Empowering Masters Students to Become Researchers: 
An Australian Case Study 

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Abstract: This paper describes a case study in which Masters students at an Australian University, undertaking a subject on Research Issues in Technology and Language Learning (TELL), were involved in the interactive simulation of applying for a small Australian Research Council (ARC) grant in the area of TELL. Through participating in this research simulation students became aware of current research methodologies and issues in the field of TELL, as well as becoming conversant in a meaningful way with the relevant literature of this area. Students gained first class experience as potential candidates and assessors of one of Australia’s major research grant schemes. The paper discusses the theoretical framework, method of implementation, outcomes and evaluation of using this type of learning experience in a Masters of Arts in Applied Linguistics.

1. Introduction

Nuthall (1999: 245) discusses that having knowledge is as much a process of engaging in acquiring, sorting, connecting, inferring, reorganizing, using and reusing information as it is possessing some kind of knowledge object. Somehow, in any learning experience the object and procedural knowledge can be present. In order to make more specific these terms, let’s think for a minute about my own writing of this paper, a learning experience, in which I am in the first place using my initial object knowledge to write a paper to share with my audience. I am involved in the process of writing the paper and editing it to take into consideration other people’s views. As a result of the process, my object knowledge is being changed as I am adding new knowledge or modifying the construction of what I already know notionally as well as about the writing process of papers in itself. The process is taking me to find out where I need to research more in the discipline knowledge to make my point more effectively. Both types of knowledge complement each other and are interrelated by the feedback, which is received from other people commenting on a draft of this paper, or myself providing feedback to myself as I read through different sections and drafts of this paper. The feedback makes me think and reflect on what needs to be deleted, changed or improved at different levels to communicate my message clearly to my audience. So what is more important, the object knowledge or the procedural knowledge?

Many teacher education programs in the area of Applied Linguistics seem to have a strong emphasis on students acquiring the object knowledge of the area of study, as they are strongly influenced by teacher-centered models of instruction. According to Johnson (1999:4), “many courses have followed a traditional model, in which the lecturer provides pre-digested course content, in the form of lectures, and all students submit their version of the same assignment”. In these traditional models the lecturer is still considered to possess some kind of knowledge object ’that can be passed to the students and the main focus is on object knowledge. These models of teacher education fail to place learners in authentic real-life situations for active learning to take place. They miss the opportunity of creating learning environments capable of engaging students in the acquisition of procedural knowledge as well as object knowledge, to allow them to become part of the research community not only as consumers but also producers. These models of teaching in undergraduate and postgraduate Computer Assisted Language Learning (CALL) programs foster passivity as students are seldom challenged to take responsibility over their own learning. There is a need to encourage more autonomous learning and self-reflection on learning in teacher education, in the same way that there is a need to advance the research agenda in the effective design and use of CALL. We need reflective autonomous learners who will be able to contribute to our field with their own research. But can our current Master students contribute actively to the advancement of the research agenda in the area of CALL or other areas when they finish their teacher education? And if not, what is stopping them?

1 Lemke 1990 
2 Kolb 1984 
3 Johnson 1999 
The research performance of Masters students has been said to be affected by their lack of confidence and security, due to their limited understanding of scholarly research and writing, as well as never having had a real audience for their academic work, which has been read only by their instructor or lecturer. Moreover, writing at a scholarly level has been identified as creating anxiety and insecurity as in general postgraduate students have very little understanding of the academic research genre and are afraid of academic audiences.

In recent years, we have witnessed innovations in teacher training influenced by learner-centered approaches to attempt to develop graduate and postgraduate students into researchers placing more importance on procedural knowledge. The research reported here was motivated by the desire to explore the implications of using the notion of knowledge as a process as well as an object to design a Masters course in Research Issues in Technology and Language Learning. This would mean that as much attention would be paid to provide the students with the relevant and critical knowledge of the area of study (the knowledge as object), as to provide them with the learning environments necessary to develop and acquire a repertoire of research, writing and publishing skills to be able to participate and contribute to the research body of the area (the procedural knowledge). In order to achieve this, the course was designed to include more real life research simulations to promote the learning of research as a process and as an object of study. It was envisaged that this type of training would also contribute to increase the levels of confidence and security that postgraduate students might experience when considering stepping into the real research community for the first time after completing their studies in a supportive academic environment. This paper is an attempt to empower postgraduate students to become future researchers conversant with the conceptual and procedural knowledge of research by involving them in a research simulation to apply for a competitive small ARC grant.

2. The Small ARC (Australian Research Council) grant: How does it work?

The Australian Research Council is one of Australia’s major research grant schemes. In order for a candidate to be successful s/he has to go through a very competitive process made of five stages:

A. **Submission Stage.** The candidate writes the application and submits it to the selection board of the ARC.

B. **The Cull Stage.** The submission goes to a general panel of assessors which makes a judgement about whether the submission is worth more detailed consideration by assessors who are expert in the field of the submission.

C. **Assessment Stage.** If the ARC board selects the application of a candidate, then it would be sent to three assessors in Australia and/or overseas, who have to write an assessment report commenting on the quality of the different aspects of the research proposal and research ability of the candidate/s, which are submitted to the ARC selection board.

D. **Rejoinder Stage.** The ARC board sends the confidential assessors’ reports to the candidate to allow her/him to reply to them with a rejoinder. The reply is sent to the board for its consideration.

E. **Final Selection Stage.** The ARC board makes the final selection of proposals to be granted by taking into consideration the reports from the assessors and the response of the candidate to those reports.

3. The Small ARC grant simulation

3.1. Aims of the Process

Research can be a satisfying and stimulating experience for many people with a trained and inquiring mind. Researchers contribute to the existing body of knowledge, to solve problems and expand knowledge by using methodical processes to discover non-trivial facts and insights, and conducting the

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5 Crawford 1999
6 Crawford, 1999; Johnson, 1999; Mumma, Bentley, & Walker, 1999; Smith & Mandlebaum; 1999
7 Howard & Sharp 1983
8 Drew (1980)
9 Howard & Sharp, 1983
process with a systematic approach\(^{10}\). This learning experience aims to help students to increase their research skills, ability and confidence, and requires them to be creative, critical, methodical, communicative and reflective, and to become aware of academic genres and audiences. The use of this learning environment has been influenced by social constructivism\(^ {11}\), as it is trying to encourage personal learning through using a meaningful social context to create an active learning environment\(^ {12}\). It aims to promote the development of critical knowledge and skills in students in the areas of TELL and CALL, as well as to create a direct relationship between what is learned in the classroom and what is needed outside the classroom, one of the most valuable principles of the situated learning approach\(^ {13}\). Furthermore, it encourages experiential learning\(^ {14}\) through exposing students to conceptual and procedural knowledge of research in a simulated real academic situation. In summary, the aims of this learning experience are:

- to help students to learn about what makes a good research proposal in a meaningful context;
- to help students to learn how to develop a sound research grant or proposal through participating in a supportive environment;
- to increase their ability to understand better the research process\(^ {15}\) as they are doing it;
- to become critical about their own research proposal and other students’ research proposals through conversational and reflective experiences;
- to promote awareness of an academic audience by having a real audience;
- to increase the postgraduate student’s confidence and security as potential researchers by having a supportive environment for their first attempt at a grant submission;
- to increase their conceptual knowledge in the area of Technology and Language Learning through their involvement in the process of developing a grant proposal.

3.2. The Participants

There were fourteen students participating in this simulation with a diverse cultural and linguistic background including Australian, British, Chinese, Korean, Samoan and Spanish. A total of 80% of the class was made up of females. Their ages ranged between 26 and 55, eighty per cent of the class being between the age of 36 and 55. The majority of them were experienced teachers in the areas of English as Second Language (ESL) and/or Language Other Than English (LOTE). None of them have had previous knowledge of the area of Technology and Language Learning, and most of them did not have prior experience using computers to enhance language learning and teaching. The research background and experience of the participants was very limited.

3.3. The Process

A. Preparation Stage

(a) In class (in small groups): Students examined the guidelines provided by the ARC to write a small ARC grant proposal. Two samples of small ARC proposals were examined for the students to become familiar with the structure and to identify what were the good elements in each of them and the elements that could be improved. Out of this initial analyses the class as whole ended up writing a list of the characteristic of a good research proposal, which at the same time became the evaluation criteria to assess the research grant proposal that the students were going to elaborate.

(b) Outside class (individual): Students were given the assessors reports attached to one of the successful small ARC samples analysed in class. They had to write a response letter dealing constructively with the relevant and irrelevant comments made by the assessors.

(c) In class (in small groups): Students shared their response letters and tried to identify the strengths and weakness of each letter. Then they created a single response letter containing the best elements of each member in the group. Each group shared their outcomes with the rest of the class.

\(^{10}\) Bell, 1993

\(^{11}\) Vygotsky, 1978

\(^{12}\) Bandura, 1986

\(^{13}\) Anderson, Reder & Simon, 1996

\(^{14}\) kolb, 1984

\(^{15}\) Bouma, 1996
B. Developmental Stage: Each student developed a small ARC grant proposal on a topic of her/his interest and submitted four copies to the lecturer. The lecturer kept one copy and gave the others to the three blind assessors of that proposal.

C. Evaluating Stage: The assessors read the proposal and wrote a report commenting on the research question/s, critical analysis of the literature and references, and evaluation of the methodology and data collection. Their aim as assessors was to provide constructive and coherent feedback to the author on the strengths and pitfalls of their research proposal. The assessor reports were given to the lecturer who gave them to the author of the proposal to keep the refereeing process anonymous.

D. Reflective and Responsive Stage: The author of the proposal wrote in a clear and coherent way a rejoinder to the assessors’ reports or evaluations, addressing the different issues raised in the reports in a constructive way and dealing with irrelevant comments effectively. S/he took this opportunity to reflect on the aims and content of her/his initial proposal and improve the quality of the initial proposal prepared by the candidate. The rejoinder was submitted to the lecturer, who took the role of the ARC board.

3.4. The Learning Outcomes

The Small ARC research learning experience conducted was evaluated based on the results of a student questionnaire, feedback obtained from informal conversations with the participants, lecturer’s observations of the process, as well as the analysis of the different documents generated by the students as a result of this research simulation. Due to the lack of space in this paper, only the results of the questionnaires, to which ten participants replied, will be discussed in depth. The questionnaire aimed to gather information from the
participants on their research skills, their participation in the small ARC simulation, their current levels of
confidence as researchers in the area of Technology and Language Learning, the place and nature of this
item in the course, and the general participant profile. There were ten responses to the questionnaire. Most
of the student benefited in one way or another from participating in this learning experience as represented
in the following table.

<table>
<thead>
<tr>
<th>What did you learn from preparing your own small ARC proposal?</th>
<th>% (^{16})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gathering information on current research issues relevant to TELL.</td>
<td>100%</td>
</tr>
<tr>
<td>Stating a clear research question for a small ARC proposal.</td>
<td>70%</td>
</tr>
<tr>
<td>Selecting the best research methodology and instruments for a particular research proposal.</td>
<td>70%</td>
</tr>
<tr>
<td>Realizing the importance of good research design and timeline.</td>
<td>70%</td>
</tr>
<tr>
<td>Using electronic media to search for relevant literature.</td>
<td>60%</td>
</tr>
<tr>
<td>Elaborating a current and relevant literature review to support a research proposal.</td>
<td>60%</td>
</tr>
<tr>
<td>Ways of dealing constructively with the research limitations of a research proposal.</td>
<td>60%</td>
</tr>
<tr>
<td>Elaborating a research budget.</td>
<td>50%</td>
</tr>
</tbody>
</table>

In addition the participants reported to have benefited from having assessed constructively the research
proposals of other candidates. It is worthwhile to notice how all the participants reported that they learnt to
be critical towards other people’s research and almost all of them to recognize the elements of a good
research proposal as a result of this learning experience, as reported in this table.

<table>
<thead>
<tr>
<th>What did you learn from assessing constructively the ARC proposals of other candidates?</th>
<th>% (^{17})</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be critical about other people’s research.</td>
<td>100%</td>
</tr>
<tr>
<td>To recognize the different elements that make a good research proposal.</td>
<td>90%</td>
</tr>
<tr>
<td>To find out inconsistencies in the research methodology and instruments of a proposal.</td>
<td>80%</td>
</tr>
<tr>
<td>To assess the impact that using clear and correct language has in a research proposal.</td>
<td>70%</td>
</tr>
<tr>
<td>To analyse critically the theoretical framework of a research project.</td>
<td>70%</td>
</tr>
<tr>
<td>To determine the soundness of a research proposal.</td>
<td>60%</td>
</tr>
<tr>
<td>To evaluate the soundness and appropriateness of the research question/s.</td>
<td>60%</td>
</tr>
<tr>
<td>To see the importance of using a consistent referencing style.</td>
<td>60%</td>
</tr>
</tbody>
</table>

Replying to the assessors’ reports helped some students to become more critical about literature reviews, as
well as to adopt the useful suggestions received about their initial proposal, and to gain experience in
having to deal with some of the suggestions from assessors with whom they disagree. This experience
seemed to help most of them to see things from different perspectives (candidate versus assessor), and to
learn that the quality of a proposal can be improved by the comments received from the assessors. I would
like to add, based on my own observations of the process and the documentation generated by the
participants, that through their involvement in this research process students improved their conceptual and
procedural knowledge of research in order to put good grant proposals in place with a sound methodology
and research design. Most important of all is the impact that this learning experience has had on the
student’s confidence as a researcher.

<table>
<thead>
<tr>
<th>Confidence as a researcher in the area of Technology and Language Learning</th>
<th>Average (^{18})</th>
</tr>
</thead>
<tbody>
<tr>
<td>To apply for a Small ARC grant before taking part in the subject (1 to 10 being best)</td>
<td>2</td>
</tr>
<tr>
<td>To apply for a Small ARC grant after taking part in the subject now (1 to 10 being best)</td>
<td>8.5</td>
</tr>
<tr>
<td>In ability as a researcher before taking part in the subject (1 to 10 being best)</td>
<td>3.5</td>
</tr>
<tr>
<td>In ability as a researcher now (1 to 10 being best)</td>
<td>8.5</td>
</tr>
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</table>

Their confidence and security in their ability as researchers improved substantially after having participated in
this learning experience during one semester. The majority of students thought that participating in this
simulation should be a component of the subject on Research Issues in Technology and Language

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\(^{16}\) Percentage based on a total of 10 participants.

\(^{17}\) Percentage based on a total of 10 participants.

\(^{18}\) Based on 10 participants.
Learning, because it can be useful for their future careers and provided them with a good research experience in a safe environment. For two of the students, time was too limited to concentrate on this simulation, as there was already enough new content in the subject without the research component. Some of the students mentioned that some of the aspects they liked about the process were having to write a grant application, gaining experience that could help them to avoid any problems in the future if applying for a grant, and gaining confidence. One of the students reported that s/he found stressful having to read negative things and felt s/he did not have enough time to complete the process. Some of the suggestions made by students to improve the process were: that no candidates names should be mentioned on the research proposals, and that the lecturer’s comments on the proposal should be received at the same time as the comments from the three assessors.

4. Conclusion

The ARC grant research learning simulation described in this paper has promoted experiential learning through encouraging students to become familiar with the process and concepts of research in the area of Technology and Language Learning. As a result of participating in this learning experience, their research skills and knowledge have benefited, becoming more critical, methodical, constructive, communicative, and reflective, as well as aware of academic genres and audiences. It helped them to expand their knowledge of research methodologies, design, and instrumentation, but most important of all was that their confidence and security in their ability as researchers increased dramatically as a result of taking part in this experience. This paper advocates the importance of including procedural knowledge and real life learning simulations as part of postgraduate research programs. In this way, we educators will be able to empower our students to become potential researchers able to contribute to the field with confidence and in a constructive manner, and one day being able to add to the object knowledge of us, their educators.

References

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