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Extra-curricular Undergraduate Research Training: Notes on the Pedagogical Practices Behind the Sydney Undergraduate Journal of Musicology

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Abstract

Although there is a clear body of evidence supporting the idea that undergraduate students benefit from participation in original research projects, many units of study – particularly in the creative arts and humanities – have been slow to embrace curriculum renewal along these lines. In this paper, we detail a pragmatic approach to meeting this curriculum challenge in a music faculty through an extra-curricular initiative that embraces, rather than challenges organisational structures already in place. The writing workshop associated with the Sydney Undergraduate Journal of Musicology provides a pathway for students looking to develop papers they have written for class assignments into original research projects. The design of the workshop uses the Madeline Hunter Direct Instruction Model as a vehicle for introducing students to the central tenets of the Willison and O'Regan Research Skills Development Framework – an increasingly popular tool for the development of original research skills. The effect of the workshop on students' engagement with the requirements of original research and their eagerness to engage in original research projects is then explored through the presentation of data derived from a focus group comprised of workshop participants that took place one year later.

Keywords

Academic Writing Skills, Undergraduate Research, Undergraduate Journal, Research Skills Development Framework, Madeline Hunter Direct Instruction Model

Cover Page Footnote

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Introduction

The benefits of providing undergraduate students opportunities to conduct original research are well established in the higher-education teaching and learning discourse. Apart from studies linking high levels of research self-efficacy in Ph.D. students to original research undertaken at the undergraduate level (Lopatto 2007; Russell, Hancock & McCullogh 2007; Carter, Mandell & Maton 2009), more general benefits such as increased intellectual confidence (Hunter, Laursen & Seymour 2006) and deeper curriculum engagement (Lopatto 2006) have also been identified. Over the past 10 years, specific initiatives and modelling around how best to deliver opportunities to conduct original research have run a parallel course, shaping "special issues" of higher education teaching and learning journals (see, for example, *New Directions for Teaching and Learning* (2003) volume 93 no. 1 or the *Journal of University Teaching and Learning Practice* (2010) volume 7 no. 2) and the agenda of higher-education teaching and learning conferences (see, for example, the programs from the 2008 ISSOTL conference "Celebrating Connections: Learning, Teaching, Scholarship" or the 2010 STLHE conference "Creative Teaching and Learning: Exploring, Shaping, Knowing").

One theoretical model gaining significant traction in Australian efforts to expand original-research opportunities for undergraduate students is the Willison and O'Regan (2007) Research Skills Development (RSD) framework. At its core, the framework is a pairing of progressive levels of thinking skills (set out in Bloom's (1956) taxonomy of educational objectives) with different facets of inquiry, charted across several levels of student autonomy. In other words, it provides a general model for how the domains of knowledge, comprehension, application, analysis, synthesis and evaluation might be seen to play out at the level of a closed inquiry, requiring a high degree of structure/guidance, through to an open inquiry within self-determined guidelines. Recent use of the framework demonstrates its applicability across the pedagogical spectrum, evident in its integration into diagnostic tools (Peirce & Ricci 2007), curriculum-delivery plans (Peirce et al. 2007; 2009) and assessment rubrics (Ng et al. 2010).

Notably, each of these applications of the framework takes place in connection with projects undertaken as part of discrete units of study. An original research output is viewed from the beginning of these programs as an assessment goal, and research-skill development forms the foundation of the pedagogical approach. For instance, Peirce et al. (2009) report on the usefulness of the RSD framework as a tool for structuring the hierarchical development of research skills over two semesters of a first-year human-biology program. Within this context, students in the class learned to situate a variety of reading and analytical tasks within a trajectory that had as its end point the production of knowledge new to the field. The authors of this study demonstrate through an analysis of qualitative data generated through interviews how the gradual scaffolding of research skills within the cohort positively affected feelings of research autonomy (Peirce 2009, p95). The success of this initiative is encouraging for those looking for ways of realising Research

Enriched Learning and Teaching (RELT) principles in undergraduate classrooms, and the educators driving this revamped biology program should be applauded.[1]

Yet the reality of tertiary education is that change – even change driven by excellent research – is often slow. Since the publication of Arthur Levine's oft-cited monograph *Why Innovation Fails: The Institutionalization and Termination of Innovation in Higher Education* (1980), organisational researchers have increasingly set out to examine what lies behind the success of certain curriculum-change initiatives and the failure of others. Over the years, such investigations have led to the confirmation of a need to be sensitive to institutional "cultural" norms when pursuing change (Kezar & Eckel 2002, p457), the benefits of embracing a collaborative style of leadership when directing change (Kezar, Carducci & Contereras-McGavin 2006, p148) and the need to engage (not ignore) opposing social and political camps within individual faculties during the course of negotiating change (Trowler 2008, pp151-152). While each of these studies offers useful suggestions for moving more effectively and efficiently through change initiatives, the fundamental problem they seek to address is not unfamiliar to anyone involved with the delivery of curriculum in a tertiary setting: the enactment of lasting change requires a critical mass of support, and the development of such support is a complicated and lengthy process.

The Sydney Undergraduate Journal of Musicology was launched in 2011 as a way of augmenting the research training that students at the Sydney Conservatorium of Music receive in music-history courses. The intent of this initiative was to enrich the culture of original-research production at the Conservatorium in a manner that embraced rather than challenged organisational structures already in place. By offering a vehicle that extends beyond assessment tasks undertaken in a variety of classes, but not altering the taught content of those classes or their assessment, the journal aims to address a research-training lag that results from the necessarily more cautious pace of curriculum renewal as it occurs within discrete units of study. Furthermore, the journal offers a new aspiration to all students to seek to take their work into a more advanced realm. The journal's procedure mimics that of a professional refereed journal. It includes an annual call for submissions, an initial cull for suitability, review by scholars at the professional level and subsequent reworking of contributions as necessary with the editors prior to publication. The journal is publicly available online at http://ojs-prod.library.usyd.edu.au/index.php/SCM.

In the journal's inaugural year, eight prospective student contributors came forward to participate. These students were from various specialty areas in music, were enrolled in several different degrees, and ranged from second-year to final-year undergraduate students. As prospective contributors, the eight students were required to participate in a workshop designed to help them identify research-skill deficits evident in their initial submissions. This diagnostic exercise used as a yardstick Willison and O'Regan's (2007) criteria set out in their RSD framework for "facets of inquiry" linked to autonomous research taking place within self-determined guidelines. During the workshop, the student authors were introduced to a general research design model derived from these facets of inquiry; guided through an analysis of works using the model as a template for discussion; asked to reflect on their own works with the research design model in mind; and asked to develop a plan for addressing deficits in their submitted articles. Following this workshop, students were left on their own to develop their papers further before submitting them for a final double-blind review.

[1] For an in-depth discussion on RELT philosophy and the educational benefits of embracing such an approach see Ozay (2012) (in particular pp458-463) and Healey and Jenkins (2009).

This article seeks to document the pedagogical procedures of the workshop component and begin an exploration of their impact on undergraduate research practice. This is achieved in two parts. First, we detail the rationale and instructional procedures of the workshop, with a special focus on the relevance and usefulness of the RSD as a curriculum-design tool. Second, we set out the methodology underpinning a focus group involving workshop participants, and discuss the data generated from this session in relation to two overarching themes: (1) Engagement with the requirements of original research and (2) Eagerness to engage in original research projects.

Of the eight students who participated in the workshop, three chose to participate in our focus-group discussion. The small number of participants in the first year of the project no doubt limits the types of conclusions we are able to draw. Yet the themes derived from our analysis retain value as guides for reflection on the ongoing refinement and deployment of such a program. Furthermore, they provide at least a measure of evidence supporting the possibility for extracurricular projects to fill a research-training gap in relation to the opportunities offered undergraduate students interested in carrying out original research projects. Comments in both thematic sets regarding the impact of the workshop on current classwork assignments in turn point to the potential for such initiatives to feed directly back into the classroom environment.

Rationale and Instructional Procedures of the Writing Workshop

The writing workshop comprised four linked activities structured in accordance with the Madeline Hunter Direct Instruction Model (HDIM). Although the HDIM is better known to teachers of primary- and secondary-school students, proposing its use as an instructional frame at the tertiary level is not without precedent (Giaquinto 2009; Steward et al. 2010). Giaquinto's work on instructional delivery deficits in first-year cohorts identifies a spectrum of passive-learning approaches used by university lecturers, and links these approaches with student dissatisfaction with instruction. He then posits that Hunter's strategy – activation of knowledge that students bring with them to class as a bridge to a new skill set via modelling and independent practice – may serve as a more engaging instructional approach and, as a result, raise levels of retention (Giaquinto 2009, pp282-283). Steward et al., looking at the usefulness of the model from the point of view of student achievement, find a correlation between its use in university marketing classes and student assessment results (Steward et al. 2010, p134). In both cases, the benefits of facilitating skill development through a model that holds student engagement at its heart are shown to be potentially as valuable within the University sector as they are in primary- and secondary-school settings.

Although instances of the model vary, nearly all make reference to the seven-step lesson plan from Hunter's (1982) publication *Mastery Teaching*. The steps of this plan can be summarised as follows: (1) an anticipatory set, in which knowledge held by the students is activated; (2) the presentation of objectives/standards, in which the goals and outcomes of the lesson are made clear to the students; (3) teaching and modelling, in which new knowledge and methods are presented to the cohort; (4) guided practice, in which students replicate what was modelled in the previous step; (5) checking for understanding, in which students demonstrate to the teacher their acquisition of the targeted knowledge or skill set; (6) independent practice, in which students apply what they have learned to new sets of data; and (7) closure, in which students summarise what was learned in the lesson and make note of its implications.

In accordance with this model, our workshop approach involved opening with a discussion in which student knowledge about research production was activated (*anticipatory set*), followed by a period of direct instruction in which students were introduced to the criteria for assessing research ability and results at the professional level (*objectives/standards*). A model for producing independent original research, in which the facets of inquiry from the RSD framework were framed under simplified labels derived from Australian research proposal templates, was then discussed.[2] This was followed by a presentation in which the facilitator undertook an assessment of a research article abstract with an eye towards illuminating how these facets of inquiry combine to produce knowledge new to the field (*teaching and modelling*). This presentation was followed by a period of guided instruction, in which students replicated the facilitator's analysis in connection with a new research-article abstract (*guided practice*). Students were then required to demonstrate understanding of the steps required to produce knowledge new to the field by identifying deficits in a poorly written abstract (*check for understanding*). This was followed by an assessment of strengths and weaknesses within the students' essays in terms of their contribution to knowledge and the development of individual plans for revising these with the intent of producing knowledge new to the field (*independent practice*). At the end of the workshop, students presented to the group their plans for moving their works forward (*closure*). Expanded discussion of each of these components is set out below to better illuminate the marriage of the HDIM and the RSD framework within the conceptual design of the workshop.

Anticipatory Set

The first task of the session required authors to summarise their work in one sentence. Students were then asked: "If you could add another sentence about the *originality* of your argument, what would it be?" The aim of this discussion was to get authors thinking about the relationship of their essays to the greater body of musicological discourse. Follow-up discussion allowed the facilitator to assess each author's familiarity with various critical trends and methodologies. Simultaneously, this discussion revealed that workshop participants largely operated between Level III ("students research independently at the level of a closed inquiry") and Level IV ("students research at the level of an open inquiry within structured guidelines") of the RSD (with alignment to either Level III or Level IV largely tied to the type of essay assigned by the lecturer for the unit of study).

Level III and Level IV alignment had distinct ramifications for the types of hypotheses students were able to put forth. Closed-inquiry assignments tended to produce essays in which no hypotheses were formulated – these assignments simply required students to provide proof of a particular assertion made by the lecturer. Structured-guideline assignments, on the other hand, either required students to engage a particular critical bent or pursue a particular avenue of investigation, implicitly holding back full autonomy over the first "facet of inquiry" charted by Willison and O'Regan: that "students embark on inquiry and so determine a need for

[2] The labels for research steps we use in the workshop are: "surveying the state of play," "identification of a research gap," "filling the gap" and "so what?". The current University of Adelaide research proposal template for postgraduate students uses the terms "state of play" and "gap" in its text while also highlighting the importance of a robust methodology and the clear articulation of a project's significance (see www.adelaide.edu.au/graduatecentre/forms/pr_proforma_ecms.doc). The University of Sydney Learning Centre also uses the term "gap" in their document *Writing a Thesis Proposal: Independent Learning Resources* (2001) while exploring literature review, methodological and articulation of significance elements (see http://sydney.edu.au/stuserv/documents/thesisproposal.pdf). Dr Ian Collinson, formerly of the UNSW learning centre, has used similar terminology in consultation sessions with postgraduate students. It is not our claim that these ways of compartmentalising or thinking about research are new. We simply posit that discussing the facets of inquiry outlined in the RSD in connection with these terms can help illuminate their meaning for students.

knowledge/understanding" (Willison & O'Regan 2007, p402). Deficit at the level of identifying a need for knowledge had further ramifications for other facets of inquiry in the framework, such as a student's ability to "synthesise and analyse new knowledge" (Willison & O'Regan 2007, p402).

Objectives/Standards

The goal of the workshop was to enable students to produce and contextualise original findings at Level V of the RSD framework ("students' research at the level of an open inquiry within self-determined guidelines"). This required an articulation to the students of what, exactly, the outcome of fully autonomous research looks like. Student comments about originality in the anticipatory set were used as a platform to launch a discussion about how research skills are assessed at the professional entry level – that is, in the assessment of Ph.D. theses. The following criteria, taken from the University of New South Wales notes for examiners of higher-degree theses, was presented to the students as a way of highlighting the intended outcomes of the workshop:

> *The expectation that a thesis displays a satisfactory degree of originality might be reflected in a number of ways. For example, a candidate might have posed an important new problem or formulated an existing problem in a novel and useful way. A candidate might have investigated previously ignored material, or offered new and significant insights about issues that have been examined by other researchers. A candidate might have developed new techniques for investigating issues, or might have applied appropriate techniques to a new set of problems. Replications of previous investigations would be acceptable provided they incorporate important new elements in the design or execution of the investigation* (University of New South Wales Graduate Research School 2006, pp1-2).

Students were then asked to identify a category within this description with which their assignments were most aligned. The facilitator then explained directly that the intended outcome of the workshop was to ensure that students achieved their goals of originality within an argument frame that would pass an assessment test at the professional entry level.

Teaching and Modelling

The announcement of this goal was followed by a period of direct instruction in which the facilitator demonstrated to the cohort how original contributions to knowledge in the humanities might be parsed into a series of four steps, in which various RSD "facets of inquiry" were either split or fused. The intent in creating this simplified model was to provide students with a manageable and replicable approach that allowed them to conceive of the whole research process as an overarching argument style.

The "facets of inquiry" Willison and O'Regan chart across levels of autonomy in the RSD framework are listed below:

(a) Students embark on inquiry and so determine a need for knowledge/understanding.
(b) Students find/generate needed information/data using appropriate methodology.
(c) Students critically evaluate information/data and the process to find/generate this information.
(d) Students organise the information collected/generated .
(e) Students synthesise and analyse new knowledge.

> (f) Students communicate knowledge and understanding and the processes used to generate them (Willison & O'Regan 2007, p402).

The first facet of inquiry in this list is concerned with charting the current "state of play" in the discourse. This facet includes the ability to understand and interpret works from the discourse in which students are working, as well as to identify gaps or shortcomings that will eventually inform their hypotheses, or what are normally referred to in the humanities as "thesis statements". The relationship between these two aspects of the first facet of inquiry is so important for the rhetorical drive of research arguments that they were presented in the workshop as two steps: "surveying the state of play" and "identification of a research gap". Facets (b) through (d) were then fused into a "filling the gap" step concerning the collection, evaluation and presentation of data. Finally, students were instructed to think of the "synthesis and analysis of new knowledge" that forms step (e) as the "so what?" point in their papers, where they tell the reader how their findings affect the "state of play" set out in the first stage of the model.

After introducing this four-step process, the facilitator modelled an analysis of a research-article abstract, colour coding sentences so that the four argument components were made clear to the group.

Guided Practice

Students were then presented with a new research-article abstract and were required to highlight or label the research-design steps introduced by the facilitator. A subsequent discussion in which students compared analyses was useful in clarifying the parameters of each step in the research-design model.

Check for Understanding

In order to ensure understanding of the four-step process, students were then required to evaluate a poorly written abstract for an article the facilitator had written as a postgraduate student. Flaws that the students identified in the conceptual design of the study were written on a whiteboard, then grouped by the cohort into the four categories of the research-design model. Potential solutions to these research deficits were discussed. This student-generated data was then compared with comments from readers' reports the facilitator had received. Alignment of student and reviewer comments denoted comprehension of the intent of the research-design model.

Independent Practice

Finally, students were directed to perform a similar evaluation of abstracts for their own articles. Once design flaws were diagnosed, the facilitator instructed students to come up with ways of addressing these flaws as they had previously done in relation to the poor abstract.

Closure

Students were asked to articulate their plans for revision to the group and then embark on a period of autonomous research development.

The HDIM and RSD can be seen to work in concert in this plan in terms of the scaffolding of student knowledge. Initially, the RSD framework was used as a diagnostic tool to assess student autonomy during the anticipatory set on a spectrum that had as its end goal autonomous production of knowledge new to the field. While the findings of this diagnosis were not surprising, they did support the suspected need for "autonomy support" that the workshop aimed to provide. Simultaneously, this element of instructional design served to make immediately relevant the introduction of *objectives/standards* and the research-design model introduced in the *teaching and modelling* step. The research-design model itself can in turn be seen to embrace the facets of inquiry of the RSD framework, fusing them into an easily replicable tool suitable for both planning and evaluation. The use of this model as an evaluation lens in the assessment of "professional-level" originality during the *modelling* and *guided practice* steps (both facets of the HDIM) subsequently facilitated student comprehension of the types of analytical tasks linked to facets of inquiry at the highest level of the framework. In short, use of the HDIM in this workshop aimed to ensure comprehension of a research-design model that could be used autonomously by students to achieve the standard of professional entry-level research.

Focus-Group Methodology

Data for reflection on the workshop and its aftermath were generated through the use of a semi-structured one-hour focus group comprised of two authors who pursued submission to the journal and one author who chose not to pursue submission following the workshop. The three were high achievers in their fields of specialisation and more broadly in their studies. All students who had taken part in the workshop had been invited to participate. The recruitment of participants via email and the resulting focus-group discussion were carried out with the approval of the University of Sydney Human Research Ethics Committee (protocol #14783).

The focus-group discussion was scheduled to take place a year after the workshop date to ensure that students would have experienced a spectrum of subsequent assignments and research tasks. The focus-group format itself was chosen in order to circumvent the power implications of a one-to-one interview, where questions about research process posed by an academic might have come across as a sort of research skills "test". In this way, we sought to circumvent the problem of an interviewer's "dominating role" unwittingly generating unreliable data, as described in the work of Cohen and Manion (1994, p287). The open format of the focus group, in contrast, allowed students to explore their experiences during and after the workshop in relation to each other, negotiating agreement or disagreement and thereby revealing rationales linked to individual interpretations of events. Furthermore, the group-discussion model allowed for the expression of ideas and viewpoints on subjects beyond the discussion topics identified in the focus-group schedule. The benefits associated with allowing group members space to negotiate agreement and the ease with which the focus-group format allows for the voicing of unpredictable viewpoints are two typically cited arguments in support of this methodological tool (Cohen & Manion 1994, pp287-288; Stewart, Rook & Shamdasani 2007, pp42-43).

Two broad discussion topics – "re-development of papers before submission" and "current research self-efficacy" – were used to structure the conversation. Exploration of these topics took place through the pairing of primary pre-scripted, open-ended questions with secondary follow-up questions – embracing a standard model of focus-group procedure as described in Stewart, Rook & Shamdasani's *Focus Groups: Theory and Practice* (Stewart, Rook & Shamdasani 2007, pp75-76). The discussion was audio recorded.

Coding and Analysis of Data

Focus-group data were interpreted through a general inductive approach (Thomas 2006). Audio recording of the focus group was transcribed strictly verbatim, and initial open coding by the primary author led to the identification of more than 20 categories or types of student comments from across the two topic areas. Conflation of these categories to account for overlapping themes and redundancy allowed for the delineation of two overarching themes: (1) Engagement with the requirements of original research, and (2) Eagerness to engage in original research projects. The primary author's descriptions of these themes were then given to the secondary author along with a clean version of the focus-group transcript so that the secondary author could perform a consistency check on the data set.

Engagement with the requirements of original research

Reference to the research model in general terms was frequently used throughout the focus group to describe methods of both interpreting and evaluating existing research and producing new research. In both of these realms, students appeared most engaged with the first two steps of the model (state of play, identification of a research gap).

A series of student comments showed a newfound awareness of the way professional authors assemble a research frame. The students were able to recognise elements often involved in introductions to the journal articles that they were reading, one identifying the recognition of "the way [authors] had set up the introduction…especially specifying the state of play and how it fits into the research." Another student then commented along similar lines that reading journal articles had become easier. This student displayed ability to identify conventions used across research texts, remarking, "There's a bit more predictability about the structure."

A similar focus on state-of-play engagement can be seen in student reflections on the essays they had submitted to the journal before the workshop. One student commented on this type of engagement as the central difference between the sort of assignments they were normally asked to write and the benchmark for originality required for publication in the journal:

> *Mine [essay brought to the workshop] was kind of a synthesis… a vague exploration, I'm just going to make this general idea and it's going to be really good and really well written and I'm going to get my marks. Like that's – that's what I was writing for…. So when we had all this stuff about… gap in literature and this is going to be published and people are actually going to read this and if you want to make this a paper you have to do this. I was like, well actually this paper doesn't have that – doesn't have the building blocks to work….*

Another student who felt their essay did include these essential "building blocks" pointed to the need to articulate with better clarity how the research question fits into the current critical milieu – demonstrating awareness of the need for each step of the model to build upon the previous step.

> *Through the process of revising it ... I sort of examined more closely... what I was extracting from various sources and how I was going about it. And … seeing how [I] had integrated the information from various sources helped me, um, understand what was unique about the paper.*

In relation to a current project, the same student later spoke about the model's usefulness in providing "a really concise way of approaching the literature in order to say something new or build upon something that exists already". Focusing more on the second step of the model (identification of a research gap), this remark was echoed by a final-year student for whom the discussion on identifying a gap in knowledge had made "a huge difference". This student expressed surprise that such an illuminating idea "can be summarised in a one-hour session".

A related discussion about the effect of the workshop on the production of new research work included comments about the need to read widely and discerningly when charting the parameters of a new field of inquiry. As one student reflected:

> *In the past I think I would have come across an article and gone, that's really exciting, and then depended quite a lot on that article. Whereas now I'm trying at least to step back and, um, sort of view the various texts and... in my head summarise what they have to offer.*

The importance of such an approach was then echoed in the comments of a student who spoke of the "worry" of stumbling across a book which "has done everything that you were…already doing", while another participant claimed to have become "a lot more…rigorous", making sure to cover "a lot more background knowledge" before focusing in on a research question.

Indeed, concern about successfully being able to survey the state of play served as a central feature in the discussion that followed the prompt question "What is the hardest part about doing original research?" As one student responded, "The problem for me is chewing through the literature to… find out whether your position is valid…you've got [to] read everything around it and make sure that you've really got a handle on everything... it's time-consuming." Commenting on a related problem and showing an increasing awareness of the demands of higher-level research, another student spoke about the limitations of lacking a reading knowledge of another language when there is "a whole mountain of literature" in that language but less in English.

Evident in the range of comments surveyed above is that student approaches to interpreting and evaluating existing research, as well as creating new research projects, changed after participation in the workshop. In particular, the workshop discussion around state of play and identification of a research gap seems to have clarified for students a path towards engagement with the first facet of inquiry in the RSD framework: the "determin[ation] [of] a need for knowledge/understanding". This is apparent in the newfound awareness of what is happening structurally in the introduction to professional research articles, the "before" and "after" style of commentary regarding the research practices of individual participants and the apparent anxiety arising from increased awareness by those undertaking literature reviews of the requirement to address new areas of inquiry. In contrast, comments about methodologies (the "filling the gap" step) and the need to articulate a project's significance ("so what?") were noticeably absent from the focus-group discussion. Possible explanations for this focus on "state of play" and "gap" are put forth in this paper's conclusions.

Eagerness to engage in original research projects

A secondary theme that emerged in the focus-group data was an eagerness to engage in original research projects. Many of the comments in this category were about the *intentions* underlying current projects. Yet plans by the students to approach future class assignments through the tenets

of the research model put forth in the workshop were also mentioned several times.

In discussion about current research practice, participants were keen to assert the desire to achieve measures of originality in their work. One student claimed to be "steering towards more…original contributions" while another student asserted having become "picky" about topics. A different student spoke of being "more selective…about, um, what I'm taking from different…articles". This student stated the intention to approach the next essay "differently because of…the process we went through"; moreover, in speaking about the specifics of what this new approach looked like, the student offered an instructive anecdote about the choice of a topic. Having chosen a topic because it appeared to have been little researched, the student found a dissertation in the library on the topic. As a result the student realised the need to:

> *redirect my approach somehow and see – because I think that's sort of just a general analysis – I might try and, um, take a different approach. Like trying to relate it to some part of [the composer's] aesthetic which isn't really in – dealt with in that book, or something.*

This student's awareness of the importance of pitting a research question against the current state of play in the creation of an original argument seems to be at the heart of the decision to change course on this class assignment. Another student taking the same elective class spoke in similar terms, highlighting first the difficulty in finding a research gap in a well-trodden field but then explaining the solution: "I decided to go really microscopically in-depth into looking at one movement of one [work]...there has been someone who has analysed [this work]…in a certain way and I disagree with that."

It is important to note in surveying these comments that the criterion of producing knowledge new to the field was not a requirement of their essay assignment. Nonetheless, both students were motivated to undertake an original research project and appeared quite familiar with the way existing literature places parameters on the types of research questions they might ask.

Direct comments linking the workshop itself with decisions to pursue original research projects in future class assignments surfaced in the group discussion as well. As one student reflected:

> *I feel that perhaps if...[the writing workshop] was given to…anyone attempting to do any type of original work, it would – it would change their methodology…. I know personally for mine, um, when I was evaluating what direction I'd like to go in…I was considering what I was interested in but I was also like, what is new and fresh? And that's part of the reason why I chose a contemporary issue.*

Another correlated the journal-article project with a newly developed perspective on undergraduate assignments, finding that these can be something more significant than previously thought:

> *I think doing this project helped me realise, um, a bit more fully that you can do an assignment that, you know, will get the marks and be like a school assignment…but which is also something significant.*

Comments in this thematic set demonstrated a desire to pursue an original research bent even

when such an approach was not required. This is apparent in the way in which students selected topics for class assignments – their self-ascribed "pickiness"; the way in which they shied away from essays that comprised only synthesis; and their general comments regarding the relevance of the research model to class assignments.

Conclusion

Despite the established benefits associated with undergraduate students conducting original research projects, the extent of factual and conceptual information needing to be covered in undergraduate creative arts and humanities classes does not always lend itself to simultaneous high-level inquiry training. Research-led teaching in these courses often manifests as self-selected literature surveys or the opportunity to choose a particular interpretive lens, leaving little room for the development of findings new to the field. While a broader embrace of research-skills training may manifest in these classes, we have attempted to augment the curriculum as it currently stands through the design of an initiative that develops research skills in an extracurricular setting. Through a writing workshop associated with the Sydney Undergraduate Journal of Musicology, we aimed to provide self-motivated students with a replicable research model informed by the Willison and O'Regan Research Skills Development framework. It was our hope that this model would be useful to students both interpreting and producing original research, and that it would be applicable in a wide variety of settings. Student comments taken from a focus group run a year after our writing workshop indicated success regarding the perceived usefulness of the research model in these two realms, as well as participants' desire to bring original research methodology into class assignments not specifically requiring the development of findings new to the field.

The goal of ensuring the comprehension and, in turn, replicability of the research model within the confines of a one-hour workshop led to the use of the Madeline Hunter Direct Instruction Model as a pedagogical frame. The tiered modelling and practice activities embedded within this model allowed for several points of clarification and multiple checks for understanding throughout the workshop. Transition from an anticipatory set linked to student-owned knowledge, to a "check for understanding" activity in which students were asked to critique the facilitator's own work, and finally to a closure activity that required students to reflect on deficits in their submitted essays, aimed to make the taught knowledge of the workshop – the four-step research model informed by the RSD – memorable and relevant.

Student comments in the focus group were useful in charting initial marks of success in this regard. Notably, the research model did serve as a central feature in discussion about past, current and future research endeavours – evident in student references to the need to critically survey a state of play and identify a research gap when conducting original research. Yet this focus seemed to marginalise discussion of the model's other components. A lack of comments about the methodological step of the model may indicate a comfort with analytical processes taught in our undergraduate courses. Indeed, when "analysis" did come up in the focus-group discussion, rarely was it broached with the language of anxiety that surrounded the discussion of state of play. Specific references to the "so what?" step of the model – the articulation of significance– were also largely absent from the discussion. Some comments during the focus group seemed to indicate a perception that significance would stand as self-evident if the state-of-play survey and identification of a research gap had been done correctly. Yet such an assumption reveals a lack of comprehension regarding the rhetorical drive of the written research output, indicating the need to make the importance of this final step clearer in future deployments of the workshop.

More positively, focus-group comments revealed a desire to take what was learned in the workshop and apply it in class assignments. Such ongoing engagement with original research activity, even when it had not been explicitly asked for, allowed students to further develop their research practice. This is evident in the way the students described employing varying strategies aimed at carving out a research gap and selecting a research topic.

The writing workshop associated with the Sydney Undergraduate Journal of Musicology can therefore be seen as a qualified success in terms of delivering repackaged facets of inquiry derived from the RSD in a manner that ensures ongoing use. While this solution is not as ideal as perhaps including more high-level inquiry training within discrete units of study, it does provide a way of extending what is taught in these units for students looking to engage with class content on a deeper level. In turn, comments from the focus group indicate that there is potential for an extracurricular project on research training to feed back into the core music curriculum. More extensive tracking of post-workshop research activity and a wider net of participant commentary will no doubt clarify our initial thoughts about the program's strengths. Yet it is hoped that this early set of notes may prove useful to those in the tertiary sector looking for ways to immediately augment the research-training schemes currently taking place in their faculties.

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