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Beyond "Parallel Play": Creating a Realistic Model of Integrative Learning with Community College Freshmen

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Abstract
What does interdisciplinary integration actually look like for students beginning their college studies? This article describes what a LaGuardia Community College teaching team, who typically share a theme and consult periodically but keep their classes distinct—discovered when they designed an integrative assignment for a paired developmental learning community pilot. During the semester, students in Introduction to Algebra and Critical Thinking completed three common assignments exploring the environment through mathematics: they collected data on their energy consumption, made sense of the numbers in an essay, and were asked how critical thinking and math contributed to their understanding of the environment theme. An examination of student work revealed that becoming an able integrative thinker involves learning very basic integrative skills. In turn faculty realized they needed to design an assessment tool which would reflect the developmental stages of integrative learning.

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Thematically-linked courses do not necessarily result in the kind of integrative learning associated with learning communities. This article explores the untapped interdisciplinarity potential in developmental learning communities when assignments are designed with intentional integrative learning in mind.

At a learning communities meeting where faculty were sharing examples of interdisciplinary integration from the paired courses *Critical Thinking* and *Introduction to Algebra*, a faculty member asked, "But is this really integration? Shouldn't the students know this already?" The assignment she was questioning had asked students to keep track of how much electricity they had consumed and how much they had saved over a brief period of time as well as evaluate the possible social effects of their electricity use. In her critique of this student's work, that faculty member frames the question at the center of this article: What might interdisciplinary integration actually look like at the early stages of a community college career when students are still in developmental courses?

A decade ago, Vincent Tinto (1998, p. 175) qualified his own earlier research where he had suggested that academic integration did not matter for retention in two-year colleges, admitting that it was "merely another way of saying that those classrooms were not involving and did not promote academic integration." He noted that his co-authors had not said that learning communities for developmental students "could *not* be used to promote integration," suggesting that the intervening period had produced examples of integration in learning communities at those colleges. Tinto

acknowledged that, "We would have understood this relationship if we were more conscious of existing practice and the ways in which our research is a reflection of existing practice. Unfortunately, too much of our research has been blind to practice and its recent innovations" (p. 175).

For several decades LaGuardia, CUNY, a diverse urban community college in western Queens, New York City, has offered learning communities involving a cohort of students and faculty who work together. Our institution believes in their value as do many other institutions nationally. The question is, to what extent is this faith justified? For the last two years, our college's Learning Communities Assessment Team, led by Professor Phyllis van Slyck, has participated in the National Project on Assessing Learning in Learning Communities, led by the Washington Center, in which we have been designing integrative assignments and then following up by examining student work. As we worked together at LaGuardia and at the Seattle meetings, our perception of what we do in learning communities at LaGuardia, as well as what we might do, evolved. Van Slyck, a nationally recognized expert on learning communities, remarked at the start of this project that over time at LaGuardia we had gotten quite good at "parallel play," that is, working collegially with faculty from various disciplines linking our courses thematically and in practice (2003, 2006). While there were shared themes and some consultation back and forth, ultimately the classrooms and contents remained distinct, similar to the ways they were taught outside the learning community. There was much that benefited students psychologically and even intellectually, in that they enjoyed special events and attention, but little that was pedagogically unique about the process.[1] We were unsure whether we were achieving true "integration," what Tinto had described as the "shared knowledge" of a discipline as well as the "shared knowing" with other students in the community (1998).

We also had a sense that there were untapped interdisciplinary potentials in our developmental learning communities, but inevitably our focus in those communities was the completion of the syllabus content and student survival/retention at the college. We had multiple desired ends for our students in those initial learning communities: We wanted them to pass high-stakes exams, to help each other navigate the bureaucracy and isolation of the first year of a commuter college, to get special attention from their professors when needed, and to generally have a stronger more relevant learning experience and thus do better than the average entering student. From various indicators, particularly student retention, it appeared our learning communities succeeded. Students in learning communities at LaGuardia are retained at a rate of 75.7% versus 70% for non-learning

community students.[2] Yet how much of this—if any—had to do with experiences of interdisciplinarity or integrated learning?

Why is interdisciplinary learning such an issue for us in the first place? Team discussions reaffirmed that we certainly live in an interdisciplinary world. Media and the Internet press us with material on every possible subject simultaneously: global warming, the mistreatment of animals, elections, gossip, new art forms. An artist may need to understand evolutionary biology or computer programming if she or he is to raise consciousness on climate change or create visuals for tomorrow's games; a metallurgist, physicist, or doctor may now get more training in aesthetics or ethics than earlier generations ever assumed they needed, while the study of literature reveals lessons for law. The rise of multiple "studies" majors over the last 20 years recognizes that students today are expected to not only have particular knowledge of various subjects, but to operate on the liminal border areas of multiple disciplines and new disciplines. Students today will be expected to be specialists early on as well as generalists later. They will likely have multiple careers and each job they take may transform while they work at it. A literate bilingualism will be neither debility nor luxury, but most likely a necessity in many global industries. Persons entering the workforce will need to demonstrate facility with both technology and with ideas, applying concepts to new and unpredictable situations. Furthermore, it appears that workers will need to know how to work together and apply the knowledge of experts to solve the many global problems from which Americans are no longer insulated. How can community colleges and their faculty approach these challenges?

As basic skills faculty, we believe that interdisciplinary learning is one way to adapt the traditional issues and methods of the disciplines to a new world. No doubt the traditional liberal arts education pursued a similar end, albeit in a different manner. Today's workers and citizens need to think on multiple levels starting out; community college students have less time to assimilate ideas gradually and associate them fortuitously at a later date. In our first-year and developmental learning communities, we are doing no less than trying to stimulate students to search for connections across disciplines as a habit of mind rather than as a happy accident. Students sometimes prefer the security of isolated disciplines. For example, if a student does not enjoy math and prefers history, or vice versa, it is easy to take the minimal course requirements and never learn anything more about a subject that he or she "is not good at." The interdisciplinary learning community, instead, encourages phobic students to approach one subject through another.[3]

A core practice for our team was using the collaborative assessment protocol designed by Boix-Mansilla (2005) and adapted for use in the national project. Based on research by Boix-Mansilla, the protocol invites readers to notice four dimensions of interdisciplinarity: purposefulness, disciplinary grounding, interdisciplinary leveraging, and reflective thoughtfulness. In interdisciplinary learning, we want students to recognize structural similarities between different ideas in varied disciplines and also to apply them directly to practical problems generated by today's world. The collaborative assessment protocol and Washington Center's heuristic for designing integrative assignments (Lardner & Malnarich, 2008) both assume that consideration of a social issue grounds the interdisciplinary project so as to serve as a central problematic which the learning community explores and attempts to answer together.

The need for these interdisciplinary realities still exists, even at the level of students entering college through basic skills courses, especially when the focus is on acquiring literacy and basic math skills. At LaGuardia, two thirds of the students are English language learners, and too many come from local high schools where 50% or fewer students are college bound when they graduate. Those students who make it to us face any number of obstacles. Once in our doors, they cannot rely on attaining a degree; they need the courses they take to matter as well.[4] Most of them will have to complete at least one developmental course, and unless they pass university-mandated exams, they will not move into college-level courses. In our system, students need to learn to pass high-stakes reading exams where they face random unrelated materials that they need to assimilate quickly and writing exams where they are asked to write about an artificial and often unfamiliar situation in 60 minutes.

Studies have shown that thematically linked content in reading classes helps readers to acquire the vocabulary and background knowledge they need to increase their skills rapidly; basic writers improve more quickly when they are invited to respond to readings on compelling subjects. In acquiring literacy skills that will prepare them for college and later, students profit from reading, writing, and thinking critically and metacognitively on serious subjects that are linked thematically. A situation—as in a learning community—where a group of students takes all their courses together guarantees a shared conceptual vocabulary as well as the social bonds that reduce first-year anxiety at a large commuter institution. LaGuardia's learning communities are intended to draw on these two features—relevant, thematic links and a clear social cohort—and to help students grasp these links directly, draw conceptual parallels, and begin to operate with real facility in a borderless universe of contiguous ideas.

In our attempt to "do" integration, we encountered two major problems. First, our faculty were not in agreement about the meaning of integration; and second, our students often could not grasp the disciplinary grounding of the subjects that faculty were integrating. We sought first to rectify the issue with our faculty. We brought back from our meetings in Seattle a variety of different techniques to use in a yearlong *Focus on Learning Communities* faculty seminar. However, our strategies had varying degrees of success. Faculty frequently reported that they were most comfortable in isolated disciplines—just like our students! The real challenge in helping faculty move toward intentionally integrated assignments is the fact that we were all responsible for basic skills components. Even in a class that is nominally a "content area," such as Introduction to Computers or Introduction to Business, faculty teaching in first-year experience learning communities always have to work with students who are not college ready.

In a Basic Writing class clustered with Internet Research Skills, Introduction to Computers, and a New Student Seminar, students struggled with integrating the skills needed to write a college-level research paper. In a reflection on this cluster, one student wrote:

> According to the courses that I took, I found all of them very important to my life and to my future life. I will be able to use all the skill [sic] that I learned in the class, especially for the computer class. Because all the courses that I will take will need a computer skill.

Thus, though this student is attempting reflection, he is not able to speak to the specific integration of skills that instructors might hope to see. Another student had a similar experience. In this sample of her research paper, she fails to integrate the skills she learned in the various cluster classes:

> Here's a security option that you can use for your young siblings and or [sic] children. You can set boundaries on the pc [sic] so the child can enjoy a safer experience on the PC. You could better secure your pc [sic] with many other security options.

Again, this student was unable to synthesize the material in a way that created an effective integration. While occasionally students in these first-year developmental classes were able to synthesize their classes, more often the above example exemplified the work they were doing. In terms of their own work, students appeared to have no clear idea of what integration would look like. Moreover, students often would not report seeing any points of integration in their classes beyond recognizing that

sometimes their teachers talked to each other or that the teacher in one class seemed to know what was going on in students' other classes.

Thus, we reevaluated what integrated learning could or should look like at our college. We are not asking our developmental students, who are ostensibly first-year and sophomore students, to integrate materials in the same way that we might ask graduate students to integrate their ideas. Integrative learning in a two-year college must take into account the developmental level of our students—what the majority of our students are ready to do. Integrative learning need not be elaborate or in-depth, but it should begin a real process of disciplinary connection for students. It might be something as simple as a student using the skills they learn in an Internet Research Skills class to write a paper for Introduction to Computers while simultaneously using what they have learned in a basic writing and rhetoric course to do something as complex as analyzing characters in Greek Drama using the tools they learned in an Introduction to Psychology course. However, at its most basic level, we want our students to begin to understand a process of making connections and relations between very different ideas. As instructors, we think we can help by making the potential opportunities for integration more explicit. For our beginning students, we may begin by working with connections that can help students feel comfortable, increase basic comprehension, and then later work on connecting ideas in new ways.

This line of thinking led our group to questions about how much "pre-integrating" we should do; for instance, should we ask leading questions in assignments to make it clear we are inviting students to make connections? Though this remains a topic of debate in our group, still, at the crux of developing integrative assignments is making sure that the faculty who are working within a learning community are clear on how and what they want to integrate across courses from the start. Returning to the question we cited at the opening of this paper about what interdisciplinary integration looks like in the context of basic skills courses, we offer the following example of an interdisciplinary learning community project and ask readers to judge for themselves: Is meaningful integrated learning taking place here? The example comes from a math course and a critical thinking course that were paired as part of the pilot for Project Quantum Leap, which uses the Science Education for New Civic Engagements (SENCER) model. SENCER hopes that by making math relevant to students' lives, students will be more successful in practice. Introduction to Algebra, the math class in this pair, has a set syllabus with an exit exam; the other course, Critical Thinking, only has a core syllabus and a required textbook. The students enrolled in this pair of courses have usually had a

difficult time with math. Some may be repeating the course for the second or third time. They typically do not see the point of knowing math beyond the fact that they need it to pass the university high-stakes exam.

Since these pre-existing restrictions do not allow faculty to build a new paired course entirely from scratch, they instead created three common assignments for the semester exploring the environment through mathematics. The first assignment is about the environmental footprint that students leave via their electrical consumption. This assignment was staged in three parts: a project that involved data collection, an application/ integration section, and finally, a reflection on what was learned and what the personal and social value was.

Part One: Data Collection

For this part of the assignment, students have to choose three appliances, record their daily use of them, calculate their energy consumption for a week, and then reduce the amount of time they spend using the appliances. The common assignment shared for the two classes is an essay in which students discuss how their energy consumption impacts the environment and how changing their habits has affected their lifestyle.

The first time we taught the class, we noticed that because the calculations were not very accurate, the analyses were not very accurate either, so we added activities to familiarize students with how to do the calculations and with the issue of the environment to give them a broader context. Students watched *An Inconvenient Truth: A Global Warning* (Guggenheim, 2006), calculated their footprint using a Web site, and engaged in a discussion about our impact on the environment. Then, as they collected data, they practiced doing calculations with "fake" data. The goal of the project was to not only to raise students' awareness regarding their energy consumption but also to get them to use the data they collected as evidence in their essays.

Part Two: The Application of Ideas and Integration

The essays showed the students generally had no problem collecting the data, but even with the extra practice in calculation, they still had difficulty with quantitative literacy. Some did not fully understand the meaning of the numbers; others did not use data at all; still others had trouble writing about the data they had collected in a way that made sense to a reader. For example:

> I did my experience [*sic*] with all three appliances which I used the most like the TV, the Computer [*sic*] and the living room light bulb [*sic*]. All together per day that became in current electricity consumption of 2.145 and reduced rang up to 0.99 which made a difference of 1.155. After getting to this point of my experiment I calculated how much electricity I could be able to save in 1 year, which gave me a total of 421.575. Having known that the average retail cost of electricity per kilowatt-hour in New York State is $0.1619, I calculated how many dollars I was able to save, which gave me $0.202.

This essay shows the incorporation of data in the analysis, but the units are not specified: 421.575 of what? Also, the student does not tell us that the amount of energy saved is per day. In spite of these technical flaws, the essay has an interesting conclusion:

> In conclusion I find that if people were to reduce their energy consumption not only with that benefit our environment but also can benefit them as well [*sic*]. As it turns out, the more time we get away from our computers and TVs the more time we can spend on self improvements [*sic*]. Our environment is suffering due to our laziness and availability of quick information and simplification of life.

In the following example, the student showed an understanding of the issue, but did not use data to support the claim, thus the integration was not as complete as it could have been:

> I think that money and energy are crucial points. In my data collection I realized that I reduced my time in half on each appliance. This also reduced the money in half, the exact time saved. To many people this may be beneficial because you are reducing your costs and helping the environment. To others however they may rely on the use of things such as a computer so much that the price will not encourage them to use it less. So depending on a persons [*sic*] view and on the time frame that they have available I believe that the choice is theirs.

This essay concluded by stating that everybody has a choice when it comes to making an effort for the environment. While this student understood the role that everybody plays, there is no integration of the math concepts, and consequently, the essay is very general.

These two examples show that the students can think critically about the issue, but we only see limited attempts to use their calculations as evidence to support their arguments. However, even with imprecise data, the reflection papers did show an increase in the understanding of their impact on the planet. Some were shocked at how much time they used certain appliances, others reflected on what they did with their time if they were not using their computers.

Here is probably the kind of essay we were looking for and the best example of integration:

> To be honest, the Math part of the project held little significance to me. I know it means a lot in the world we live in and such, but it just didn't grab my attention. I do know without it, I wouldn't be able to know how much time I actually spent doing things regularly, or when they were reduced. So, I'm not saying Math didn't play a role, I just didn't care for it. I could "physically & personally" feel the differences, I don't need numbers to tell me that. On the money standpoint, Math held more weight, on displaying how much money was saved. I'm always back and forth with Math and how it relates to me. It's kind of like a love/hate relationship and I'm sure my reflection on Math is coming across like that. Nevertheless, I was able to save money by reducing my usages. After I reduced everything, I was able to save $56.84! That's a lot of money, maybe math does hold significance!

This example shows the student's ability to think critically about the environment and the use of math. There is both an integration of data to understand energy consumption and also a reflection on the change in the student's mind regarding math.

Part Three: Reflection on What is Learned

Some may wonder whether this is the kind of integration we should aim for, or whether it is so basic that the students should be able to do work like this before taking our classes. Judging by the results of our projects, our students do find it difficult to integrate data into their reasoning as a way to provide evidence for their argumentation and sharpen their critical thinking skills. At the end of the semester, when students were asked how critical thinking and math contributed to their understanding of the theme (environment), for the most part they found that they understood that saving energy was necessary for the environment and also might save them money:

> I also stopped looking at math as just numbers. I think that if these paired classes were offered to me in high school maybe I would not have had such a hard time passing math because it would help me to better understand math and how it applies to my life experiences.

> ... two weeks into the class I was see [*sic*] a changing in the way I was thinking about math, I still hated math but being able to use a method to try understand [*sic*] the course was so much easier.

With respect to integrating the environment theme into two courses, we can say our pair is successful, especially in Critical Thinking where

the students are able to use what they learned in that course and apply it to their thinking about the environment—they began to see how mathematical data can impact decision making and the shape of daily life as well as our future.

We still need to help students increase their ability to use math outside of the math class and feel comfortable enough with numbers to use them the same way they use any type of evidence in any project. Judging from this example, what does integration look like at the level of developmental education at a community college?

We would like to suggest a few considerations in thinking about integration at this level. Students completing the course should understand the boundaries of a discipline and the fact that the boundaries are sometimes not as solid as they appeared previously. This is a first step to valuing interdisciplinary learning and reaping its special benefits. Whether these students created masterful integrated projects was not the point; in fact, the faculty were not entirely sure they had created masterful assignments themselves. The fact was that the students were not able to make these connections at the start and needed to be directed in their reflection to rethink the connections and their relevance to their own learning. In more than a few cases, they did. As we develop our facility with designing integrative assignments, we need to take a parallel step as well, which is that of creating a realistic assessment model for looking at student work, one that recognizes that integration will occur in multiple stages and at multiple levels. In this way, we can keep the conversation about integrative learning tied to and reflective of the inclusive mission of the community college.

References

Boix-Mansilla, V. (2005, January/February). Assessing student work at disciplinary crossroads. *Change,* 37(1), 14–21.

Guggenheim, D. (Director). (2006). *An inconvenient truth: A global warning* [Motion picture]. United States: Lawrence Bender Productions.

Lardner, E., & Malnarich, G. (2008, July/August). A new era in learning-community work: Why the pedagogy of intentional integration matters. *Change, 40*(4), 30–37.

Tinto, V. (1998, Winter). Colleges as communities: Taking research on student persistence seriously. *The Review of Higher Education, 21*(2), 167–177.

van Slyck, P. (2003). Learning more, learning better: Developmental learning communities at LaGuardia. In G. Malnarich & P. Dusenberry (Eds.), *The pedagogy of possibilities: Developmental education, college-level studies, and learning communities*. Olympia, WA: Washington Center for Undergraduate Education and National Learning Communities Project.

van Slyck, P. (2006). Learning communities and the future of the humanities. *Profession*, 163–176.

Endnotes

1 On the benefits of learning communities, see: Hodge, G., Lewis, T., Kramer, K., & Hughes, R. (2001, October). Collaboration for excellence: Engaged scholarship at Collin County Community College. *Community College Journal of Research & Practice, 25*(9), 675–690; Dodge, L., & Kendall, M. (2004). Learning communities. *College Teaching, 52*(4), 150–155. For a very different and critical perspective on student attitudes about learning communities, see: Talburt, S., & Boyles, D. (2005). Reconsidering learning communities: Expanding the discourse by challenging the discourse. *JGE: The Journal of General Education, 54*(3), 209–236.

2 LaGuardia's Retention Study, fall 2009.

3 For discussions of interdisciplinary learning communities, see: Manian, S., & Sanders, N. (2005). Blood, sex, and power: A learning community. *Journal of Women's History, 17*, 162–169. Also see, Needle, A., Corbo, C., Wong, D., Greenfeder, G., Raths, L., & Fulop, Z. (2007, Summer). Combining art and science in "arts and sciences" education. *College Teaching, 55*(3), 114–119.

4 Five-year graduation rate is under 50%—LaGuardia Community College Institutional Profile, 2007.