A STUDY OF WRITING ASSIGNMENTS IN SELECTED CANADIAN UNDERGRADUATE ECONOMICS PROGRAMS*

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ABSTRACT

The literature on university economics education suggests that written assignments are a highly valuable assessment vehicle that can help students to develop economic knowledge as well as skills relevant to the workplace. That literature also suggests that written assignments are under-used by economics instructors. Few studies have, however, attempted to quantify the degree of under-utilisation. This paper uses enrolment data and data extracted from the content of course outlines and syllabi to assess the degree to which writing is used as an assessment strategy in economics courses at a sample of research-intensive Canadian economics departments. The analysis shows that economics writing is indeed under-represented within the range of assessed activities at these institutions. Some observations are also provided about the context and type of writing assignments offered. The conclusion reached is that there is considerable pedagogical room within these institutions to make greater use of economics writing as an assessment tool.

Keywords: assessment, economics education, writing.

JEL classification: A22

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1. INTRODUCTION

The academy is being called upon to examine how we train and prepare tertiary students (Adelman 2006; AACU 2007; Barr & Tagg 1995). A number of constructive commentaries about the state of economics education have appeared in the literature over the course of the last 20 or so years. There have been: suggestions for curriculum reform (Salemi & Siegfried 1999; Siegfried et al. 1991) and support for instructors trying to move away from reliance on the lecture format (Salemi & Siegfried 1999; Colander & McGoldrick 2009); recommendations for using active learning techniques and opportunities to engage students in economic reasoning around social policy issues to address the imbalance of instructional practices that limit student engagement (Siegfried et al. 1991, p.214); and compelling arguments about teaching the strengths and weaknesses of the various schools of economic thought (O’Donnell 2004).

Chalk and talk has nonetheless been a durable instructional approach over the fifteen years covered by three surveys of American academic economists’ teaching methods and assessments conducted by Watts & Becker (2008; see also Becker & Watts 2001, p.275). Before these surveys were published, Seigfried et al. (1991, p.207) perceived deficiencies in the range of assessment vehicles used to ask students to demonstrate their mastery of economics. At least in the United States, the evidence suggests the dominance of what Christensen, Hughes and Mighty (2010, p.4) call “practices of convenience” aligned with the transmission model of education. Such practices include a heavy dependence on assessment items such as multiple choice exams and quantitative problem sets. In contrast to practices of convenience, assessment vehicles such as those which rely more substantially on student writing as an important element of economics education have been argued to more effectively act as an “acid test of thinking like an economist” (Seigfried et al. 1991, p.211). Writing is a key proficiency in a practicing economist’s toolkit, embodying information literacy and communication skills as well as effective use of economic forms of evidence and argument.

No systematic survey of disciplinary teaching and learning activities or assessment methods has appeared for Canada. The present study, therefore, aims to help fill this gap by examining the extent to which writing is used as an assessment vehicle in selected Canadian undergraduate economics programs. The study uses content analysis
of all course syllabi from participating departments to derive data regarding how much economics writing was offered in the 2008-2009 academic year. This is then combined with course enrolment data to calculate the proportion of courses that provide opportunities to write about economics. This approach allows the prominence of disciplinary writing opportunities to be quantified and overcomes a number of problems with other approaches in the literature that have been used to examine assessment methods, and thus informs the ongoing conversation about teaching and learning activities in economics education.

The next section summarizes that conversation. The section after that outlines the study’s methodology, describes the data and analyses the data. Results about the prevalence of writing opportunities in the sample institutions are reported and additional observations from syllabus content are made. I then discuss implications of the findings, including how writing complements the economics curriculum, before summarizing and concluding in the final section.

2. THE IMPORTANCE OF WRITING SKILLS IN UNDERGRADUATE EDUCATION

The education literature calls for writing to be a part of the economics curriculum (e.g., Siegfried et al. 1991, pp.217-218; Salemi & Siegfried 1999, p.358; Becker 2000, p.117 stops short of actually calling for writing). There are two themes in the literature that pertain to economics writing. The first is authentic assessment, what the discipline sometimes calls “doing economics” (McGoldrick 2008), and what Hansen (1986; 2001) alluded to when he recommended teaching proficiencies in addition to concepts. Authentic assessment is defined as any graded task that requires the student to engage in meaningful or worthy activities that are analogous to expert use of the content (Wiggins 1993, p.229). Better examples of authentic assessment are performances that maintain a fidelity to the skills and competencies that a practitioner of the subject matter would actually carry out (Cumming & Maxwell 1999). For economics, writing is a form of authentic assessment, a platform for performances that are congruent with, if sometimes somewhat contrived examples of, what economists do.

The second theme from the literature is the development of substantive reasoning or critical thinking skills. An assignment that requires “[a]ctive, persistent and careful consideration of any belief or
supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends” (Dewey 1910, p.6) can address both the integrative thinking and active learning aspects of the learning outcome deficiencies that are described in Siegfried et al. (1991) for the economics major. The difference between assignments designed to foster critical thinking, and writing that simply reports what is written by others, is influenced by the instructor’s expectations and the feedback they provide during the writing process (Bloemhof 2008). Students need to be coached while they learn to integrate information, to understand the economic phenomena they are studying, to use economic reasoning and evidence, and to unpack the assumptions that underpin explanations in order to evaluate them and make recommendations (Black & Wiliam 1998). To the extent that the assignment gives students autonomy and control over their learning, minimally contrived authentic writing assignments can develop important self-management, critical thinking and research capabilities if they ask students to be resourceful in pursuing their research (Dynan & Cate 2009; Fulwiler 1982; Bloemhof 2008; Roy 2007). Students can define and refine a research question, locate and evaluate the resources that they will use to inform their beliefs about their question, formulate arguments, and integrate information into convincing conclusions about their question, just as Siegfried et al. (1991, p.217) recommend in the economics education literature as part of “doing economics.”

Unfortunately, the evidence suggests that substantive writing (or inquiry; see Bloemhof 2008), as distinct from reporting or summarizing in written form what others have said, is rare in the discipline. Almost 30% of the selected American economics departments surveyed by McGoldrick (2008, pp.288-9 and Table 1) have no writing requirement at all. A formal writing course is required by 34.6% of these responding departments, and a one-off senior (honours or capstone) seminar with some writing dimension is the next most common (31% or 75 responses). Although about 15% of McGoldrick’s sample reported having a course dedicated to teaching the research process as the student completes a research paper, clearly almost any upper level course could provide opportunities for students to practice writing using economic reasoning and scholarship to establish and think critically about beliefs in the way that Dewey (1910) describes.
There are, of course, challenges to offering as much writing as desired. Instructors are naturally reluctant to assign writing if it could increase the time spent on teaching and grading.\(^1\) It takes patience and time to communicate expectations about good reasoning and credible evidence in economics, through timely individualized, formative feedback that develops students’ facilities with discipline-specific forms of evidentiary support and information integration (Black & Wiliam 1998). It is much easier to use only test-based assessment of declarative and technical knowledge, particularly with available test banks and on-line quizzes to automate the grading, than to assign some writing in addition.

These observations suggest a form of inefficiency due to self-interest dominating the social optimum: test-based assessments replace skills-based, coached or repeatedly formative assessments, and authentic assessments become rare. Of course, another form of inefficiency works on the demand side of the degree market. Students are also self-interested and significantly influenced by assessment structures (Biggs 1996; Gibbs & Simpson 2004/5, p.6; Watkins & Hattie 1981); they have learned to expect, and how to succeed in, traditional test-based assessments. It is conceivable that they may strategically avoid elective courses with a written assignment, particularly if they have limited university level writing experience and high grades are needed for the next step in their education or career.

It is hard to say what a typical student needs to develop their writing skills. Light (1992, p.28 and Chart 7) found that 71 percent of responding Harvard University undergraduates wrote ten or more papers during their academic year, with only six percent writing fewer than four papers of any length (\(n = 365\)). When science concentrators at Harvard are excluded from the sample, 83 percent of respondents turned in at least sixty pages of final draft written work during an academic year, and only ten percent reported fewer than forty-five pages of final draft work (Light 1992, pp.28-29). Apparently, it did not take very much writing to challenge respondents intellectually and increase their time commitment and self-reported engagement (Light,

\(^1\) One reason to assign written projects to teams of two or more students is to minimize the grading burden. These social climates simultaneously create issues of shared workload and dilute the skills learning for the individual. Consequently, team projects should probably be chosen only when the value of learning to work in teams is a priority.

Writing is part of an agenda for enhancing economics education, particularly for the people who take economics for general education (Salemi & Siegfried 1999, p.357). Economic methodology uses technical and numeric argument with abstract reasoning to analyze diverse and important social problems, often implying policy prescriptions that must also be justified on the grounds of balanced judgment. Economic issues provide an excellent content for students to practice these complex communication skills. Communicating for clarity and understanding, and numeracy and problem solving skills are part of a set of fundamental employability skills (Conference Board of Canada, 2009).

The cost of providing “constructive intellectual uneasiness” (Cohen & Spencer 1993, p.227) is worth it, particularly if it does get students to focus on argument and think like economists. Writing-based authentic assessments create opportunities for students to engage with course content, and are both a vehicle for and evidence of learning to question, to argue with reason, and to marshal evidence (Bloemhof 2008; Fassler Walvoord & Smith 1982). However, practice with writing is needed to build proficiency, and offering more writing early in the program, as Dynan & Cate (2009) recommend, seems wise.

Writing is therefore important, but how much is it used in practice?

3. METHODOLOGY, DATA AND ANALYSIS
As outlined above, the objective of the present study is to quantify the prominence of disciplinary writing opportunities in participating Canadian universities. One of the strengths of the approach taken here is that it overcomes a number of problems with other approaches in the literature. The first problem arises from the fact that surveys mix perception and intent into the data. The lengthy surveys by Becker and co-authors referenced above, ask instructors to recall aspects of recently taught courses, without the means to verify these recollections. The survey about writing assignments conducted by McGoldrick (2008) also asks a subset of individual instructors to remember what they did in a class. The course syllabus, by contrast, is an objective but convenient snapshot of the presence of graded
writing; indeed, the syllabus is often interpreted as a binding contract between students and the institution. A complete set of syllabi over all courses in the program for the academic year thus provides an objective record of what students did in the course.

The syllabus is also a pragmatic reflection of how important writing assignments are in the eyes of the instructor because value has been attached to these activities in the final course grade. There is no reason to suppose that the percentage grade weight represents the assignment’s value or contribution to learning even within a course, much less across courses. But the presence of graded writing in the syllabus does signal the possibility that the instructor perceives writing to be at least as valuable to learning as other possible assessment activities.

The grade weights allocated for assessed teaching and learning activities also represent the hidden curriculum that drives students’ perceptions of where to focus effort in order to earn grades in the course (Snyder, 1971, cited in Gibbs & Simpson 2004/5, p.4). Graded writing is probably not the only writing that students do to facilitate their learning, however students are strategic in how they allocate their time (Gibbs and Simpson 2004/5, p.6; Entwistle 2010, p.28). A grade incentive may be necessary in order to inspire the sort of sustained writing in an essay or research paper.

Finally, the chalk and talk survey data reworked in Schaur, Watts & Becker (2008) does not scale for class size when reporting the number of instructors surveyed who use writing-based assessments, which can give a misleading impression of the incidence of assigned writing.

The current study uses the enrolments for each course to measure actual student exposure to written assessments as a weighted proportion of total enrolment across all economics courses, and therefore yields an enrolment-weighted measure of writing within each department and across the participating departments in the study.

The study’s data was derived from the full set of course syllabi and final registration enrolment numbers for all courses offered in the fifteen participating economics departments over the period from September 2008 to April 2009, excluding summer session. The set of all Canadian institutions offering post-secondary qualifications in economics is at least four times larger than the sample, ranging from

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2 Summer session was excluded to remove the burden of responding to the data request in August or the new academic year.
college programs through teaching-oriented universities, comprehensive universities and research-intensive universities. Reputations of departments are strongly influenced by their research record, so it would be valuable to verify whether the skills that students develop at the research-based institutions are broadly congruent with reputation. The economics community in Canada is compact enough to be characterized by a productive rapport among chairs. Still, some parsimonious judgments were made when creating a prospective participant list of research-intensive economics departments from each region of the country (including representation from francophone institutions) that would also have available personnel to indulge the fairly onerous request for a complete set of data.

Department chairs at sixteen research-intensive universities in Canada were asked by email to participate in a study about the amount and type of writing required of students taking economics, and all but one consented to participate. A complete set of syllabus and enrolment data for each department were collected using a combination of email, conventional mail and web page access.

Table 1 lists all participating departments. They varied in size and program focus, but all offered major and honours undergraduate programs, as well as graduate programs conferring masters and doctoral degrees in economics. Twelve of the fifteen were in the top fifteen Canadian institutions according to the RePEc ranking of the top 25% of economics departments in the study year. The participating departments in the sample therefore reflect well-regarded Canadian economics departments.

The size of a department during the academic year, defined as the total enrolment in all courses, is calculated as a simple sum of the number of students in each four-month-long course offered between

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3 Though supportive of the research, one department declined to participate because providing the requested information in a useful format would have required considerable resources.
4 One department chair kindly wrote a Gauss program to put their data into a more accessible format.
5 Ranking is as of December 2010; see IDEAS (2010). The three institutions that did not make this list, which RePEc itself calls experimental, are located in the west, centre and east of the country respectively. Note that all of the participating departments offer graduate training in economics and, like most Canadian universities, are publicly funded, not-for-profit institutions.
Table 1: Participating Universities providing Economics Course Syllabi for Academic Year 2008-2009

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<td>Queen’s University</td>
<td>University of Guelph</td>
<td>University of Western Ontario</td>
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<tr>
<td>Simon Fraser University</td>
<td>Université Laval</td>
<td>University of Victoria</td>
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Note: University of Western Ontario is now called Western University.

September 2008 and April 2009. Size therefore refers to the total number of enrolments in each course credited in the regular academic year. Size is bounded from below by the total number of students served in the department because upper-level students are likely to be taking more than one economics course during the year. Chart 1 shows the sizes of the participating departments. Departments range from about 2,500 to about 12,000 enrolments and the average total enrolment in the participating departments is nearly 7,300.

To determine which of these courses asked students to turn in some form of written assignment, I first calculate the sum of enrolments in all courses for which the syllabus lists a grade for a written assessment. No distinction was made between different forms or lengths of written assignment, or numbers of authors. Essay-type questions in timed examinations, which had a summative rather than a formative objective, and may be graded pragmatically using a different set of criteria than those used for a research paper (Fulwiler 1982, p.16), were, however, not included as writing opportunities for purposes of this study. While valuable, the types of question that can be asked in an examination, the forms of evidence and the reduced revision opportunity available in an examination situation,

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6 The few eight-month-long courses that were observed were counted as two half-courses of two times the second term’s final enrolment.

7 Two courses offered a paper as an alternative to an examination. These were treated as opportunities to write; however, they represented less than 0.3% of the respective total enrolment.
make them quite a different form of composition than a research or term paper.

For courses with writing identified, I sum course enrolments and divide by institution size as specified in Chart 1 to calculate the proportion of course enrolments with writing in the assessment structure for each participating institution. Chart 2 shows the resulting proportions for each department including all courses. Chart 3 shows the resulting proportions for upper level courses only, that is, for all courses excluding first year introductory courses. The weighted average across all fifteen departments of the proportion of all courses with at least one instance of evaluated writing is 11.3 percent, rising to 19.0 percent if first-year courses are excluded.

For this sample, the size of the program is not influential on the proportion of course enrolments with writing opportunities. Chart 2 shows that a large total enrolment does not necessarily imply fewer opportunities to write \( (p = 0.818) \); indeed, the largest department offered more than the average number of writing opportunities. The slight negative relationship between program size and proportion of upper level classes with writing opportunities in Chart 3 is not significantly different from zero \( (p = 0.137) \).

However, the size of the honours program could be influential. On the one hand, a large honours program relative to the intake in principles may mean that relatively many students get to write a senior thesis; conversely, smaller honours programs may imply more
Chart 2: Writing as a Proportion of Total Enrolment.

Note: Total 2008-2009 enrolment is the sum of all half-year course enrolments.

Chart 3: Writing as a Proportion of Upper Level Enrolment (Omitting First Year Courses).

instructional resources per capita, and therefore could mean more writing opportunities.

A very rough idea of the size of the honours program relative to total enrolment is the sum of senior thesis course enrolment as a proportion of the enrolment in the principles of microeconomics course. Chart 4 shows the proportion of total enrolments (including first year courses) with writing in the assessment structure for each institution ordered by ascending size of relative honours enrolments. For programs which did not have an honours seminar, the enrolment
Chart 4: Opportunities to Write as Proportion of Total Enrolment by Estimated Size of Honours Class, 2008-09 Academic Year

Chart 5: Proportion of Classes with Enrolment Greater than 30 by Size of Participating Department

Chart 6: Grade Weight of Writing Assignments, All Departments (Excludes Honours).
of a single fourth-year honours program required course was substituted (for example, senior microeconomic theory). The sample correlation coefficient between size of program and proportion of writing opportunities is 0.38.

Chart 5 shows, not surprisingly, that departments with higher total enrolments in the sample tended to have more large classes; in every department, though, classes became smaller on average as the student progressed through the program. If the honours seminar is excluded, then assignments worth between 10% and 50% account for more than 97% of all writing, and more than 98% of all student enrolments in courses with writing. For these assignments, there is a significant negative correlation between class size and the proportion of the final grade made up of writing ($r = -0.4915$). This is illustrated in Chart 6. Larger classes tend to use other assessments for more of the final grade.

The quantitative analysis outlined above was supplemented with additional analysis of course outlines to see what kind of writing was assigned and how this writing was approached by instructors. This analysis indicated that the writing that was assigned was diverse, ranging from simple reporting (summaries of someone else’s writing) through industry studies, research essays involving inquiry (integrative writing in which puzzles in the literature are actively explored), to senior theses with literature reviews and empirical work. Team projects were common in some departments. One participating department even offered a writing assignment in a microeconomic theory course required for the major.

All of the fifteen participating departments required some writing of their honours students, but it would not be accurate to describe a “traditionally-formatted course” in this sample as having two tests plus a paper, as Cohen & Spencer (1993, p.219) do. In this sample, a two or three midterm, one final examination course is the new “traditional”. Two-thirds of the departments offered an honours seminar organized around significant scholarly writing on a topic which, unlike most of the other writing described in the syllabi, was often student-chosen within an instructor-specified broad topic area or theme.

All participating departments had statements in their syllabi about the value of written assignments. At some institutions, the content analysis picked up a departmental commitment to writing. A
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One mandatory course organized around writing was offered by one participating department. Two other departments had a requirement that students should demonstrate proficiency in written expression. Despite this, not all of the programs that clearly indicated an explicit writing requirement showed a high proportion of writing opportunities relative to enrolment. Two of the participating departments could conceivably confer a general (non-honours) economics degree on someone who had not completed a single instance of writing in the discipline.

One observation about this census of course syllabi in these selected departments is that very few syllabi laid out an explicit set of learning objectives. Nearly all of the syllabi focused instead on the content that would be covered, often from the recommended textbook or reading list. Fewer than 5% of the courses represented in this study listed learner outcomes, such as what skills a student would learn, how a student would change, or what they would be able to do as a result of taking the course.

4. DISCUSSION

It would be hard to argue that Canadian academic economists do not believe writing is valuable. The data identify a number of programs with explicit writing requirements including one core theory course. However, the data also indicate that in a number of the participating departments there were very few or no writing opportunities at the second or third year level. Students could conceivably take the honours seminar without any prior opportunity to master discipline-specific information literacy or written communication skills.

For some students this represents a real problem. The learning objectives alluded to in the syllabi for some honours seminars, capstone experiences involving the development of data handling and econometric skills, suggests that adequate research and writing proficiencies might be assumed at the beginning of the honours seminar. Students may benefit from opportunities to develop these proficiencies and to practice the art of following a substantive

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8 In one participating department, only honours economics students were required to demonstrate writing proficiency, either by credit for the honours seminar or by submitting two essays worth at least a quarter of the final course grade from economics courses.

9 Saunders (1998) provides some information about how to formulate learning objectives in economics.
economic issue through the literature, critically reflecting on this issue, and presenting the results of their reflection in writing before they arrive in these capstone experiences. Integrating numeracy skills into an authentic project is a sufficiently challenging exercise in itself. Having well formed writing proficiencies from earlier coursework would help students to clearly articulate the outcomes of their learning about data handling and econometrics.

It must be remembered that the findings outlined above represent conclusions that relate only to a subset of the total number of Canadian economics programs and should be interpreted carefully. Clearly, information-oriented sampling is the appropriate methodology for a study like this, because randomization would obscure the interesting information needed to answer the research question. Although the economics departments that agreed to participate represent research-intensive universities and programs, the results can only apply to that sample and certainly cannot be said to reflect a country-wide average. Furthermore, not all students avail themselves of learning opportunities with the same degree of fidelity to the process, so although on average writing is an engaging learning activity, its impact will certainly vary from student to student.

5. CONCLUSIONS

A wide range of teaching and learning activities is available to facilitate the desired competencies in a balanced course of study in higher education. Writing is a particularly strong candidate for economics both because of its fidelity to the practice of economics and also because of its proximity to academics’ experience. It may be challenging for instructors to offer more opportunities for active learning via in-class experiments, for example; the same is not likely to be true of writing assignments.

The purpose of this paper has been to discover the extent to which writing is used as a formative assessment vehicle in selected Canadian economics programs. The syllabus content analysis suggests that, for institutions participating in the study, writing is an under-represented form of assessment relative to traditional testing. All of the departments had instances of undergraduate economics writing, so students do have some opportunities to strengthen their writing skills at these Canadian economics departments, but the scope to develop proficiency in critical thinking through writing may be deficient
because of the number and type of writing opportunities currently assigned.

Students may of course get writing experience from outside of the discipline, but writing experiences from other disciplines may be poor preparation for the honours seminar, where proficiency with economic writing is most helpful. Standards across the academy for information integration and evidentiary support are parallel but distinct from the unique lens used by economists to view the world. To weigh complicated issues, the best economic writing integrates analysis from the scholarly literature and nuanced reasoning backed up by data. The forms of proof used in economic argument are different to those used in history or political science, and students need practice developing, employing and expressing these forms in writing if they are to be the most effective economists possible.

In all disciplines, writing assignments in electives might be surveys or reporting of existing knowledge that are not designed to advance proficiency with questioning, creation of new insights or exploration of puzzles of the student’s own choosing. Surveys and reports are certainly appropriate as part of a well-rounded education; however, using higher order critical thinking to integrate information and analysis in the context of economic problems must be considered a key proficiency for economics graduates. Based on the data presented in the current study and the US surveys in the literature, it seems clear that, at the margin, changing some of the assessed activities in the economics curriculum into writing assignments designed to integrate these skills could be quite valuable to learning.

Writing is a skill, and skills require room within the curriculum for practice. If graduating economics students with well-developed higher order cognitive and affective domain competencies is valuable, then there is a role for more writing, at least in some Canadian economics programs. Addressing the issue of how to bring this about, given the convenience of traditional testing, is the next challenge. The economics discipline is well-positioned to train critical thinking and questioning skills, having the asset of important and relevant societal issues and the unique lens by which to view that society. It would be a shame if that learning opportunity continued to be generally neglected.
REFERENCES


