

## **Abstract**

**Background.** Nursing education now requires graduate entry for professional registration. The challenge is to ensure students develop independence and team working in resource effective manner. The dissertation is one opportunity for this.

**Aim.** To evaluate changing from individual dissertation supervision to group peer supervision.

**Methods.** Group supervision was implemented for one cohort. Dissertation outcomes were compared with two previous cohorts. Student evaluative data was assessed.

**Findings.** Group supervision did not adversely affect dissertation outcomes ( $p=0.85$ ). 88% of students reported peer supervision to be helpful, with themes being 'support and sharing', and 'progress and moving forward'.

**Conclusions.** Peer group support provided consistent supervision harnessing the energy and resources of the students and Faculty, without adversely affecting outcomes.

**Key words.** group supervision, peer dissertation support

## **Introduction**

As with many developed countries, the UK has adopted all graduate nurse and midwifery education. Innovative educational strategies are required to reflect this graduate workforce (Wolff et al 2010). In Common with most international expectations of graduate health care professionals, the UK Quality Assurance Agency (QAA) benchmarks the attributes required in undergraduate programmes. These include conceptual understanding, independence of thought, personal responsibility and the capacity to evaluate the appropriateness of different approaches to solving problems and decision making (QAA 2008). These attributes are also consistent with the aspiration for the nursing profession within the Robert Wood Johnson Foundation Initiative on the Future of Nursing (Institute of Medicine 2011). The final year dissertation offers one way to demonstrate these graduate attributes within an independent study yet increased graduate student numbers and the diverse undergraduate student body raises questions about current dissertation supervision approaches to fostering independent study whilst promoting student success (Mac Keogh 2006). The challenge is to simultaneously encourage team working, peer support and feedback (Francis 2013) within University resources. Acknowledging the current health care and educational contexts, the aim was to contribute to the development of the knowledge and skills required for modern nurses and midwives, through group peer supervision, without adversely affecting current outcomes, using mixed evaluative methods.

## **Background literature**

Dissertations are a highly valued component of undergraduate honours degrees. Production of an evidence based dissertation offers an opportunity for undergraduates to complete a substantial piece of work (Rowley 2000). The UK QAA (2001) benchmarking statements for healthcare programmes highlights the importance of dissertations and their potential contribution to the dissemination and professional development of evidence based practice. Preparing a dissertation encourages practitioners to ask questions about practice, access health care research and evidence and report the key ideas and findings effectively to others (The Royal College of Nursing (RCN) 2011). Boud and Costley (2007) highlight that the activities undertaken for dissertations, relate to the learning needs of the student, education values and the world of work. Undertaking a dissertation is an indication of the students' ability to manage their own learning (Stephenson, 1998), communicate and make decisions, demonstrating a link between research, personal learning and professional practice. It is as much about the learning gained during the process as the presentation of the dissertation.

Dissertation supervision in the Faculty of this study is understood to be an academic support activity, conducted in the context of developing a specific dissertation or project. The ethos is one of student centredness, in which the student is supported in their scholarship to develop their full potential as an independent learner. Traditionally individual supervision was provided, being up to 8 hours of academic support from a named lecturer, with resulting high demands on both student and academic time. This has been recognised as a transactional relationship and issues of power, attention and dynamics form important components (Blaxter 2010). This high stake assessment, in terms of credit contribution to the student's overall programme, requires tenacity and resilience and has been described as a 'marathon' rather than a 'sprint', in which the part played by supervisors can be 'make or break' (Gelling 2011), for supervision may foster dependence rather than independence, or, in cases of poor supervision, may inhibit progression (Cullen 2009). Supervision of undergraduate dissertations is part of university lecturers' teaching responsibility but, unlike postgraduate supervision, academic discourse on undergraduate supervision is sparse (Rowley and Slack 2004).

Peer support is recognised as beneficial to student learning both in general academic work and practice (Christiansen and Bell 2010). Furthermore, learning in a group can reflect how health care students engage with team working in practice and also support collaborative work in clinical research (Bower and Timmons 1999). Moreover, collaborative learning has been shown to have a positive impact on critical analysis and problem solving skills (Karantzas et al 2013).

Akister, Williams and Maynard (2009) investigating students' views on the effectiveness of individual versus group supervision, found 94% of those experiencing group supervision (n=48) completed on time compared to only 54% receiving individual supervision (n=18), with no apparent difference in expected marks. A qualitative study on group supervision (Kangasniemi et al. 2011) found students were positive about group supervision and that the most important aspects to consider when setting up group supervision included: the organisation of the group,

the nature of supervision, interaction between students, the role of the supervisor, and learning results. The study concluded that group supervision was a suitable approach.

Thus the aim of this study was to investigate the effect of introducing group dissertation supervision. The research questions guiding the study were;

- 1) Does group compared to individual undergraduate dissertation supervision affect final mark or submission on time rates?
- 2) What are students' opinions of group dissertation supervision?

### **Methods**

A mixed methods approach was adopted (Creswell 2011) to achieve the dual aim of assessing students views and the dissertation outcomes.

The University of Southampton, Faculty of Health Sciences, Evidence Based Practice (EBP) module runs throughout the final year of the programme, providing lectures, seminars and supervision. The group supervision model was implemented by providing nine timetabled, regular and structured supervision meetings with 13 students and two supervisors. Each two hour session was planned to complement lectures and enable opportunities for discussion and debate. To foster a reflective, focused and goal-directed atmosphere, an action learning model was adopted (McGill & Brockbank 2004) as action learning has been shown to improve knowledge acquisition, empower users, foster independence, promote problem solving and enhance communication (Bennet et al 2010, Haith & Whittingham 2012, Lee & Porteous 2010). Following the recommendations of Johnson (1998) the action-learning sets comprised a maximum of seven students per supervisor. In addition, each student could negotiate up to ninety minutes of individual supervision time with the supervisor, to be taken as required in recognition of the benefits of this activity (Baptista et al 2010). All members of each action learning group had access to an online forum to ask questions, share resources and discuss ideas. Supervisors initially had preparation and subsequent support sessions to share the on-going experiences of this innovation.

Group supervision participants were all third year undergraduate Bachelor of Nursing (Hons) and Bachelor of Midwifery (Hons) students in the 2008 cohort (n=163).

Baseline descriptive data of age, gender, and programme of study for 3 cohorts, 2006, 2007 and 2008, at programme entry were extracted from the Faculty student database. The final dissertation marks were extracted from the assessment database. Data were available as anonymised statistics and no individual data were accessed.

Evaluative questionnaires including quantitative and qualitative elements based on routine questions used for module evaluation activity within the Faculty data were distributed by the module team, from the 2008 cohort of students who experienced group supervision, at the end of the taught component module. The questionnaire consisted of one closed question using a rating scale of 1-5 where 1 was very poor and 5 very good and 3 open text questions (Box 1).

Quantitative data were analysed in SPSS 19.0. using analysis of variance for comparison of baseline data across the 3 cohorts. As the dissertation marks data were skewed with unequal variances, the non-parametric Kruskal-Wallis test was used to assess the statistical significance of differences in marks between year cohorts.

Using qualitative data analysis methodology as proposed by Boyatzis (1998) and supported by (Silverman 2006), the qualitative data were reduced into separate units of analysis, compared for similarities and themes, coded and analysed for shared meanings (Figure 3). Subsequent independent application of the set codes by a peer researcher demonstrated that coding appeared reliable.

### **Ethics**

Advice was sought from the Faculty Ethics committee and this project was classified as education evaluation of a teaching method and did not require ethical approval. However confidentiality was ensured as good practice, all data were available as anonymised statistics only and no individual data were accessed.

### **Results**

There were 13 groups with 163 students who completed the module. Precise data on number of individual supervision sessions were not recorded but informal feedback suggests many students did not use any, in comparison to previous cohorts who usually used much of if not all of the allocated supervision time. Table 1 details the staff resource for group supervision compared to the previous model of supervision used and suggests a reduction of approximately 45% in staff time on a cohort of 163 students.

Analysis of variance indicated no statistically significant differences were found in any baseline data (age  $p=0.66$ ) across the three cohorts (table 2). The Kruskal-Wallis test indicated no statistically significant differences between the cohorts ( $p=0.08$ ). Comparison of marks by degree classification was by percentage within each group (Figure 2).

Table 3 presents the mean cohort dissertation marks, and the percentage achieving each classification (banding) as well as incidence of extensions. Group supervision made no significant difference ( $p=0.85$ ) in the mean dissertation mark achieved, compared to individual supervision. There was no difference in the incidence of deferrals/extensions between the groups. Table 4 details the quantitative evaluation data from the cohort who experienced group supervision; 62.5% would recommend group supervision to others, with 88% indicating that peer activity was the most helpful aspect of group supervision.

Qualitative analysis identified that group supervision offered an environment for collective learning. The ways in which it offered this were highlighted in three overarching themes, namely 'a forum for support and sharing', 'a forum for innovation' and 'a yardstick for progress'. Additionally, more minor themes of supervision that had impact on the educational experience, such as session structure and timing of sessions, were highlighted

## **Discussion**

The main findings of this study were that group supervision was viewed positively by students, had no detrimental effect of dissertation outcomes compared to 2 previous cohorts who were demographically similar, and was resource effective for the Faculty. This is reassuring, suggesting that group supervision is not detrimental to the dissertation outcome for students. This supports the findings from previous studies on undergraduate supervision (Akister, Williams and Maynard 2009, Kangasniemi et al 2011) and reinforces the value of building on group supervision as a way to enhance student learning during the completion of an undergraduate dissertation. Although not statistically significant, it was noted that, in the group supervision cohort, there was a smaller percentage of students achieving a mark in the higher bandings of 60-69% and 70% or over, and a correspondingly higher percentage in the 2 lower bandings. An explanation for this may be that group supervision did not provide the individualised guidance that enables students to reach the highest marks, although one could speculate that the marks now reflect the ability of the students, rather than the influence of the supervisor in individual supervision. It was also recognised that the impetus of an all graduate workforce meant that in 2008 there was an increasing percentage of students originally from the Diploma with Advanced Studies route, who transferred to the degree programme during that year and the change in marks may or may not reflect this change in cohort membership. It may also be an artefact of the data. Additional data from subsequent cohorts is required to explore this further.

The majority of students would recommend group supervision to others, and in line with the wider evidence (Roberts 2006) peer support was a positive aspect. The qualitative analysis indicates that students felt positive towards group supervision processes but this presumption must be viewed cautiously as the data only represent 54% of the cohort. The centrality of the relationship between the student and their supervisor is seen as significant (Gelling 2011). This traditionally private relationship (Boucher and Smyth 2004) is challenged by a model of group supervision that constitutes an opportunity for shared learning both for individual output and for peer support and shared experience, although the role of the supervisor in the group is still seen by students as distinct. Certainly, the qualitative responses would suggest that students placed value upon the support of peers as a “yardstick” for progress and in particular, the opportunity to problem solve collectively. Some comments were only loosely associated with group supervision, others highlighted some student preferences and some further areas of enquiry such as student expectation of supervision and the use of individual supervision opportunities (Figure 3). These comments may highlight student preference regarding individual learning styles (Kolb 1984, Honey and Mumford 1992 and Rasool and Rawaf 2007).

As the students emphasised in this study, the variety of opinions, and “multiple brains” provided in each group offered significant encouragement to progress and move the dissertation process forward. Importantly the students’ comments highlight how much learning resulted from listening to peers’ experiences and hearing others’ questions and problems as well as actively contributing to answering other students’ questions. These endeavours are unlikely to be experienced in the same way during individual supervision. It may be that positive experiences of supervision at

undergraduate level may create an important legacy for the future in stimulating graduate nurses and midwives to do more research and later to offer their supervisory support to new researchers. It is likely that the issues of power identified in the one to one relationship between student and supervisor (Blaxter 2010) are not as problematic with peers. However, it is not to be overlooked that the evaluation of this model of group supervision revealed that while students appreciated peer support, they also highlighted the importance of the academic contribution of the group supervisor. This suggests that an approach which promotes both the interaction of students and which is supported by an academic may be able to blend the best features of both peer and academic support.

All the students had the option of up to ninety minutes individual supervision, thus offering the opportunity to experience both forms of supervision and, although 19.5% of students indicated that this allocation of time was insufficient and 41.5% requested more individual supervision time were made available, informal feedback from supervisors would suggest that not all students accessed this opportunity. No data were collected on the uptake of this individual supervision for comparison with the students' evaluation data and this should be considered for future enquiry, but initial estimations would suggest that time spent in one to one activity was reduced, thus indicating potential efficiency savings within the Faculty.

The early drivers for the change were in part based on finding more effective and efficient approaches to supervising an increasing number of undergraduate students undertaking an evidence based practice dissertation. This goal has been achieved, and is a model that could be adopted by other Higher Education Institutions, who share the goal of developing independent graduate nurses and midwives, who are able to work within teams providing team support and feedback. It would be worth considering if group supervision can be transferred to other health professions.

It had been hoped that these supportive group processes would provide encouragement with time management and this would reduce the number of deferral requests, however there was no evidence of this. To explore this phenomenon further would require in-depth consideration of the factors that contribute to deferral and support of timely submission.

### **Strengths and Limitations**

The key strength of the study was that it included a whole student cohort and could be compared to 2 previous cohorts who had undertaken the same programmes of study, with a different form of supervision. The mixed method approach enabled examination of both student outcomes and their experiences of supervision within the context of an educational programme. The main limitation was that only 54% of students replied to the evaluation questionnaire; however this is comparable to evaluative module data collected within the Faculty. In order to remain consistent with the usual evaluation principles and activity of the Faculty, the questionnaire was short and did not include all aspects that could usefully have been analysed. Although informal staff feedback was received, this was not formally assessed and this is being undertaken for next cohort.

## **Conclusions**

This paper illustrates that group supervision is one response to offering best support and supervision to undergraduate students as they undertake their final year dissertation. The evidence indicates students can benefit from peer support within their group supervision without there being adverse effects on their individual outcomes. It is also resource effective for the Faculty.

Further work needs to be done to investigate how individual supervision opportunities are accessed by students and also to review the distribution of marks in subsequent cohorts experiencing group supervision. If we are to promote the early development of clinical academic careers, research across other health professions and institutions should be explored to recognise that alongside clinical research, educational processes sit at the heart of professional healthcare.

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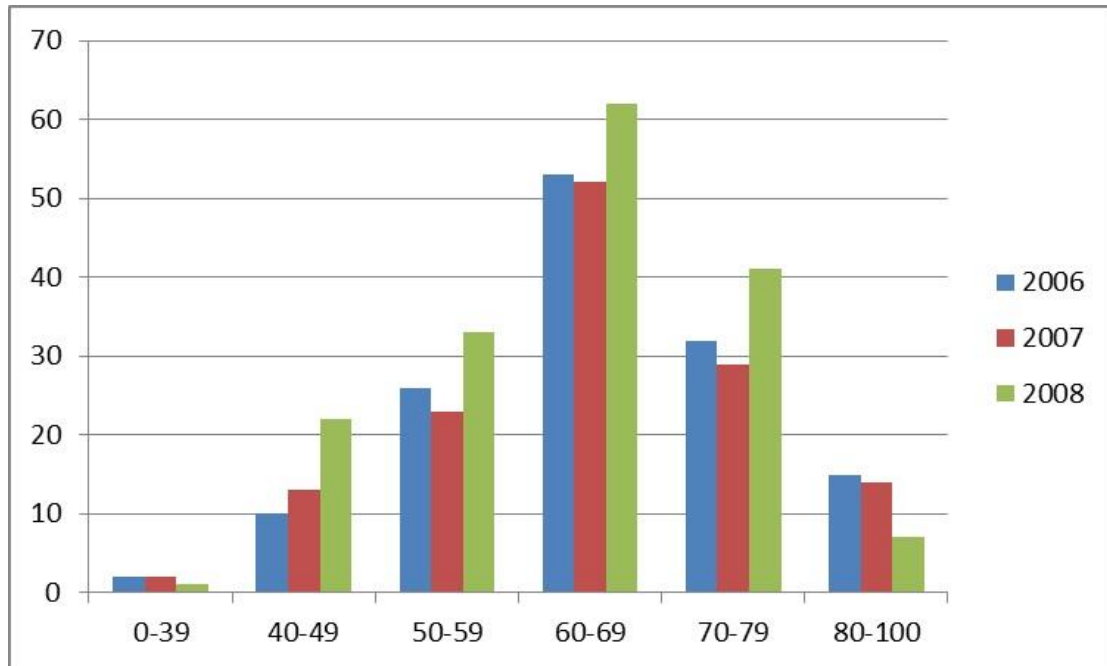
### **Box 1. Evaluation Questionnaire**

- 1) 'On a scale of 1-5 would you recommend group supervision to other students'?
- 2) What was the most helpful aspect of group supervision?
- 3) What was the least helpful aspect of group supervision?
- 4) What would you want to be different next time?

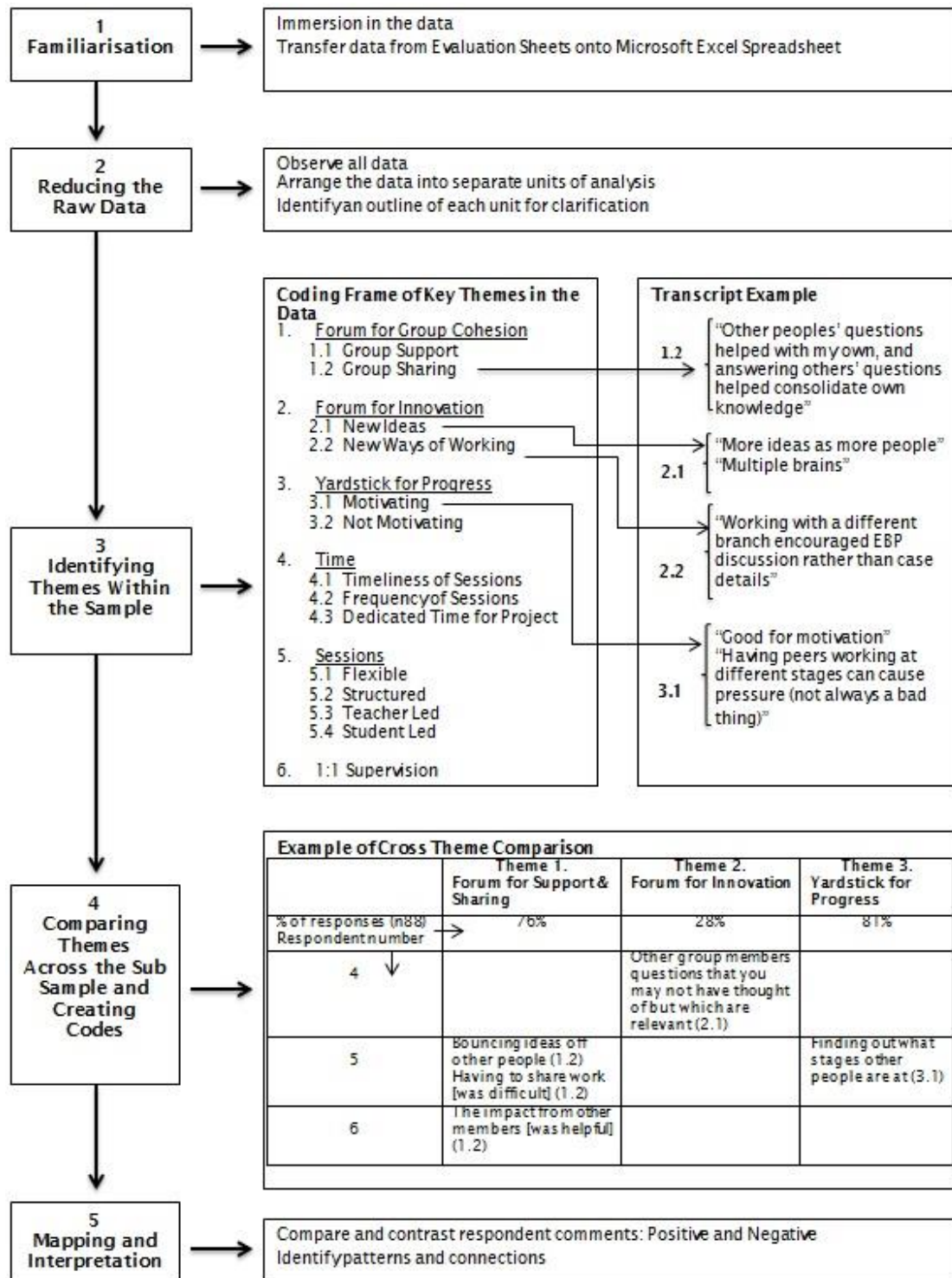
**Figure 1. Summary Data Collection Process**



**Figure 2. Frequency graphs of the dissertation marks by intake**



**Figure 3. Qualitative data analysis: the stages of the framework technique and an example of its application using Boyatzis (1998) and adapted from Swallow et al (2003)**



**Table 1. Estimation of staff resource (in hours) for the 2008 cohort who received group supervision compared to a cohort of the same size receiving individual supervision**

	Group supervision (based on 2008 cohort) (n=163)	Estimated individual supervision for a cohort of the same size using the previous model of supervision (i.e. n=163)
Number of student groups	13 groups (Each of 11-14 students)	Not applicable
Number of group supervision seminars (each of 2 hours duration)	9	Not applicable
Individual staff time in seminars	9 x 2 = 18 hours	Not applicable
Total academic time in seminars (2 staff per group)	(9 x 2 x 13) x 2 = 468 hours	Not applicable
Individual supervision time allocated per student	1.5 hours	8 hours
Total number of staff providing supervision	26	68
Number of individual students supervised per staff member Mean Range (min-max)	6.3 (5-7)	2.4 (1-5)
Total staff time allocated to individual supervision	244.5hours (163 students for 1.5 hours)	1304 hours (163 students for 8hrs each)
Average supervision activity for an individual staff member	27.5hours (18 group + (6.3x1.5) 9.45 hours individual supervision)	19.2hours (1304 hours divided across the 68 staff)
Total academic time allocated for all supervision activities (on 2008 cohort n=163)	712.5 hours (seminar +individual time)	1304 hours
Difference in total academic resource for supervision activities		Reduction of 591.5 hours (approximately 45% reduction in staff time)

**Table 2. Baseline line descriptors across cohorts**

Descriptor	2006 cohort (n=136)	2007 cohort (n=133)	2008 cohort (n=163)
Age (mean and SD)	23.8 (6.72)	22.5 (7.31)	22.7 (7.09)
Gender (percentage female)	95.6%	93.4%	91.3%
Program (number)			
Adult nurse	82	71	86
Child nurse	25	27	25
Mental Health nurse	6	9	21
Learning Disabilities nurse	1	2	3
Midwife	22	24	28
Number of students transferring to the degree program from the Advanced Diploma program (Nursing only) (% of cohort)	35 (25%)	63 (47%)	98 (60%)
Number of students discontinuing program in year 3 for any reason	1 (nurse)	2 (nurses)	1(nurse)



**Table 3. Dissertation outcomes by cohort and marking band**

Outcome	2006 cohort (n=136)	2007 cohort (n=133)	2008 cohort (n=163)
Overall dissertation mark (mean and SD)	65.24(10.99)	64.11(11.81)	62.07(10.99)
Range (min-max)	36-95	15-90	20-85
Percentage achieving			
70% or more	34.6%	32.3%	28.2%
60-69%	38.2%	39.1%	37.4%
50-59%	19.1%	17.3%	20.2%
40-49%	7.4%	9.8%	13.5%
Less than 40%	0.7%	1.5%	0.6%
Percentage who had defers/extensions	8.7%	12.6%	9.8%

**Table 4. Quantitative analysis of evaluation data for 2008 cohort who received group supervision**

Question	Response rate	Results
On a scale of 1-5 would you recommend group supervision to other students?	100%	Mean (SD) Percentage scoring 4 or 5  3.72 (1.12) 62.5%
Most helpful aspect of group supervision Themes identified (per cent of replies to question) Peer activity (sharing ideas, discussing, peer feedback) Academic contribution	100%	 77 (88%)  14 (16%)
Least helpful aspect of group supervision Themes identified (per cent of replies to question) Restricted individual supervision time Discussions not relevant to own work Timing of seminar- too close / too many/ too few Others at different stages of project Group too large Comments not related to group supervision	77 (88%)	 15 (19.5%) 13 (17%)  12 (14.3%) 24 (31.3%) 4 (5%) 4 (5%)
Suggestions to improve groups supervision Themes identified (per cent of replies to question) More individual supervision or only individual supervision More and or better timed seminars More structure to seminars (some gave examples agenda, theory) Smaller groups Group students by topic/interest/profession	65 (75%)	 27 (41.5%) 16 (24.6%) 13 (20%)  5 (7.7%) 3 (4.6%)