

Global Perspective-Taking: Extending Interdisciplinary Pedagogies into International Classrooms

by

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Abstract: As William Newell observed, in order to obtain an excellent undergraduate education, it is necessary for students to move between disciplinary and interdisciplinary educational experiences; additionally, he claims it is essential that “students also...shuttle back and forth between the classroom and the outside world” (Newell, 2010, p. 12). This movement, both intellectual and physical, promotes the development of the perspective-taking that can help students better understand, and potentially begin to address, complex global issues (Newell, 2001). If moving between disciplines and beyond the classroom into the physical world (and back) could have an impact on students’ perspective-taking development, what might happen if that movement happened across great distances – if international experiences and the consideration of international topics were added to interdisciplinary learning? From 2010 to the present, faculty and staff at the American College of Norway, an international college serving American, Norwegian, and other international students, have developed and instituted multiple interdisciplinary learning experiences based on Newell’s theory that interdisciplinary learning enhances high impact learning experiences like study abroad (Newell, 1999). This article examines three of these learning experiences and their outcomes within the framework of William Newell’s theories, describing how the potent combination of international study and interdisciplinary learning can create significant growth in students’ perspective-taking abilities.

Keywords: applied learning, art integration, collaborative learning, curriculum development, experiential learning, interdisciplinary pedagogy, international education, study-abroad, team-teaching

Introduction

Over the decades of his illustrious career in pioneering the field of interdisciplinary teaching and research, William Newell evolved a profound and pragmatic definition of interdisciplinarity that was predicated on the

necessity of helping students grapple with the complex issues that they will be required to address, post-graduation, regardless of major or career. As one can see in examining the evolution of Newell's thinking, part of the power of interdisciplinarity resides in its requirement that students come to understand and to integrate the various insights of different disciplines in regard to overarching themes or problems (Newell, 1999, 2001). As Newell participated in and helped develop and define the field of interdisciplinary studies, his ideas extended far beyond the original framework of interdisciplinary courses and clusters for undergraduates. Thanks in large part to his efforts, and the efforts of many others with whom he worked like Kenneth Boulding, Julie Thompson Klein, Allen Repko, Don Stowe, Barbara Leigh Smith, Tanya Augsburg, and Rick Szostak (Newell, 2008), interdisciplinary thinking and methodologies have come to frame many educational endeavors from undergraduate majors to graduate degrees to research clusters. And, as his notions of interdisciplinarity continue to advance, taking the framework of interdisciplinary learning into an international educational setting seemed to the faculty at the American College of Norway to be the logical next step.

As Newell indicated in his 2010 article for the journal of the Association of American Colleges and Universities, the best “[i]ntegrative learning experiences bring students into contact with people who are *inside* the complex situation [they are addressing]. Since these people are situated in different social locations, they look at the complex situation in which they find themselves from different angles, experience it differently, and come to different understandings of it” (p. 7). When this kind of academic integration (through interdisciplinary learning experiences) can involve individuals from multiple countries and cultural backgrounds and perspectives, the impact is powerful. For the past eight years, work in combining interdisciplinary teaching and learning with international study and experience has been ongoing at the American College of Norway, a small international college near Oslo, Norway, serving Norwegian, American, and other international students. Three specific interdisciplinary learning experiences at this college have proven especially effective:

- A linked course experience integrating insights from two courses: Environmental Studies and Human Rights;
- A thematic learning experience linking assignments and integrating perspectives across courses in English, Peace Studies, and Introductory Interdisciplinary Studies along with student extracurricular activities at multiple institutions in three countries;
- A single course situating art study within the context of global, environmental issues.

In each of these three interdisciplinary, international learning experiences, students were exposed to and interacted with a proliferation of perspectives. They were asked to consider issues from the viewpoints of not only different disciplines but also other people and other cultures. Then they were required to integrate materials while also working with people from outside the academy who viewed the same material through different lenses and insights from such sources. Finally, they needed to reach conclusions and complete projects that required them to consider all the viewpoints before formulating their own responses. Because of this wide-range of source materials, the learning experiences were powerful and have resulted in the kind of intense and multi-faceted learning outcomes that we ideally hope to develop in students: “Grounded in the disciplines and in out-of-class experiences, such an approach exposes students to diverse perspectives and encourages them to integrate their insights,” providing students “with additional information about a complex situation beyond what the disciplines or even interdisciplinary studies can offer” (Newell, 2010, p. 3).

Toward an Interdisciplinary, International Curriculum

The American College of Norway (ACN), located south of Oslo in the city of Moss, provides Norwegian students planning to study in the United States with a first year of U.S.-style college, and provides U.S. students with an international learning experience based in a U.S. institutional infrastructure where courses are taught in English and where classes are small and student-centered. Since ACN provides only one year of instruction, sending its students off at the end of each year to finish degrees at U.S. partner institutions, most of its courses are general education courses that complement many fields of study. Approximately 60-75 Norwegian students attend ACN each year, and they are joined by students from the United States who are on semester- or year-long study abroad experiences. Often students from other countries outside of Norway or the U.S. are part of the student body. Most students live together in a small apartment complex close to the college, and the college orchestrates many extra-curricular activities that contribute to program building, creating a strong learning community where classroom ideas can continue to percolate after classes are over. The American College of Norway, founded in 1992, has partnered with U.S. institutions for its entire tenure, working most closely with the University of North Dakota (UND), which approves all academic curriculum, vets all faculty, and serves as ACN’s School of Record.

Classes at ACN are taught by U.S. professors, some traveling for the se-

mester from their home institutions and some American ex-pats who live in Norway. Though the majority of students are first year students, there is a breadth of experience in the group, especially since Norwegian first year students are on average one to two years older than U.S. students due to differences in Norway's secondary educational system and the Norwegian military requirements for both men and women. Most American students who attend ACN are in their first or second year and usually still need general education courses to complete their studies. Overall, the group each year is made up of students from wide-ranging socio-economic backgrounds.

Since its inception in 1992, the American College of Norway faculty and staff have striven to expose students to key issues that affect Norway and the United States. Drawing on resources peculiar to and easily accessible in Norway, students have been encouraged especially to consider environmental policies, human rights policies and infractions, immigration, criminal justice, and sustainable peace. These particular topics were addressed through specific disciplinary courses with no attempt to integrate learning or insights between those courses.

Students have also benefited from the cultural experiences of living in a foreign country and studying with international peers (Carmichael, Finney, & Magness, 2005; Carmichael & Carmichael, 2015). However, as with many study-abroad programs, the integration of classroom and learning experiences was left to the students to do in some fashion themselves (Tarrant, 2010, p. 434). of course, little was done to help students process the variety of perspectives and experiences they encountered. Much like interdisciplinary studies in its early days, when students were often exposed to a multidisciplinary look at particular topics without being given the skills to begin integrating the insights of those disciplines (Newell, 2008), students at American College of Norway were left to get the most out of their learning and experiences themselves. And though, of course, studying at ACN was a popular and valuable international learning experience, it became clear that the unique ACN environment could provide even more opportunity for deepening and augmenting students' awareness of and abilities to tackle complex global issues by creating interdisciplinary learning opportunities and providing them with instruction in how to integrate the insights from the many sources available in various guises.

Both interdisciplinary pedagogy and international study experiences are proven high-impact practices with irrefutably strong student learning outcomes (Bollag & Field, 2006; Carmichael & Carmichael, 2015; Carmichael & LaPierre, 2014; Kuh, 2005; 2008; Savicki & Brewer, 2015), and both interdisciplinary approaches and global perspectives are increasingly neces-

sary to students' abilities to deal with modern, complex issues that bridge many disciplines and cultures. Additionally, study abroad is perceived to increase sensitivity to these complex global issues (Stroud, 2010; Tarrant, 2010). Thus as we began to redesign the ACN curriculum, we believed that the combination of an interdisciplinary curriculum and an intense, extended international experience could produce remarkable learning results for our students helping them to discover new ways of perceiving and responding to pressing world challenges. As Newell posited, interdisciplinarity could be effectively used "to integrate and maximize the impacts of a variety of pedagogies such as...study abroad, and learning communities" (Newell, 1999, p. 18).

Over the course of several years, we at the American College of Norway became increasingly influenced by the arguments of William Newell and others. We agreed that creating opportunities for interdisciplinary learning tied to the disciplinary and real world experiences that ACN could provide would augment program benefits for our cohort of international students who both studied and socialized at high levels together (Klein, 2002; Klein, 2005; Newell, 1999; 2010). Learning outcomes evidenced by the interdisciplinary learning communities at partner institutions like the University of North Dakota (Carmichael & LaPierre, 2014) provided further incentive for us to alter our offerings. And, since, as Newell (2001) contends, "interdisciplinarity is, at root, concerned with the behavior of complex systems" (p. 4), the curriculum at the American College of Norway which already undertook to study complex systems, such as environmental challenges and sustainable peace, was ripe for interdisciplinary development. It was this thinking that prompted us to create and offer the three different types of interdisciplinary learning experiences identified above. Following is a description of each learning experience along with the positive learning outcomes of each that our regular assessments have thus far provided.

Environmental Issues and Human Rights: Integrating Two Courses

The first interdisciplinary learning experience, developed and executed in 2010, involved the integration of two courses: Global Environmental Impacts and Global Human Rights Issues. The courses were created and taught respectively by a Biology professor and a Humanities and Interdisciplinary Studies professor (the author), and these two faculty members constructed the courses to "select and teach the relevant disciplinary materials in the context of analyzing an interdisciplinary question" (Newell, 1983, p. 112): To what degree does environmental depredation cause human rights abuses?

The curriculum and assignments involved all three components of Newell's model for excellent undergraduate learning: disciplinary understanding, interdisciplinary learning, and real world application (Newell, 1998, 2001). In addition, we added the fourth component of international perspective building, requiring students to integrate the experiences and perspectives of their international classmates into their academic considerations.

Students from Norway, the United States, Pakistan, and Israel were enrolled at the American College of Norway in these two classes that were taught in tandem and, once a week, together. During the separate classes, students focused on understanding the disciplinary methods and materials related to environmental issues and human rights, gaining familiarity with insights from both areas. In the environmental studies course, they read about and had lectures on global climate change, studied scientific research on the topic, conducted small experiments, and learned to analyze climate change data. In the human rights course, they read the *Universal Declaration of Human Rights* and considered specific areas of historical and current human rights abuses, including those involving ethnic cleansing, systematic abuse of women and children, denial of women's rights, poverty, hunger, poor health-care, and water quality issues. They attended guest lectures by the former Norwegian Minister of Justice on the treatment of indigenous peoples in Norway and the U.S. Overall, students gained insight into the disciplinary approaches and perspectives of both fields and sets of topics. To answer the multi-faceted yet coherent question regarding the connections between environmental issues and human rights abuses, however, insights from both courses needed to be brought together, and an interdisciplinary approach was needed to help them do that.

Because it is the case that, as Newell (2001) says, "Interdisciplinary need not become experts in the disciplines they utilize...[but] need sufficient command of [a discipline's] relevant portions to illuminate the specific features of that particular complex system," (p. 17) we felt that the disciplinary course materials students encountered prepared them to integrate insights from both disciplines to confront the problem of environmental predation and human rights abuse.

To help students start to integrate these insights, students in the two classes met together once a week. In these joint sessions, students were presented with arguments and methods for developing interdisciplinary thinking skills. They were given tasks that asked them to find connections (perhaps previously not seen) between varying facts and ideas from both disciplinary perspectives (Newell, 2010), thereby establishing common ground "by bringing out latent commonalities in the [often] conflicting insights of dif-

ferent disciplines” (Newell, 2006, p. 94). For instance, the class was divided into three groups, and each group was assigned a particular environmental issue: water supply contamination, air quality, Arctic sea-ice melt, etc. Students were asked to explain findings from scientific data about these issues, and then they were asked to find places in the world where these issues affected people. Once they chose a specific area to examine, they were asked to find information about the quality of life for people in these areas they had selected and to look at conditions that they had learned were covered under the notion of human rights. Then they were asked to consider how the environmental situations and the human rights issues overlapped. What they discovered allowed them to see the larger systemic connections between climate change and human rights: They found, for instance, that there seemed to be a correlation between what was happening environmentally and data that indicated higher poverty rates, higher cancer rates, and higher suicide levels, among many other things. One group in particular, studying the Arctic sea-ice melt, discovered that communities in the Arctic north where temperatures and ocean levels are rising were faced with life-changing and challenging issues such as displacement (due to mud slides and sinking land) that led to the disruption of communities, higher death rates (than those outside of this area in the same geographical regions), increased poverty rates, and higher infant mortality rates (than the norm for their geographical area or country). Suddenly, the importance of combating climate change had a human face, and the students realized how great the impact of human behavior and scientific research and development in the field of climate change science might be.

Likewise, students were asked to study environmental policies of countries like Norway and the U.S. and to consider how these policies were or were not informed by scientific data and by information about the impact of the policies on the health and well-being of citizens. They brainstormed ways to leverage scientific findings in order to make arguments for policies that allowed for the more ethical treatment of people. Though the results of this activity were rather simplistic and idealistic, the value of the experience came “from getting the students to see the richness of the question and what would be involved in answering it, more than from learning the answer itself” (Newell, 1983, p. 117).

In addition to helping students more fully appreciate the richness and complexity of these issues by integrating disciplinary perspectives and insights, they were also exposed to differing personal and cultural perspectives – adding a final level of complexity to their studies. Norway and the United States have differing stances on recycling, water and air quality, nat-

ural resource mining, healthcare, and the value of human capital. The day of combined classes allowed these international students time and opportunity to share and explore alternative stances on such matters and to consider how different countries can and do acknowledge the same data but create varying political and social policies in response. They would note that one society embraced personal actions to reduce harmful emissions by increasing gasoline prices, increasing public transportation options, and incentivizing ownership of electric cars through nationally funded tax incentives, while another country did not do these things, causing it to use a prodigious amount of the world's supply of oil while creating a significant amount of pollution. They were also faced with squaring people's ethical needs with the political responses of their own countries. How, for instance, could a country like the U.S. espouse family values at the same time it increased factory emissions that could be directly linked to childhood cancers? How could one country count national healthcare a luxury and another a human right? Again, students did not necessarily come to agreement on answers to these questions, but they established a common ground or framework for better understanding the issues and information, and a more integrated approach to considering new ways to approach or even perhaps solve these complex problems. The value was in realizing there were different opinions on these issues, contemplating the varying perspectives, trying them out, and having to defend one's own to others. Through these learning activities, students were able to appreciate a complex problem, exercise disciplinary and interdisciplinary perspective-taking, establish common ground for discussion and understanding, and achieve partial integration of disciplinary materials. For instance, as they studied the impact of Arctic sea-ice melt, students gained a more informed understanding of the complex factors at play: the impact of the ice melt on the environment, indigenous communities, national borders, global security, and global trade potential. Moving from a look at scientific data on rising ocean levels to a consideration of the displacement of Arctic communities allowed students to shift between and integrate disciplinary perspectives in order to create a common framework for understanding the global ramifications of such a complex issue. It became inherently clear in this work that considering these issues from only one disciplinary perspective would be less than adequate, and that it was essential to "consider each possibly relevant disciplinary perspective in an open-minded way" and to attempt to integrate those perspectives in order to gain a stronger sense of the complex system as a whole (Arvidson, 2015, p. 138).

Throughout this experience, students were assessed through both indirect and direct mechanisms in order to determine the effectiveness of this

international, interdisciplinary experience. The assessment included both pre- and post-writing assignments and a final survey of student perceptions of learning. This research was approved by the UND Institutional Review Board. Overall, as Carmichael and Carmichael (2012) discovered, the pre- and post-assignments indicated that students gained more specific understanding of global human rights and human rights violations. It was also clear that students integrated insights from both classes to reach higher order conclusions that allowed them to see specific issues within a larger political, environmental, and psycho-social context. Assessment of this international learning experience indicated that all three of the original goals were met: Students indicated high levels of engagement in activities where purposeful integration of materials was presented. In addition, they were able to develop strong, critical responses to general issues of human rights abuses based on their new awareness of the interplay between environmental and scientific issues and human rights violations. And, finally, they all demonstrated a more informed, passionate and articulate stance toward the complex process necessary for addressing environmental issues and protecting human rights (Carmichael & Carmichael, 2015).

In past semesters at the American College of Norway, these two courses would have been taught separately. Any connections between disciplinary insights would have been accidental and left up to the students to discover. However, the curricula for these two courses were revised and course materials and assignments were integrated based on Newell's arguments for the value of utilizing interdisciplinarity when studying complex, multi-faceted issues (2001). Providing the tools (assignments) and space (weekly combined classes) for this interdisciplinary work to take place also allowed more opportunity for this diverse group of students to share and integrate their varied viewpoints into their findings. The results were powerful, and the experiment led ACN faculty to consider more options for creating interdisciplinary learning experiences.

Sustainable Peace: Combining Disciplines and Global Perspectives

The second integrative and interdisciplinary experience that was created utilized the American College of Norway's special relationship with the Nobel Peace Prize Institute (Oslo) and the Nobel Peace Prize Forum (Minneapolis, MN) to help students better understand the issue of global, sustainable peace. However, given that the topic of sustainable peace was even larger and more multi-faceted than the complex but more focused question of how environmental depredations can create human rights abuses, a more

encompassing and more integrative interdisciplinary framework was needed. To help students integrate insights from the various disciplinary components necessary to tackle the incredibly complex topic of global, sustainable peace, we determined that viewpoints must be considered from Political Science, Peace Studies, and Humanities in order to come to a stronger understanding of the issue. And we also felt that students in many different kinds of courses could benefit from considering their own discipline's take on the issues involved by viewing those insights through the lenses of disciplinary perspectives.

Instead of linking two courses or creating one purpose-built interdisciplinary course, we created team-developed assignments that were undertaken by students at three universities in three different countries and in different classes, bringing their disciplinary and cultural insights to grapple with the same complex questions: What is global, sustainable peace and is it possible? Students' findings from these courses and universities were shared over social media platforms and then discussed by each group in each country. This iterative dialogue was sustained through an entire semester, allowing students time to consider each other's personal and disciplinary insights and to revise their own ideas in the wake of these shared ideas. Students from Norway, the United States, and South Africa participated. They were enrolled in English, Political Science, Humanities, and Peace Studies courses. And, just as the linked environmental course and the human rights course benefitted from the diversity of global perspectives presented by the students themselves, so too did this interdisciplinary learning experience benefit from the discussions ranging from country to country, from culture to culture.

Additionally, ACN faculty and staff recognized the value of utilizing the space between the academic classroom and the social world of the students – both real and virtual. Persuaded by examples of experimental colleges seeking to bridge the divide of classroom and out-of-classroom activities (Newell, Hall, Hutkins, Lerner, McGuckin, & Oates 2003), we also decided to capitalize on the unique living-learning environment of ACN students as well as the students' constant use of and comfort with social media. These realities presented us with the opportunity to create a learning experience that would extend out of the academic environment into students' activities, and beyond borders. To capitalize more fully on the out-of-class component, the faculty and students at the American College of Norway created a student Peace Committee – a committee that would operate throughout the entire academic year and that would both actively assist in gathering, synthesizing, and distributing student responses from the various institutions via social media platforms and also spearhead and create extra-curricular activities to

augment the ongoing studies (these eventually include music videos, student blogs, and community awareness campaigns). Thus we worked to follow Newell's advice for strengthening an interdisciplinary learning experience by placing this one in a culturally integrative setting, bringing "students into contact with people who are *inside* the complex situation. Since these people are situated in different social locations, they look at the complex situation in which they find themselves from different angles, experience it differently, and come to different understandings of it" (Newell, 2010, p. 8).

Faculty at the American College of Norway, the University of North Dakota, and Nelson Mandela University (NMU) in South Africa met remotely via Skype to develop the semester-long, interdisciplinary curriculum for groups of first year students at all three institutions in Humanities, English, Peace Studies, and Political Science classes. This curriculum used texts from the humanities and the social sciences to reflect those disciplines' insights into the topic, and it established key discussion questions such as "What is a global citizen?" that would require students in each class to consider the topics not just from their own disciplinary perspective, but from the perspective of other disciplines. First year students from the following places and classes were involved: seventy Norwegian and American students in English courses and Peace Studies courses at ACN, sixty first-year American students from UND in an Introduction to Humanities course, and forty first-year students from South Africa, Zimbabwe, and Zambia in Political Science courses at Nelson Mandela University. Students and faculty were connected via electronic platforms and social media. The associate director of ACN, Rebecca Norvang, took charge of the student Peace Committee.

Just as the interdisciplinary consideration of environmental issues and human rights previously described drew on the unique resources of Norway, this project too would draw on the American College of Norway's access to Norwegian experts. It was decided to develop the project around the complex ideas of globalization, disarmament (nonviolence), and dialogue. These three ideas are key to Norwegian global policies and were inspired by the work of the first female recipient of the Nobel Peace Prize, Bertha von Suttner (1905). Thus, Norwegian author Anne Synnøve Simensen, whose pivotal work is *Kvinnen Bak Fredsprisen: Historien om Bertha von Suttner og Alfred Nobel/The Woman Behind the Peace Prize: The History of Bertha von Suttner and Alfred Nobel* (2012), agreed to be personally involved in this endeavor.

A packet of readings sharing disciplinary insights into the topic was created for the curriculum at all three institutions and the ACN Peace Committee students themselves were asked to choose and develop the forums for online discussions as well as any other activities they felt were important,

thereby making the project more meaningful to the students' own interests and ways of learning. Faculty at all three institutions agreed to this structure and approach. The literature packet contained excerpts from Bertha von Suttner's (2009) *Lay Down Your Arms*, speeches by Victor Hugo, excerpts from Tolstoy's (2010) *The Law of Love and The Law of Violence*, letters exchanged between Tolstoy and Gandhi, and speeches from Nobel Peace Prize Laureates including Martin Luther King, Jr., F. W. de Klerk, Christian Lange, and Mother Teresa. Since Simensen's book was only available at the time in Norwegian, an ACN film student on the Peace Committee created a short documentary featuring Simensen and her work in order to tell von Suttner's story. This video was shared with the other institutions via a YouTube site developed for this project.

As students read the materials, they met in discussion groups to consider specific questions that would draw on as well as require the integration of different disciplinary insights. These questions included, "What is peace?" "What is a global citizen?" and "How can sustainable peace be achieved?" After the localized discussions, students in the classes in Norway, North Dakota, and South Africa summarized their conversations in writing and emailed the summaries to the students on the Peace Committee at ACN. So that students at each college could see the responses, these were published on a blog developed by the Peace Committee students, and excerpts were posted to the Promoting Peace Facebook page (also created by the Peace Committee).

In the first iteration of these responses, students were encouraged to produce answers drawing on the perspectives of the classes in which they were enrolled. For instance, responses from students in the UND Humanities course about what a global citizen is centered on identity definitions, like "a global citizen is someone who cares about and identifies with others, who has empathy with another despite their location," while students in the NMU Political Science course tended to see the question from the standpoint of history and policy. One student group in this course responded to the question by saying that,

Historically people have not had the resources to move across borders and so have maintained the integrity of the group by identifying strongly with the socio-political identity of their region. Today though, people move more freely, they are able to construct policies that affect people in other countries, making everyone in developed countries more of a global citizen.

All good responses, these, but quite rooted in their disciplinary perspectives.

After the students at all three institutions were able to access, analyze,

and debate the responses of their international peers, they regrouped in class discussion to consider why other students would have similar or different ideas about the appropriate answers to these questions and to reevaluate and refine (or enlarge) their own responses. They were asked to find the useful ideas in each perspective and to consider the commonalities and differences. Then, they were asked to consider how the ideas from one discipline might connect to – impact, result in, result from – the ideas of another discipline. In the meantime, they all continued to read and to debate the assigned packet materials. They considered materials and questions regarding global citizenship, peace, and disarmament, and were able to reach more nuanced and impactful conclusions regarding the role of the individual and the community in achieving a more peaceful future (Carmichael & Norvang, 2014).

As in a 3-D painting, suddenly new ideas seemed to move to the forefront of their vision. One student group at the University of North Dakota, in the Humanities class, created a revised response to the definition of global citizenship by saying,

Citizenship has historically been defined as something resulting from one's geographical location. But the borders and policies that are traditionally used to define citizenship are often arbitrary and are far less important than most people realize. In the past – and even today – people react to others based on “where they come from,” but actually we all come from the same place: earth. And now more than ever, defining ourselves as one people is necessary to the survival of ourselves and the earth too.

Another student group realized that,

All too often people fight over things – like national identities – that don't matter. These identities are created by powerful people who work to exploit others for personal gain. We need to recognize our isolation as citizens of a particular community or of a country and do away with the boundaries that limit us.

And students at the American College of Norway were inspired by these ideas and realized that one way to transcend these barriers (set historically and defended ethically) was through music and art – disciplines that both have the potential to combine and to give utterance to complex ideas and solutions.

Additionally, because the project included people from within different cultural and social contexts from the start, students were able to integrate their academic learning with the perspectives of culturally diverse groups of their peers, collaborating across borders and social media platforms. Understanding the global impact of these interdisciplinary issues became very

immediate for everyone, and students continued to share their thoughts and conclusions via the blogs and the Facebook site. Students from South Africa spoke eloquently of apartheid, and U.S. students suddenly became more aware of their history as a slave-owning country. Students in Norway, often rather confident in their assumptions about Norwegian peace-keeping policies, were asked to defend the historical treatment of their indigenous Sami people. Students were confronted with the way the world viewed them and their countries, and they had to struggle to square these perspectives with the ways in which they had defined their own personal and national identities. The answers to “What is a global citizen?” suddenly became even more complex as they interacted with people living inside different systems, all attempting to articulate their perspectives on the same topic.

Eventually, these global conversations led to an international student-led conference presentation at the 2013 Minneapolis Peace Prize Forum (MPPF), the creation of a music video called *Lost in Thought* featuring both Norwegians and Americans and dealing with isolation, fear, and the need for human connection (Ryan, 2013), the production of several paintings, and a community awareness campaign to draw attention to issues of sustainable peace. Had the topic of global, sustainable peace been limited to the discussions within one course in one discipline at one college, the rich exploration and recognition of the complexity of the topic could not have become as developed and would not have resonated so fully with students. The expanded framework – both academic and geographical – for studying the topic gave each group of students a context in which to consider and then reconsider their own ideas (Newell, 2001), and allowed them to produce responses (like the conference presentation, the painting, the music, etc.) in which they drew from the many different disciplines. The music video, for instance, drew on insights from Political Science as well as Humanities. The visual arts pieces represented ideals of Peace Studies (we can achieve peace) while embodying some of the pessimism of Political Science study (humans struggle to survive, one group over the other). We believe that none of these works could have been created if students hadn’t been required to engage in interdisciplinary thinking – and taught how to do just that.

As theory and practice have suggested again and again, providing students with an integrated approach to understanding complex issues and giving them the leeway to develop their own projects and weigh in on the issues under consideration yielded impressive results (Astin, 1993; Glasgow, 1997; Kuh, 2008; Light, 2001; McCombs & Whistler, 1997; Newell, 2001). In this particular interdisciplinary learning experience, perhaps more than in the other two at the American College of Norway discussed in this article, the students were encouraged to move back and forth between disciplinary

and interdisciplinary educational experiences as well as to “shuttle back and forth between the classroom and the outside world,” integrating the perspectives of others with those derived from their own academic learning (Newell, 2010, p. 12). The use of social media and shared, online discussions took this movement into the outside world beyond the usual classroom/out-of-classroom borders in a way that deepened and extended students’ perspectives on and understanding of how other individuals and cultures view the many facets of sustainable peace.

These results provide concrete proof of Newell’s theory that students can, “after observing the behavior of systems in which they participate...learn to anticipate formerly unappreciated large-scale consequences of their actions, and change their behavior to alter a systemic pattern” (p. 11). They show that they could “imagine alternative worlds and select behaviors to promote the world they choose” (2001, p. 11). Of course the responses do not alter the entire reality – these students did not discover the answer to achieving world peace. They did, however, gain a stronger understanding of the challenges and complexities of the subject, and they did create ways to address the issues of sustainable peace and global citizenship through changes in their perspectives and behaviors.

Art and Environment

Seeing students respond to the global peace experience by spontaneously adding artistic expression to the mix led me to the most recent interdisciplinary experiment at the American College of Norway: one that would integrate art into a course from the beginning. In his “Theory of Interdisciplinary Studies” (2001), Newell advances his pivotal notion that to “the distinguishing but elusive characteristic of interdisciplinary studies – synthesis or integration – is at last explained in terms of the unique self-organizing pattern of a complex system” (p. 1). Newell goes on to observe that the study of complex systems “tends to resonate well with natural and social scientists,” but it may seem strange or at odds with those in the arts who tend to focus on the individual, “syncretic, unique, and personal,” not those things “regular, predictable, and lawful” (2001, pp. 3-4). However, as he continues to observe, evaluating a work of art within a context allows us to better understand some of its meaning or significance to the system in which it was created (2001, p. 4). I would add to this that artists are fully immersed in complex systems and provide and/or evoke utterances of that system that, when studied, in relationship to other textual or artistic utterances, provide insight into the impact of that system on the individual, and mirror the shifts and changes

within complex systems over time.

How, I wondered, could I create a learning experience that could help students come to a deeper understanding of the meaning and power of certain artistic expressions – their own included – by seeing them within a particular complex context? Because I was uncertain about the ultimate success in pursuing this question, I decided to attempt to create an interdisciplinary experience housed within a single course and to pilot it during a summer term at ACN. The summer term at the American College of Norway is unique in that it offers a small group of students (10-18) intense, three-hour-a-day classes that run through a four-week semester. The week-day time is highly focused, and required field trips are planned for several of the weekends too, naturally moving students from classroom to the outside world where they can easily see examples of the ideas they are studying. Students take only a maximum of two classes during this summer term and are thus able to concentrate intently on course materials. All of the students enrolled in the summer program are sophomores, juniors, and seniors, and are thus more experienced learners. Within this framework, I decided to have students study the visual arts in the context of environmental issues and activism. The course, *Environmental Protest Art*, purposefully integrated a study of environmental threats with an exploration of pivotal protest art pieces addressing those threats.

During the summer of 2016, sixteen students from Norway, the University of North Dakota, West Chester University, PA, and Pace University in Manhattan, NY, met together to explore the intersection of environmental issues and protest art. No artistic expertise was required, and the students ranged from rising sophomores to recently graduated seniors (Pace University offers their Honors students a study abroad scholarship that can be used up to one semester after graduation). Students spent equal amounts of time in the first weeks of the summer term studying materials on environmental issues including data sets about global temperature changes, greenhouse gas emissions, and arctic ice melts, as well as policy statements from global climate change summits, and treatises by environmental activists such as Bill McKibben. They met with the Norwegian Ambassador to the U.S., Kåre Aas, who discussed the recent Arctic ice melt data with them, as well as the biological and geo-political implications for the countries of the Arctic Council (of which both Norway and the U.S. are members) as well as for the countries bordering the Arctic.

Once they were familiar with some of the basic arguments, perspectives, and implications of climate change science, the students were introduced to five pivotal environmental arts activists and their works: Nils-Udo, Andrew

Goldsworthy, Agnes Denes, Chris Jordan, and Banksy. They also watched James Balog's exquisite and breathtaking time-lapse photos of the melting arctic ice (Orlowski & Balog, 2013). In small group discussions, students were asked to correlate components of the artists' works with the environmental issues they represented. What particular issues was each piece speaking to? Did the artists adequately – or even accurately – represent the issue they were focusing on? Could any single work be seen as an intelligible utterance of the problems of the system it represented? Was the work powerful enough to inspire the kind of change it hoped to create? To answer these questions, students needed to connect data and arguments surrounding the environmental issues themselves with particular art pieces. They had to find the common – and differing – perspectives on the facts of a situation (rising water levels, for instance) and compare them with the artistic rendering of that phenomenon (like Banksy's "I Don't Believe in Global Warming" scrawl, sinking below the water level where it was stenciled). They were encouraged to "[look] behind stated positions for underlying values and assumptions" and to "construct a more comprehensive understanding" of the artistic works and of the issues with which they were dealing (Newell, 2010, p. 10).

As students learned to understand cultural artifacts like paintings and street art within the complex system they were representing, I also wanted to have them integrate ideas from first-hand experience. Thus, we visited art galleries in Oslo and used our nascent techniques for trying to see how individual works might connect to the systems within which they were located. At the Oslo National Gallery, we studied Scandinavian landscape artists like Peder Balke and Johann Christian Dahl; at the Astrup-Fearnley, which features contemporary art, we considered works by Hannah Greely and Damien Hirst. Since art "seek[s] to draw others (audiences, viewers, readers) into the integrative process" (Newell, 2012, p. 301), this hands-on practice of visiting and considering genuine artwork was an important part of helping students to practice using their interdisciplinary thinking to situate a work within a complex system (Newell, 2010). Additionally, the experience helped them to improve their abilities for better understanding art and for seeing how and why it can so powerfully influence human action.

Of course, as in the other learning experiences described here, students were also required to filter their views through the lenses of the other students' perspectives. Several students in the class were visual and performing artists. Several students, though not artists themselves, had a great deal of exposure to art, while other students had experienced little-to-no exposure to art – or quite frankly, to climate change science. Students

who were more experienced and sophisticated could quickly integrate and apply insights from environmental science to art we studied (and vice versa) but often had to patiently listen to the slowly developing thoughts of the less-exposed and sophisticated students. Norwegians had to come to an understanding that some Americans in the group initially rejected climate change science and often found art to be confusing, elitist, and sometimes even threatening. Those American students benefitted from seeing how so many other students from different places easily accepted climate change science and could advance sophisticated analyses about the art they considered. Just like the other learning experiences here, this one also was greatly enhanced by the bringing together of students from many places and backgrounds:

Talking to one or two people from another culture, community, or racial group may yield mostly idiosyncratic insights – after all, there is a lot of variation within cultures, communities, and groups – but if students get a chance to talk to enough individuals, the distinctive perspective of that culture, community, or group should start to become apparent. That’s why we set up whole programs like study abroad or service learning – so students get an entire semester of interactions with people with different perspectives. (Newell, 2010, p. 8)

In order to give students a space to express the ideas the course was generating, I decided to create hands-on projects for them so that their ideas could potentially take a physical shape. I wanted them to mirror the process of artists taking on and giving voice and emotion to the realities of the system in which they situate their work – I wanted them to *participate* in the interdisciplinary activity of art creation. Therefore I asked them to work in pairs, select one environmental issue we had been studying, and create a photo-collage or a music mash-up that would embody insights drawn from the study of that issue and express them to an audience. They shared and critiqued these projects with each other. Then they moved from these smaller projects to the culminating project: the student art gallery.

For this final project, this group of students, from such a variety of backgrounds and with such a variety of skills, interests, and academic abilities, was tasked with combing through the information we had been studying to identify what they determined to be the most pressing environmental issue people face globally. They were required to defend their selection based on evidence, providing objective arguments for the pressing nature of the issue they selected. Then they were asked to work together to create a gallery experience that would communicate information about this issue in some way

to the general public in the community of Moss, Norway (a small city, south of Oslo). They were allowed to create individual or group pieces and to create either a “real” or virtual gallery. Since not all the students were artists, they were assured that the effort and overall effect of the project would be considered in the evaluation of their work, not necessarily their artistic skill.

The result was breathtaking. Students proposed and defended their choice of temperature change and its ensuing environmental depredations as their gallery theme. They then transformed one entire section of their student apartment building into a public pop-up gallery – a temporary, sudden installation of art that makes a statement.

Beginning with an installation of burning garbage at the entranceway, they created visual, aural, and physical experiences on each flight of stairs and in the entryways of each apartment on every floor. Students took individual ownership for each display, so every student created work that contributed to the whole gallery. The faculty and staff of the college, along with other area residents, were invited to attend the installation. As guests ascended the steps, they were exposed to rising temperatures (controlled via the building thermostats and cleverly hidden space heaters), and they viewed paintings, modern dance performances, and video displays containing data and depicting the students’ understanding of global climate change. By the end of the experience, every guest was visibly moved and silent. Many indicated that they had never so clearly understood and felt the potential harm of global temperature change as they did after attending this pop-up art installation. And, as the instructor of the course, I will admit that I have never been prouder of a group of students and of their work than I was after experiencing their gallery.

Most importantly, the students themselves indicated their pleasure at creating such a successful experience for others. They also expressed their appreciation for having themselves come to a more comprehensive understanding of important environmental issues by unpacking the messages and power of individual art pieces. Additionally, by articulating their chosen environmental issues in the form of another discipline (art), they felt they were able to more powerfully render the ideas they had come to understand by “participat[ing] in a shared integrative process” of creating and defining social and scientific issues through artistic expression (Newell, 2012, p. 301). This participatory experience was also extended because the students opened their art show to the public, thereby engaging a live audience in an interdisciplinary experience. In final student reflection papers, they made comments like, “I knew global climate change was important, but I never felt it so strongly as I did in this course,” and,

Where I was raised, no one believes in global warming. But now I understand how the rest of the world thinks, and I can see the impact on so many others. I'm glad I had a chance to present some art about this topic and make others feel the way I do now.

One student, a rising senior at Pace University, claimed, "I've always considered myself an artist. But now I'm an artist with a purpose. I have learned how to use my art work to create social change." In all of these instances, it was clear that the students' understanding of both the environmental science issues and the art itself was enriched and extended by the integrated study of the two disciplinary perspectives and by the integration of varied cultural and personal perspectives as well. The students' self-assessment confirmed what I thought myself, that in this case as in the other ACN interdisciplinary learning experiences discussed earlier, "integrative and interdisciplinary activities have the additional benefit of motivating students by demonstrating the real-world relevance of their education" (Newell, 2010, p. 12).

Conclusion

From an institutional standpoint, the successful results of these three interdisciplinary learning experiences have prompted a formal curricular move to create regular opportunities for interdisciplinary learning at the American College of Norway. One fall semester component spearheaded by ACN Professor John Ross involves an interdisciplinary study of the Arctic North, with a travel component to Svalbard/Spitzbergen, while another experience will see the expansion of the summer Environmental Protest Art course into a full spring semester experience with a travel component to London. From a personal standpoint, the success of these three experimental offerings has taken me to the next phase of my work in interdisciplinary studies. For the past two decades this work has been influenced by William Newell. From teaching in and heading up an interdisciplinary department at a state university, to creating successful mechanisms for evaluating the learning outcomes of interdisciplinary study (Carmichael & LaPierre, 2014), to now integrating interdisciplinary learning with international study, I have been inspired and challenged by the ideas and findings that Newell has shared through his body of work and through his personal mentoring. As I worked through the creation of these three international learning experiences with my colleagues, I was constantly brought back to the thought, "What would Bill say?" and I attempted to craft as much of these experiences as possible within the framework of his theories and in accordance with the practical examples he has provided.

Though many of us academics thus have been greatly influenced by William Newell's work, no one has benefitted more than the students in the many well-crafted interdisciplinary studies programs and intentionally interdisciplinary courses and learning experiences that now exist because of his tireless advancement of the field. His work has helped to give form and integrity to a field that provides students and, thus, citizens, with a more comprehensive framework for understanding and solving the complex world issues they face than has been available to them previously. He has helped raise awareness of the potentiality of interdisciplinarity, and this awareness has resulted in teachers and researchers from many countries coming together to grapple with, experiment with, document, and utilize interdisciplinarity as a mechanism for creating stronger intellectual frameworks and new ways of seeing and changing the world. As one of these young academics, quite recently one of these students, Nick Sousanis has so eloquently said, "If we have a superpower, it's the capacity to host a multiplicity of worlds inside us, frames of reference from which to see the world differently... in passing through these thresholds, we emerge with the possibility to become something different" (2015, p. 66). The field of interdisciplinary studies, Bill's field, taps into this ability we all share and has opened up the possibility for us to have "a more comprehensive understanding of [any] situation in its full complexity" (2010, p. 8), an understanding that can lead us, along with our students, to "imagine alternative worlds and select behaviors to promote the world [we] choose" (2001, p. 11).

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References:

- Arvidson, P. S. (2015). The virtue of reverence in interdisciplinary study. *Issues in Interdisciplinary Studies*, 33, 117-143.
- Astin, A. W. (1993). *What matters most in college: Four critical years revisited*. San Francisco: Jossey-Bass.
- Bollag, B., & Field, K. (2006, January 20). Foreign students: Uncle Sam wants you. *The Chronicle of Higher Education*. Retrieved March 18, 2018 from <http://Chronicle.com/weekly/v52/i20/20a04501.htm>.
- Carmichael, T. S., Finney, S., & Magness, M. (2005). An international learning community: Cultural studies and study abroad in an integrated studies program. *Issues in Integrative Studies*, 23, 38-55.
- Carmichael, T. S., & Carmichael, J. (2012, Winter). Collaboration in an international classroom. *Academic Exchange Quarterly*, 16(4), 42-47.
- Carmichael, T. S., & LaPierre, Y. (2014). Interdisciplinary learning works: The results of a comprehensive assessment of students and student learning outcomes in an integrative learning community. *Issues in Interdisciplinary Studies*, 32, 53-78.
- Carmichael, T. S., & Norvang, R. (2014). A global dialogue on peace: Creating an international learning community through social media. *International Journal of Teaching and Learning in Higher Education*, 26 (3), 445-452.
- Glasgow, N. A. (1997). *New curriculum for new times: A guide to student-centered, problem-based learning*. Thousand Oaks, CA: Corwin Press.
- Klein, G. (2002). It takes more than a passport: Interdisciplinarity and study abroad. *Innovations in Interdisciplinary Teaching*. Westport, CT: American Council on Higher Education/Oryx Press.
- Klein, J. T. (2005). *Humanities, culture, and interdisciplinarity: The changing American academy*. Albany, NY: State University of New York Press.
- Klein, J. T., & Newell, W. (1997). Advancing interdisciplinary studies. In J. Gaff & J. Ratcliffe (Eds.), *Handbook of the undergraduate curriculum: A comprehensive guide to purposes, structures, practices, and changes* (pp. 393-415). San Francisco, CA: Jossey-Bass.
- Kuh, G. D. (2005). *Student success in college: Creating conditions that matter*. San Francisco, CA: Jossey-Bass.
- Kuh, G. D. (2008). Why integration and engagement are essential to effective educational practice in the twenty-first century. *AAC&U Peer Review*, 10 (4), 27L28.
- Light, R. J. (2001). *Making the most of college: Students speak their minds*. Boston, MA: Harvard University Press.
- McCombs, B., & Whistler, J. S. (1997). *The learner-centered classroom and school: Strategies for increasing student motivation and achievement*. San Francisco, CA: Jossey-Bass.
- Newell, W. H. (1983). The case for interdisciplinary studies: Response to professor Benson's five arguments. *Issues in Integrative Studies*, 2, 1-19.
- Newell, W. H. (1998). Professionalizing interdisciplinarity: A literature review and research agenda. In W. H. Newell (Ed.), *Interdisciplinarity: Essays from the literature* (pp. 529-563). New York: The College Board.
- Newell, W. H. (1999). The promise of integrative learning. *About Campus*, 4(2), 17-23.

- Newell, W. H. (2001). Powerful pedagogies. In B. L. Smith and J. McCann (Eds.), *Reinventing ourselves: Interdisciplinary education, collaborative learning and experimentation in higher education* (pp. 196-211). Bolton, MA: Anker Press.
- Newell, W. H. (2001). A theory of interdisciplinary studies. *Issues in Integrative Studies, 19*, 1-25.
- Newell, W. H. (2006). Interdisciplinary integration by undergraduates. *Issues in Integrative Studies, 24*, 89-111.
- Newell, W. H. (2008). The intertwined history of interdisciplinary undergraduate education and the association for integrative studies. *Issues in Integrative Studies, 26*, 1-59.
- Newell, W. H. (2010). Educating for a complex world: Integrative learning and interdisciplinary studies. *AAC&U Liberal Education, 96*(4), 7-12.
- Newell, W. H. (2012). Conclusion. In A. Repko, W. H. Newell, & R. Szostak (Eds.), *Case studies in interdisciplinary research* (pp. 299-314). Thousand Oaks, CA: Sage Publications.
- Newell, W. H., Hall, J., Hutkins, S., Lerner, D., McGuckin, E., & Oates, K. (2003). Apollo meets Dionysius: Interdisciplinarity in long-standing interdisciplinary programs. *Issues in Integrative Studies, 21*, 9-42.
- Orlowski, J. (Producer & Director), & Balog, J. (Time-Lapse Director). (2013). *Chasing ice* [Motion picture]. United States: Submarine Deluxe.
- Ryan, S. R. (2013). *Lost in thought* [video file]. Retrieved from <https://www.youtube.com/watch?v=CzpzOJ4TwZY>
- Savicki, V., & Brewer, E. (2015). *Assessing study abroad: Theory, tools, and practice*. Sterling, VA: Stylus Press.
- Simensen, A.S. (2012). *Kvinnen bak fredsprisen: Historien om Bertha von Suttner og Alfred Nobel*. Oslo, Norway: Cappelen Damm, AS.
- Stroud, A. H. (2010). Who plans (not) to study abroad? An examination of U.S. student intent. *Journal of Studies in International Education, 14*, 433-450.
- Sousanis, N. (2015). *Unflattening*. Harvard University Press.
- Tarrant, M. A. (2010). A conceptual framework for exploring the role of studies abroad in nurturing global citizenship. *Journal of Studies in International Education, 14*, 433-450.
- Tolstoy, L. (2010). *The law of love and the law of violence*. New York, NY: Dover Publications.
- Von Suttner, B. (2009). *Lay down your arms*. Charleston, SC: BiblioBazaar, Nabu Press.