

Understanding Advanced Placement Grading in BC

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This newsletter presents the executive summary for this project report. The full report is available at www.bccat.ca/pubs/AP_Grading.pdf

The Advanced Placement (AP) program provides the opportunity for high school students to enrol in advanced level coursework in a number of subjects, and potentially earn college or university transfer credit. AP is owned, created, and administered by the nonprofit College Board, and many post-secondary institutions provide transfer credit or advanced standing for completed AP exams, or will factor in AP scores into admissions decisions (or both).

This project, sponsored by the British Columbia Council on Admissions and Transfer and conducted by Plaid Consulting, sought to:

- Gather and summarize existing AP grading practices at British Columbia high schools and school districts;
- Analyze policies and practices for evaluating the AP grade and exam score information, and for grading AP standing at post-secondary institutions;
- Determine whether any insight can be provided on the appropriate equivalencies between AP course grading and British Columbia high school course grades based on student post-secondary performance; and
- Identify areas for future research and, if appropriate, the development of suggested practices.

This research was conducted in the spring of 2017 and focused on grading practices in AP courses in both public and independent schools throughout British Columbia. As part of the research, surveys were conducted with BC AP teachers and coordinators, post-secondary admissions directors, and representatives of the College Board. A case study compared the post-secondary performance of students who participated in AP with those who did not participate in AP.

AP grading at BC high schools

Plaid reached out to 29 public and independent secondary schools across BC, completing eight telephone interviews spanning the Lower Mainland, Fraser Valley, and Vancouver Island, with AP teachers, and a few AP coordinators. The study participants identified that AP course grading practices were varied within and between schools. The teachers and AP coordinators generally did not have insight into grading practices in other schools or districts.

This research was focused on grading practices in AP, and the post-secondary performance of students who participated in AP as compared with those who did not participate in AP.

The environmental scan highlighted that different secondary schools had different practices in how they award credit for both AP courses and their BC provincial analogues, with some schools automatically granting credit for the BC course, others requiring an additional coursework component, and others not granting credit for the analogue BC course. The interviewees universally indicated that grades in AP courses and their BC provincial analogues would be different. Teachers noted that it was nearly always the case that students had higher grades in the provincial course. The interviewees confirmed that the grades awarded for AP and BC courses reflected mastery of those curricula, respectively.

AP perceptions and practices at BC post-secondary institutions

Most post-secondary institutions have specific criteria posted to their websites that outlines how AP courses are evaluated, and what types of transfer credits are received for certain scores on the AP exam. While the exact scores required differ by institution, the policies overall are quite similar and have stayed consistent for several years, with limited review beyond regular transfer credit requests. AP exam scores can be used towards admission averages at Kwantlen Polytechnic University (KPU), Simon Fraser University (SFU), and the University of British Columbia (UBC).

UBC notes that AP course grades may be combined with an approved high school curriculum to meet the University's admission requirements. Other institutions do not explicitly address on their webpages whether AP course grades can be used in admission averages.

Most BC institutions award transfer credit for an AP exam score of 4 or higher, though some institutions will grant either transfer credit or advanced standing – the ability to take an advanced course, but not the prerequisite – based on an exam score of 3 or higher.

The post-secondary institution representatives identified a few key themes related to AP grading practices:

- their own policies have not been studied recently,
- they feel there are differences in AP grading between different schools,
- course transcription practices are not clear, and
- there are challenges in granting transfer credit or advanced standing based on AP due to academic units within institutions requiring different standards than the institutional minimum.

Post-secondary academic performance of students with AP courses

Compared to students who did not participate in AP, AP students tend to be better prepared academically, complete more coursework, take additional high-level college courses related to their AP subjects, have superior leadership abilities, more likely to have a double major, and are twice as likely to move on to graduate or professional school (Curry, MacDonald, & Morgan, 1999), especially if they received a score of 4 or higher on the AP exam (Mattern, Shaw, & Xiong, 2009). The link between AP coursework and college success has not been strongly demonstrated: AP exam performance is strongly correlated to college performance, but coursework itself is not a useful predictor of post-secondary performance (Geiser & Santelices, 2006). AP students who complete both the AP course and exam out-perform those who complete the course only or the exam only (Hargrove, Godin, & Dodd, 2008).

Three BC post-secondary institutions - KPU, UBC, and the University of Victoria (UVic) – participated in case study analyses whether AP course grades can provide signals to the institutions regarding post-secondary performance, either in aggregate or in specific subject areas or courses. AP exam scores were not included in the analyses. The data covered two entry cohorts of students who entered each institution directly from BC secondary schools.

The case study performed utilized two separate analyses, with the first considering general AP indicators such as whether a student took any AP courses, or whether they took specific AP courses, coupled with the institution's admission average. The second analysis looked at specific course grades and an indicator of whether a student took an AP analogue of the specific BC course.

TABLE 1: Description of the case study cohorts and grades on transcripts

	KPU	UBC	UVic
Total students	6,389	6,589	3,662
Students with AP courses (% of total)	489 (7.7%)	2,197 (33.3%)	670 (18.3%)
Total enrolments in AP courses	611	4,258	1,012
Most common AP courses (* indicate predictive capability of post-secondary performance in subject areas)	AP Calculus AB 12* AP English Literature & Composition 12 AP Psychology 12	AP Calculus AB 12* AP English Literature & Composition 12 AP Chemistry 12 AP Psychology 12 AP Biology 12.	AP Calculus AB 12* AP English Literature & Composition 12 AP English Language & Composition 12 AP Psychology 12 AP Chemistry 12
Both BC and AP course analogues on transcripts (% of all enrolments)	66.2%	64.0%	67.6%
BC grade = AP grade	68.1%	22.1%	21.7%
BC grade > AP grade	19.4%	67.1%	64.8%
BC grade < AP grade	12.5%	10.8%	13.5%
BC course grade higher average	0.8pp	3.3pp	3.3pp
BC course grade higher median	0.0pp	2.0pp	2.0pp

The case study highlights that for some course pairs (particularly English and science courses, such as biology, chemistry, and physics), more than 80% of students received credit for both the AP course and its BC provincial analogue, with more than 60% receiving a better grade for the BC course. There were, however, exceptions: students who pursued the AP Calculus courses received credit for Calculus 12 only about 20-25% of the time, and AP Macroeconomics 12 and AP Microeconomics 12 students only received credit for Economics 12 around 35% of the time. The case study reinforces that, when students have both an AP and a non-AP version of a course on their transcript, it is not possible to make the assumption that students will receive a higher grade in the non-AP version.

In the general AP indicator analysis, KPU and UBC data had small predictive capabilities. The analysis indicated that students with AP courses would likely perform better in aggregate. At UBC certain AP courses were good indicators. At the University of Victoria, there were no general AP indicators that had predictive capabilities for aggregate performance. For specific subject areas and courses, both general indicators and an indicator for whether a student completed AP Calculus AB 12 provided some predictive ability in some subject areas and courses. At KPU, one subject area additionally showed that AP English Language & Composition 12 had a small predictive ability.

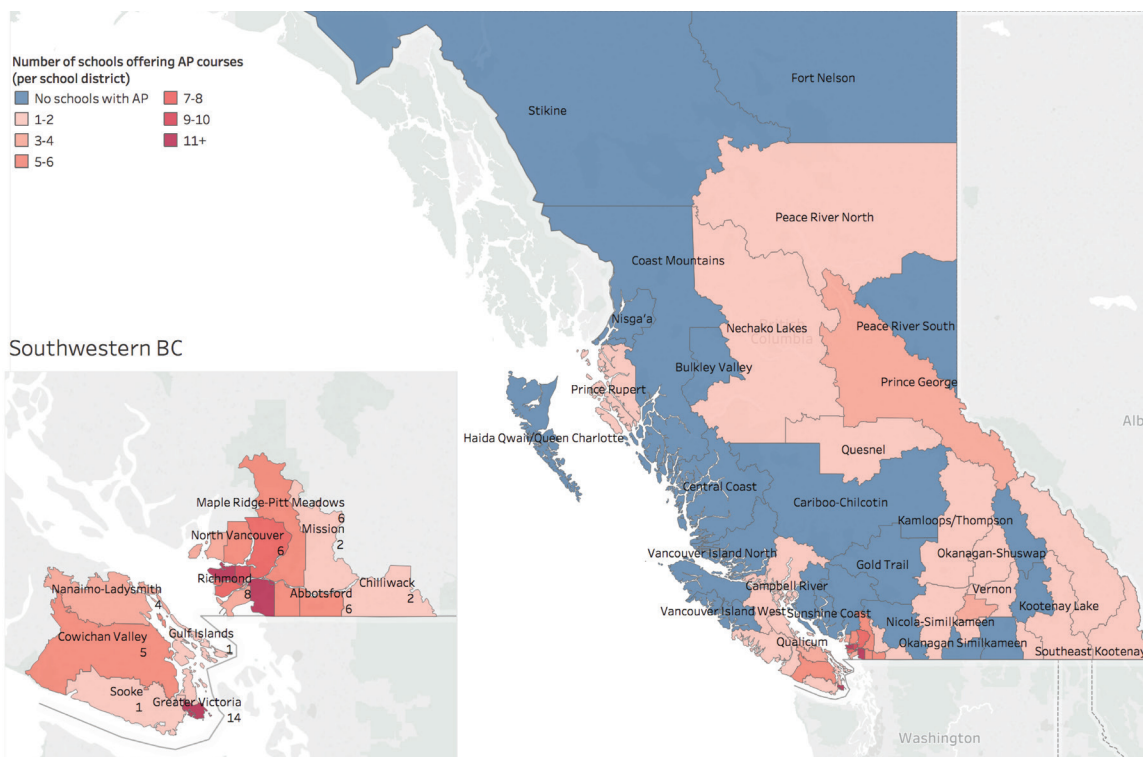
In the specific course analysis at all three institutions, we obtained better predictive models by factoring in whether a student took an AP analogue of the BC course. For many of these courses, particularly those that are non-English-focused language courses, students with AP grades performed similarly to students with BC analogue grades higher than the AP grade suggested. Their performance similarly outstripped what would be expected from looking at the transcribed grade of the BC analogue of the course when both appeared on the student's transcript.

Future research opportunities

With the data available in the case study, it was not possible to determine a suitable equivalency scale between AP exam scores and course grades. Additionally, it was unclear whether the substantial differences in patterns between the post-secondary institutions (e.g., which AP courses students choose to take, the grades they receive in those AP courses relative to the grades received in similar BC provincial versions of the course, and which post-secondary subject areas are most impacted by students taking AP courses) are a result of the course offerings available to students in secondary school, course selection by students based on post-secondary study paths, or post-secondary program and course design. Additionally, post-secondary institutions suggested that they would like to assess how AP and non-AP students compare in courses which follow from post-secondary courses for which students are given transfer credit on the basis of AP coursework.

The challenge for institutional admission officers is how to appropriately utilize signals from Advanced Placement courses in evaluations. Unlike the International Baccalaureate program, AP students seldom have an entire program of credits, on average having one to two AP courses along with non-AP courses. What is clear from this research is that the utility of those signals depends highly on the context, and that institutions need to look into their own data to determine what works best for their context. There is no one approach that will work in all, or even most, cases. As the results of the analysis vary by both institution and individual course, we highly recommend that institutions conduct an analysis to determine the appropriate equivalencies between grades in AP and BC analogues of a course for their context, and for individual AP courses.

AP Offerings by BC School District*



* Author's calculations. Information on schools offering AP from College Board (n.d.b.) and translation from school names to school districts and administrative areas based on BC Stats (1996 and 2011)