

2011

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Some Multidisciplinary Practices

KATHLEEN BLACK

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INTRODUCTION

From the beginning of the Northwestern College Honors Program in 2002, we have operated with several underlying principles, three of which relate to our goal of being multidisciplinary. Based upon our recognition of multiple intelligences and our acknowledgment of scholarship in all academic disciplines, we have made it our goal that a single definition of either intelligence or giftedness should not suffice as a strategic design concept for the program or as a selection criterion for the students who participate in it.

In creating our program, the Faculty Honors Program Committee decided that our honors program would not include only traditional or discipline-specific pursuits but would incorporate elements that reflect and encourage excellence in a number of different ways and disciplines. We wanted one of the criteria for honors students to be the expression of their giftedness in many categories, including music, art, mathematics, and science.

The adoption of a multidisciplinary structure birthed a second objective in our honors program: to develop well-rounded scholars. The idea of developing “Renaissance students” appealed to us. We frequently tell prospective students that, if they are accepted into the honors program, they are by definition “interested in everything.”

Finally, we wanted the honors program to be a vehicle for associating, connecting, and integrating concepts and knowledge from a variety of disciplines. As an overriding focus, we strive through the multidisciplinary structure to help our students see associations that connect one discipline to another. Once the students are able to see the commonalities as well as the distinctions among disciplines, they are less likely to isolate themselves within their own particular majors.

PRACTICES THAT PROMOTE MULTIDISCIPLINARY PRIORITIES

While foundational program objectives are laudable, translating them into organizational commitments and operational practices is challenging. In response to this challenge, we developed the following practical approaches.

MULTIDISCIPLINARY ADMISSIONS PROCEDURE

Since Northwestern College grants a substantial scholarship to students accepted into the honors program, we restrict the number of accepted students, so admission is highly competitive. We generally evaluate between seventy-five and ninety-five applicants for admission of just fifteen new students. Therefore, developing and executing a selection process that is fair to all applicants has been a top priority from the beginning of the honors program, and we have always affirmed that we need to include different types of scholars.

Applicants submit short essays that should demonstrate character and depth of thought, but the writing prompts do not pertain to any particular discipline. We also require that applicants submit a longer paper about any subject of their choosing. In evaluating these writing samples, we are looking for a thesis supported by main ideas and relevant details, but we put no restrictions on the subject matter. This paper is generally one that the applicant has done for a class in high school.

In addition to these written materials, applicants submit a sample of their achievement or ability that may come from almost any field of interest to them and that includes an explanation of the context of their submission. The work they choose to submit varies widely, but a common characteristic is their high degree of originality in content and form. Some include pictures of their artwork, photography, musical compositions, film productions, poetry, short stories, or creative prose pieces. Other applicants have submitted research in biology, chemistry, or physics; projects in political science; or computations in mathematics. They have submitted speech performances, oral interpretation, drama performances, and vocal and instrumental musical performances as well as papers in literature and history. We thus take a multidisciplinary approach right from the beginning of the process by allowing candidates for the program to submit evidence of their scholarship in any discipline.

Each original submission is scored by a faculty member qualified to serve as an expert in the relevant discipline. If an applicant sends in a CD with a flute performance, the primary flute instructor scores it; if someone sends in a report on research in chemistry, a chemistry professor scores it. In this way, many professors from diverse disciplines across campus become involved in the honors program and play a role in determining which applicants are accepted. We make this discipline-specific scoring as uniform as possible, using a simple 1 to 5 scoring scale: 1 indicates typical high-school-level work; 2 is good high-school-level work; 3 is typical college-level work; 4 is good college-level work; and 5 is excellent college-level work. As one might expect, 5 is extremely rare.

This application process has served the program well in meeting our multidisciplinary objectives and helping us defend our selection process as fair to all applicants. A parent once complained that the admission process was unfair to his son, who was good at science and math, not English. The complaint withered away when we explained that his son had chosen to send in only essays

for consideration when he could have sent work in science or math, a choice that the application material makes clear.

Another way our application process has worked well is that we have a group of students in the program who are diverse in their chosen fields of study. We do not consider the choice of a major in our selection; nonetheless, the majors of the selected students represent almost every department on campus. We generally have between sixty-five and seventy scholars in the program pursuing over thirty different majors.

We also admit students after their first year at the college. These second-chance applications similarly reflect our multidisciplinary intent in that, during their first year, the applicants must have taken honors classes in at least two different disciplines and submit a paper, on any topic, that was written for one of our classes.

HONORS COURSES WITHIN VARIOUS DISCIPLINES

The honors courses that we create and offer also show our commitment to our multidisciplinary approach. We currently have honors courses in a number of disciplines: ancient studies, art, biology, history, literature, music, mathematics, philosophy, textual interpretation, topics in science, and writing. The courses must all be approved by the Honors Committee, a multidisciplinary group of professors. Beyond approving the concept and content of each course, the committee members may offer suggestions for methodology.

In addition, the honors director has been instrumental in encouraging the creation of innovative honors courses, regardless of the academic field. The first offering of Honors Environmental Biology, for instance, included ten days of study, during spring break, at a research center in Belize. Students studied both sea life and the rainforest under the direction of two professors from our college, a marine biologist and a botanist. Students did their lab work in Belize rather than during regular lab sessions on campus. This year, students in this general-education honors biology course will go to Japan, working under the direction of a faculty member who did marine research through a Fulbright grant at the hosting Japanese research facility.

Faculty members involved in honors from various disciplines contribute ideas that shape the courses. Those of us on the Honors Committee do not restrict ourselves to thinking only about the academic disciplines in which we have degrees. Thus, we demonstrate to students one of our objectives for the program: that scholars need not be isolated within their majors.

REQUIREMENTS FOR COURSES

Another manifestation of our multidisciplinary commitment is the nature of our course requirements. Most honors programs require that students take a specified number of honors credits and/or take specified honors courses. Instead, we have distribution requirements. Our students must complete honors courses within a minimum of three different disciplines.

SOME MULTIDISCIPLINARY PRACTICES

When the Honors Committee was forming the program parameters, we chose to look at the multiplicity of disciplines rather than the number of credits. Students necessarily learn about disciplines in which they might have had no earlier interest, thus becoming multidisciplinary scholars.

MULTIDISCIPLINARY PRESENTATIONS AND RESPONSES

In addition to completing honors courses, students must complete one or more “honors components,” arranged by the honors director, during each semester in which they are unable to take an honors course. They are required to do at least one honors component before they graduate. The individualized components, taken by the juniors and seniors, are supervised by faculty members who agree to direct honors students in specified projects.

The subject matter of the honors components varies widely and has included number theory, international business, radio production, engineering, psychology, music theory and practices, and the theory of second language acquisition. Some recent components include “Symphonies Out of Songs: The Compositional Technique of Mahler’s First Symphony”; “The Somali/Autism Puzzle for Educating Diverse Learners”; “Erasmus and Luther in the Struggle over Free Will: *De Libera Arbitrio* vs. *De Servo Arbitrio*”; “Introduction to Egyptian Mathematics”; “Talkin’ Trini: A Survey of English in Trinidad”; and “Racial Justice and the Supreme Court.”

The methodology also varies. Sometimes the components consist of traditional research papers in areas of interest, but students have also assisted professors in their research and have conducted original research on their own. Two honors students have done research within the Minnesota Historical Society to study the history of gangsters in St. Paul and the history of authors of the Twin Cities. For each of these, students created for their fellow students a tour of relevant sites to visit. One student did primary sociological research to present “Same Country, Different World: The Unique Culture of Bethel, Alaska.” Another student assisted a professor with research by collecting samples and doing laboratory analysis for a component entitled “Genetic Analysis of *E. coli* from Lake Johanna.”

After completion of a component, the student is required to present the work in an Honors Seminar session, using PowerPoint. Attendance at fifteen sessions of Honors Seminar each semester is a requirement for our honors students, and students not in the program attend sessions as well. Students must answer questions from the audience at the conclusion of each presentation. Honors students learn to communicate ideas to others who are not majoring in that field, and the listeners learn to ask thoughtful questions and participate in discussion of a new concept not related to their major. In a seminar session presented by an engineering student on “An Introduction to Einstein and Special Relativity,” students from diverse disciplines got excited as they began to understand the concepts. One music major wrote about this experience: “I remember one specific seminar on Einstein’s Theory of Relativity in which I suddenly

realized that I understood what was being said! This technical, scientific jargon that would have blown my mind previous to college was fitting and making sense." In their yearly reflective essays for the honors program, many students make similar comments about the knowledge and enthusiasm they have gained in numerous subjects outside their majors through listening to their peers.

Other lectures in a variety of disciplines are delivered by professors and guest scholars for both Honors Seminar and the college-wide Lecture Series. All faculty, staff, and students, as well as people from the community, are invited to these lectures, which count as seminar sessions. Sometimes we require them to respond to the lectures online in a discussion-board forum or devote an additional seminar session to discuss the ideas, but we always encourage them to take notes, and our honors students often step forward with thought-provoking questions for the speaker, regardless of whether the current topic matches their major.

MINNESOTA COLLEGIATE HONORS SYMPOSIUM

The Minnesota Collegiate Honors Symposium is perhaps our most important setting for multidisciplinary learning. The Northwestern College Honors Program created this yearly symposium, to which other colleges in Minnesota with honors programs are invited. All the students in the Northwestern program are required to attend this daylong event. Some of our students present, of course, but each of the others is assigned a task for the symposium. Many are session monitors, who must ask two questions of each speaker. Students are not briefed before these presentations, and roles are assigned without any regard for the topics of the presenters or the interests of the session monitors. We expect our honors students to be able to listen to a scholarly presentation about which they had no previous information and create stimulating questions.

At each symposium, we have had presentations about philosophy and literature such as "Arian Soteriology"; "Conflict and Compromise in the Development of Islamic Ideals"; "The Conflict between East and West in *Paradise of the Blind*"; and "The Ghost of Idi Amin in Ugandan Literature." Other topics demonstrate a variety of disciplines: "Pressing On: Martin Luther King's Living Legacy as Displayed in the Life and Ministry of Dr. John Perkins"; "The Healthcare Industry and the LEP Individual: ESL Education's Role in Healthcare Communication"; and "Incentives for a Federal Shield Law."

Two aspects of student participation in this Symposium reveal the objectives of our program. First, Northwestern students who are chosen to do a presentation do not necessarily explore a topic that is within their major, and so a mathematics education major presented a paper on "Class vs. Character in Dickens' *Bleak House*." Secondly, students respond well to the symposium. They can be heard in the hallway between sessions telling each other how interesting a session was or extending the discussion into the breaks and over lunch. The students also post responses on our electronic discussion board for further exploration of ideas. In their reflective essays, they have written

SOME MULTIDISCIPLINARY PRACTICES

comments like “I would rarely solicit information concerning the development of vocal cords, but I found myself fascinated by the presentation at the Honors Symposium” or “At this year’s symposium, I had the opportunity to learn about psychology, business, sociology, math, and linguistics. What a great time!”

MULTIDISCIPLINARY FIELD TRIPS

Because we are located in an urban area, we have the opportunity to take at least one field trip each semester, which counts as an Honors Seminar session. The Honors Council, a group of students in the program, decides the destinations of these field trips, and the assumption is that all students are interested in learning anything. We have taken field trips to art museums, historical sites, history museums, a science museum, and the Minnesota Zoo (conducted by a guide from the University of Minnesota School of Veterinary Medicine). We have had intercultural experiences (a Vietnamese cooking lesson and the Festival of Nations) and have experienced theater (*Jane Eyre* at the Guthrie Theater). Sometimes a field trip has been multidisciplinary in itself. Our field trip to the American Swedish Institute included information about architecture, history, and art. Another example is our attendance at an event called Victorian Ghost Stories at the James J. Hill house, which includes elements of oral interpretation, literature, and, in the tour of the mansion that belonged to the famous railroad magnate, history and architecture.

Students often mention field trips in their reflective essays. One student wrote about how interesting it was to tour a museum in the company of fellow honors students who shared their knowledge and insights as they looked at exhibits: “Our recent field trip to the Mill City Museum was another chance to learn from my fellow students as well as the tour guide and museum exhibits. I am continually amazed as I find that I am interested in every subject that we learn about.” Another wrote recently: “At the beginning of the year, we took a field trip to the zoo. I have to admit that I did not expect to learn very much; I just went because I enjoy going to the zoo. I was very surprised to find that I actually learned a lot while we were there. The other students in my group shared their knowledge, and I had a chance to share some of mine. This field trip generated discussions and learning.” These comments provide some subjective validation that the program has been successful in providing valuable learning experiences and in encouraging our students to visit these venues on their own.

CROSS-DISCIPLINARY HONORS SEMINAR REQUIREMENTS

In addition to the requirement to attend at least fifteen hours of Honors Seminar events each semester, students must complete seminar assignments related to all majors. For example, we require them to improve their non-specialized vocabulary by adding new words from their reading each semester and using words collected in that year’s “dictionary” in an essay or narrative account that they post in the discussion forum online. In addition, we require

them to annotate their summer reading and, using the annotated lists of their fellow honors students, make lists of books they would like to read. One of our continuing emphases in Honors Seminar is the development of argumentation and logic, skills that apply to every discipline. After learning about deductive and inductive arguments, premises, ambiguous language, logical fallacies, argument by authority, use of statistics, and semantic argument, students practice those skills using primarily the writing prompts provided by the Graduate Record Exams (GRE).

Another frequent activity during Honors Seminar is discussion, either led by the juniors or seniors or “Open Discussion” during which everyone is expected to bring in a topic. Occasionally these discussions are centered on a topic within the student’s major, but often they focus on current events. Students enjoy this chance to get beyond what they call the campus “bubble.” As one student said, “I think one of the greatest things about Honors Seminar is this exposure to a wide range of ideas and current issues.”

We also make students aware of what we call “outside opportunities,” which might be lectures or special exhibits at museums. Students may use up to two of these outside opportunities to fulfill requirements for seminar hours. They share these learning opportunities, if possible, by inviting others to join them. (We tell them to “try to use all the seat belts in the car.”) They also share by posting a summary and response online. No attempt is made to match these outside opportunities to any particular major.

INTEGRATING THE DISCIPLINES

Our objective of making honors students see connections among the various academic disciplines has frequently proven to be more elusive and difficult than our objectives of being inclusive in admissions and multidisciplinary in academics. However, the integration of academic disciplines can occur as a direct result of a student’s honors courses. Immediately prior to graduation, honors students are required to write a final paper reflecting on their journey as a scholar. The specific honors courses they choose to mention are not necessarily courses within their major field of study. For example, one social science major recently wrote that she was glad that she had taken the honors course in forensic science, a course involving physics, chemistry, and biology. While she never wanted to major in science, when she was graduating and heading for law school, she saw the application of this course to the study of law.

Integration also occurs in honors components. A few of the upperclassmen have requested to do components that either cross disciplines or have been inspired by the work of an honors student in another discipline. For example, one student did a component on the correlations between art and classical literature, and two others have explored the broad question “What is the nature of higher education?” Another senior, with a major in cross-cultural studies, was influenced by studies in psychology that other honors students had done and adopted their methodology. Other examples of integration of disciplines

SOME MULTIDISCIPLINARY PRACTICES

within the honors components include “Notating Culture: An Examination of Music Notation and its Relationship to Culture”; “The Effect of American Postmodernism on Mass Religious Events”; and “Affected by Beauty: Calvin’s Aesthetic Theory.”

We have also seen integration among disciplines as a result of the student-led seminar discussions. The most outstanding example of integration of multiple disciplines came from a student majoring in musical composition. He wrote:

Had I not been an [honors student], I highly doubt that my composing would be as broad-minded as I seek for it to be. I would likely not be drawing in influences from other art forms, as witnessed by my *Improvisation after Edvard Munch No. 1, “Hvit Nat,”* inspired by a trip to the Minneapolis Institute of Arts. I doubt that I would have pursued poetry to the extent that I have, which has led to the composition of many art songs over the last year; several professors believe these to represent my best work. Having the experience of upper-level, multi-disciplinary student presentations continually broadening my interests, I have found many new and formative inspirations for composition. From hearing mathematics students speak, I pursued one to find out about matrix functions, and then applied these to composition, eventually having a major breakthrough in my compositional technique, producing a work that will be on the recital. From the religious and philosophical discussions we have had in seminars over the years, I have explored more mystical and theological concepts in music. (J.D., Reflective Essay, April 2010)

Honors Colloquium

A new honors course that epitomizes our efforts to be multidisciplinary is an interdisciplinary colloquium in which students do research on a variety of topics within a common theme at a location outside the United States. They then present to each other what they have learned. So far, we have been able to do two Honors Colloquiums, one with a study trip to Wales and Ireland and one with a study trip to Scotland. Within the country or countries associated with the trip each time, students have studied history, linguistics, sociolinguistics, literature, art, music, electronic media, journalism, philosophy, and religion. Many of the students have been able to conduct relevant research while they were on the study tour. In a presentation last spring to students and faculty members, Colloquium students recounted the connections they had found among their areas of study and the integration of ideas from the study of others.

CONCLUSION

We believe that we have made a good start on the realization of our program’s multidisciplinary objectives. A recent graduate wrote, “My interests have

KATHLEEN BLACK

not narrowed. . . . Instead, they have expanded so much that I do not even know how to satisfy all my appetites for different areas of learning. I was recently asked in an interview what I would want to study if I could expand my knowledge base in one area. I laughed because I did not know what area to choose." He has become a "Renaissance student." In this graduate and in our honors students as a whole, we see evidence of interest in and appreciation for a wide variety of subjects, the connections between them, and their application to numerous fields of study, leading us to believe that we are meeting these objectives for the program.

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