Perceptions and expectations of authorship: Towards development of an e-learning tool facilitating discussion and reflection between post-graduate supervisors and candidates

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Abstract

This paper describes an online flexible learning project aimed at Higher Education by Research (HDR) Candidates and their supervisors to encourage discussion around issues of authorship. The project was developed in response to the new *Australian Code for the Responsible Conduct of Research* which requires discussion between all participants in a project followed by a "written acknowledgment of authorship". However, despite providing guidelines on the definitions of authorship and the responsibilities of authors and institutions, this document does not address the inherent unequal power relations when one of the authors is an HDR candidate and another a supervisor. In addition, more ambivalent issues such as order of authors which could potentially be a source of considerable conflict between supervisors and HDR candidates are not addressed. In order to engage fully in authorship discussions, HDR candidates require both knowledge of authorship protocols and the ability to negotiate within the supervision relationship. Since supervision is a particular type of pedagogy where the aim is the development of 'competent autonomy', the supervisor's role is to model and foster negotiation skills along with ethical behaviour. In order to develop HDR candidate's reflective practice and negotiation skills towards the attainment of this autonomy, an online questionnaire which ascertains the opinions of HDR candidates and their supervisors around various authorship issues and their reasons for their answers is proposed. Interactive worksheets to educate both supervisors and students on authorship protocols are also proposed. This paper describes the background to the project, along with an initial evaluation of the questionnaire content and pragmatic issues surrounding the creation of the online tool.

Introductory Background

This project aimed at facilitating discussion on authorship and other ethical research issues was developed in response to three major factors: the need to promote and clarify the guidelines in the *Australian Code for the Responsible Conduct of Research*, increasing pressure on HDR candidates and their supervisors to publish and the pedagogical nature of the co-writing process between supervisors and HDR candidates.

Promoting the Code

The publication of the *Australian Code for the Responsible Conduct of Research* has reignited discussion on ethical issues related to research practice in some quarters. However, despite the clear guidelines provided, anecdotal evidence suggests that many researchers rely on

their own experiences to guide them in research practice and, in many cases, are unaware of the *Code* and its implications. Universities as both research *and* training institutions are held particularly accountable for the promulgation of the *Code* and are expected to "provide induction, formal training and continuing education for all research staff, including research trainees" (National Health & Medical Research Council, Australian Research Council & Universities Australia, 2007, Section. 1.3). The special responsibility of universities towards the development of their HDR candidates' research skills and ethical research practices is emphasized, with an entire section in the *Code* dedicated towards the supervision of research trainees. It is therefore clear that it is not sufficient to merely provide supervisors and HDR candidates with access to the *Code*; some sort of explicit training is required in order for the University and its HDR supervisors to fulfill their responsibilities.

Authorship and Supervision

It has been estimated that as much as 70% of university research in Australia can be attributed to postgraduate students (Siddle, 1997). Thus HDR candidate publication contributes significantly to the research output of an institution. The University of Adelaide, like most universities in Australia, actively encourages HDR students to publish and supervisors to co-author student publications. However, publication practices vary considerably among academic disciplines. If there is conflict between HDR candidates and supervisors regarding authorship issues, university income and prestige could be negatively impacted. Conversely, an increase in HDR publication rates could increase research funding potential and university prestige incrementally. The publication of HDR research also has clear professional benefits for HDR candidates and their co-authors. Training practices which could develop HDR candidates' knowledge of institutional practices and encourage the development of negotiation skills could potentially contribute to an increase in publication rates (Wilkinson, 2008). This sort of training could also contribute to institutions fulfilling the requirement to "actively encourage mutual cooperation with open exchange of ideas between peers" as stipulated in the *Code* (NHMRC et al., 2007, Section. 1.1). As authorship is a vital part of academic life, it is the university and supervisors' responsibility to equip HDR candidates with the skills of cooperation with fellow researchers and scholars (Morris, 2008).

Supervision as Pedagogy

There has been a drive in the past ten years towards re-evaluating the way in which graduate supervisors and HDR candidates interact. In Australia, as in Europe, the previously prevalent "Oxbridge" model of supervision (Grant, 2003) where supervision is seen as merely an extension of research, has increasingly been questioned (Manathunga and Goozee, 2007, Manathunga et al., 2007, Manathunga, 2007, Knowles, 2007). Theorists suggest that in order to meet the demands of both academia and industry, HDR candidates require specific skills, attributes, and the development of "competent autonomy" (Gurr, 2001, Malfroy, 2005). It is argued that the required characteristics can only be developed through effective explicit pedagogy (Cuthbert et al., 2009, Diezmann, 2005, Grant and Graham, 1999, Grant, 2005, Green, 2005, Humble et al., 2006, Malfroy, 2005, Petersen, 2007). However, there is considerable debate regarding the form that this pedagogy of supervision should take. The private idiosyncratic nature of the research supervision situation in the Australian context has made the examining of the 'black box' of supervision pedagogy particularly challenging (Johnson et al., 2000). This is especially true since supervision practices are not as regularly evaluated by university quality control mechanisms as is the case with coursework degrees. The only feedback on supervision practices occurs in post-graduation questionnaires when it is far too late to make any interventions in the particular situation. Universities have attempted several bureaucratic solutions (Knowles, 2007) to crack open this 'black box' of

supervision pedagogy. For example, at the University of Adelaide, panel supervision and an annual review are mandated. However, since panels are only mandated to meet twice a year and form filling does not necessarily imply discussion or agreement, the success of these interventions is likely to be mixed.

Models of Supervision Pedagogy

Despite the fact that supervision pedagogy has been variously described as "unscrutinised" (Johnson et al., 2000), "poorly understood" (Grant, 2003) and "under-theorised" (Petersen, 2007), a growing body of literature has focussed on describing the forms that supervision pedagogy might potentially take. Some scholars conceive research pedagogy in terms of the supervisor modelling scholarly activities to the neophyte researcher (close to the previous "Oxbridge" or "Trad-Supervisor" model) (Grant, 2005), while others suggest that supervision pedagogy should involve an "orderly" process of explicit research skills training (Grant, 2005). A further model of supervision pedagogy has emphasised its mentoring role (Humble et al., 2006, Manathunga, 2007, Manathunga and Goozee, 2007, Samara, 2006).

Although the models of supervision pedagogy described above provide explanations for some of the supervision behaviours observed by researchers, they provide few details of how these pedagogical models would be put into practice. What is clear in all these models, however, is that supervision pedagogy relies heavily on discussion (Knowles, 2007; Grant, 2005).

Alignment tools

Another concern about supervision models is that they assume that supervision relationships and/or pedagogy would remain constant throughout a candidature or that a particular supervisor's style of pedagogy would remain constant with different students. An alternative view is that supervision pedagogy could potentially adjust to the varying needs of individual students at different stages of their candidature as well as cater for the needs of different candidates. An important consideration related to this perspective and the promotion of pedagogical discussion is that of "alignment". Theorists like Gurr (2001) have suggested practical tools to measure alignment of supervision style/pedagogy and student personalities/learning needs.

Gurr's "supervisor/ student alignment model" is described as both a tool for encouraging discussion, consequently serving a relationship-building function; and a pedagogical tool facilitating candidate "reflection" and therefore the development of "competent autonomy" (Gurr, 2001). Gurr's model has been well received and utilised in various contexts. The particular value of this tool appears to be that it can be used at different stages of candidature to track dynamic needs and reflect on relationships and the development of autonomy (Gurr, 2001). However, concerns have been raised that it assumes that development towards autonomy is linear (Gatfield, 2005) and that HDR candidates achieve the same level of autonomy in all aspects of their research development (Discussion, *Exploring Supervision Workshop*, 2009).

Cadman and Kiley's *Expectations in Supervision* questionnaire is an attempt to address the issues mentioned above (Kiley and Cadman, 1997). It consists of a series of statements about different aspects of candidature and the supervision relationship ranging from choice of topic, monitoring of progress and writing of the research documents to the provision of emotional support and quality assurance. On the left hand side, supervisor prominent statements are given, for example, "It is the supervisor's responsibility to select a research topic", while on the right hand side, the HDR student is proposed as the 'agent' with statements like "The student is responsible for selecting his/her own topic". Supervisors and

students independently plot their responses to the questions on a cline of 1 (on the left—indicating complete supervisor responsibility) to 5 (on the right—indicating complete HDR candidate responsibility). The value of this expectations model is that it enables students and supervisors to independently give their opinions on a variety of aspects affecting the supervision relationship and then to use the questionnaire as a tool for discussion and reflection. Like the Gurr tool it can be used at intervals throughout the candidature and as there are no 'correct' answers, it should, in theory at least, encourage open discussion. The problem with tools such as the *Expectations in Supervision* questionnaire is that although student and supervisor complete the form independently, the quality of the discussion/negotiation that follows is completely dependent on the type of supervision relationship. "Trad-supervisors" who believes that they are the sole arbiter of the research process could quite easily spend the "discussion" time lecturing the students on what they should be thinking, providing the student with little or no time for negotiation or reflection. On the other hand, the tool could encourage a genuine exchange and provide the student with the confidence and opportunity for dialogue. It would be useful if there was some way to ensure that both HDR candidates and their supervisors were given the opportunity not only to share their opinion on different supervision issues, but also were able to reflect upon the reasons for these opinions and justify them without the risk of intimidation or even gentler forms of coercion towards "disciplinary self-reproduction" (Manathunga, 2007).

A Pedagogical Tool for Reflection on Authorship

The development of "competent autonomy" is viewed as essential in the HDR context (Gurr, 2001). The movement towards this autonomy in research writing involves far more than technical skills. The ability to apply disciplinary conventions and develop an own identity within the discipline are also vital. A developed understanding of authorship issues is essential for HDR candidates to become part of their disciplinary community of practice. However, to operate as autonomous individuals within this community, HDR candidates require developed reflection and negotiation skills so that they are accepted as colleagues rather than perpetual neophytes. The "Reflective Thinking Model" developed by Kember et al. (1999) and expanded by Chan et al (2002) provides a useful model for describing the stages of reflection which HDR candidates should be guided through in order to achieve competent autonomy. The model indicates that a progression through "habitual action", "thoughtful action", "reflection" on "content", "reflection" on "process" and finally "critical review of suppositions of subject discipline and existing knowledge" (Chan et al., 2002) are required in order for HDR candidates to truly become an autonomous "subject" or to achieve realisation of their "scholar self" (Petersen, 2007, Johnson et al., 2000) within their community of practice.

Computer tools such as discussion boards, wikis and peer-sharing tools are recognised as useful ways of encouraging participation, critical-thinking and reflection in educational environments, since the sense of privacy that students experience online encourages the most reticent students to participate (Vallance, 2008, Yang et al., 2008). These very characteristics suggest that computer tools have potential for application to a reflection tool for the supervision relationship. The *Gurr Student/Supervisor Alignment Model* and *Expectations in Supervision Model* rely on supervisors and HDR candidates completing the questionnaires independently and on supervisors not dominating discussion. A computer tool which only permits respondents to view other's responses on completion facilitates independent completion, while a tool that demanded each participant provide reasons for their choice of each answer could ensure autonomous reflection.

The popularity of applications on social network sites such as *MySpace*, *Facebook* and *Twitter* where the participants can compare results of independently completed questionnaires,

suggest another potential feature for an online questionnaire. A suitable computer tool could allow each of the participants to complete the questionnaire independently, then, complete an initial reflection on each answer, and, after completion, be prompted to share with the other participant using an application that compared results and showed where answers diverged. With this kind of tool, HDR candidates reflect on their answers prior to discussing them with their supervisors and are in a better position to argue debatable points. If an HDR candidate's answer diverges from university policy, the supervisor would understand their reasoning process and could explain the policy in terms they could understand and then refer them to additional resources and materials.

A computer tool could allow a student to first respond habitually and select their answer then, thoughtfully evaluate their action by giving reasons for this response. Next, the printout of where responses diverge would result in "reflection" on "content". This stage could be followed up with online worksheets on issues of authorship where guidelines exist. Further discussion between supervisor and student could result in "reflection" on "action". Finally, the HDR candidate would obtain more confidence in negotiation and an informed "competent autonomy" and the supervisor would gain greater insight into the HDR candidate's thinking processes and, thereby, hopefully greater respect for the candidate as a colleague. With increased confidence and autonomy, the HDR candidates could begin to critically "review the suppositions of their community of practice" and realise their autonomous "scholar self".

An appropriate pedagogical tool which could assist the supervisor to lead the HDR candidate through the different levels of reflection could potentially assist in publication rates and encourage productive supervision pedagogy. This tool should be reusable at different stages of candidature and encourage autonomous reflection and negotiation between supervisor and HDR candidate.

Project Aims
In order to develop a practical tool to enhance supervision pedagogy and thereby the development of HDR candidate competent autonomy, we decided on the following aims for our project.

To develop a questionnaire that:
- ascertains HDR candidates and supervisors' perceptions of issues related to authorship
- is reusable at different stages of candidature
- encourages reflection.

To create a computer tool that:
- allows independent completion of the questionnaire
- encourages independent reflection on answers
- highlights areas for discussion
- can be utilised with other HDR content requiring reflection.

To create accompanying worksheets that:
- provide information on authorship issues where guidelines exist (*Australian Code for the Responsible Conduct of Research*)
- give the HDR candidate and the supervisor easily accessible, easy to understand information and learning activities about authorship guidelines.

This paper describes the content and evaluation of the initial questionnaire and a discussion of how this evaluation has informed content development. In addition, the current functionality of the tool is outlined. An evaluation thereof is a subject for a further paper. This paper also identifies potential areas for explicit teaching in the online worksheets. An evaluation of the materials will be the subject of further research.

Preliminary Evaluation of Questionnaire Content

The first draft of the questionnaire (see Addendum A) consisted of eight questions relating to issues of authorship and project ownership. Some of the questions such as "if anyone assists in writing or editing an article, they can assume that they will be one of the authors?" would be covered by authorship guidelines in the *Code*. Other questions such as "The supervisor should help the student to write papers" address issues which are more discipline specific or even touch on individual preferences. The questionnaire was used at the Faculty of Humanities and Social Sciences HDR student induction and resulted in much debate among the HDR candidate participants. However, as authorship is particularly an issue in the Sciences where supervisors are expected to co-author journal articles with students on a regular basis, further evaluation was carried out in the School of Agriculture, Food and Wine.

The evaluation of the questionnaire content consisted of two phases. Firstly, the authorship questionnaires were given to 19 HDR candidates and 18 supervisors all within the School of Agriculture, Food and Wine at the University of Adelaide. They were all asked to complete the questionnaires independently with their first instinctive response as they would in preparation for a discussion on authorship issues. The aim of this phase of the research was to ascertain the areas of broad agreement, and to discover potential contentious issues that required further questions and possibly teaching materials. The second phase of the research consisted of a questionnaire (Addendum B) to determine HDR candidates and supervisors' opinions on the content of the questionnaire, its value as an online tool, and other issues they would want addressed in an authorship questionnaire.

Responses to the Authorship Questionnaires

The first phase of the project revealed some areas of broad agreement: HDR candidates and their supervisors in the School of Agriculture, Food and Wine appeared to agree that authorship could be assumed if it relied on "some of [their] work" (question 2), that supervisors could assume authorship if one of their students published (question 3) and that supervisors "should help students to write papers" (question 8) (Addendum C). These results were interesting since the majority of students and supervisors in the exploratory discussions in the Humanities and Social Sciences Faculty had indicated that supervisors were loath to co-publish with students and rarely assumed authorship even when they provided significant input to their students. The imperatives to co-publish appear to be far greater within the School of Agriculture, Food and Wine and authorship appears to focus more on the project than on the act of writing. Despite the broad agreement within the School, these questions remain a useful part of the questionnaire because of these disciplinary differences. Another interesting aspect is that the agreement on question 3 appears to contravene accepted protocols on authorship at the University of Adelaide where, in line with the *Code* and the *Vancouver Protocol*, an author must contribute:

"(a) conception and design, or analysis and interpretation of data;
 (b) drafting the article or revising it critically for important intellectual content; and
 (c) final approval of the version to be published."

(University of Adelaide, 2007)

From their responses to question 3, it appears that supervision of the project is seen as sufficient grounds to claim authorship by both supervisors and HDR candidates. This suggests that teaching materials explicating the University minimum requirements for authorship would be a valuable pedagogical tool.

HDR candidate and supervisor responses were also similar for questions 4 and 5 ("In co-authored papers on the thesis work, the supervisor should decide who is the first author" and "If anyone assists in writing or editing an article, they can assume that they will be one of the authors") with both groups predominantly responding "in some circumstances". Although their answers are similar, the circumstances under which authorship would be assumed clearly constitute a discussion point for HDR candidates and their supervisors. A discussion of the circumstances under which editing an article might constitute authorship is also valuable since conferring authorship on an editor would appear to contravene the University conditions of authorship as described above. In addition, the fact that the supervisor should decide on the order of authors appears to go against the recommendation that "authorship of a research output" should be "discussed between researchers" rather than dictated by one of the authors (NHMRC et al., 2007). The power relations inherent in the supervision relationship as discussed above come into play in authorship discussions and a tool which would encourage discussion and empower the student is clearly important. In the *Guidelines and Rules for Responsible Practice in Research* and the *Australian Code for the Responsible Conduct of Research* there are no fixed rules about the order of authors. This thus appears to be an area for future question development. Especially since, as remarked by Morris (2008), this could be a particular area of conflict for HDR candidates and supervisors.

Questions 1, 6 and 7 show the most divergence. This appears partly at least to be as a result of an uncertainty regarding the meaning of the questions. For example, in question 1 ("Students should expect to do a good amount of work in their department that is not part of their thesis work") students and supervisors appeared unsure whether "work" related to teaching or other research work. It is also debatable if this question relates directly to authorship issues and, therefore, is excluded from the final questionnaire. Supervisors were far more likely to accept that a thesis could incorporate the work of others within a discipline or department under some circumstances than HDR candidates. This indicates that discussion of the boundaries of projects and what constitutes a significant thesis contribution are areas requiring discussion between HDR candidates and supervisors in this School. Question 7 likewise shows great divergence with most supervisors feeling that the supervisor should "help" the student to write the thesis, while most students express ambivalence on this issue. It is clear from the comments that there are a variety of opinions on what constitutes "help" and suggests that this is a useful question to include in the questionnaire. The uncertainty on the issue of "help" suggests that more detailed questions may be useful in the final questionnaire and accompanying worksheets.

Responses to the Survey Evaluating the Authorship Questionnaire

The supervisors and HDR candidates were also asked to evaluate the questionnaire content and its potential as an online tool. The student survey questionnaire evaluating the authorship discussion tool is included in Addendum B (a similar questionnaire was used for supervisors). From the results (Addendum D), it appears that HDR candidates and supervisors generally agree that the authorship questionnaire should be part of the Core Component of the Structured Program (CCSP). Overall, the supervisors found the content of the Survey "relevant" and suggested that it would "identify issues" and "facilitate discussion". HDR candidate responses were far more varied. This perhaps relates to the lack

of detailed questions on issues such as order of authors and supervisor project leadership and its relationship to authorship that, according to Morris (2008), particularly concern HDR candidates. It is hoped that a more detailed attention to these issues will make the questionnaire more relevant to HDR candidates.

The potential of the questionnaire as an online tool was also interrogated. The majority of students and supervisors considered an online survey more convenient than a paper-based tool and indicated that they would be more likely to complete an online survey than a paper-based one (although there was one respondent who was resistant to using any online tools). However, from the responses, it appears that they do not believe that an online tool will necessarily translate into increased independence of responses or timely feedback compared with a paper survey. There were few negative responses on these issues, but rather most HDR candidates and supervisors were uncertain of how the questionnaire would translate into the online environment. Therefore, once the survey is fully operational, further evaluation of the tool will be required.

When asked to suggest additional questions for the authorship questionnaire, both supervisors and HDR candidates suggested issues that would appear to be tangential such as: project funding, project expectations (how much data is required for a PhD), meetings with the supervisor, time management, student/supervisor relationship, workload, the differences between Masters and PhD, and part time work hours. This indicates that authorship issues go to the heart of the supervision relationship and touch on issues of power, project scope and project ownership which stretch far beyond technical writing processes or the ordering of names on a written document. Although this tool will focus on authorship issues, it has the potential to facilitate discussion on broader issues including application to the *Expectations in Supervision* questionnaire. Another important issue raised is the amount of work which constitutes co-authorship and primary versus secondary authorship. Since this issue is not explicitly addressed in authorship protocols, it is an area which requires discussion and negotiation in the supervision relationship and is explored in more detail in the final version of the questionnaire.

Practical issues in building an Application

The concept of the proposed application developed from the "compare quizzes" on social networking sites. The limitation of these applications is that all participants need to be members of the particular social networking group in order to access the application. In addition, the "compare" function relates only to the overall categorisation of the user and not to individual questions and the reasons for answers as required by this project. The *Google Forms* function of *Gmail* was proposed as a possible candidate by the Online Learning team at the Centre for Learning and Professional Development. This application allows the creation of an online survey where supervisor and student only see each other's answers after completion of the survey. It also provides a platform where each can provide the reasons for their answers. However, the limitation of this application is that a new survey is required for each supervision pair/triplet. Therefore, an administrator is required to receive requests for a survey, to copy the original survey, rename it and send it to each supervision partnership/group. A preliminary tool using the *Google Forms* application is in use. However, since no existing application can fulfil all our needs, a customised application is under development.

Conclusion

It is clear that an online e-learning tool to facilitate discussions on authorship issues fills an important gap in the field of supervision pedagogy and the application has potential for use in other aspects of supervision pedagogy including ascertaining views on writing conventions and aligning expectations of supervision. Although the *Australian Code for the Responsible Conduct of Research* dictates that there should be signed agreement on authorship, this does not necessarily mean that agreement has been reached or discussion has occurred. A webpage with easily accessible questionnaire(s) on authorship and other relevant HDR issues is planned. These will be accompanied by short interactive worksheets addressing the main tenants of the *Code*. It is hoped that the tools and accompanying worksheets will address both the pedagogical responsibilities of the supervisor and University to provide students with training in academic practices (Morris, 2008) and thus avoid potentially harmful power issues that could damage the supervision relationship.

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Addendum A

Whose Project is it anyway?

Please fill in your answers to the following
BY YOURSELF
Do not show anyone else your answers or discuss them with someone until we ask you.

1. Students should expect to do a good amount of work in their department that is not part of their thesis work.

No   Possibly, under some circumstances   Yes

2. If an article is published that relies on some of your work, you can assume that you will be one of the authors.

No   Possibly, under some circumstances   Yes

3. If a student plans to publish something, the supervisor would expect to be a co-author.
No   Possibly, under some circumstances   Yes

4. In co-authored papers on the thesis work, the supervisor should decide who is the first author.

No   Possibly, under some circumstances   Yes

5. If anyone assists in writing or editing an article, they can assume that they will be one of the authors?

No   Possibly, under some circumstances   Yes

6. The thesis can incorporate work that others in the Discipline/ Department have done.
No   Possibly, under some circumstances   Yes

7. The supervisor should help the student to write the thesis.
No   Possibly, under some circumstances   Yes

8. The supervisor should help the student to write papers.
No   Possibly, under some circumstances   Yes

Addendum B

SURVEY ON AUTHORSHIP QUESTIONNAIRE

THE UNIVERSITY OF ADELAIDE
AUSTRALIA

STUDENT RESPONSE

Consider the questions covered in the survey and indicate your response to the following statements.

	Strongly agree				Strongly disagree
	1	2	3	4	5
The survey questions are relevant to my HDR program.	☐	☐	☐	☐	☐
The survey made me reflect on my expectations of HDR research.	☐	☐	☐	☐	☐
The survey would identify differences of opinion between my supervisor and I.	☐	☐	☐	☐	☐
The survey would facilitate discussion with my supervisor regarding HDR issues.	☐	☐	☐	☐	☐
The survey/discussion clarified what is expected of me as an HDR student.	☐	☐	☐	☐	☐
The survey would be a useful tool to initiate discussion with my supervisor.	☐	☐	☐	☐	☐

Do you think completion of the survey should be a requirement of the CCSP?   YES ☐

NO ☐

Please list any other HDR related issues you think should be included in the current survey?

_____

_____

_____

If the survey was made accessible as an online tool…

Indicate your response to the following statements.

	Strongly agree				Strongly disagree
	1	2	3	4	5
I would be more likely to complete the survey online.	☐	☐	☐	☐	☐
It would be more convenient to complete an online survey.	☐	☐	☐	☐	☐
An online survey would enable me to give more independent responses.	☐	☐	☐	☐	☐
An online survey would provide me with more timely feedback.	☐	☐	☐	☐	☐

THANKYOU FOR YOUR ASSISTANCE!

Addendum C

Responses to Authorship Questionnaire

Students' responses to authorship Survey

Question	No	Possibly	Yes
1	3	13	3
2	0	2	17
3	0	5	14
4	6	10	3
5	6	10	3
6	6	8	5
7	4	11	4
8	0	8	11

Supervisors' response to authorship survey

Question	No	Possibly	Yes
1	8	9	1
2	1	1	16
3	1	5	12
4	5	8	5
5	3	12	3
6	0	14	4
7	4	3	11
8	0	1	17

Addendum D

Responses to Evaluation Survey

Question	Student Responses					Supervisor Responses				
	1	2	3	4	5	1	2	3	4	5
1	6	11	1	1	0	9	7	1	0	0
2	3	8	6	2	0	5	4	8	0	0
3	5	1	7	3	1	3	6	8	0	0
4	4	5	8	1	1	5	5	5	0	0
5	4	9	4	2	0	3	7	4	3	0
6	4	6	6	2	1	5	9	2	0	0
8	7	5	2	3	2	4	4	5	3	2
9	6	7	2	3	1	6	5	2	3	1
10	3	5	7	3	1	4	8	2	2	1
11	4	4	8	3	0	2	6	7	1	1
	Yes	No				Yes	No			
7	14	5				13	2			

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