

# **Developing Research Skills in Masters Level Students in the UK: an Action Research Study**

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# Background

- Full / part time taught Public Health Masters launched in 2005
- Full / part time online Public Health Masters launched 2007 (by demand)
- Degree - minimum entry requirement. Expectation that students will have gained academic and research skills

# Expectation on entry to HE .... ?

- Brew (2006, p44) states:

*"by the time students reach University, they already have had considerable experience in investigation, in project research, and in inquiry based learning ..."*

Brew, A. (2006) *Research and teaching: Beyond the divide*. New York: Palgrave Macmillan.

## An opposing viewpoint ..

- Schroeder (2004) suggests that contemporary HE students have changed dramatically and that it is important we respond to this.
- He argues we can benefit from understanding the effect of our teaching and to do this we need to explore; **how we are presenting it and to whom.**

## **An opposing viewpoint .. (2)**

- Schroeder (2004) further argues that many students:
  - lack confidence in their intellectual abilities
  - are uncomfortable with abstract ideas
  - have low tolerance for ambiguity
  - are less independent in thought & judgement and more dependent on the ideas of those in authority
  - Are more dependent on immediate gratification and display more difficulty with basic academic skills

## An opposing viewpoint .. (3)

- Schroeder also believes that these students require a **practice-to-theory** approach rather than a more traditional **theory-to-practice approach**

Schroeder, C.C. (2004) *New Students - New Learning Styles* [online] available at: <http://www.virtualschool.edu/mon/Academia/KierseyLearningStyles.html>

- Although initially our expectations were in line with those of Brew (2006) it soon became apparent that this was not the case.
- We began to observe a lot of traits described by Schroeder (2004) - a lack of basic academic skills became apparent with:-
  - referencing, literature searching, quality of literature accessed, and critical analysis skills being particularly problematic

## The evidence ....

- This was further supported when we asked our 2007 cohort about their prior research experience:

28% = no prior experience

22% = limited experience

- Therefore **50% entered** the course **without** the level of research knowledge we anticipated (n=32).

# Our student population

- Diverse
- Many International students who have not studied in the UK before
- Anderson (1988) highlights that learning style models are often underpinned by Western assumptions and do not consider cultural differences in cognitive & communication styles

Anderson, J. A. (1988) 'Cognitive styles and multicultural populations' cited by Smith, M. K. (2001) 'David A. Kolb on experiential learning', *the encyclopedia of informal education* [online] available at <http://www.infed.org/b-explrn.htm>.

# Student comment ...

- One student wrote in his online reflective journal ...

*“ Hmmmmm ... I hope I can handle all these ????  
(modules) quite different, the method of study  
here, assignments and all as compared to practical's  
and exams in Nigeria”*

# Questions we asked ourselves ...

- If the traditionally taught students were having difficulty with key skills what would we find with the distance learning students?
- Would they need additional support? What form would this take?
- How were we going to get the distance learning students to engage with research and develop key skills via a solely online environment?

## **The beginning ....**

- We needed to be led by the students; listen to their voices and adapt our pedagogy accordingly to enhance teaching & learning
- Action Research enables us to do this and will identify how future provision needs to change in order to improve student learning experience and enhance research & evaluation skills

# Addressing our questions

- Research and evaluation needed.  
Methodology identified and proposal written
- Study Design – Action Research
- Ethics approval and funding (CETL) secured

# Action Research (AR)

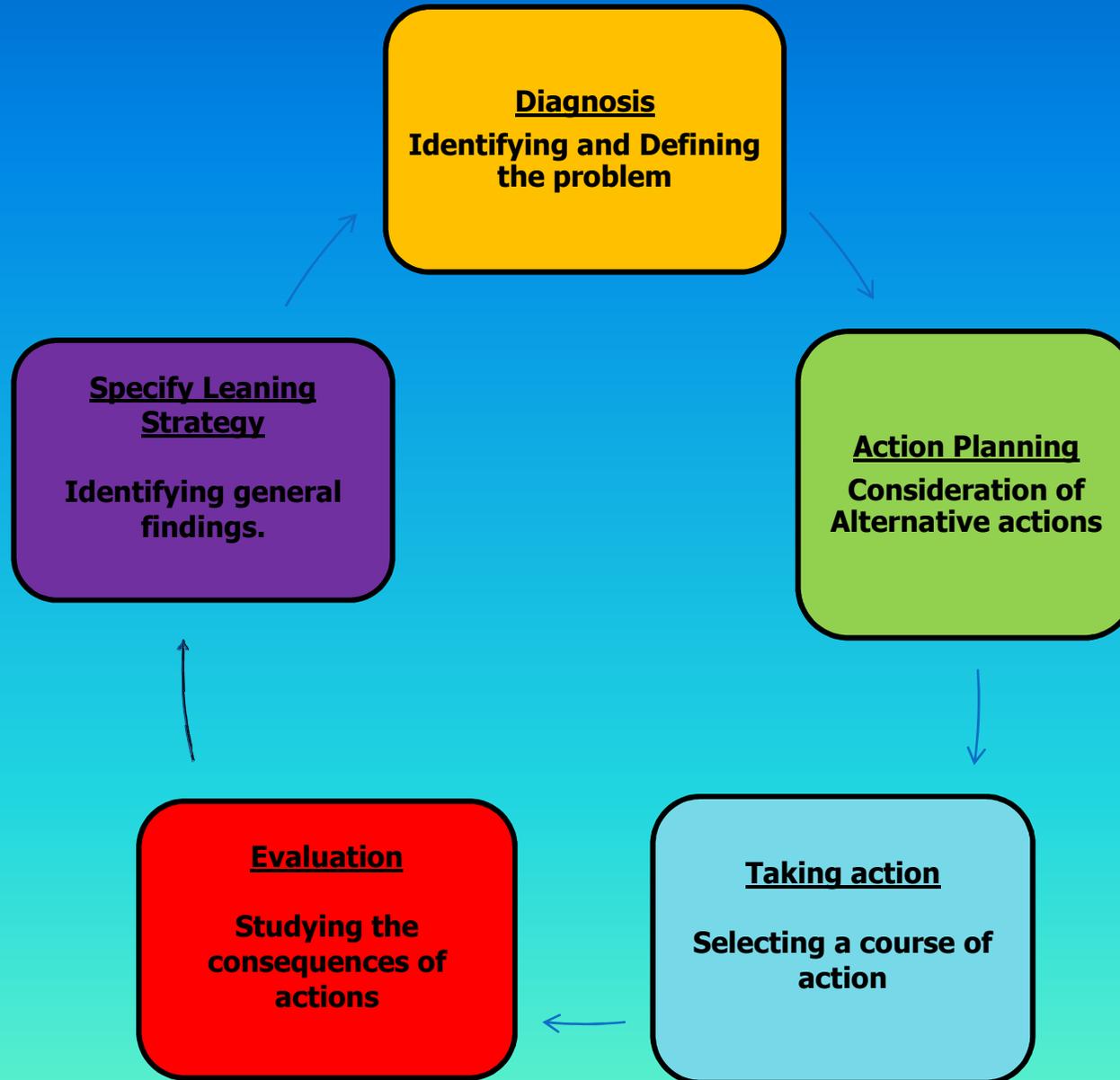
- This approach begins with an idea and the research process is the developmental process of:
  - following through the idea
  - seeing how it goes
  - continually checking whether it is in line with what we wish to happen

## Action Research (cont.)

- Seen in this way, AR is a practical way of looking at our own work to check that it is as we would like it to be
- AR is open ended and does not begin with a fixed hypothesis. Hence, is a form of self evaluation

*McNiff, J (2002) Action research for professional development – Concise advice for new action researchers [online] [www.jeanmcniff.com/booklet1.html](http://www.jeanmcniff.com/booklet1.html)*

# Action Research Cycle



# Stage 1: Diagnosis - identifying and defining the problem

- Attending students have difficulty with developing research skills so what strategies can we use that will be equally effective for our online students?
- How do we ensure that **all** our students gain the research skills required for '*real world*' practice
- Brew & Prosser (2003) suggest that students and academics engage in a 'research' partnership, and work together in a community of learners. Is this possible with online learners?

Brew, A and Prosser, M T (2003) Integrating quality practices in research-led teaching and institutional priorities, *Proceedings of the Australian Universities Quality Forum: National Quality in a Global Context*, pp.118-121 [online] <http://www.auqa.edu.au/auqf/2003/program/day3.htm>

## Stage 2 :Action Planning - consideration of alternative actions

- Beetham & Sharpe (2007, p3.) ask '*are we prepared and ready to re-think our pedagogies and re-do our practices?*' They further propose that contemporary pedagogy would need to encompass '*ways of knowing*' as well as '*ways of doing*'
- Hughes (2008, p438) : '*technology, without the pedagogy can be a fetishised and empty learning, and teaching experience – stylized, but without substance, simply an electronic information push*'

## Stage 2 (cont.)

- Hughes further proposes that the UK has lost its way and that pedagogical debate has been held back by emphasising the technology *per se*.

Beetham, H., & Sharpe, R., (2007) *Rethinking pedagogy for a digital age, designing and delivering e-learning*, London; Routledge

Hughes, J. (2008) *Becoming an eportfolio teacher*. In Cambridge, D., Cambridge, B. & Yancey, K. (Eds.) *Electronic Portfolios 2.0: Emergent Findings and Shared Questions*. Washington, DC: Stylus Publishing.

## Stage 2 (cont)

- Mayes and de Freitas (2007, p23) suggest that we are witnessing *'a new model of education, rather than a new model of learning'* as *'our understanding deepens...we see how learning can be socially situated in a way never previously possible'*.
- We need to continually review our pedagogies and understanding of e-learning

Mayes & de Freitas (2007) in Beetham, H., & Sharpe, R., (2007) *Rethinking pedagogy for a digital age, designing and delivering e-learning*, London; Routledge

## **Stage 3: Taking action – selecting a course of action**

- Formally explore the academic achievement of our student cohorts
  - do our perceptions match student ability?
- Listening to the student voice
  - What do they think is working?
  - What do they think needs to be improved?

# Sample: n=104

- All students asked to complete and return a questionnaire (via email)
  - Data gathering tool has evolved / is evolving over time
  - Very high response rate

# Data Collection: Questionnaire

## Background Data

- Mode of Delivery?
- Home / overseas student?
- Course Duration?
- Academic Level on Entry?

# Data Collection: Questionnaire (cont)

- Student perception of research skills on entering the course and again on completion
- Identify what skills they want to develop / what skills have been developed
- What teaching and learning strategies are effective / could we do anything differently?

# Outcome Measures

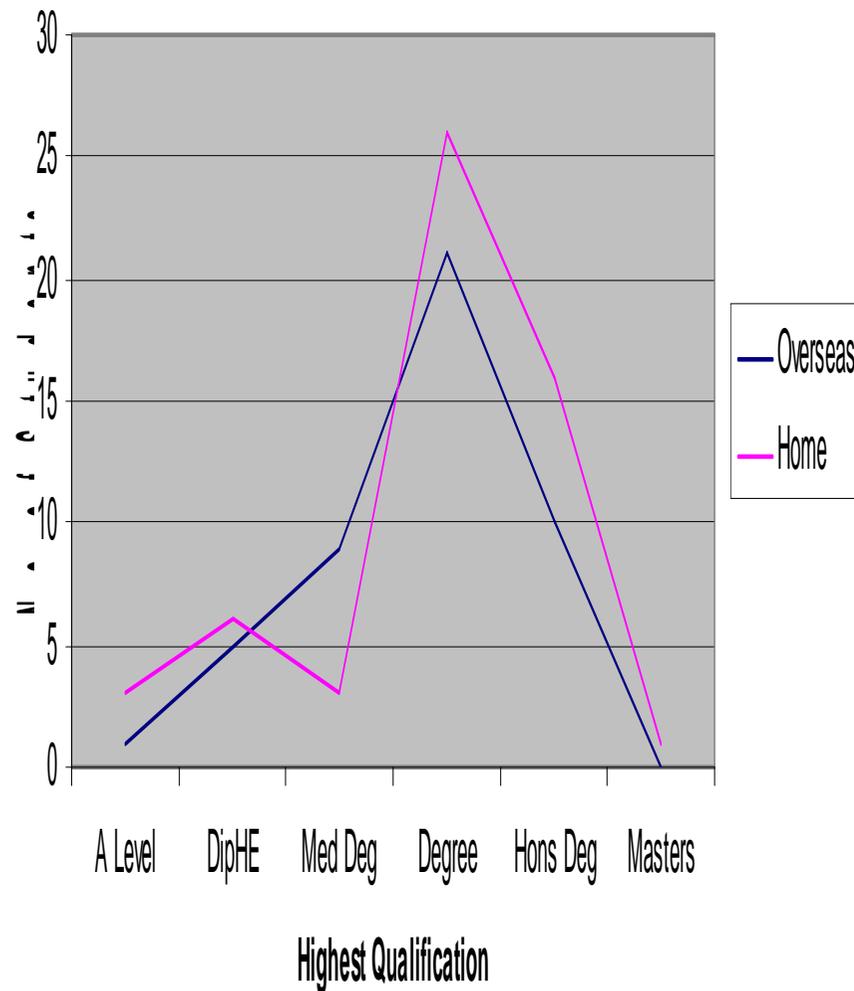
## **Academic achievement = Assessment Grades**

- Research Methodologies Unit (early in course)
- Dissertation (final assessment)

# Results (1)

- Mode of Delivery:
  - 74 traditional taught (71%)
  - 28 online
  - 2 mixed (some online learning due to pregnancy)
- Course Duration:
  - 74 completed full time (1 year)
  - 29 part time (2 years)
- International Students:
  - 46 International students (44%)
  - 3 EU students (2%)

### Entry Qualifications By Mode of Delivery



- There was no significant difference in entry qualifications by overseas or home student status (n=101)
- Differences in perceptions of research skills also not significant (n=54)
  - referencing most confidence with (mean 7.21)
  - Statistics least confidence with (mean 4.96)

## Student Perception of Research Skills: Mean Ratings on entry



## Results (2)

Suggested Changes to Research Methods Content:  
(n=57)

9 stated no changes needed

20 identified the need for more sessions / time

10 want more coverage of statistical analysis

Skills TO develop: (n=104)

Just under half wanted to develop all skills

Interpreting data was identified by 22%

Skills NOT developed: (n=47)

100% stated that they had not sufficiently developed data analysis skills

# Key findings

- There is no difference in outcomes (grades) by mode of learning
- There is the need incorporate more statistical analysis and interpretation of data into our teaching
- Level of education does not seem to have impacted on grades. Those with A Levels or Dip HE (n=8) did as well as those educated to degree level

## Key findings (cont.)

- Interestingly of the 7 who failed their dissertation on first attempt 4 have an honours degree, 2 a medical degree and one an unclassified degree. None had lower entry qualifications. Evenly spread across overseas (4)/ home students (3).

## Changes to date ...

- We have introduced more 'workshop' teaching sessions where students can work in small groups to access, interpret and discuss real world research (practice to theory approach). Online activities to be developed for distance learners
- We have incorporated more online activities to facilitate engagement – these include online discussion forums, Wiki's plus games such as hangman & crossword puzzles

## Changes to date (cont.) ...

- More videos and podcasts incorporated as these have been well evaluated.
- Voice emails have been well received by the online students – especially useful for providing feedback
- Skype well evaluated as this provided 'human' contact with online students

# The future

- To continue to gain to student feedback and develop online material in line with this (**Evaluation: studying consequences of actions**)
- To continue to evaluate and develop our online material
- To provide a range of material that will engage all students
- To work towards a '*community of learners*' so students can support each other regardless of mode of learning

# Recommendations

- To develop strategies that will facilitate online, student focussed learning communities (**Specify Learning - Strategy Identifying general finds**)
- To facilitate the integration our Masters students into the wider research culture within the University (RiT)
- Revisit Action Learning Cycle

And finally ....

..... thank you for listening

We would appreciate you sharing your thoughts and experiences.

Questions also welcome!