Pedagogic Research

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Supporting teaching in higher education to improve the student learning experience in the Biosciences

Getting started in PedR - what are the issues?

- **Does participating in PedR matter to staff?**
- **How is work on PedR funded?**
- **Do I have time for PedR?**
- **What area of PedR should be tackled?**
- **Is PedR different from science research?**
- **Where do I publish work on PedR?**
- **Coping with the background literature of PedR**
- **Case study – me!!**
- **Take home messages**

Does participating in PedR matter to staff?

For T+R staff – university's mission/attitude/promotion criteria?

- keeps options open
- RAE scores?

For T only staff

- improves CV
- helps promotion
- increases credibility
- reflects your own interests
- diversifies and adds interest to the job
- wider portfolio
- increases network of contacts
- outside funding expected
- increased options for future employment

How is work on PedR funded?

- does it need to be? (outside funding expected)
- EU grants (DON'T lead)
- subject centre grants
- university teaching development funds
- national bodies – Leverhume etc
- charities – Garfield Weston, Rowntree
- UTF/NTF awards
- professional/learned societies
- collaborate with CETLs
- something your faculty/dept needs to know?

Do I have time for PedR?

- buyout if funded

- what's it worth to you?

- how much time is really involved?

- you are already spending the time doing this – it's only the writing up that's additional

- the issue is doing it in a way that can be published – doing the same work but doing it differently – with the objective at the start of writing it up

- use project students

THINK WRITE-UP – from the start

What area of PedR should be tackled?

- whatever you are changing or having to do differently anyway
- other people have the same problems and are interested in your solutions
- what works for you to solve your problems?
- where you see there are issues which need investigation? (differentiated learning: enterprise +entrepreneurship: student attitudes…….)
- you make changes in courses, did they make things better or worse?

Big question, small question, action research

Is PedR different from science research?

YES!!

- students complain if not treated equally
- they don't all respond/reply
- you can't get another down from the animal house
- there's not always a theory-based hypothesis
- there are windows of opportunity in the teaching year
- you make up the methods as you go along
- some of it is touchy-feely; not nice numbers!

NO!!

- measurement validity/accuracy, sampling, replies, statistics,
- focus, identification of question
- cope with disappointment
- design is critical

Where do I publish work on PedR?

- professional discipline journals
- education journals
- subject centre journals and news bulletins
- internet journals generally (DOI, Digital Object Identifier)
- university data repositories

What do you want out of publication?

How good is the work?

Not all publication is the same, just as in science

Coping with the background literature for PedR

This is the area where most need help is needed: there are several strategies to cope with the problem!

- ask an expert!

- leave it out and wait for the referees to tell you what to put in

- become expert (takes ages, compare with discipline science literature)

- find a related paper and pinch the references

Case study – me!!!

- **Interested in T & R – held MRC, SRC, CASE, Wellcome and industry grants for science research (25y) in neurotransmitters;**
- **1978-1984 computer based MCQ – students know what to expect in exam**
- **1980-1987 simulations of pharmacology laboratory preparations - meet needs for students who don't get data**
- **1984-1990 HoD -----choice moment**
- **1984-1990 developed computer based tutor**
- **1990-1993 Pharmacology Higher Education Network (DfEE funded)**
- **1993-1997 TLTP2, development of technology based teaching resources (HEFCE)**
- **1995-2000 peer assessment – too much marking!**
- **1998-2001 TLTP3, implementation of technology based resources (HEFCE)**
- **1999-2003 EpharNet European pharmacology network (EU funded)**
- **2000-2005 students' and employers' views on our courses**
- **2001-2004 assessment audit to improve assessment generally (NTF)**
- **2001-2005 European software collaboration (EU funded)**
- **2003- other audits (employability, work placements, external examining, enterprise ....)**
- **2006 student attitudes**

20 full papers and 40 refereed publications on teaching

Some publication titles

- **Some experiments in using a computer-based learning system as an aid to self-teaching and self-assessment. Computing and Education**

- **Staff & peer group assessment of oral communication skills. Studies in Higher Education**

- **Peer assessment of student practical reports and its influence on learning and skill acquisition. Capability**

- **Knowledge and skills needs of pharmacology graduates in first employment: how do pharmacology courses measure up? Trends in Pharmacological Sciences**

- **Do computer simulations of laboratory practicals meet learning needs? Trends in Pharmacological Sciences**

- **Computer based learning - an aid to the successful teaching of pharmacology? Naunyn-Schmiedeberg's Archives of Pharmacology**

- **Employment and employability for pharmacology graduates. Nature Reviews (Drug Discovery)**

- **Teaching pharmacology in 2010 - new knowledge, new tools, new attitudes. Folia Pharmacologica Japonica**

- **Coping strategies for staff involved in assessment of laboratory write-ups. Bioscience Education Electronic journal**

- **Skills and Knowledge needs among recent bioscience graduates – how do our courses measure up? Bioscience Education Electronic journal**

- **You can do it, if you want to**
- **Actually, you are doing it already**
- **It's not rocket science**
- **Your problems and solutions ARE of interest to others**

How can I do what I do anyway to make it fundable/publishable?