Student Participation in University Governance at a University with Predominantly Online Programs

by

Linnea Gay Perry
B.A., University of Alberta, 1988

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of

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ABSTRACT

The purpose of this study was to investigate if there were predictors for student participation in university governance; voting rates in particular. The variables examined were citizenship status, gender, age, basis of admission, program level, and program delivery model. The location of the study, Royal Roads University, offers the majority of its programs through a blended delivery model: an online format combined with short residencies. A regression analysis was performed on voter participation rates in elections for student representatives on the Royal Roads University Student Association, Academic Council, and the Board of Governors. Results indicate low voting rates overall with the highest frequency of voting amongst those in blended delivery programs; correlations exist between age and citizenship status, and between program delivery model and program level, but statistically significant predictors of voting behaviour were peculiar to each election dataset.

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Acknowledgments

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Dedication

For Sherman Waddell and David Rees who encouraged me to start this journey, and to Mark Perry and Lenora Marcellus who actively supported me throughout.

Introduction

Statement of the problem

Publicly funded post-secondary institutions in Canada are struggling to maintain a balance between the demands of business and of government: between return on investment and public interest (Schuetze & Bruneau, 2004). Models of higher education are changing as are students' roles within universities and colleges: some institutions are moving away from traditional institutional models to more entrepreneurial models and students are increasingly being viewed not only as partners in a relationship based on teaching and learning but also as consumers. Assuming that these roles are not mutually exclusive, how active a role are these consumers of higher education taking in the management of their institution through participation in university elections?

Whereas previous research in this area (Jones & Skolnik, 1997; Wood, 1991; Zuo, 1995; Zuo & Ratsoy, 1999) has been primarily qualitative in nature and has focused on the roles, influence, contributions and testimonials of student representatives on university committees as well as broader socio-political aspects of the relationship of the student body to the academe, this study examines data on voter participation rates in elections for student representatives on university committees to determine if gender, age, citizenship status, basis of admission, and level of program may influence student participation rates in university elections. Because the university participating in the study, Royal Roads University (RRU), offers most of its programs in an online or blended format incorporating short intense residency periods, the delivery model of the students' programs is also a variable in the study.

While anecdotal information has indicated student involvement in elections for student representatives on university committees and the Undergraduate Students' Association has been low, and basic voter participation rates obtained from the online open-source *LimeSurvey* analysis tool[1] (which is used to conduct and summarize the results of online elections) confirmed this, no detailed specific data on voter demographics has been researched until now.

The purpose of this study was to investigate voting rates in elections for student representatives on the Royal Roads University Student Association, Academic Council, and the Board of Governors and to determine possible predictors (citizenship status, gender, age, basis of admission, program level, and program delivery mode) for student participation in university governance.

Review of the literature

There are a number of themes in the literature relevant to this study: the composition of the student body at Canadian universities and colleges; student involvement in university governance and participation rates in university elections in particular; and the broader issue of voting behaviour in society.

The composition of the student body is an important aspect to consider in terms of institutional governance because the ratio of international students to Canadian citizens; of women to men; and changing age demographics can influence the direction an institution takes in terms of academic programming, scheduling, delivery models and provision of student services.

[1] http://www.limesurvey.org/en/

The Bologna Process, an initiative by 46 European countries to restructure and harmonize the post-secondary education system in Europe[2], often serves as the foundation for discussions of higher education from an international perspective. Supplementing the objectives of the original Bologna Protocol presented at the eponymous Conference in 1999, the 2001 Prague Conference articulated the value of student representation in higher education governance (Bergan, 2003). Yet for many Canadian universities where, as in most of Europe, student involvement in university governance has been a reality since the 1960s, the impact of the Bologna Process has primarily meant increasing awareness of the value of cultural diversity and mobility in tertiary education. This has led to the creation of joint degree programs and other types of partnership agreements with non-Canadian institutions, not only bringing more students from other countries to Canada to study but also providing opportunities for students in other countries to enroll in programs that feature Canadian-developed curricula at their own institutions. Also, developments in online learning platforms such as Moodle have had an impact upon teaching models to the extent that some students never have to be physically present in classes at any institution in order to earn a credential.[3]

Literature on statistical trends relating to the student body at Canadian universities and colleges (AUCC, 2011) indicates that as of 2010 of the more than 1 million students enrolled in degree programs in Canada, 56% were women and 10% were international students. Recent data posted by the Research Universities' Council of British Columbia[4]

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[2] http://www.ihep.org/assets/files/TheBolognaClub.pdf

[3] The Environmental Practice programs at Royal Roads University are an example of such programs.

[4] http://www.bcheadset.ca/

echoes the national rates for both groups while information from the British Columbia Ministry of Advanced Education[5] (which post standard reports based on data provided by institutions that submit student and program-related data twice yearly as part of the Ministry's Central Data Warehouse) matches the national gender ratio but shows a slightly lower percentage of international students at just over 7%. The RRU student body composition falls within the BC and Canadian norms for gender and numbers of international students. The average age of BC graduate and undergraduate students are not reported at the provincial level; however with an undergraduate population that has an average age of 30 and a graduate population that has an average age of 40, RRU's student body is assumed to be older than the BC average and is certainly above the national averages: AUCC reports that 86% of full time undergraduates in Canada are under 25 years of age; and that only 31% of Canadians at the graduate level were 30 years of age or older.

Another aspect of the student body covered in the literature concerns so-called 'non-traditional' students (Bean & Metzner, 1985; Gilardi & Guglielmetti, 2011) which is relevant insofar as it provides some definition of the non-traditional student that may be applied to a large part of the sample population in this study: mid-20s or older, part-time, commuter (physically or virtually), and likely working full-time. However, extant studies on non-traditional students do not examine these students' participation in election processes and tends to restrict its scope to the university experiences of first-year students and their continuation into second year.

[5] http://www.aved.gov.bc.ca/datawarehouse/welcome.htm

Previous Canadian studies related to student involvement in university governance (Jones & Skolnik, 1997; Wood, 1991; Zuo, 1995; Zuo & Ratsoy, 1999) are outdated and focus on traditional university or college environments where students attend classes on campus; and while there is research relating to student engagement and persistence at higher education institutions offering distance (and specifically online) programs and courses (Angelino, Williams & Natvig, 2007; Hughes, 2004; Simpson, 2012), statistical data on student participation in governance and elections at such institutions is lacking.

While student leadership and participation in university governance has been the subject of articles, reviews and varied research in Europe (Bergan, 2003; Pabian & Minksová, 2011; Persson, 2003), Australia (Lizzio & Wilson, 2009), and North America (Renn & Lytle, 2010; Wood, 1991; Zuo & Ratsoy, 1999) the literature has tended to focus on the principles of democratic representation in higher education or been conveyed through the lens of student leaders or representatives on committees and set within the broader context of fostering opportunities for civic engagement as provided by colleges and universities (Hollister, Wilson & Levine, 2008) which are often driven by institutional, national (Colby, Ehrlich, Beaumont, & Stephens, 2003) or international priorities.

There is substantial literature on voting behaviour in the context of provincial, federal and municipal elections, as well as information linking education and voting behaviour such as Statistics Canada research[6] on voting in the May 2011 federal election that found:

[6] http://www.statcan.gc.ca/pub/75-001-x/2012001/article/11629-eng.pdf

> Voting rates increased with both age and education. However, the education effect was much stronger among young voters, such that the difference in voting rates between 18- to 24-year-olds and 25- to 34-year-olds disappeared after controlling for education and other factors. (p 3)

However, with one notable exception (Lewis & Rice, 2005), there is a distinct lack of literature concerning student voting behaviour within the higher education setting. Why is it important to measure voting rates in university elections? From the institutional perspective there are motives which are both altruistic and self-serving: to demonstrate institutional interest in non-academic student involvement in university affairs; and to measure the engagement of particular groups of students with the institution in a way not covered by student engagement surveys such as the BC Student Outcomes[7] surveys, the National Survey of Student Engagement (NSSE)[8], or the Canadian Graduate and Professional Student Survey (CGPSS).[9]

It is hoped that the findings contribute to determining if there is a need to dedicate more resources, including staff time and effort, to encouraging students to participate in university elections and to making them aware of the benefits of voting for student representatives with the possibility of increasing turnout. (Recognizing the diverse concerns of the students in online and on-campus programs, the Royal Roads Undergraduate Student Association (RRUSA) has separate Executive positions for an online president and an on-campus president.) Finally, as Lewis and Rice (2005) note, 'a comprehensive understanding of turnout requires that scholars examine a wider array of elections than they have to date.'

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[7] http://outcomes.bcstats.gov.bc.ca/Default/Home.aspx

[8] http://nsse.iub.edu/

[9] http://www.cags.ca/cgpss/index.html

While keeping the key themes from the literature in mind: the make-up of the institutional student body, student participation in institutional governance, and voting behaviour in society, it is necessary to consider the local legislative context in which this study takes place.

The British Columbia and Royal Roads University legislative contexts

The British Columbia University Act (1996)[10] indicates that "each university is composed of a chancellor, a convocation, a board, a senate and faculties" (3(2)) and membership of students on university boards is mandated in the composition of the Board of Governors (6(19)1.e.) and the Senate (35(2)h). The term of office for students on both is one year, and in both cases the student representatives must be "elected from students who are members of an undergraduate student society or a graduate student society..."

Royal Roads University however (like Thompson Rivers University) has its own Act which differs from the BC Act in several respects. The Royal Roads University Act[11] (1996) stipulates that the "board of governors...is composed of [among other constituents]...a student elected by the students" (5(d)). This is a crucial difference because although RRU has an undergraduate student society (incorporated under the Society Act of British Columbia) – the RRUSA – it does not have a graduate student society.

Moreover, in the RRU Act, an academic council takes the place of a Senate while still assuming a similar role in the university's governing structure. The terms of

[10] BC University Act: http://www.bclaws.ca/Recon/document/ID/freeside/00_96468_01

[11] Royal Roads University Act: http://www.bclaws.ca/Recon/document/ID/freeside/00_96409_01

reference for RRU's Academic Council delineate the powers delegated by the President as specified in the RRU Act. These powers are wide ranging and give the members the authority to, among other duties, set admission requirements and curriculum content, grant awards and fellowships, set criteria for granting degrees and develop education policies. Thus the two student members of Academic Council play an important role in representing the needs and wishes of their constituency, as well as the university as a whole, in these matters.

Purpose and study population

The purpose of this study is to analyse the results of elections for student representatives on university committees to determine if there is a correlation between voting behaviour (voting vs. non-voting), student characteristics: age, gender, citizenship status, basis of admission and program characteristics: program level and delivery mode.

The research is intended to demonstrate if there is a need for the institution to find ways to engage more students or more diverse students to vote in university elections and by extension to help them to feel more connected to the institution and to the larger student body. The study is also intended to demonstrate that the institution is paying attention to the role of university governance in student life. The Registrar's Office, the official sponsor of university elections, will receive insights on whether particular demographic groups may be more involved in institutional governance than others. Educational institutions which demonstrate interest in student participation in governance and encourage student involvement help to foster a sense of belonging and community in

their students. This contributes to a psychologically healthier student body which may lead to improved academic performance and which benefits society at large.

The students whose data is included in the research may be interested in the study for the purpose of learning where they fit into the electorate at RRU. Future students who will be eligible to vote in university elections may benefit from initiatives launched to engage them in the election process as a result of the findings in this study.

RRU, considered a small university "specializing in applied and professional fields"[12], had a full-time enrollment equivalent (FTE) of 2440 for the 2012-2013 fiscal year[13] of which 830 were undergraduate and 1610 were graduate, incorporating a total of 211 international FTE.

The study population consists of current and former undergraduate and graduate students of RRU enrolled in credit programs offered in Canada (so-called "domestic" programs) within the past 19 months (a timeline necessitated by the desire to include a Board of Governors election for student representatives) and who were eligible to vote in elections for student representatives on Academic Council, the Board of Governors; and the RRUSA. Voter eligibility differs from committee to committee. To be eligible to vote in Academic Council elections the students must be registered in programs which have already started at the time the election is called. For Board of Governors elections, eligibility is based upon active enrollment in courses at the time the election is called; for the RRUSA eligibility is based upon enrollment in undergraduate programs and non-credit ESL programs which have already started. Membership in the RRUSA is

[12] http://www.aved.gov.bc.ca/publications/legislation.htm

[13] http://www.royalroads.ca/sites/default/files/files/marketing/rru_audited_fte_report_v13may13_signed.pdf

automatic for all undergraduates and ESL students who have paid their student fees. According to the RRU website:

"The RRUSA serves as a collective undergraduate voice, liaises with the University on a variety of issues, provides ongoing activities and events for learners, and administers the undergraduate extended healthcare plan."[14]

The purpose of voting in the RRUSA elections is to elect four individual members to serve on the RRUSA Executive in the following roles: on-campus president, online president, vice-president communications, and vice-president finance. There are council members elected from each undergraduate program but the council elections are not administered by the Registrar's Office and are not part of this study.

Pabian and Minksová (2011) have noted that there are limitations to the generalizability of studies that focus on the involvement of students in governance at a single institution. While this may be especially valid when considering RRU alone and its residency-based blended delivery model which is currently unusual in Canada, the continuing development of online teaching technologies and evidence that blended models have learning outcomes which are superior to both online and face to face models (U.S. Department of Education, 2010) and are more successful at retaining students than purely online programs support the argument that it is advantageous to have research on student participation in university governance at an institution which offers such programs.

[14] https://student.myrru.royalroads.ca/rrusa/student-association

Research questions

This study aims to answer the following questions:

1) Are students in online programs more or less involved in university governance than students in on-campus programs?
2) Are undergraduate students more or less involved in university governance than students in graduate programs?
3) Are female students more or less involved in university governance than male students?
4) Is age a factor in participation in university governance?
5) Is citizenship status a factor in participation in university governance?
6) Is basis of admission (whether the student was admitted under regular admission requirements or flexible admission requirements e.g. prior learning assessment) a factor in participation in university governance?

Methods

Research design overview and sampling strategy

This is a correlational study employing regression analysis to examine voter participation rates in elections for student representatives on university committees in order to determine if gender, age, citizenship status, basis of admission, and level of program may predict participation in university elections. These variables were chosen as predictors because of the quality of these data in the student information database meaning they are highly reliable with a consistently low error rate; the accessibility of the data; the feasibility of using these variables as they did not include data specific to vulnerable populations; and because these variables are of interest to the stakeholders of the governance processes at the institution.

Initially it was the intention to review all election results for student representatives on university committees for elections that had occurred within the past twelve months. Due to election by acclamation in 2013 for a student representative on the Board of Governors and for an undergraduate student representative on Academic Council, 2013 data are restricted to results for the 2013 election for a graduate student representative on Academic Council and the 2013 election for undergraduate student representation on the Royal Roads Undergraduate Student Association (RRUSA) Executive. 2012 election results for student representatives on the Board of Governors were used for the analysis of voting rates for representation on that committee.

Measurement issues

The data sets were screened prior to analysis in order to detect and minimize measurement issues related to inaccurate or missing data. The following issues were identified relating to the integrity of the data: RRU's so-called "rolling intake model" wherein program start dates occur throughout the calendar year not just during specific academic terms; the ability for students to transfer programs or program offerings at any time not just at the beginning of an academic term; the time-lapses between pulling of student data for the list of eligible voters and when the election message is sent and between the sending of the message and the deadline for when students can vote; and missing basis of admission values which may occasionally occur when a student has transferred into another program offering after being admitted and the basis of admission value which is attached to the original offering is not entered on the record for the new offering.

Inaccurate data

It is beyond the scope of the study to look at case level data to determine why the RRUSA data set contained data for students who should have been ineligible to vote because they were not in a non-credit ESL or undergraduate level program. However, it can be inferred that because of RRU's rolling intake model and the ability for students to move between programs or from one program level to another, that between the time they are identified for inclusion in the list of eligible voters supplied to RRU Computer Services staff (who use the list to create an election-specific email distribution list) and the time they vote in the election, they show up as being in a group of students which should have been ineligible to vote in that election. 30 graduate-program level student

records were removed from the data set prior to analysis in SPSS[15]. Because 20 of these students have a program value representing a graduate-level management program that was specifically designed to be offered to international students, it can be assumed that at the time the list of eligible voters was pulled from the student information system (SIS), these students were taking the ESL program which specifically prepares them for that program. This is reinforced by the citizenship field values of *student-auth* which appear in the data for those students.

Missing data

There were records excluded from the analysis because they were out of the scope of the study and there were records which were missing values for a single variable. The first group consisted of records for students in non-credit ESL programs that appeared in the data. Students in the ESL programs (offered through partnership with StudyGroup[16]) pay undergraduate student fees in order to benefit from student services funded by these fees such as BC Transit's U-PASS initiative. Because they pay these fees, the students are eligible to vote in the RRUSA elections. However, because they are not registered in academic programs, they would not have a basis of admission appropriate to an academic program in the SIS nor are they considered undergraduates for the purposes of enrollment reporting. For these reasons, the data for all 35 non-credit ESL students who were eligible to vote in the 2013 RRUSA election were eliminated from the RRUSA data set prior to analysis in SPSS. The removal of the records for these two groups resulted in a final valid sample size of N = 886.

[15] http://www-01.ibm.com/software/analytics/spss/

[16] http://www.studygroup.com/

The Board of Governors' data set was originally comprised of 3003 records. 8 records were deleted from the data set: 1 non-credit record and 7 for-credit records because they represented students enrolled in courses that were not part of a specific program – individuals whom RRU labels as Continuing Education (CE) students. The remaining sample size used for analysis is N = 2995.

The records missing a variable were those missing basis of admission values. The basis of admission is a data element added to student records at the time of admission to a program. It indicates the previous academic or non-academic qualifications upon which the decision to admit the student is based.

Missing data can fall into one of three categories: missing at random (MAR), missing completely at random (MCAR), and missing not at random (MNAR) (Tabachnick & Fidell, 2007).

For the Academic Council data set, 1833 of the 1835 records contained all the applicable variables. The other 2 records did not have basis of admission values. The missing basis of admission values for Academic Council can be considered as MCAR as the other variables for the two records were different from each other and the basis of admission was most likely a simple case of a step in the departmental business process being overlooked. This is also the probable explanation for 29 of the 54 Board of Governors' election records which were missing basis of admission values as these 29 records represented 17 different programs so the missing data was not correlated with the other variables in any significant way for those records either and they can also be considered MCAR. The other 25 of the Board of Governors' records missing the basis of admission values were for students from outside Canada who were enrolled in the Master

of Arts in Educational Leadership and Management program and attended the RRU campus in Victoria for only part of their program (most of the program is delivered outside of Canada). The business processes used to manage their files may vary from those whose studies are fully within the definition of the domestic program model. Because the missing basis of admission data for these records is predictable from other variables belonging to these records, the missing values can be considered as MAR - missing at random.

As less than 5% of data points were missing from each of these respective data sets and the pattern of the missing values was largely predictable from other variables in the Board of Governors' data set, the missing data was not considered to be a serious issue and the missing basis of admission values were simply replaced with a value of *Unspecified*.

Data sources

Existing data were used for this study. The data were obtained from the online survey tool *LimeSurvey* (for the Academic Council and RRUSA elections) and the open source learning platform *Moodle* (for the Board of Governors election) through which online voting occurred, and the SIS. An institutional systems analyst matched student data from *LimeSurvey* and *Moodle* (student names and email addresses) with student demographic variables contained in the SIS: age, gender, citizenship status, basis of admission, program, program level and program delivery model. See *Appendix 1 – Royal Roads University Election Data Variables* for a complete list of variables and corresponding codes.

The accuracy and completeness of the student demographic data pulled from the RRU SIS consistently meets or exceeds the data quality thresholds established by the BC Ministry of Advanced Education (AVED) for institutions which submit data twice yearly to AVED's Central Data Warehouse.

Research has shown that pulling data from student information systems, also known as data mining, to look for predictors of attrition can have an accuracy rate as high as 80% and is more reliable and less resource intensive than survey methodology (Caison, 2007; Delen, 2012). Whether this is true of data mining for the purpose of predicting student voting rates remains to be seen.

Research methods

After the data was received from the systems analyst it was necessary to conduct some cleanup of the data in Excel. This included checking for inappropriate or missing values as noted above, deleting unnecessary data and grouping variable values together in a meaningful manner.

There is possible overlap between the data sets as undergraduate students eligible to vote in the RRUSA elections may also have been eligible to vote in the Board of Governors election; and graduate students eligible to vote in the Academic Council election may have also been eligible to vote in the Board of Governors election.

The variable values for program group, citizenship status, delivery mode, and basis of admission were consolidated in order to streamline analysis. The program group values denote the level of post-secondary study: graduate (*grad*) or undergraduate (*ugrd*), followed by the credential type of the program: doctorate (*doc*), masters' degree (*mast*),

bachelors' degree (*bach*), certificate (*cert*), or diploma (*dip*). Thus the original *Program group* values of *ugrd-bach* and *ugrd-cert* were grouped as *undergraduate* while *grad-mast*, *grad-doc*, *grad-dip* and *grad-cert* values were grouped as *graduate*. Citizenship status values of *citizen*, *resident* and *refugee* were combined under *Citizen*, while the values *student-auth* (representing "student authorization" and denoting those studying in Canada under a student visa or study permit) and *visitor* (denoting those studying in Canada under a visitor permit) were combined under *Non-citizen*. The delivery mode values of *face to face* and *classroom* were amalgamated into *FaceToFace*; seven *basis of admission* values: *BC-Non-Univ* (denoting admission to RRU based upon completion of a diploma or associate degree at an institution in British Columbia), *BC-Univ, Canada* (denoting admission to RRU based upon completion of a post-secondary credential outside of British Columbia but inside Canada), *Flex-Admiss* (denoting admission to RRU based upon prior learning assessment and factors other than academic qualifications), *Foreign* (denoting admission to RRU based upon a recognized academic credential from outside Canada), and *Special* (admitted to RRU under special consideration) were aggregated into three: *Academic* (comprising *BC-Non-Univ, BC-Univ, Canada,* and *Foreign*); *Flexible* (incorporating *Flex-Admiss* and *Special*) and *Unspecified* (incorporating NULL values).

Data coding and the grouping of variables is key to obtaining accurate descriptive statistics and in determining relationships between variables. As well, the number of groups or variables used determines the statistical procedures employed to interpret the data (Howell, 2008).

To further aid this process, extraneous columns which contained data unsuitable for use in the statistical analysis were deleted prior to analysis in SPSS. These data did not factor into the research questions and included: *Survey name, Survey administrator*, *survey_uses_left*, and the *Program code* column which contained more than 40 different program values. Additionally, the Academic Council and RRUSA data set included a *survey_email_status* column to indicate whether the survey was deliverable and whether anyone chose to opt out of receiving the survey. Any 'opt-outs' were treated the same as those who did not vote and this column was removed prior to analysis.

The *Survey_completed* values indicate whether or not someone voted, therefore the column was relabeled *Vote status*. *Date of birth* column values were converted to ages using Excel formulas based on the date the respective election survey was open for access minus the date of birth divided by 365 then the resulting numbers were truncated to remove decimal points and the resulting column was labeled *Age*.

Prior to conducting a check of the data using SPSS DESCRIPTIVES, string type variables were re-coded so that the each value for each variable had a corresponding numeric code. Also a check between the original data sets and the SPSS data files was conducted using SPSS FREQUENCIES. Given that the dependent variables (with the exception of *Age*) were nominal the most appropriate descriptive statistics to use for analysis were frequency distribution and bar charts. A frequency polygon was run for *Age* as well as checks on range and standard deviation.

The purpose of using regression analysis for this study was to determine if there were any predictors for student voting behaviour in university elections.

Potential ethical issues

Although no data was gathered directly from individuals in the study and all existing data were stripped of identifiers before analysis, due diligence was taken to ensure that ethical issues were considered. An application for research ethics approval was submitted to the Royal Roads University Research Ethics Board and approval was granted; see *Appendix 2 – Royal Roads University Ethics Approval*. Subsequently, a certificate of approval for use of anonymized data was obtained from the University of Victoria Human Research Ethics Board; see *Appendix 3 – University of Victoria. Certificate of Approval*.

It was considered that potential ethical issues which may arise include students becoming aware of this study and being concerned that the researcher would be aware of who voted and who did not. This may be more of an issue for students coming from regions of the world where voting has more associated risk. The British Columbia University Act Part 9 43(2) stipulates that the Registrar "must conduct all elections that are required" and thus the staff in the Registrar's Office must be seen to be impartial and unbiased with regard to election information. However, student concerns could be mitigated by having a contact person outside the Registrar's Office (e.g. in Computer Services or in the Vice-President Academic's Office) who, if contacted, can assure individuals that their names and student identification numbers were not available to the researcher. Data indicating which candidate they voted for is not a variable in the study and was not made available to the researcher.

It is incumbent upon institutions collecting data from students to recognize the diversity of their student population. Although gender is a variable in this study and a

gender value is mandatory for legislated reporting purposes, RRU provides applicants and students the option to enter *transgender* as an alternative to male or female. None of the data sets for the three elections contained the *transgender* value.

Research Findings

In general, findings are as expected in that the overall voting participation is low and the voting margin between the sexes is similar across committees. The graduate versus undergraduate voting rates depend upon the individual election; this is also true with regard to age of voters but when considered as a whole, votes are normally distributed by age range. Canadian students tend to vote more than international students; and basis of admission does appear to be a predictor for voting. There are some surprising results: it was expected that on-campus students would have higher voter participation rates than those in blended or online programs but this is not the case for each election.

Limitations

There were some limitations to the study. It would have been ideal to measure more than one committee that had eligible voters at both the graduate and undergraduate level. However, there were elections by acclamation that negated the need for the election of an undergraduate student on Academic Council. Another factor that may influence the election results is that student registration status is dynamic; meaning that between the time the list of eligible voters is pulled from the student information database and the time that the election survey is emailed out to the students some of them will have withdrawn or taken a leave of absence. New students may have started programs in the

meantime but only those who are registered and have started programs as of a particular date are sent the election survey invitation and, of those, only students with an active registration status can log in to the survey tool.

Correlations

Correlations ($p \geq .05$) exist between citizenship status and program delivery mode in the Academic Council and RRUSA results ($r = 0.7$ and $r = 0.5$ respectively), and, for the latter dataset, a negative correlation exists between program delivery mode and age ($r = -0.5$). In the Board of Governors' dataset, program delivery mode and program level are negatively correlated ($r = -0.6$) because the undergraduate programs are less likely to be delivered in a blended format than the graduate programs.

Although there are correlations between these variables, the assumption of linearity was confirmed by examining scatterplots. In addition, the predictors contain conceptually different information so multicollinearity only occurs because the predictors are related; thus aggregation of the highly correlated variables is not appropriate (Leech, Barrett, & Morgan, 2011).

The connections between age, citizenship status, program delivery mode, basis of admission and voting behaviour become clearer after performing a regression analysis.

Regression Analysis results

Regression analysis was conducted to determine if the predictor variables, *program delivery model*, *program level*, *gender*, *age*, *citizenship*, and *basis of admission*, significantly predict if a student will vote. Logistic regression was chosen as the most

appropriate form of regression analysis because the dependent variable is dichotomous and the independent variables are categorical with the exception of *Age* which is continuous. All predictors relevant to each election dataset were entered simultaneously into the equation for analysis. Subsequent staged removal of variables from the initial model did not substantively alter the results so only the results of Model 1 for each dataset are included here.

The analysis, summarized in Table 1, reveals that when all six predictor variables are considered together for the Board of Governors' data, four variables: *program level* ($B = 1.08$, $p < .001$), *program delivery model* ($B = -1.44$, $p < .001$), *basis of admission* ($B = .34$, $p < .01$), and, to a lesser degree, *citizenship status* ($B = -1.31$, $p < .05$), are statistically significantly predictors of whether or not a student will vote. When five predictor variables, *program delivery mode*, *gender*, *age*, *citizenship status*, and *basis of admission*, are considered together for the Academic Council data, two variables, *program delivery model* and *age* are statistically significant predictors ($p < .01$) of whether or not a student votes: *program delivery model* ($B = -.63$) has a strong negative relationship to voting and *age* ($B = .02$) has a modest positive relationship to voting. Including the same five predictor variables in the regression for the RRUSA data reveals that only *program delivery model* ($B = .5$) and *citizenship status* ($B = -1.4$); in a moderate positive direction and in a strong negative direction respectively, are significant predictors ($p < .001$) of whether or not students vote in that election.

The exponentiated B (e^B) provides the odds ratio for each variable which indicates the extent to which each unit increment in a variable influences the odds of students voting. The percentage value of odds is derived by using the following formula:

$(e^B - 1)$ X 100.

If the result is a positive number, the odds of the variable influencing the outcome are increased by that percentage with each incremental change in the variable. If the result is a negative number, the odds of the variable influencing the outcome are decreased by that percentage with each incremental change in the variable.

The odds of students voting in a Board of Governors election can decrease by 76% if changing delivery model from Blended to another delivery model but the odds of students voting in the same election increases by 47% when the basis of admission changes from academic to flexible admission. This basis of admission information appears to indicate that those admitted under flexible admission, students who have spent a number of years in the workforce and who tend to have substantially more experience related to their area of study, are more motivated to vote in university elections than their counterparts who were admitted solely on the basis of academic qualifications. Perhaps most telling is the odds ratio for program level: there is an almost 200% increase in the odds of a student voting in the Board election if they move from undergraduate programs to the graduate level. Citizenship status is a less significant indicator of voting behavior for the Board associating a 1% decrease in the odds of voting with each unit increase in age.

The odds of voting in an Academic Council election decrease by 47% with a change in delivery model (from Blended to an alternate delivery method) but increase by 2% with each unit increase in student age.

The odds ratios for voting in the RRUSA election show that a unit change in citizenship status decreases by 74% the odds that a student will vote in that election but a

change in delivery mode (from Blended to Face to Face) increases the odds of students voting in that election by 67%.

Table 1.

Summary of Logistic Regression Analysis for Variables Predicting Voting Behaviour in University Elections for Student Positions on Board of Governors (n = 2995), Academic Council (n = 1833) and RRUSA (n = 886)

	Board of Governors			Academic Council			RRUSA		
Predictor	*B*	SE_B	e^B	*B*	SE_B	e^B	*B*	SE_B	e^B
Age	-.00	.01	.99	.02**	.01	1.02	.00	.02	1.00
Citizenship status	-1.31*	.62	.27	.96*	.38	2.62	-1.34***	.33	.26
Delivery model	-1.44***	.31	.24	-.63**	.22	.53	.5***	.13	1.67
Basis of admission	.34**	.13	1.47	.09	.15	1.09	.03	.25	1.02
Constant	-2.80			-2.70			-2.55		
χ^2	180.54			20.33			28.05		
df	6			5			5		
% of voters	10			13			12		

Note. Gender is not a significant indicator of voting behavior in any of the three elections. Program level is not a relevant indicator for voting behaviour for the Academic Council and RRUSA elections as each was restricted to eligible voters from only one level. Therefore gender and program level have been omitted from the table.

e^B = exponentiated *B.*

*$p < .05$. **$p < .01$. ***$p < .001$.

Additional findings related to each research question are as follows:

Research findings question 1: Are students in online programs more or less involved in university governance than students in on-campus programs?

As noted, there were some interesting findings in relation to this question. It was expected that those students enrolled in Face to Face programs, which are delivered full-time on-campus and offer the greatest opportunity for engagement with the institution, would have the highest voting rates. However, this has not proven to be the case for every election.

When all three electoral groups (Board of Governors, RRUSA and Academic Council) are combined, as indicated in Figure 1, the overall relationship of votes to program delivery model is apparent.

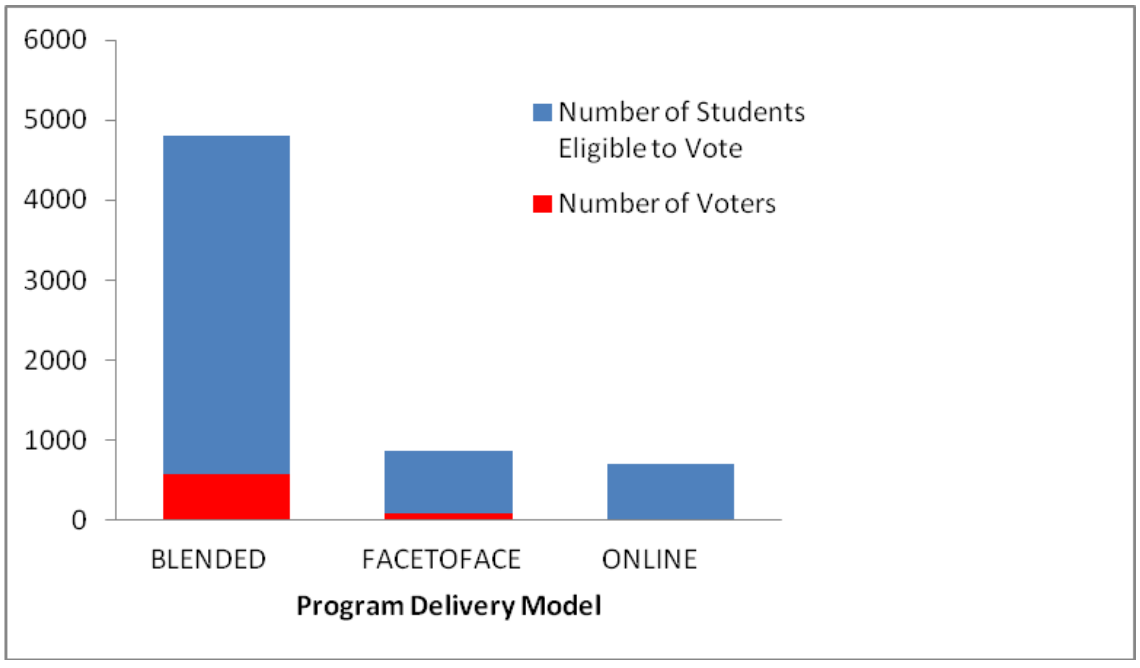

*Figure 1.*Voting rates by program delivery model for all elections combined.

Looking at each committee group separately (Table 3), it is clear that results relating to delivery format are as anticipated for the RRUSA results only; over 95% of voters in the Board of Governors and Academic Council elections are those in Blended program offerings. The Blended and Online delivery model variables are not aggregated because the residencies for the blended programs, which normally involve two weeks of intensive face to face team building, group projects and in-person contact with instructors, engage the students in a way that strictly online programs do not despite the use of online discussion boards and other interactive group-based forums utilized in online program delivery.

Table 2.

Summary Voting Rates by Committee and Delivery Model

	Eligible	Voted			
Committee	to Vote	Total	Blended	Face to Face	Online
Board of Governors	2995	310 (10%)*	303 (98%)**	4 (1%)**	3 (1%)**
Academic Council	1833	240 (13%)*	227 (95%)**	8 (3%)**	5 (2%)**
RRUSA	886	105 (12%)*	38 (36%)**	66 (63%)**	1 (1%)**

Percentage of all eligible to vote in the election Percentage of all who voted in the election.*

Research findings question 2: Are undergraduate students more or less involved in university governance than students in graduate programs?

The RRUSA election was open solely to undergraduate students and the Academic Council election was open to graduate students exclusively. There is only a 1% difference in the voting rates between those two electoral groups. The Board of Governors election, open to both undergraduates and graduates, shows a dramatic difference in voting rates between the program levels: almost 15% of graduate students voted but less than 3% of undergraduates voted.

Table 3.

Summary Voting Rates by Committee and Program Level

	Eligible	Voted		
Committee	to Vote	Total	Undergraduate	Graduate
Board of Governors	2995	310 (10%)*	32(10%)**	278(90%)**
Academic Council	1833	240 (13%)*	-	240(100%)**
RRUSA	886	105 (12%)*	105(100%)**	-

Percentage of all eligible to vote in the election Percentage of all who voted in the election.*

Research findings question 3: Are female students more or less involved in university governance than male students?

None of the three electoral groups show any significant difference in voting pattern by gender although the overall number of females eligible to vote is 15% higher than the number of men eligible to vote.

Females tend to outvote males except in the RRUSA election where a slightly higher percentage of males voted (12.6% over 11% of females) despite there being more females than males eligible to vote in that election. The smallest margin between male and female voting rates (0.7%) is in Academic Council: 13.4% of females voted and 12.7% of males voted.

Table 4.

Summary Voting Rates by Committee and Gender

	Eligible	Voted		
Committee	to Vote	Total	Female	Male
Board of Governors	2995	310 (10%)*	192(62%)**	118(38%)**
Academic Council	1833	240 (13%)*	144(60%)**	96(40%)**
RRUSA	886	105 (12%)*	54(51%)**	51(49%)**

Percentage of all eligible to vote in the election Percentage of all who voted in the election.*

Research findings question 4: Is age a factor in participation in university governance?

The ages were grouped into ranges for ease of analysis. When all three electoral datasets are combined, the ages of voters tend to be approximately normally distributed around the 36-40 range as seen in Figure 2.

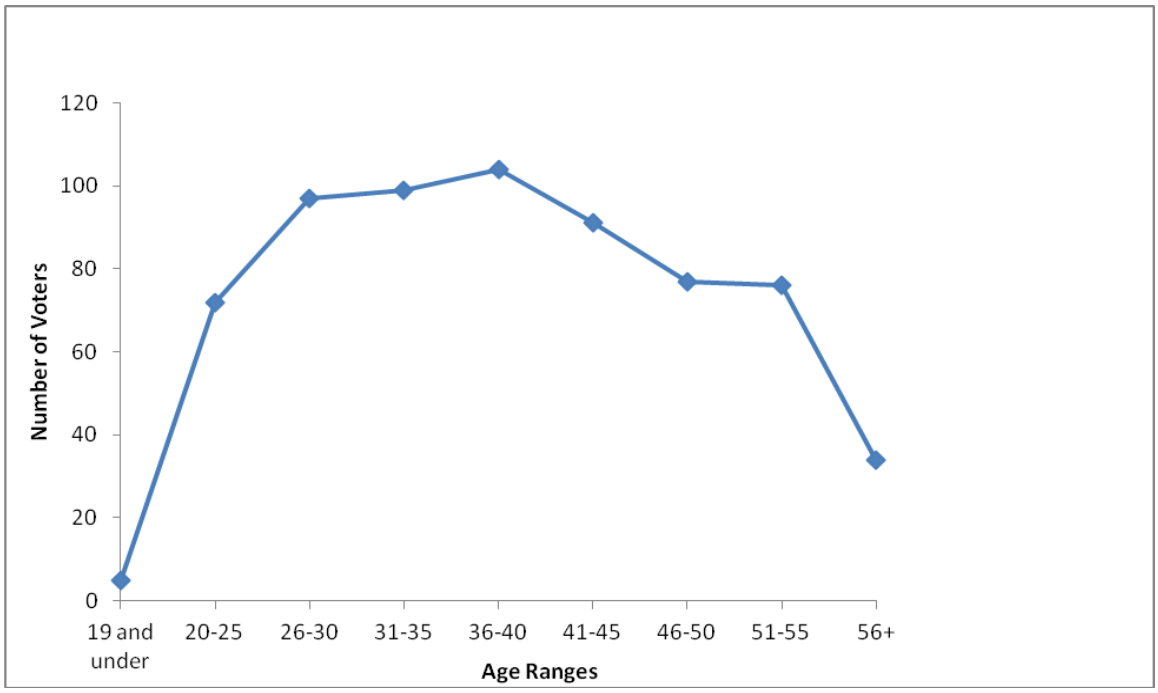

Figure 2. Distribution of votes by age range for all elections combined.

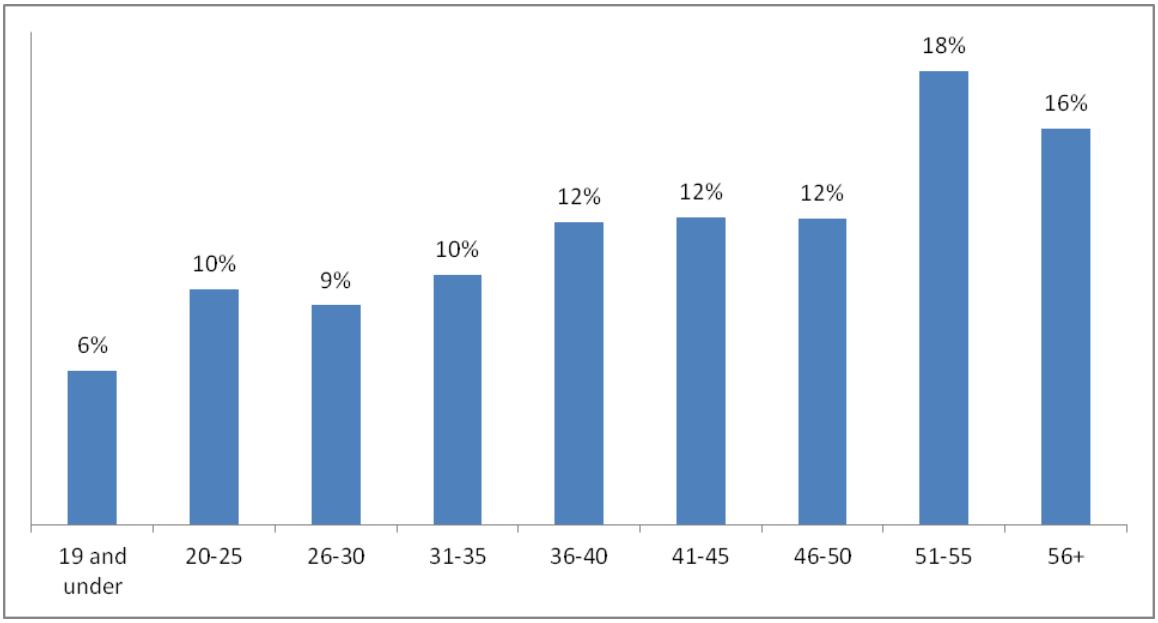

Figure 3. Percentage of voters within each age range for all elections combined.

Considered separately, the age range distributions of those eligible to vote in the Board of Governors' and Academic Council elections are comparable while the age ranges and accompanying distributions in the RRUSA sample are reflective of the younger ages of undergraduates in general and of those in the non-credit ESL programs in particular. Figures 7, 8, and 9 of Appendix 4 *Results* compare the distributions of those eligible to vote and of those who voted in each of the three elections.

The frequency distribution for age of eligible voters in the Board of Governors election is positively skewed in the 26-30 age range, representing 20% of those eligible to vote, but the distribution for voters is normalized around the 36-40 range. As shown in Figure 4, the highest percentage of voter participation per age range in that election (15.3%) is in the 56+ age range.

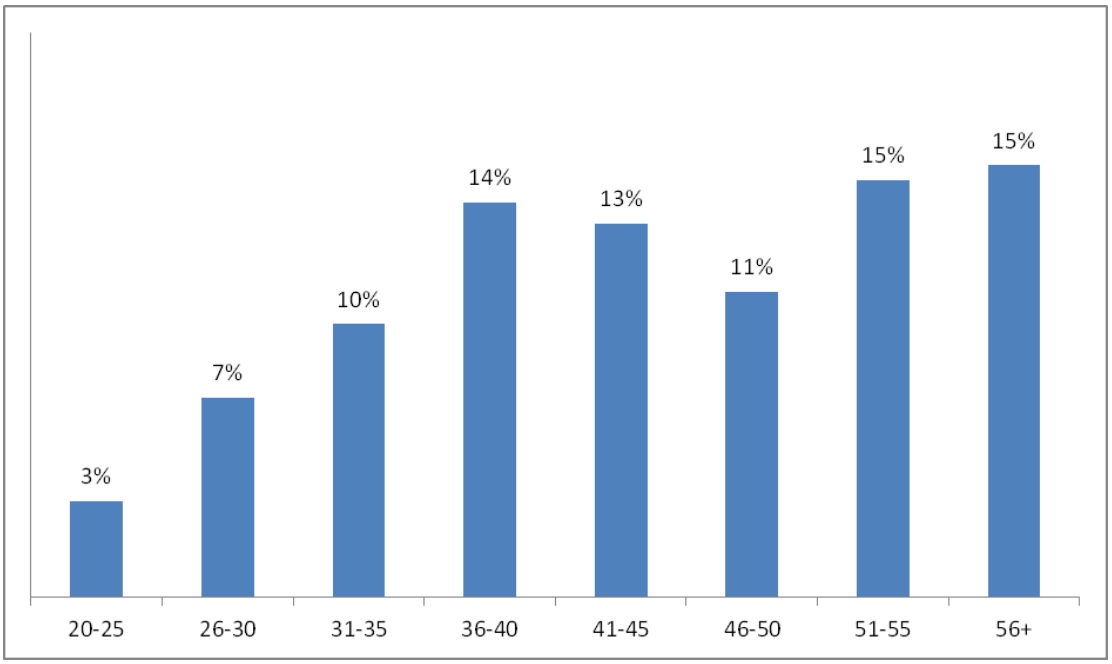

Figure 4. Percentage of voters within each age range in the Board of Governors election.

For the Academic Council election the frequency distribution of all eligible voters for Academic Council is normally distributed around the 31-35 age range, but as indicated in Figure 5, the voter participation percentage for the 51-55 age range is the highest of any age group for this election (23%).

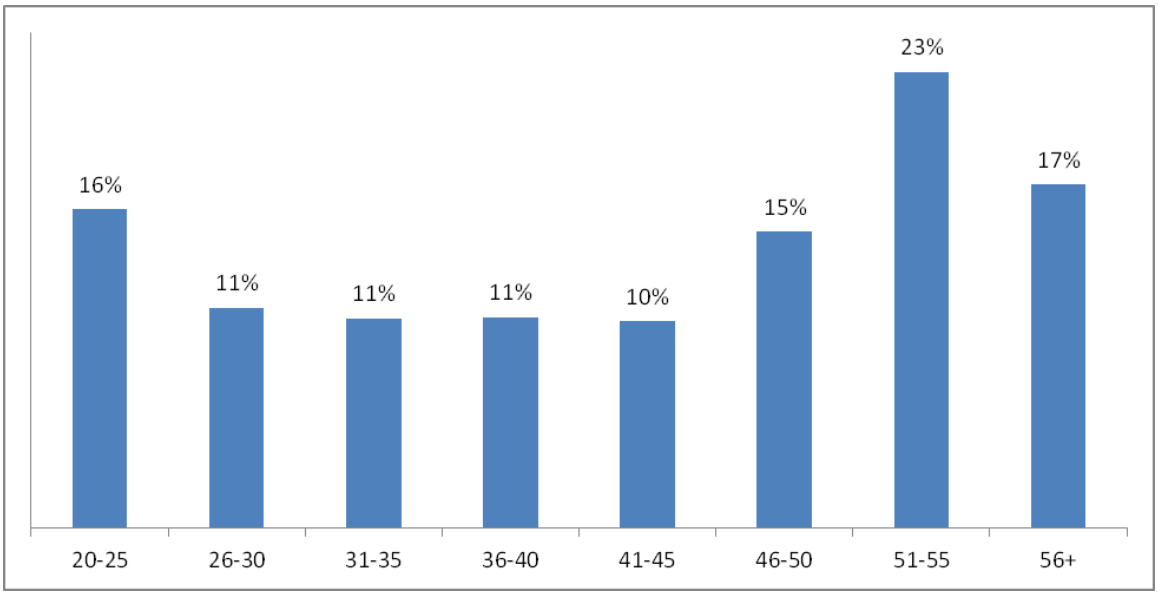

Figure 5. Percentage of voters within each age range in the Academic Council election.

Perhaps most interesting are the RRUSA age findings; both the eligible voter and actual voter age frequency distributions are positively skewed and peak at the 20-25 range. Students in the 41-45 age range represent approximately 5% of those eligible to vote in the RRUSA election but have the highest voter participation rate *per age range* at 19%.

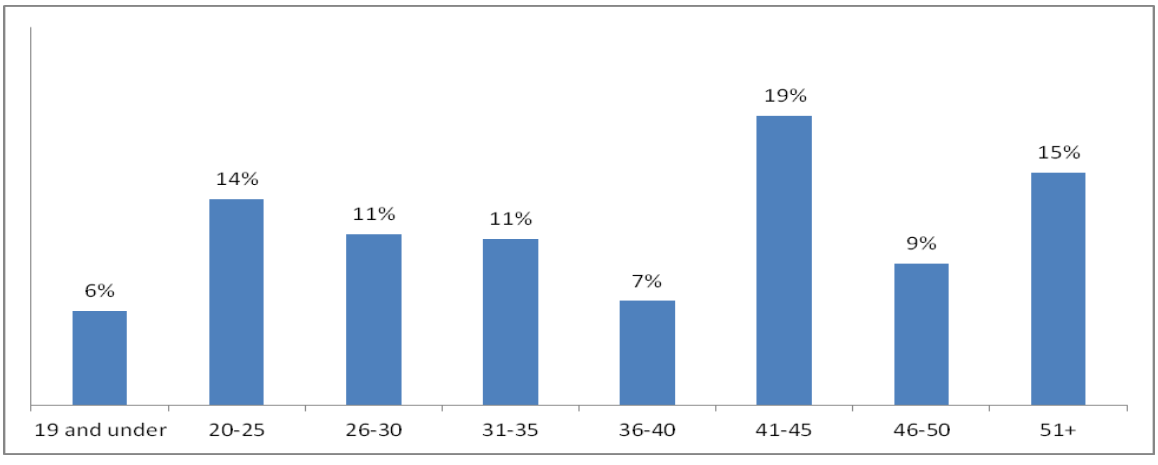

Figure 6. Percentage of voters within each age range in the RRUSA election.

Research findings question 5: Is citizenship status a factor in participation in university governance?

Overall, 92% of eligible voters are Canadian and 11% of them voted. 8% of eligible voters are international students and 7% of that group voted. At the individual committee level, Board of Governors' data indicate that, *within their own populations*, four times as many Canadians voted as non-Canadians: 10.6% versus 2.7%. In the RRUSA election twice as many Canadians (13.6%) voted than non-Canadians (6.4%). In the Academic Council election, there is less than a 1% difference in voting rates between the two groups.

Table 5.

Summary Voting Rates by Committee and Citizenship Status

	Eligible	Voted		
Committee	to Vote	Total	Canadian	Non-Canadian
Board of Governors	2995	310 (10%)*	307(99%)**	3(1%)**
Academic Council	1833	240 (13%)*	226(94%)**	14(6%)**
RRUSA	886	105 (12%)*	91(87%)**	14(13%)**

Percentage of all eligible to vote in the election Percentage of all who voted in the election.*

Research findings question 6: Is basis of admission (whether the student was admitted under regular admission requirements or flexible admission requirements e.g. prior learning assessment) a factor in participation in university governance?

While all three election datasets indicate higher voting rates from those with a basis of admission of *Flexible*, the Board of Governors' is the only election to show a statistically significant connection between basis of admission values and voting behavior: there are 25.7% more students with a basis of admission of *Academic* who are eligible to vote than those admitted under flexible admission, yet the latter group has double the voting rate of the former (16.6% versus 8.3%).

In the Academic Council election there is a 3% higher number of *Flexible Admission* voters than those with a basis of admission value of *Academic*, and for the RRUSA election there is only 1% more *Flexible Admission* voters than *Academic* voters.

Table 6.

Summary Voting Rates by Committee and Basis of Admission

	Eligible	Voted			
Committee	to Vote	Total	Flexible	Academic	Unspecified
Board of Governors	2995	310 (10%)*	128(41%)**	181(58%)**	1(1%)**
Academic Council	1833	240 (13%)*	89(37%)**	151(63%)**	
RRUSA	886	105 (12%)*	33(31%)**	72(69%)**	

Percentage of all eligible to vote in the election Percentage of all who voted in the election.*

Discussion

The findings in this study confirmed assumptions that overall voting rates in university elections are low. Unexpected results were that the highest frequency of voting took place amongst students in programs with blended delivery models. Analysis revealed a moderate to strong positive relationship between citizenship status and program delivery model and moderate negative correlations between age and citizenship status, between program delivery model and age, and between program delivery model and program level.

The higher voting rates within blended programs could be a key indicator of the connection students in blended programs have with the institution: approximately 80% of Royal Roads' program offerings are in blended delivery format, offering intensive two-week long on-campus residencies each year during which students have significant opportunity to partake of campus facilities, interact with staff and bond with each other on team-based activities and projects. Yet, the on-campus students have the highest level of in-person access to staff and services.

The reasons for the correlations are directly linked to Royal Roads University's teaching and learning model and strategic direction. To align with the Ministry of Advanced Education priorities, there has been an increase in international students' presence. These students begin their studies at RRU enrolled solely in face to face programs, primarily at the undergraduate level but also at the graduate level. For the RRUSA this means their electorate is all undergraduate students (which as a group have a mean age of 30 at Royal Roads') or non-credit ESL students (which tend to be under 25).

Age appears to be of statistical significance in the Academic Council dataset only because its close relationship to other predictors in the Board and RRUSA elections precludes it from standing on its own. However, it is apparent that it is of substantive significance overall when one considers that the highest voting rates in each election were within age ranges starting at over 40 years old.

There are a number of areas related to voting behaviour that warrant further investigation. Communications undertaken during the elections, and how these communications may affect voting, should be considered: the notices that go out to the electorate; how many, what they look like, language used, method of distribution e.g. are they sent to a distribution list and/or posted on MyRRU (Royal Roads' student website). *LimeSurvey* software allows for survey recipients to "opt-out" of receiving subsequent email reminders about voting in the election also providing the recipients with the opportunity to "opt-out" of voting in the election simply by clicking on a URL in the initial email invitation. The Academic Council and RRUSA elections were both conducted with *LimeSurvey*. The Board of Governors' ballot was sent out via the *Moodle* platform which does not have an 'opt-out' feature.

It would be valuable to determine how much awareness there is among students of each committee and its aims. Do the election emails contain a link to the terms of reference? Is there a link to, or list of, action items, minutes or motions passed or key issues discussed in the past? Do the election administrators indicate why students should vote for a student representative? Are the election notice emails personalized? Simpson (2012) indicates motivational emails to distance students should be "short (fewer than 400 words), written in an informal, friendly style using humor where appropriate…but

containing serious ideas…" (Simpson, p.126). Could this recommended email format also work for motivating students to vote? The increased presence of social media in students' lives means there may opportunities to use text messaging or other similar methods to encourage students to vote in institutional elections

It is possible that survey fatigue could be a factor in low voting rates. It may be useful to investigate how many other surveys were sent out during the time period when these elections took place. As well, there may be overlap amongst the three samples with some individuals eligible to vote in more than one election and thus receiving multiple emails about elections.

Are differences in voting rates for each committee related to the specific responsibilities, activities, or powers of each committee? Is voting in an election for one committee considered by potential voters to be more valuable than voting in an election for another committee? What are the reasons for the 12% gap between graduate and undergraduate voting rates in the Board of Governors election? Is it because the Board (the sole body providing legislative oversight in a unicameral governing structure although it delegates some decision-making powers to Academic Council) is perceived to be the domain of the elite – politicos, corporate leaders, and established community members - whereas the RRUSA is more accessible and directly relevant to the lives of the undergraduate students it is mandated to serve? Moreover, although the RRUSA is an association which represents undergraduate and ESL students in a number of ways, the service-related needs of different groups and sub-groups of students can be varied (Kenyon, Frohard-Dourlent & Roth, 2012) and not necessarily addressed by any one committee. Some American students may feel they have less of a say in the governance

process at Canadian universities because Canadian universities have provincial ministries responsible for developing policy oversight on accountability and performance measures so the power of university boards is more restricted here than in the United States (Kezar, p.969).

Finally, it is important to consider knowledge transfer: how do we take what has been gleaned from this study and use it to improve voting rates? The significant predictors of non-voting behavior that all three committees had in common were citizenship status and program delivery model so any generalized drive to encourage voting should target these two areas. Institutional initiatives such as the establishment of a separate student services office specifically to meet the needs of international students, in particular to provide assistance with immigration processes, medical insurance coverage and orientation, may foster an increased level of engagement with the institution and its representative bodies.

With regard to program delivery model, specific attention needs to be paid to potential voters in face to face program offerings. As those who are on campus full time, they are in the best position to provide informed votes for candidates who speak to the actual campus environment, including its facilities and infrastructure.

Because university staff provide impartial oversight over the election processes for university committees, current institutional understanding of student voting behaviour can be augmented by data which could influence an institution's governance and strategic goals. Collegiality and transparency in the form of data sharing with other institutions about student voting rates could provide insights on voting behavior across institutions that could benefit all involved. This study also points to future projects that could include

undertaking a targeted survey of students in domestic programs to establish whether they are aware of intrinsic or extrinsic motivators for their voting behavior in university elections and what institutions can do to increase the likelihood of students' participation in university governance through exercising their right to vote.

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Appendices

Appendix 1

Royal Roads University Election Data Variables

- id – unique record identifier
- vote_status – indicator of voting activity (did not vote = 0, voted = 1)
- gender – gender of eligible voter (female = 0, male = 1)
- age – age of eligible voter
- age_range
- citizenship – citizenship status of eligible voter (Canadian citizen = 0, non-Canadian citizen = 1)
- pgmgrp – program group of eligible voter (undergraduate = 0, graduate = 1)
- pgmdelmode – program delivery mode (blended = 0, online = 1, face to face = 2)
- basisadmiss – basis of admission of eligible voter (academic = 0, flexible admission = 1, unspecified = 2)

Appendix 2

Royal Roads University Research Ethics Approval

28 October 2013

Gay Perry
Student System Coordinator, Registrar
Royal Roads University
2005 Sooke Road
Victoria, BC V9B 5Y2

Dear Gay,

Please accept this letter as confirmation that the Royal Roads Research Ethics Board (REB) has given clearance for the research project, "Student Participation in University Governance at a Predominately Online University".

This letter is to confirm that clearance was granted on the 26th of October, 2013, pending any additional clearances required by the sponsoring organization or any other organization.

Should you require any additional information, please feel free to contact us.

Please also find attached a Privacy Research Agreement with Royal Roads University.

This agreement confirms that clearance is given to you to access data for your proposed research

Should you require any additional information, please feel free to contact us.

Sincerely,

[redacted]
Colleen Hoppins
Research Ethics Coordinator
Office of Research
Royal Roads University

2005 Sooke Road, Victoria, BC Canada, V9B 5Y2 Tel: (250) 391-2553 Fax: (250) 391-2500
www.royalroads.ca

Appendix 3

University of Victoria Certificate of Approval

University of Victoria

Human Research Ethics Board
Office of Research Services
Administrative Services Building
PO Box 1700 STN CSC
Victoria British Columbia V8W 2Y2 Canada
Tel 250 472 4545 Fax 250-721-8000
ethics@uvic.ca www.research.uvic.ca

Certificate of Approval

PRINCIPAL INVESTIGATOR:	**Linnea Gay Perry**	**ETHICS PROTOCOL NUMBER** Minimal Risk - Chair/Vice-chair	**13-448**
UVic STATUS:	**Master's Student**	ORIGINAL APPROVAL DATE:	13-Nov-13
UVic DEPARTMENT:	**EPLS**	APPROVED ON:	13-Nov-13
SUPERVISOR:	**Dr. John Anderson**	APPROVAL EXPIRY DATE:	12-Nov-14

PROJECT T TLE: **Student Participation in University Governance at a Predominately Online University**

RESEARCH TEAM MEMBER None

DEC.ARED PROJECT FUNDING: **None**

CONDITIONS OF APPROVAL

This Certificate of Approval is valid for the above term provided there is no change in the protocol.

Modifications
To make any changes to the approved research procedures in your study, please submit a "Request for Modificat on" form. You must receive ethics approval before proceeding w th your modified protocol.

Renewals
Your ethics approval must be current for the period during which you are recruiting participants or collecting data. To renew your protocol, please submit a "Request for Renewal" form before the expiry date on your certificate. You will be sent an emailed reminder prompting you to renew your protocol about six weeks before your expiry date.

Project Closures
When you have completed a l data collection activities and will have no further contact with participants, please not fy the Human Research Ethics Board by submitting a "Notice of Project Completion" form.

Certification

This certifies that the UVic Human Research Ethics Board has examinec this research protocol and concluded that, in all respects, the proposed research meets the appropriate standards of ethics as outlinec by the University of Victoria Research Regulations Involving Human Part cipants.

[redacted]

Dr. Rachael Scarth
Associate Vice-Pres dent, Research

Certificate Issued On: 13-Nov-13

13 448 Perry, Linnea Gay

Appendix 4

Results

Table 7.

Logistic Regression Predicting Voting in the Board of Governors' Election

Variable	*B*	*SE*	*Odds ratio*	*p*
Gender	-0.18	0.13	0.84	.163
Age	-0.00	0.007	0.99	.882
Citizenship	-1.31	0.62	0.27	.034
Program group	1.08	0.21	2.94	.000
Program delivery model	-1.44	0.31	0.24	.000
Basis of admission	0.34	0.13	1.47	.002
Constant	-2.80	0.30	0.06	.000

Table 8.

Logistic Regression Predicting Voting in the Academic Council Election

Variable	*B*	*SE*	*Odds ratio*	*p*
Gender	-0.04	0.14	0.96	.78
Age	0.02	0.008	1.02	.009
Citizenship	0.96	0.38	2.62	.011
Program delivery model	-0.63	0.22	0.53	.005
Basis of admission	0.09	0.15	1.09	.537
Constant	-2.70	0.33	0.07	.000

Table 9.

Logistic Regression Predicting Voting in the RRUSA Election

Variable	*B*	*SE*	*Odds ratio*	*p*
Gender	0.12	0.21	1.12	.588
Age	0.006	0.016	1.00	.715
Citizenship	-1.35	0.33	0.26	.000
Program delivery model	0.51	0.13	1.67	.000
Basis of admission	0.03	0.25	1.02	.908
Constant	-2.55	0.53	0.08	.000

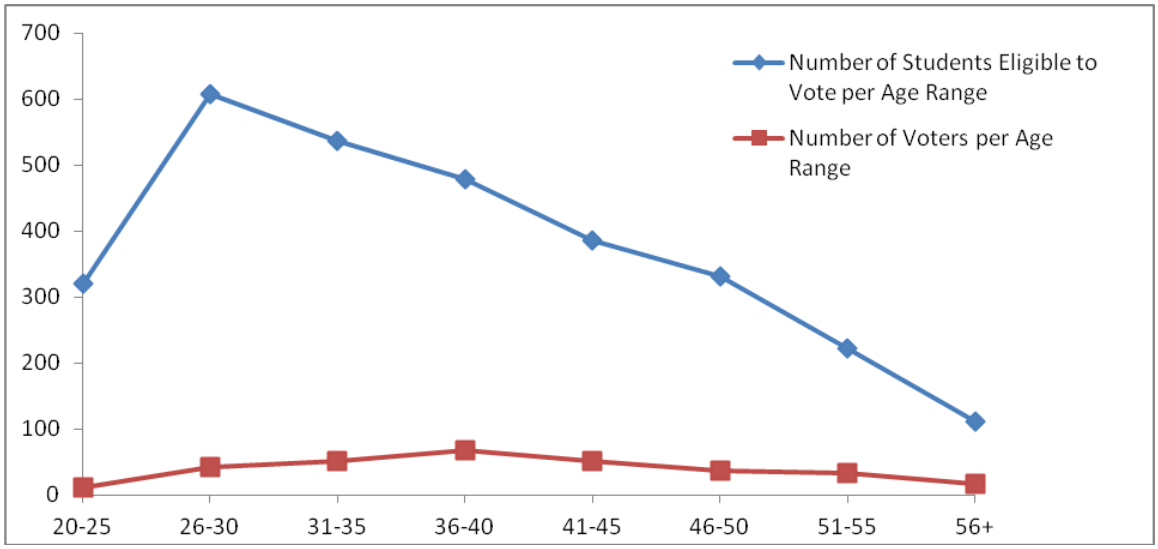

Figure 7. Comparison of frequency distribution by age range between those eligible to vote and those who voted in the Board of Governors' election.

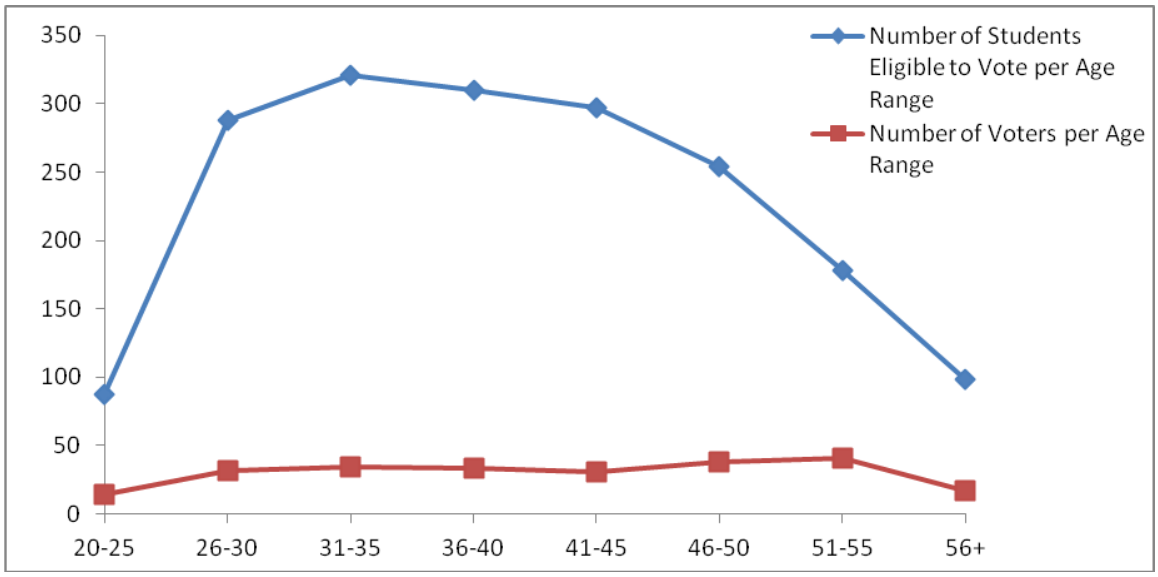

Figure 8. Comparison of frequency distribution by age range between those eligible to vote and those who voted in the Academic Council election.

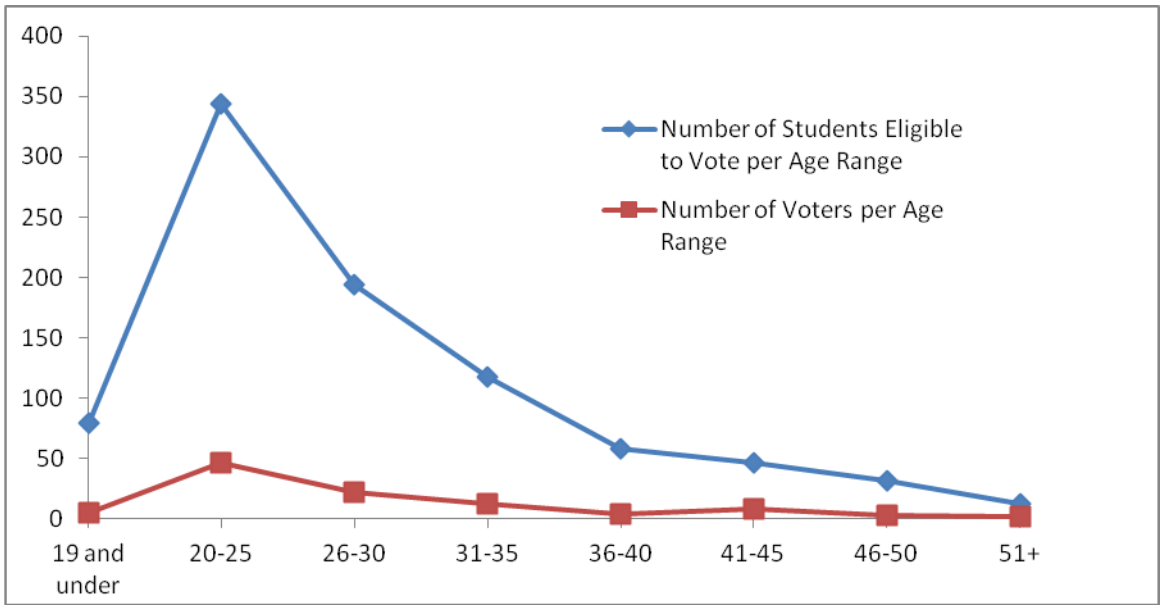

Figure 9. Comparison of frequency distribution by age range between those eligible to vote and those who voted in the RRUSA election.