"Research Led Teaching; Principles, Perceptions and Practice in WMG" - Final Report Knowles_Maggs

Introduction

This project seeks to engage with the concept of Research-Led Teaching and Learning (as cited in objective 2.1 in the University Learning and Teaching Strategy). Despite such a high-level commitment to the concept, there seems to be a lack of consistency of understanding of the construct and its implementation both within WMG and across the wider University. By using an inductive methodology (focus groups) to develop inputs from students and staff (both research and teaching) the aim is to develop a shared understanding of the term, its many facets and, crucially, how this might best be operationalized; initially within WMG but with University-wide implications. The project was approved for funding in November 2015 (Co-Investigators: Graeme Knowles and Steve Maggs) with a completion date of end July 2016. The team later expanded include Dr Harita Joshi.

Observations and Learning from the Process

As newcomers to this type of research, it is worth noting that there was initially something of a lack of anticipation of the difficulties and delays that might affect this type of work. Specifically, there have been more problems than anticipated in getting together focus group participants, especially from the research side of the department. This has, however, provided some insight into the issue we are exploring with respect to the relative importance assigned to the issue of research led teaching within different communities within WMG, and will be discussed in the research outputs. The second issue which was more technical in nature was the time and effort involved in the transcription of recorded meetings – this was vastly underestimated and, in the end was contracted out at a cost to the department. This too had an advantage, in that it helped to reduce bias as the transcriber had no subject specific knowledge or agenda about the research so value judgements which may have distorted the transcript were avoided. Finally, even with experienced facilitators keeping focus groups 'focused' on the topics as something of a challenge!

These issues were challenging at the time, but have certainly contributed to our understanding – research led learning in action!

Work Completed

Phase 1: First Round of Focus Groups

The first round of focus groups (one with teaching staff, one with research staff, and one with students) were completed with 6 participants in each of the groups; participants self-selected by responding to an email request which contained a detailed description of the planned research and the commitment involved in terms of time and effort. Each focus group lasted between 1 and 1.5 hours and was facilitated by an experienced external academic in the case of staff sessions and a PhD student familiar with this type of research in the case of the students. Sessions were recorded and transcribed at departmental expense; all participants had signed an ethical consent form prior to the session, which explained exactly what would happen and how the data would be recorded, stored and used to allow for informed consent.

Using a standard focus group approach, phase one aimed to develop initial working definitions and associated ideas and constructs.

Set Up and Data Gathering:

The following approach was taken to the conduct of the initial focus groups:

a) Researchers initially established appropriate questions and prompts for use in the groups. As this was an exploratory phase - and in order to avoid bias or unduly influencing the findings - researchers purposefully avoided significant secondary research in order to establish an understanding of the current thinking within the target groups without pre-conceptions. Questions were therefore kept general, and pitched to encourage discussion and expansion rather than being highly focused.
b) Purposive selection of candidates for focus groups was not possible due to the relatively small numbers of volunteers from each group. Amongst staff (both research and teaching) experience levels were generally fairly high with most attendees having in excess of 5 years' experience in their role (not all in WMG). Students were a mix of undergraduate and full-time masters students broadly reflecting the balance of students taught within WMG. There was recognition that there is a potential for bias in the self-selection of candidates; however, since the most likely form of the bias would be the inclusion of people who have thought more than is usual about the topic area this was not deemed a concern.
c) Using a facilitator-observer model the focus groups were conducted for each constituency separately and thematic analysis undertaken to establish the principal ideas for each group.

Results and Analysis:

The thematic analysis of the transcripts was conducted by individual focus group (Research, Teaching, and Student) and adapted from Braun and Clarke's (2006) Step-by Step Guide:

- ***Step One:*** Read the transcript a number of times in order to familiarise the researchers with the contents.
- ***Step Two:*** Review each text highlighting key comments and ideas in a systematic fashion, developing initial ideas of codes.
- ***Step Three:*** The reviewers compared their results and agreed a common set of key phrases and ideas.
- ***Step Four:*** Generate a coherent and systematic thematic 'map' of the analysis.
- ***Step Five:*** Refine the specifics of each theme and the overall 'story' of the analysis generating clear definitions and names for each theme.
- ***Step Six:*** Produce a scholarly report of the analysis using a selection of 'vivid, compelling extracts'.

In order to minimise bias three separate researchers coded the data initially and came together in step three to agree a common understanding of the ideas and text elements to be included for further analysis. This reduced the potential for elements to be excluded or interpreted based upon the views or expectations of one researcher. Once a set of elements had been agreed, the researchers conducted an Affinity Diagram analysis for each of the groups on separate occasions. The logic of this was to avoid (or at least minimise) the risk of 'cross contamination' of codes

between groups – that is to say, the forcing of codes developed for one group onto another because they were fresh in our minds.

The Affinity Diagram technique was used to develop themes from the raw data; the individual phrases selected from the transcript were placed in random order on desks and the researchers silently grouped and regrouped them into logical sets. The silence means that no one individual can promote their views through argument or force of will; it encourages all to seek to understand why others group the data differently. When the regrouping peters out, it indicates that a degree of consensus has been gained.

At this point, each group is given a title upon which all agree (discussion is permitted at this stage) and which represents all of the elements within that set without being much broader than the data indicates. The data is then reviewed to check that all elements fit the title given, and whether additional elements should be included from other groups; appropriate refinement/reorganization occurs at this stage. The outputs of this phase are included at Appendix 1 to 3.

Phase 2: Second Round of Focus Groups

Set Up and Data Gathering:

The second phase of focus groups was designed to present each group with the broad outcomes of phase 1 and to focus on three key issues:

1. Making sense of the differences in perspectives between the three groups.
2. Postulating what might be a cohesive understanding of the key aspects of Research Led Teaching.
3. Considering concrete actions which might usefully be taken within WMG (and possibly within the wider University) to develop an appropriate response to the Research Led Teaching Agenda.

The approach was broadly as the previous set of focus groups.

Results and Discussion:

Phase two was always designed to build upon phase 1 so the outcomes are linked to those from appendix 1. Key outcomes are briefly discussed below with associated key comments from Students (S), Teachers (T) and Researchers (R):

1. Three aspects of Research Led Teaching were discussed across the groups:
    a. ***Research Informed Teaching:*** Referring to curricula based in current research (sub-divided into a further 2 aspects: Use of externally available literature and research, and use of the lecturer's own research – researcher as teacher). Indicative comments: ***"…so, making sure that the lecture notes are supported by the latest findings and research and thinkings." RC; "I mean it's something that I use but I would have thought it was something to do more with evidence based, that's the sort of term I'd use" TB; "I understand it is I had a module this year that was given by a guy who had done, just finished his PhD, so a lot of what he was teaching was from his PhD work and from the research he'd done, so it was very cutting edge" SD***.

b. ***Student as Researcher:*** Where the dominant learning style for students is to explore topics with facilitation from the lecturer. This can be through case-based learning, flipped classroom or other similar approaches. Indicative comments: ***"I would say the second one of those, where you're allowing students to go off and explore and sort of do some research, maybe investigate a topic of some description and that is, that's sort of being research led" RD; "The core of it is an understanding of method and methodology; that is where it, where it really starts, that's the most fundamental thing. So that both, so that they can understand the content that's been given to them and also critically evaluate it." TB; "…for me I believe that research is not just about finding what other people have done, you need to have a question and you need to answer and it comes from a level of understanding, that's where creative thinking comes in" SA.***

c. ***Pedagogic Research:*** This relates to staff undertaking their own research (or accessing and utilising existing research) specifically focused on the development of effective teaching and learning strategies. Indicative comments: ***"…the actual means that we're using to teach, so that ought to be research based as well and we ought to be using best practice, and whether that's current research based or generally … you ought to have some research evidence for the way that we're doing it." TF; "taking latest thoughts, research, on how you carry out education." RC.***

There are obvious links in a and b to models such as Healy (2005) with the notion of three key axes:

Focus on Research Content ↔ Focus on Research Process

Students as Audience ↔ Students as Participants

Teacher Focused ↔ Student Focused

2. There is a reasonable degree of commonality of the topics covered, although not opinions about them, or degree of emphasis. Specifically, the Research Focus Group focused most on *Research Informed Teaching* and spent little time discussing pedagogical research. Indicative comments: ***"So it's almost the research informs the detail but also potentially the types of course or module you might have." RB; "…a sort of osmosis of research going into the teaching process" RD***

   Students focused mostly on the (positive) aspects of *Student as Researcher* (Indicative comments: ***"So it makes it really insightful and impactful" SA; "…you don't teach 100% of it, you make people do research and make them understand what is this, so that the learning will be much effective than just pacing in the class." SB***) and had mixed views on *Research Informed Teaching* with some finding it 'inspiring' and some feeling they were unable to 'keep up' with the expert lecturer (indicative comments: ***"…so it was very cutting edge, it was kind of at the forefront of that, that topic. But it was personally quite hard to always understand because I hadn't done, I didn't have the depth of knowledge that he'd had to get to that point. So while it was very, it was all new fresh ideas that you couldn't find anywhere else, it was also quite hard to comprehend as a student because I hadn't done years and years of work up to that point where he'd got to." SD; "The best teachers I had were people who***

came along to say, here's research that I've done, look what it illustrates." TA. Teachers had the most balanced discussion across all three aspects.

3. Terminologically, the phrase '*Research Led Teaching*' had an interesting effect on discussion; in the Research Group it led to an initial focus on what might be paraphrased as 'how can we as researchers influence the curriculum to include our cutting edge research' (see indicative comments in point 2 plus ***"As researchers we are in a community that's at the forefront and engaging with the wider industry, so we can see emerging sort of demands and trends and interests to forewarn and perhaps influence the curriculum or module structure, whatever, to bring more appropriate balance." RC***). They then moved on to discussing the readiness or otherwise of students at various levels (Undergraduate years 1 to 3; M-level and post-experience students) to be exposed to *Research Informed Teaching* (Indicative comment: ***"Initially they want the answers and go straight to the exam. As they mature, then they start developing their own interests and therefore you … and the lectures become more, you know lectures do become a lot less structured as well, they become a bit more open-ended in terms of where they can go and explore." RC***). In contrast, the Teaching Group became concerned with ideas of the relative value placed on research and teaching and notions of 'second class citizenship' (indicative comments: ***"I just, well, being the cynical view, is that, well it sort of ties in with … it's just saying it's the USP (all laugh) for the university because we are obviously primarily research rather than teaching, it's sort of a way of saying, you should come here to learn because we're research led! (laughs)" TC; "Expert researchers within the department will dictate the content of the syllabus and come in and present their research." TF).*** Finally, the Student group principally focused on their experiences as active researchers but there was also comment on the negative experience of having what appeared to them to be irrelevant (for their level of development) research content delivered to them by a lecturer (see earlier comments). Taken together, these perhaps indicate that the term 'Research Led Teaching' has an unhelpfully hierarchical feel to it; research leads and teaching follows. There is also a possible parallel in the recent trend in referring to 'Learning and Teaching' as opposed to 'Teaching and Learning' to emphasise the more inclusive, less hierarchical term.
4. There is a general agreement that members of staff engaged in learning and teaching need to be supported by stronger links to pedagogical research (both existing research and research conducted by them and their peers) as supported by comments in 1c).
5. Specific issues for WMG were the split between teaching Fellows, Research Fellows and Academic Staff. There were perceived advantages to the structure which included not forcing individuals to become involved in doing things they did not want to do (and hence tended not put much effort into, leading to poor delivery) and specialisation; however, it was felt that the research-teaching nexus would benefit from the more traditional multi-skilled approach where they could inform each other – perhaps unsurprisingly this was not explored by students but came across strongly from staff groups. Indicative comments: ***"… we do have people that 100% teach I guess and that could be where the problem is, or sort of the challenge is." RC; "I think it's a problem we have in WMG, I mean we split the researchers and the teachers into two groups although there is some overlap between them, and there are some great advantages in that, but I think that in this area it's also picking up some disadvantages because the teaching fellows aren't actually researchers" TB.***

6. Both Teaching Staff and Research Staff felt that they were under-supported in developing the skills of the other compared to the level of expectations upon them. In particular, Teaching Staff felt that they did not have skills and experience in evaluating research for inclusion in their teaching: ***"How can I question their research or have any, any sort of sense of quality of it, when I myself am not a researcher?" TF.*** Similarly, some of the Research staff felt that the support for developing them as teachers could be improved: ***"There is no real driver to be good at teaching." RC***. This was exacerbated by the lack of structures supporting this aspect of 'interdisciplinarity' (it is noted that this is a different use of the term than usual).
7. Due to the range of students dealt with by WMG, there were different challenges in respect of *Research Informed Teaching* with respect to the students' ability to contextualise and grasp cutting-edge research work when perhaps basics were not fully in place.

Phase 3: Outcomes & Recommendations

Developing a Model:

Although a model was not an anticipated (or necessarily desired) output of the process it became clear during discussions that there are linkages between the three key dimensions identified by the research and that a model might be useful tool to promote effective discussion of these aspects.

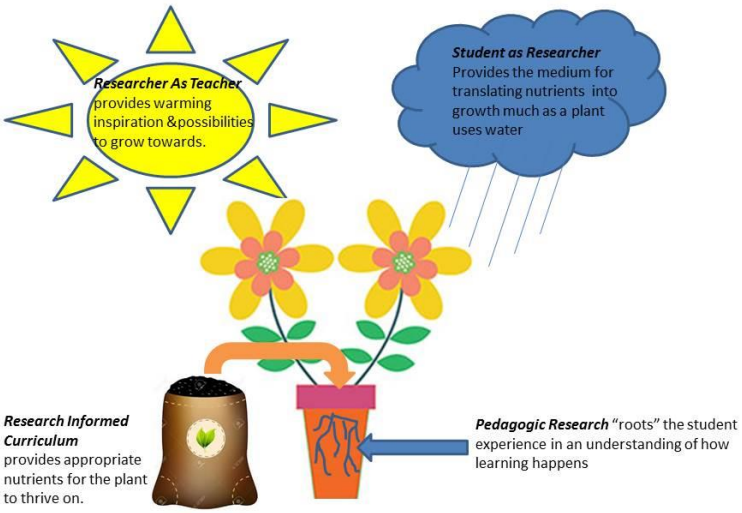


Figure 1. The 'Growth' Model of Research Led Teaching (or The Research Led Teaching ECO-System)

While there are a number of eloquent definitions of the purpose of higher education, they all involve elements of growth and development of the individual (whether that be growth in knowledge, understanding, intellectual capability, employability or one of a dozen other dimensions) and thinking in this vein led to the model above. The Key aspects of which are as follows:

- ***Pedagogic Research:*** Developing a clear understanding of learning mechanisms and styles 'roots' the student experience in theory and allows for the development of effective practice by staff and self-efficacy in students.

- ***Research Informed Curriculum:*** Is the mechanism by which students are exposed to appropriate, up to date and stimulating content.
- ***Researcher as Teacher:*** An aspect of Research Informed Curriculum which allows for direct connection with the research currently being conducted in the Department. This generates motivation and enthusiasm about both content and process and shows potential for future careers. The analogy also works to recognise the concerns of students that too much 'sun' can actually damage their development or motivation.
- ***Student as Researcher:*** Develops in the students' critical enquiry skills and attitudes which allow them to make best use of other inputs, much as plants use water to transport nutrients to where they can best support growth.

The model (as all models) is obviously imperfect, but we hope that, to paraphrase George Box (1987), this one may prove useful.

Suggested Actions & Points for Consideration:

1. It would be useful to review the somewhat loaded terminology around 'Research Led Teaching' for clarity, and also to avoid reinforcing existing prejudices (whether real or apparent) within the institution.
2. WMG should develop a stronger departmental engagement with the pedagogical literature and encourage research and experimentation by those involved in teaching with respect to their practices and their effects. It is noted that the Pedagogical Interest Group recently set up is one element of this engagement which could be built upon.
3. A purposeful consideration of the balance of Research Fellows, Teaching Fellows and 'traditional' Academic Staff should be undertaken. Recognising the strengths and weaknesses of the more specialised structure within WMG and considering what balance and what further actions might most effectively support the development of an appropriate Research-Teaching nexus. Fundamental to this will be supporting Teaching Staff in developing skills in research, and vice versa. There will also be issues of how staff are measured and rewarded (research is still seen as the primary way of 'getting on' in the University); change theory strongly indicates that if measures do not align with desired new behaviours it will inhibit change (Kotter; 2013).
4. Consider how to engage Researchers more in the development and delivery of an up-to-date curriculum, bearing in mind the issues of relevance and readiness identified by students. Potential approaches might be to have 'master classes' which are non-examined (and possibly non-compulsory) which might serve to enlighten and inspire but would not create the frustration and anxiety which might result from inclusion in an assessed mode.
5. Introduce a more explicit element to our programmes enabling students at an early stage to understand the principles of learning and their own (and others) preferred learning styles.
6. Encourage an increased emphasis on 'student as researcher' activities throughout the curriculum. This may involve increasing the proportion of problem-oriented teaching; understanding and addressing issues with culture and experience inhibiting effective student engagement in such activities; and building more reflexive elements into all aspects of teaching provision.
7. It is recognised that the research is based on a relatively small sample of staff and students associated with WMG. The methodology has yielded what we consider to be significant and interesting insights with potential for further learning to occur, but the wider relevance of the

findings is unproven; hence, it would seem logical to attempt to widen the scope of the research to other parts of the University to deepen the understanding of this important issue.

Conclusions

The approach seems to have been successful in developing some insights into the topic of Research Led Teaching within WMG. Interesting consistencies and inconsistencies were found between the views of staff groups and students and a coherent model developed to illustrate the relationship between the various ideas which emerged. A number of actions brought forward for consideration and the team has learned a lot about the research method as well as the subject matter content.

References

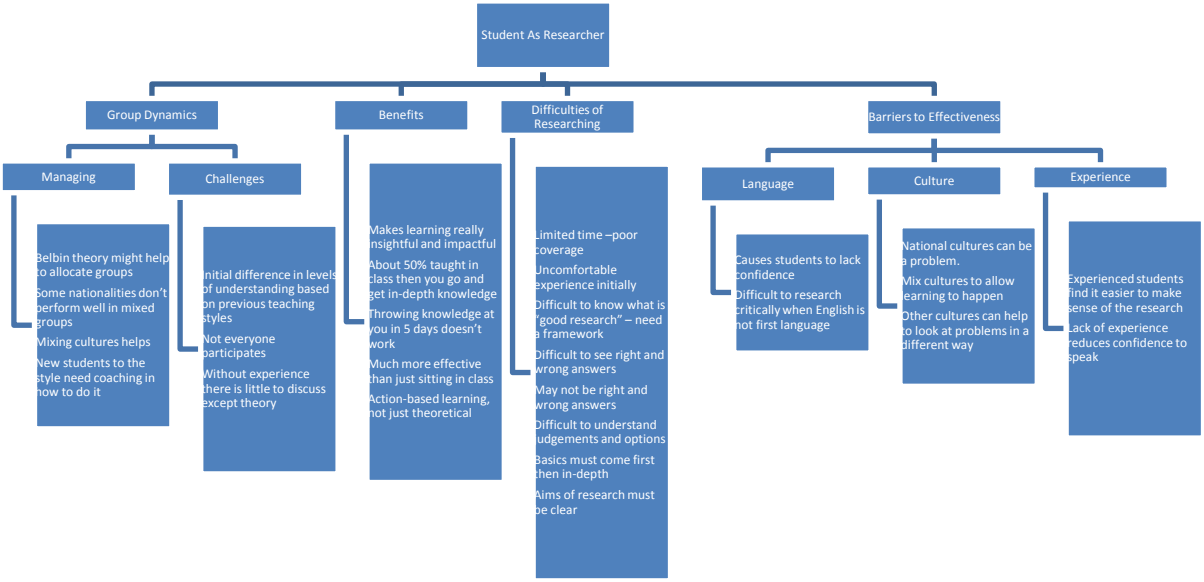
Box, G.E.P. & Draper, N.R. (1987). Empirical Model-Building and Response Surfaces, p. 424, Wiley. ISBN 0471810339.

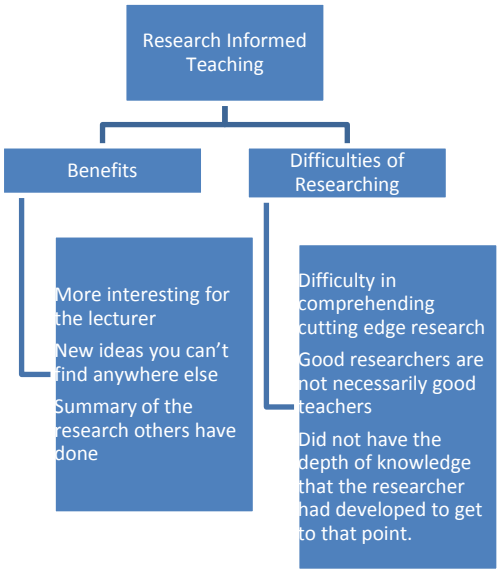
Braun, V. & Clarke, V. (2006) Using Thematic Analysis in Psychology, Qualitative Research in Psychology, Volume 3, Issue 2

Healy, M . (2005) Linking research and Teaching: Disciplinary spaces in Barnett (ed) Reshaping the University: New Relationships Between research Scholarship and Teaching, McGraw-Hill/Open University Press.

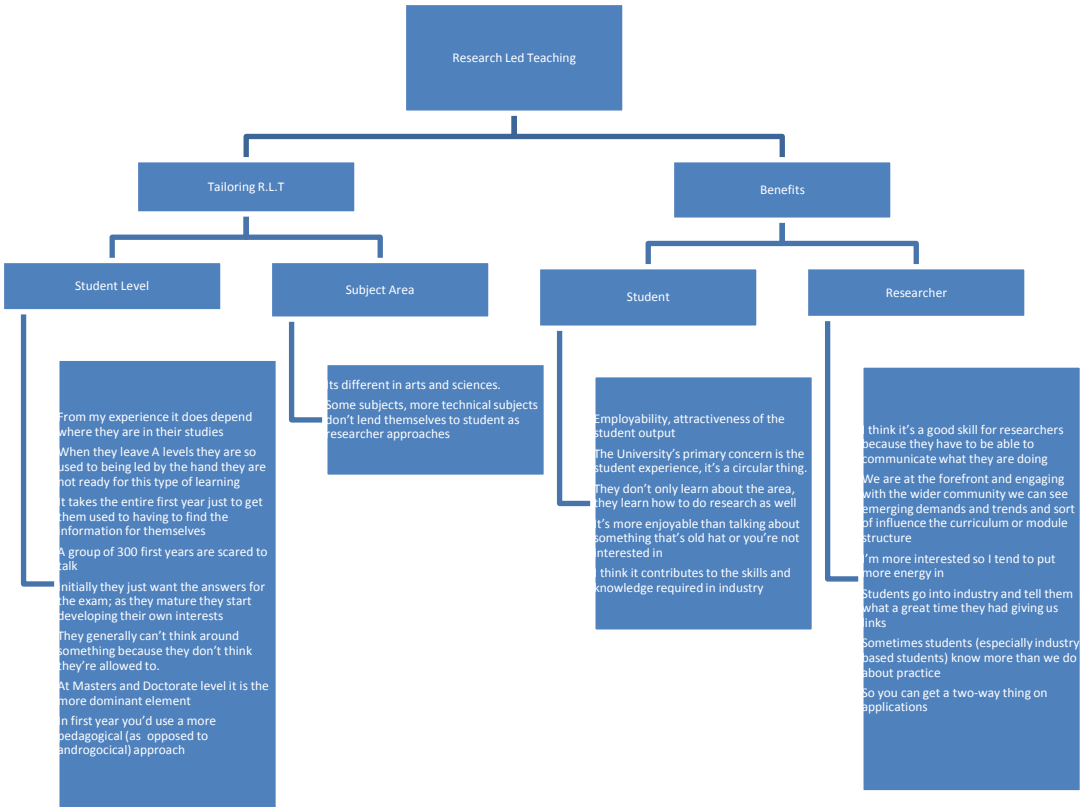
Kotter, J.P. (2013). Leading Change, Harvard Business Press. ISBN 978-1-4221-8643-5.

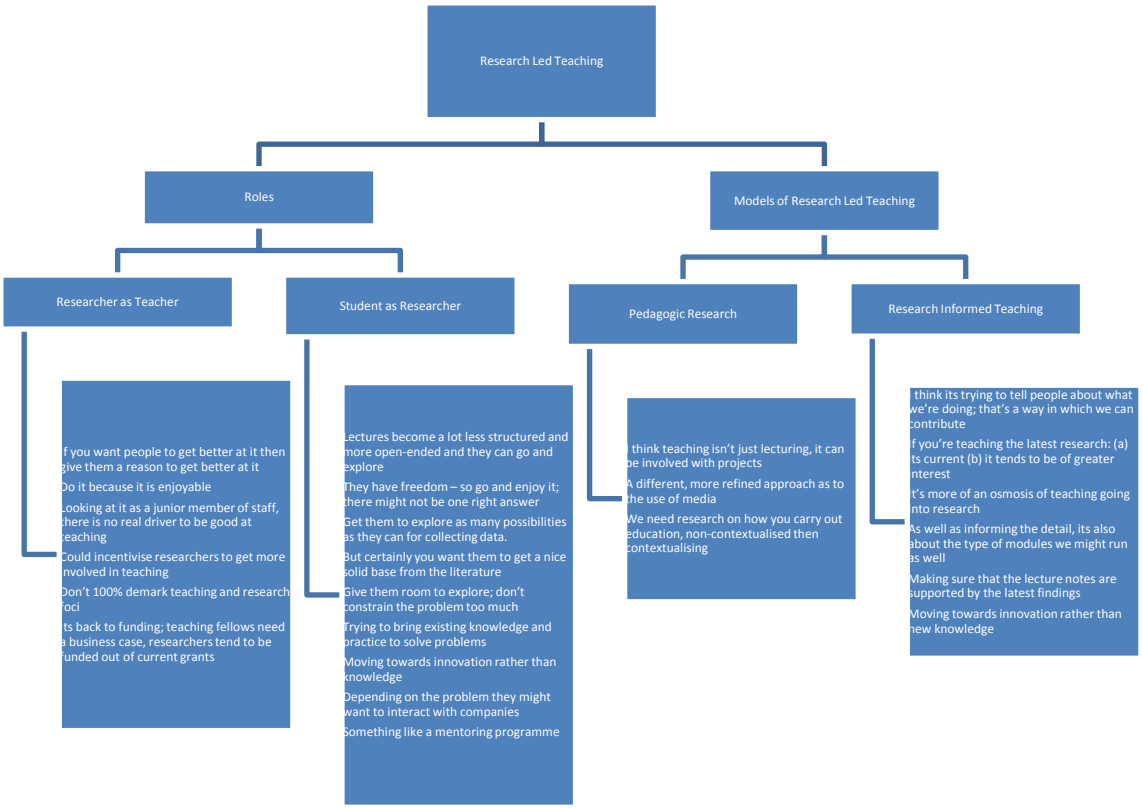
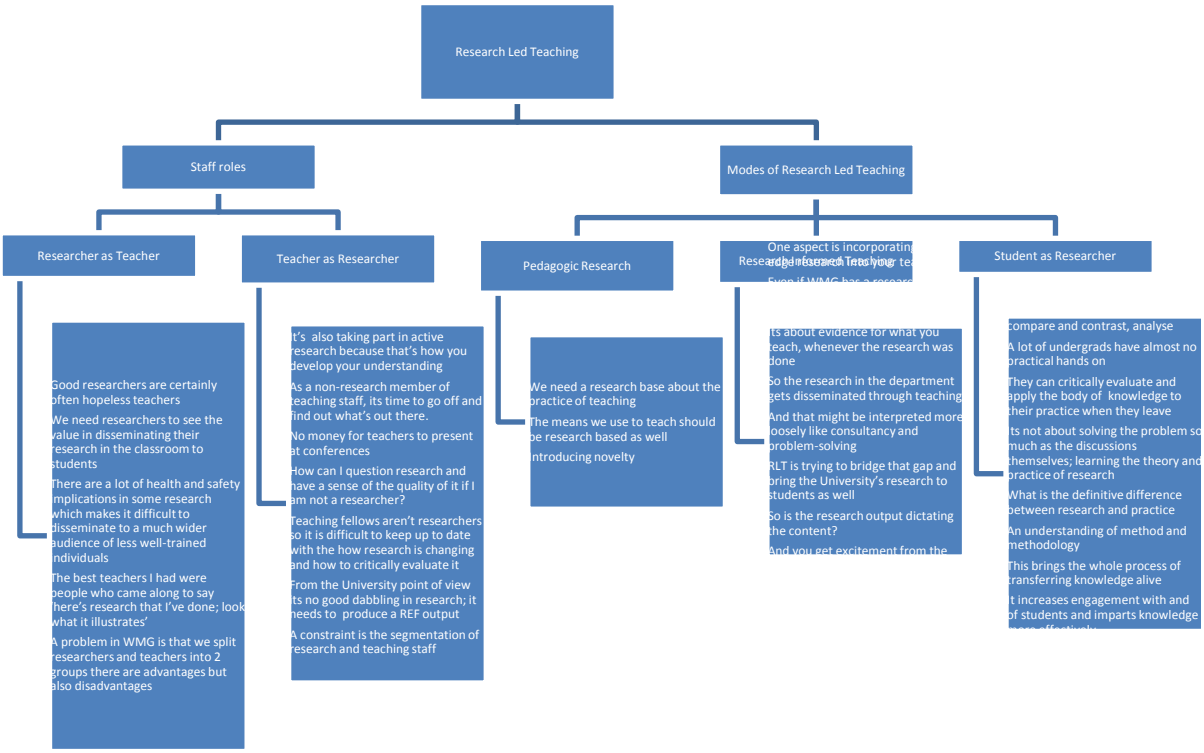
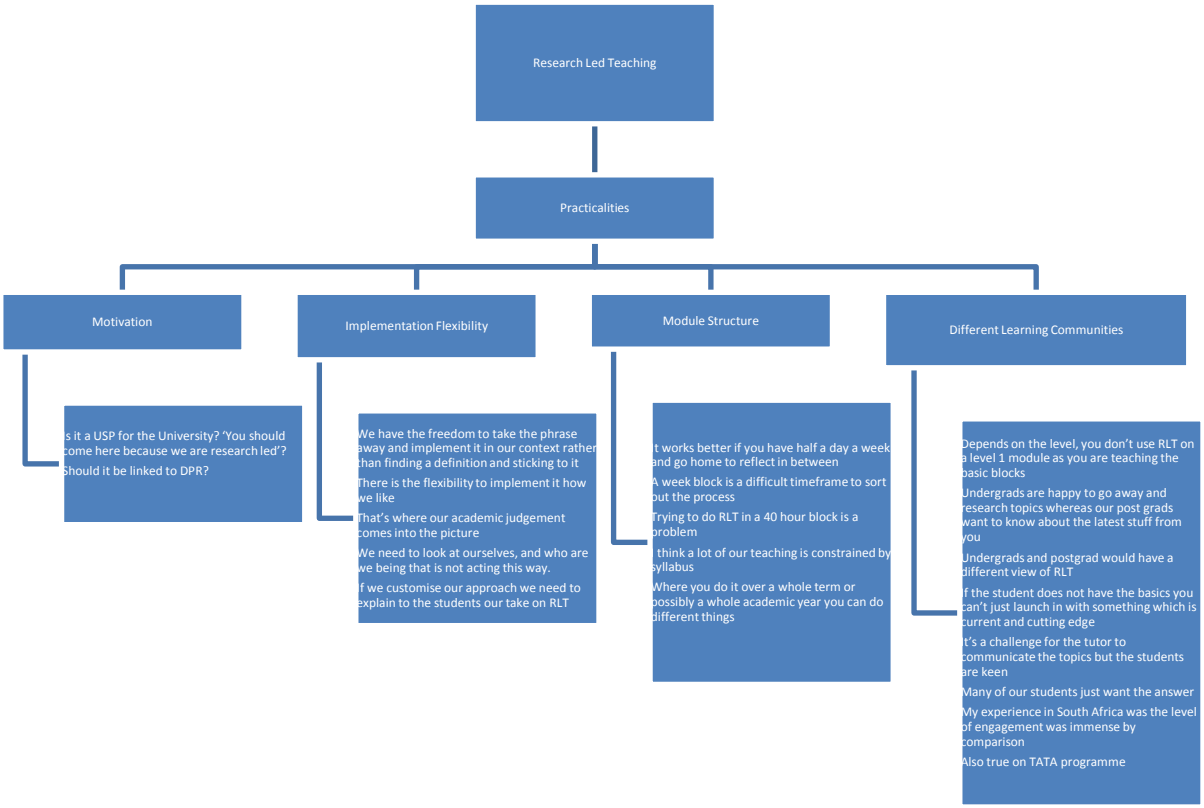
Appendix 1: Affinity Diagrams for Phase 1 Student Focus Group





Appendix 2: Affinity Diagrams for Phase 1 Research Focus Group





Appendix 3: Affinity Diagrams for Phase 1 Teaching Focus Group