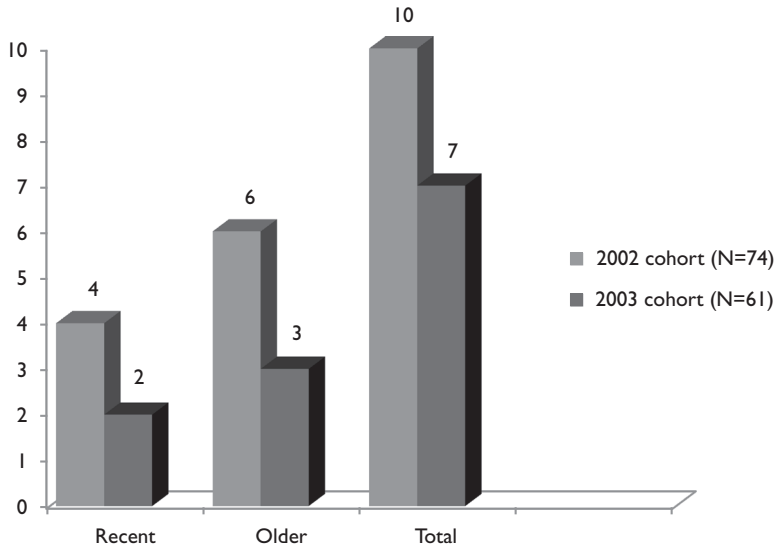

Figure 5.3 Column chart showing average number of journals used in assignment of two cohorts of crime psychology students

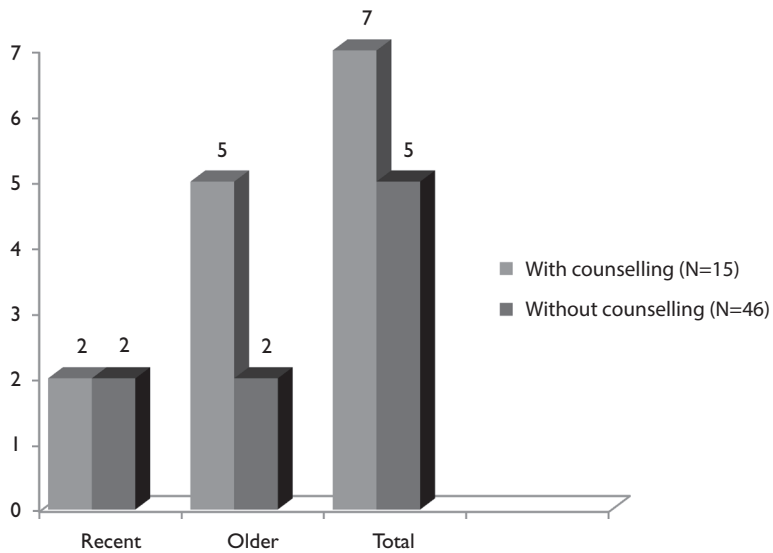

Figure 5.4 Column chart showing average number of journals used by crime psychology students who also took counselling psychology

Modifying future practice

A simple quantitative measure like this tells us some interesting things but what it did not do was to tell us why there were these differences in journal use. As you can see from the above, I keep having to speculate – which is one of the problems with applying a statistical approach to human behaviours.

We were also interested in finding out how effectively students were applying the information in their journal articles in their essays. A few feedback comments that I had made on the essays of the 2003 cohort of counselling psychology students were picked out by my research colleague and showed that all was not well:

> . . .you tried to do this but missed the golden opportunity of using the highly appropriate research papers that you cited.
>
> . . .used loads of research – you bombarded me with it but you did not say much about it – i.e. that's the evaluative part.
>
> . . .more critical analysis needed – you cited research but you did not say what had been done; what was the basis for the claims?

What was happening here? I had been successful in getting my students to use, or at least cite, more up-to-date journal articles in their essay, but in spite of my assistance on how to critically evaluate and apply a journal article to their PALS case study, they were still not doing this satisfactorily. In terms then of modifying my practice for the following year's cohort (2004), I decided that I would need to focus more on breaking down the critical evaluation and giving clearer guidance and maybe more practice. This was a direct consequence of carrying out this study and meant that I did, in fact, modify my practice when teaching the next cohort of counselling psychology students. In so doing another issue emerged for another cycle of action research. . .

Disseminating my findings

This study was reported as a research paper at a psychology learning and teaching conference (Norton, Norton and Thomas, 2004), but in the event we did not take it further and develop it into a journal article. This was mainly because in statistical terms, the results were slight so it would be unlikely to be accepted by any journal editor. The other reason was that our pedagogical interests had moved into other areas. This of course happens with any area of research, but what is so special about action research is that it can, and does, impact your practice. In my case this was carrying forward an understanding that students need to be taught quite directively how to use journal articles in their own academic writing.

Overall conclusion

By comparing two research approaches to the same problem using the acronym of ITDEM'D I have demonstrated the many ways that a troublesome issue or

concern can serve as a trigger to carry out a small-scale study in your own professional context. Beginning an enquiry is the most important step to take, regardless of the approach you take or the methods you use. If you actively reflect on the process and your findings, you will learn a significant amount about your own teaching and your students' learning. You will also learn how to refine your research design and carry out more studies that could well form the foundation for further cycles of action research.

Synopsis

- In this chapter, I have described how a pedagogical action research study can be carried out with results that not only can be presented at learning and teaching conferences but which also can help improve teaching practice.
- I chose a student learning issue that will probably be recognized by many readers: the problem of students not using enough primary sources (journals) in their written assignments.
- I have used the acronym of ITDEM'D to explain a simple, practical, step-by-step process that will get you started on thinking about designing and carrying out your own pedagogical action research study.
- ITDEM'D stands for: Identifying the issue, Thinking of ways to tackle it, Doing it, Evaluating the effects, Modifying practice and 'Disseminating your findings.
- By presenting two quite different methodological approaches to the same issue (one hypothetical, the other real) I have tried to show how ITDEM'D can be readily adapted to a type of investigation that feels comfortable for you and best fits your own context.

Activity answers

1. No. This is a double-barrelled question (i.e. it has two parts) so you should think of breaking it down into two sub-questions to disentangle these two quite distinct issues. Researching the concern of 'too much information' is over general and needs refining.
2. No. This would be impossible and the question would not be researchable. You might, however, explore with colleagues and/or students their perceptions of 'expert teachers'.
3. No. You would need to be more specific about the ways in which you would make an assessment task easier, and you may well have to define what you actually mean by the concept of 'easy'.
4. Yes. This would be a researchable question, but you might want to make it more specific (i.e. helpful to colleagues who are new to marking, for example).

5. Yes. This would be a good starting point for an exploratory study.
6. No. 'Interesting' is too vague a concept.
7. Yes. This is a specific and researchable question that applies to your own context.
8. Yes. Again this is specific and well situated in the context of your own practice.
9. Yes. This could be a good starting point for an exploratory investigation and again, it is specific to your context.
10. No. This is too general and makes too much of an assumption.

Further reading and resources on practical approaches to action research

Websites

The range of resources on the internet is considerable and trawling through them can sometimes be quite a demoralizing experience as information overload can rapidly overcome you. Rather than add to your overload at this stage, I am going to recommend just three sites that I have found over the years to be very helpful.

Jean McNiff's website

Available at www.jeanmcniff.com/ (accessed 28 March 2018).

For someone just beginning to explore the potential of educational action research, this is an excellent website – friendly, informative and scholarly – with resources to help new action researchers. There are links to McNiff's books and papers, many of which are downloadable, as well as examples of action research theses at masters and doctoral level. A useful starting point might be the downloadable action research booklet below.

Action research and action learning for community and organizational change

Available at www.aral.com.au/ (accessed 28 March 2018).

This is the website of Bob Dick, an Australian who describes himself as an independent scholar, an educator, facilitator, coach, and change consultant. It is well worth exploring but since it is related to action research in all fields, you may have to pick and choose a little. It is particularly useful for those who want some background to the philosophy of action research, some of the debates that surround its use, as well as advice on planning and running action research projects. (See the pages on action research and related resources and those headed 'Leading action researchers say why AR'.)

Jack Whitehead's website

Available at www.actionresearch.net/ (accessed 28 March 2018).

This website is a scholarly and very rich source of resources and writings of Jack Whitehead who is known for his conception of a living educational theory and connecting it with an action research methodology.

Journal for publishing pedagogical action research

Many subject-related and generic journals in the field of higher education publish action research studies but *Educational Action Research* is one that is dedicated to action research in education at all levels.

Educational Action Research published by Taylor and Francis, frequency: five times a year. Available at www.tandfonline.com/toc/reac20/current (accessed 28 March 2018).

This is a fully refereed international journal concerned with exploring the dialogue between research and practice in educational settings. It is supported by the Collaborative Action Research Network (CARN). It is available in print and online and you can publish open access.