GROUP UNDERGRADUATE RESEARCH SUPERVISION, STUDENT EVALUATIONS, PERFORMANCE AND STAFF RESOURCE EFFICIENCY AT A NORWEGIAN UNIVERSITY

Jokull Johannesson
University of Agder, School of Business and Law (NORWAY)

Abstract

Dissertation research is considered a critical part of undergraduate degrees in many countries and in Norway the production of a research based dissertation is considered a benchmark for science based university business degrees. The challenge is to achieve the dissertation research objectives with the resources available to universities. The aim of this study was to evaluate the effect of group based dissertation research supervision on student evaluations, performance and staff resources at a University of Agder (UIA) Norway. This study reports on two years of experience of the group dissertation research supervision, involving 121 marketing and leadership major students, organized in 40 groups and supervised by two professors at the UIA School of Business and Law. The main motivation for the selection of the group dissertation supervision approach was cost savings. The purpose of this article is to evaluate the effectiveness of group dissertation supervision in terms of student evaluations, performance and resource efficiency. The research questions were: 1. how does the group supervision affect students’ performance and completion rates? 2. how does the group supervision affect the student evaluations? 3. how does the group supervision affect resources efficiency? A case study methodology using mixed approach was used to accomplish the aims of assessing students’ performance, evaluations, and resource efficiency [1]. The 2015 and 2016 student cohorts were used for the study. The findings show the group dissertation research supervision to be a success in terms of students' performance and evaluations. The group approach to dissertation supervision generated large financial surpluses hence a practical solution to resource strapped institutions. However, the social implication of generating large financial surpluses at the plausible expense of quality of the education needs further research.

Keywords: Undergraduate dissertations, group supervision, resource efficiency.

1 INTRODUCTION

Dissertation research is considered a critical part of undergraduate degrees in many countries and in Norway the production of a research based dissertation is considered a benchmark for science based business degrees. Dissertation research is believed to demonstrate the student’s ability to work independently on research projects, enhance their theoretical understanding and application thereof in business, add realism to theory, improve problem solving skills, establish the student’s expertise in an area and enhance interdisciplinary approach to business issues in a global world [2]. The challenge for universities is to achieve good quality supervision of the dissertation research with the resources available [3].

At the University of Agder, Norway, the Bachelor's Programme in Marketing and Management was established in 2013 to meet the demand for this type of education in southern part of Norway. The Programme included a bachelor dissertation class structured in line with common practice in business higher education rather than a learning theory and involved active faculty support to the students as previous research has deemed necessary [4], [5], [6]. The key problem with dissertation research supervision is to deliver good quality supervision at an affordable expense for the university. Todd, Smith, and Bannister [7] argue for students to be assigned individual supervisor and meetings lasting 15 minutes each week. Others have argued for the effectiveness of group supervision and groupwork [8].

At the University of Agder, School of Business and Law, the administration decided on using group based supervision where one supervisor supervised a group of 30-49 students. The main motivation for the selection of the group dissertation supervision approach was cost efficiency.

The aim of this study was to evaluate the effect of group based dissertation research supervision on student evaluations, performance and staff resources at the University of Agder, School of Business...
and Law. This study reports on two years of experience of the group dissertation research supervision, involving 121 students, organized in 40 groups that were supervised by two professors with more than 30 years of combined supervision experience.

This article makes the following contributions: First, I show that the students evaluate the group dissertation supervision format favorably. Second, the article shows that the group supervision results in good student performance. Third, I show that the group dissertation supervision format generates significant revenue surpluses for the university. Finally, the structure of the group dissertation supervision class described in this article can be used as a model for other business schools interested in a cost-effective way to conduct undergraduate dissertation supervisions.

2 BACKGROUND AND THEORY

This research was done into the supervision of 121 students enrolled in three dissertation modules in the marketing and leadership program at the University of Agder, School of Business and Law during spring semesters 2015 and 2016. The modules were 15 ECTS credits and required about 400 hours of work for each student. An analysis of the structure of the dissertation class demonstrates the inclusion of elements of the different learning theories.

The module was structured into 10 weekly class periods, each of three-hour duration with two 15 minute breaks. The first three classes were of the lecture type and established general foundations of scientific research. In the first lecture a professor gave a general overview of management research. The second lecture was given by an IT/librarian specialist and focused on the use of the University’s databases. The third lecture focused on literature searches and citations using Endnote and the like.

An analysis of the structure of the dissertation class demonstrates the inclusion of elements of the action learning ([9], [10], [11], [12], [13] and experiential learning theories [14], [15], [16].

The students were strongly encouraged to select their own topics but, due to a popular demand the professors proved lists of plausible topics and, some students choose topics from the lists. An outline of the typical chapters of a dissertation was also provided. This approach links to the planning, research and experience elements of the action learning theory as proposed by some learning theory scholars [9], [10], [11].

The students were organized into groups of three students doing one dissertation and all the students in the group were given the same mark. Warschauer [12] encouraged this type of collaborative learning process as it facilitates competence in the respective discipline and content of the topic under study, and develops critical thinking skills. Other scholars concur and belief collaborative learning improves the learning experience by exposing the students to diverse viewpoints, debates and that the dialectic inquiry increases the competence of the members of the group [17], [18]. Although this organization of students into groups of three are in line with collaborative learning theory, it appears that this grouping of students was primarily motivated by a desire to reduce the workload on the professors and employee expenses. Hence, it was a cost-efficiency measure by the School of Business and Law.

Furthermore, the students were strongly encouraged to do empirical research and engage with companies, institutions and do primary research by empirical surveys and almost all did. A literature review type dissertations were rare. The students’ active engagement with individuals, companies and institutions is harmonized with the recommendations made by experiential learning theory scholars such as [14], [16], [15]. During the dissertation process the students demonstrated evidence of engaging in the Dewey’s model of experiential learning where the impulse stage is the assignment and need to complete a dissertation; the observation stage is the empirical research; the knowledge stage is the analysis part of the dissertation and development of solutions; and the judgement stage is the conclusions and recommendations [19].

Starting in the fourth week, the professors met with groups of 30-49 students in a classroom conducting seminar like sessions where each group gave about 3-minute presentation of the work they had done on a part of the dissertation and the professor gave instant feedback. Considering the collegiate learning theory, the students’ colleagues were encouraged to give feedback on the presentations which they did to a varying degree. This format continued for five weeks and each week had an assigned topic and written assignments addressing the different chapters of a dissertation, the topics were: topic analysis/selection/outline, literature review and research questions, data collection, data analysis, and results respectively. Also, this process can be considered in reflection of the action
learning theory. The seminars in the last two weeks were devoted to group presentations where each group gave a detailed progress report on their dissertation. During the five seminar weeks, five short written assignments addressing a part of the dissertation were assigned and collected. Those were collected into a folder in a paper format or digital according to the professor's preference and the collection of the five written parts were used to assess the groups on pass or fail basis. In accordance with university assessment regulations, a pass was required on the folder content to be allowed to submit the dissertation which was then assessed and given marks on a typical A to F scale. The course plan and the content of the folder assignments are shown in table 1.

<table>
<thead>
<tr>
<th>week</th>
<th>Topic</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Introduction: What is management research?</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Knowledge generation</td>
<td>Form a group of three and give contact details.</td>
</tr>
<tr>
<td>5</td>
<td>Literature search and citing correctly</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Topic Analysis/outline</td>
<td>Chooses a potential topic/case and explains why. Cite three scientific sources.</td>
</tr>
<tr>
<td>7</td>
<td>Conducting a literature review &amp; Developing a research question</td>
<td>Prepare a 3-4-page literature review with at least five citations. Formulate a precise research question.</td>
</tr>
<tr>
<td>8</td>
<td>Data collection</td>
<td>Develop a data collection plan.</td>
</tr>
<tr>
<td>9</td>
<td>Data analysis</td>
<td>Develop a data analysis plan.</td>
</tr>
<tr>
<td>10</td>
<td>Discussing the results and writing the thesis</td>
<td>Preliminary results discussed</td>
</tr>
<tr>
<td>11</td>
<td>Group presentations and discussion, I</td>
<td>Progress reports and findings.</td>
</tr>
<tr>
<td>12</td>
<td>Group presentations and discussion, II</td>
<td>Progress reports and findings. Folder due.</td>
</tr>
</tbody>
</table>

3 METHODS
A mixed approach case study methodology was used to accomplish the aims of assessing students' performance, evaluations, and resource efficiency [1]. The students were enrolled in the Bachelor's Programme at the School of Business and Law at the University of Agder, Kristiansand Norway. Two student cohorts were used for the study. Descriptive- and student performance data were obtained from the Norwegian DATABASE FOR STATISTIKK OM HØGRE UTDANNING as well as University database. Student evaluation data was obtained from the professors teaching the courses. Financial data were obtained from public sources but faculty cost was estimated. As I was the professor for one of the three dissertation supervision classes, I could observe the students and collected supplementary information via informal interviews.

The independent variables were: the program of lectures and seminars, student primary and secondary research, the collaborative engagement, engagement with corporations, institutions and research subjects, and estimates of the faculty expense and student revenue.

The dependent variables were: the student evaluations which were in the form of a written feedback giving by class representatives after discussion with the class members; the student performance measured by grades and, estimates of financial surpluses generated.

4 RESULTS
The findings show the group dissertation research supervision to be a success in terms the students' evaluations, performance and teaching resources efficiency.

4.1 Student evaluations
Student feedback evaluations were collected by class representatives for the one class of 2015 and one of the two classes in 2016. Overall the student feedback on the professors' performances were positive as indicated in these feedback examples:
a) Very good feedback. At first, people were a little scared of the feedback, but now everyone appreciates them. Very skilled at motivating and push us. Very professional good lecturer. We are progressing very well. Good to be pushed so much, we are soon done.

b) Over all, we think you are a great and knowledgeable teacher.

The students liked the structured plan to the dissertation and the associated weekly assignments as suggested by the action learning theory and exemplified by this comment: The assignments every week works great to get us working form the beginning of the course. Requests were made to provide sample dissertations or detailed outline but this was not done in 2015 or 2016. Interestingly the students appear to want more structure and plans regarding their dissertation as typified by this remark: Another thing is that we should have a structure on how the assignment should be written, as most of us have not written a bachelor earlier. Remarkably, the students were happy with the traditional lecture type classes at the start of the semester particularly the lecture on library and information systems at the University as illustrated by this remark: The guest lecture by the libraries was great, and he has helped some of the groups along the way.

Some students were dissatisfied with the lack of individual attention to the specific groups and some students liked to have the option to do an individual dissertation and receive personal one-on-one supervision. These examples represent this student feedback: Some people would like to have the opportunity do the bachelor on their own/in smaller groups. It would be helpful to have some more individual help, doing one group at the time making it easier to have a conversation about each. Not the whole class, but only each group.

4.2 Students’ grades

The students’ grade performances varied from year to year. In 2015, the most common grade was an A with B coming second and C third, with about a third of the students getting these marks respectively. Two groups-six students received a D. In 2016, the grade distribution curve was relatively flat over the grades from A-E with B being the most common mark, followed by As, Cs, and Ds. One group-three students received an E and two groups-six students failed. In comparison, the average dissertation mark for all students in Norway, in 2016 were in percentages: A: 19, B: 35,96, C: 29,12, D: 11,36, E: 2,73 and F: 1,83% [20]. These figures indicate that in 2015 the bachelor students in the UIA School of Business and Law got more As and Cs than the national average. They got slightly less Bs and fewer Ds and Es. In 2016, the students in the UIA School of Business and Law got slightly less As, less Bs, but more Cs and much more Ds than the average dissertation marks for all bachelor students in Norway. Also, in that year, two groups-six students got Fs on the original assessment and resubmit. Fig. 1 shows the grade distributions in percentages.
4.3 Resource efficiency

I was surprised to discover the difficulty in finding information on actual costs and income of public universities in Norway which is ranked number 6 of 176 countries on the Corruption Perception Index 2016 by Transparency International [21]. In 2014, Gjerde and Gjerde [22] indicated that the government payment for business students differ for universities and varies from NOK1200-3100 per ECTS point. The University of Agder (UIA) internal budget documents show its average income per ECTS for all students to be towards the bottom of these estimates. Hence, one can estimate that the 15 ECTS class of 30 dissertation students generates income for the UIA in the range of 15x30x(1200-3100) = 540,000 NOK to 810,000 NOK which is approximately the annual salaries of Associate- to full professors. Given that the teaching of the dissertation classes constitutes only a part of the faculty members’ teaching load, it appears that the group dissertation supervision format generates a significant financial surplus for the UIA.

5 DISCUSSION

McMichael [23] highlighted the difficulties with supervising undergraduate dissertations. Particularly by inexperienced faculty. In our case, the positive comments of the professors’ conduct of the dissertation classes indicates that the supervision of many undergraduate students by the group dissertation approach needs the expertise of highly qualified and experienced faculty.

The students’ satisfaction with the action theory’s model of provided significant structure or a plan to follow is reassuring but request for specific research topics, detailed outlines of dissertations and sample dissertations may violate the dissertation’s goal of letting the student choose their own focus and do an independent study [4]. The dissatisfaction expressed by some students about the lack of individual attention is a direct consequence of selection this format of dissertation supervision and can be expected. Then the question needs to be raised about the optimal size of group dissertation classes. Essentially, the seminar format of instruction was used by us and it is an established maxim in UK business schools that seminars lose their effectiveness with much more than 20 students and I believe the same applies to undergraduate group dissertation supervision or, because of the difficulty of the job of supervising, perhaps less number of students is optimal. Our experience is that there is a limit to the number of students that can be handed and justified in a seminar for the simple reason of time. E.g. a group of 45 students attending a seminar of three session of 45-minute duration would have only 3 minutes of professor’s time per student per week for a total of 21-minutes for the semester. This obviously presents significant challenges for both the professor and students.

The students’ grades show acceptable conformity to the national average with the exceptions of the Ds and Fs in 2016. However, a discussion with the professor teaching these students explains their poor performance as the students’ lack of commitment to the class and general failure to take on board instructions both before the first submittal of the dissertation and feedback for improvements given before resubmitting. Hence, the format of the undergraduate dissertation supervision is probably not the reason for their poor performance.

The staff resource efficiency is high when using the group dissertation supervision format and it appear that this format generates significant financial surpluses for the UIA. However, the social and moral justifications of generating financial surpluses on dissertation supervision needs be opened for general discussion in universities before this supervision format is adopted. This is particularly relevant to the marketing and leadership students in the UIA School of Business and Law whereas they have previously received instruction in modules having hundreds of students in them. Modules that have generated significant financial surpluses. Is it justifiable to use the marketing and leadership students as cash cows for the University?

6 CONCLUSION AND RECOMMENDATIONS

The group undergraduate dissertation supervision format described in this paper is a financial success for the University, it results in acceptable student satisfaction and performance. For those considering adapting this format of undergraduate dissertation supervision, I make the following recommendations: First, the classes should have 20 students and not more than 30. Second, a careful consideration is to be given to amount of structured support, such as dissertation outlines or samples, given to the students because the independent study requirement. Third, experienced faculty needs to be assigned to this module.
ACKNOWLEDGEMENTS

I thank Professor Andreas Erick Wald for his many discussions about the dissertation supervision course, his contributions to this paper and table 1, which is based on his original course outline developed in 2015.

REFERENCES


