



Academic Foundations of the RHSS Programme

The design of the *RHSS* programme is based on sound pedagogical foundations that aim to help students learn course material quickly and effectively. This design is inspired by current research which has helped shape our understanding of pedagogical techniques that contribute to student learning and engagement.

The Efficacy of Global Education

Roman Holiday Summer Studies makes understanding the increasingly interdependent global community one of its goals for every student. In recent years, educational research¹ has produced numerous detailed reports suggesting the increased need for global awareness. Canadian students will almost certainly be involved in increasing levels of global interaction—through their work, their leisure, and most certainly in their citizenship. But no effort to provide a global education can possibly succeed without a solid curriculum base, which must be the focus of any efforts to enhance the relationship between global and liberal education. Further, defining a global education in this sense extends the purposes of liberal education itself. It enhances the list of learning goals, while reinforcing the best aspects of a traditional education.

Mastery Learning

Many of the homework tasks in our courses are designed to give students multiple opportunities to learn the content and demonstrate their knowledge. In many traditional classes, if a student attempts homework and does not do well, he or she simply gets a low score on the assignment, and instruction moves to the next topic, providing the student a poor basis for learning the next concept. The feedback is also often given weeks after the concept was taught, by which point the student barely remembers the material, and rarely goes back to review the concepts to understand them better. In the *RHSS* programme, we strive to give immediate feedback on that concept the student did not understand. In many cases, we provide supplemental versions of the same assignment, so that a student can re-study and re-attempt the homework. This process is called *Mastery Learning*, and was shown³ to increase student performance by about one standard deviation over more traditional forms of instruction.

Peer Assessments

In many courses, the most meaningful assignments do not lend themselves easily to automated grading by a computer. For example, in a poetry course, we would want students to practice critical thinking and interpretive skills by answering essay-style questions, which require an understanding of the material. Similar issues arise when we evaluate seminar group performance, scored discussions, answers to homework questions, or many others forms of assessment and evaluation. This is particularly an issue in courses in the Humanities and Social

Sciences, and other disciplines where a relatively small fraction of the content lends itself well to scan card evaluation. Given our commitment to offer high-quality courses, we place a substantial importance on peer assessments, where students can evaluate and provide feedback on each other's work. This approach draws on two bodies of literature: First, the education literature on peer assessments. In keeping with the literature on student peer reviews⁴, we have developed classroom practices in which students are first trained using a grading rubric to grade other assessments. This has been shown to result in accurate feedback to other students, and also provide a valuable learning experience for the students doing the grading. Second, we draw on ideas from the literature on evaluation which suggests we can combine many assessments and evaluations (of varying degrees of reliability) to obtain highly accurate scores. Adopting such a method, we expect that multiple student grades for homework will generate grading accuracy comparable or even superior to that provided by a single evaluator.

Active Learning in the Classroom

Many of the activity-based curriculum materials in the *RHSS* programme are designed to significantly improve student learning experiences. Many studies have demonstrated that standard lecturing is not the most effective mode of instruction. Considerably more effective are the teaching methods that use active learning and interactive engagement between teachers and students, and between students and their peers. For example, describe a lesson in an introductory short story class that compares a traditional lecture setting to one that uses active learning. Research shows⁵ that in the active learning group, student engagement nearly doubled, attendance increased by 20%, and average scores on the same test increased from 41% to 74% (where random guessing would give a score of 23%). Researchers found similar results⁶ when gauging student responses to active learning. Our curriculum offers students the opportunity to take the traditional lecturing approach—required for conveying the necessary material from inside to outside the classroom, in an online learning format that is, in many ways, equally interactive and engaging. By doing so, we open up space in the curriculum for the active learning strategies that are considerably more effective in increasing engagement, participation, and learning.

The Importance of Retrieval and Testing for Learning

Many people think that the primary purpose of homework is to assess or to evaluate students. We believe that a far more important purpose is that they drive learning, and ensure long-term retention. A key factor in the design of the *RHSS* programme is the extensive use of interactive exercises, which we believe are critical for student engagement and learning. Even within teacher-led lectures during class, there are multiple opportunities for interactions: the teacher will frequently stop, and ask students to answer a simple question to test whether they are tracking the material. This strategy has value not only in maintaining student focus and engagement. Research shows² that even simple retrieval questions have significant pedagogic value. For example, recent research shows that activities that require students to retrieve or reconstruct knowledge produces significant gains in learning—much more so than many other learning strategies.

1. Stearns, Peter N. "Global Education & Liberal Education." *Liberal Education* 96.3 (2010): 18-23. Academic Search Premier. EBSCO. Web. 25 Jan. 2011.
2. Two papers in *Science*: Karpicke, Jeffrey D. and Roediger III, Henry L. (15 February 2008). "The Critical Importance of Retrieval." *Science*. New York: The American Association for the Advancement of Science, Vol. 319 no. 5865 pp. 966-968; Karpicke, Jeffrey D. and Blunt, Janell R. (January 20 2011). "Retrieval Practice

- Produces More Learning than Elaborative Studying with Concept Mapping". *Science*. New York: The American Association for the Advancement of Science, Vol. 331 no. 6018 pp. 772-775.
3. In a seminal paper by Bloom, Benjamin S. (June-July 1984). "The 2 Sigma Problem: The Search for Methods of Group Instruction as Effective as One-to-One Tutoring". *Educational Researcher*. New York: American Educational Research Association, Vol. 13, No. 6, pp. 4-16. This means that if in a traditional class 50% of all students pass a certain (median) level of performance, with Mastery Learning, about 84% of students now achieve this level of performance.
 4. Robinson, Ralph. (September 2001). "Calibrated Peer Review: An Application to Increase Student Reading and Writing Skills." *The American Biology Teacher*. New York: National Association of Biology Teachers, Vol. 63, no.7, pp.474-480.
 5. Deslauriers, Louis; Schelew, Ellen and Wieman, Carl. (May 2011). "Improved Learning in a Large-Enrollment Physics Class." *Science*. New York: The American Association for the Advancement of Science, Vol. 332 no. 6031 pp. 862-864.
 6. Wieman, Deborah M. and Mazur, Eric. (January 2009). "Farewell, Lecture?" *Science*. New York: The American Association for the Advancement of Science, Vol. 323 no. 5910 pp. 50-51. Their research findings were obtained across multiple disciplines and diverse institutions.