

# Skills development, habits of mind, and the spiral curriculum: A dialectical approach to undergraduate general education curriculum mapping

Jeffrey W. Murray |

To cite this article: Jeffrey W. Murray | (2016) Skills development, habits of mind, and the spiral curriculum: A dialectical approach to undergraduate general education curriculum mapping, Cogent Education, 3:1, 1156807, DOI: [10.1080/2331186X.2016.1156807](https://doi.org/10.1080/2331186X.2016.1156807)

To link to this article: <https://doi.org/10.1080/2331186X.2016.1156807>



© 2016 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license



Published online: 11 Mar 2016.



Submit your article to this journal [↗](#)



Article views: 7430



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)



Received: 24 October 2015  
Accepted: 17 February 2016  
Published: 11 March 2016

\*Corresponding author: Jeffrey W. Murray, Department of Focused Inquiry, Virginia Commonwealth University, 5165 Harris Hall, 1015 Floyd Ave., Richmond, VA 23284, USA  
E-mail: [jwmurray@vcu.edu](mailto:jwmurray@vcu.edu)

Reviewing editor:  
Kris Gritter, Virginia Commonwealth University, USA

Additional information is available at the end of the article

## CURRICULUM & TEACHING STUDIES | RESEARCH ARTICLE

# Skills development, habits of mind, and the spiral curriculum: A dialectical approach to undergraduate general education curriculum mapping

Jeffrey W. Murray<sup>1\*</sup>

**Abstract:** This essay seeks to contribute to growing discussion concerning the need for more intentional inclusion of habits of mind in curriculum development, particularly in undergraduate general education, and to fuel an examination of the “dialectical” relationship between skills development and the development of habits of mind. The essay begins by generating a tentative curriculum map for the development of a set of habits of mind. It then provides an overview of the theoretical framework of dialectical analysis, which is used to identify points of synergy between skills development and the development of habits of mind. This essay hopes to enrich and expand the ways we think about undergraduate general education and spiral curriculum design, with the ultimate goal of illuminating the role of undergraduate pedagogy in shaping the academic habits of mind and professional character that we wish our students to develop. Toward that end, this essay encourages us to recognize that our students don’t magically transform from one state to another but instead undergo a gradual stepwise evolution, and to commit ourselves to better understanding precisely how that evolution occurs by examining the dialectical relationship between skills development and the development of habits of mind within our courses and curricula.

### ABOUT THE AUTHOR

Jeffrey W. Murray, PhD, is an assistant professor in the Department of Focused Inquiry at Virginia Commonwealth University. He teaches Focused Inquiry, a two-semester seminar for first-year students that emphasizes the development of professional/academic skills and comprises tier one of the University’s General Education curriculum. Professor Murray received a master’s degree in Rhetoric and Communication Studies from the University of Virginia in 1994 and a doctorate in Communication Studies from the University of Iowa in 1998. Throughout his career, he has published numerous articles in the areas of philosophy of rhetoric and communication ethics, and more recently in the scholarship of teaching and learning.

### PUBLIC INTEREST STATEMENT

This essay contributes to a growing conversation in higher education concerning the need for greater attention to the development of students’ moral and professional character by attending more intentionally to teaching “habits of mind.” This essay begins by developing a “curriculum map” to illustrate how habits of mind might be structured into a first-year college seminar, incrementally across units of the course and embedded into major assignments and classroom activities. This essay then offers a model of “dialectical” interdependence to explore how the development of habits of mind is reciprocally interdependent with the development of academic skills for their full success. The essay concludes by offering examples of how academic skills and habits of mind can reinforce one another in a “spiral curriculum,” in which the development of a skill makes possible the further development of a habit of mind, which makes possible the further development of that skill, etc.

**Subjects:** Curriculum Studies; Education Studies; Higher Education; Philosophy of Education

**Keywords:** academic skills; habits of mind; character; spiral curriculum; dialectical; curriculum map; general education

### 1. Introduction

In a presentation I gave to undergraduate teaching assistants (UTAs)—and a few faculty members—in the Department of Focused Inquiry at Virginia Commonwealth University last spring, I began by asking: “What have you learned to do in Focused Inquiry? In other words, what are you able to do now that you were not able to do before starting the Focused Inquiry sequence?” [Focused Inquiry is the name of the first tier of VCU’s General Education Curriculum and includes three courses, the two-semester first-year seminar Univ 111 and Univ 112 and the second-year research writing course Univ 200. The UTAs present had all completed at least the first two courses in the sequence (for which they were now a UTA) and most were enrolled in or had completed the third course.] Some characteristic responses included “properly cite material, argue, convey ideas” (C. Horlick, personal communication, April 9, 2015), “critically analyze texts, synthesize information, write MLA citations, do actual research” (J. Cummings, personal communication, April 9, 2015), and “identify fallacies, determine useful sources, use the library search engine, convince using logos, ethos & pathos, identify claims and sub-claims” (C. Sorey, personal communication, April 9, 2015).

I then shifted abruptly to presenting them with two simple math questions—both lines of questioning were intended to lay the foundation for a central distinction I sought to draw between skills development and the development of habits of mind. Question 1: *You go to the grocery store and buy 3 apples, 4 bananas, and 2 pears. How many pieces of fruit did you buy?* Question 2: *You go to the grocery store. The store carries 8 varieties of apples. You buy 3 of each kind. How many apples did you buy?* And finally the *real* question: *What is the difference between Question 1 and Question 2?* The answer to Question 1 is:  $3 + 4 + 2 = 9$  pieces of fruit. The answer to Question 2 is:  $8 \times 3 = 24$  apples. And the answer to the *real* question is that the first question is simple addition and the second question is simple multiplication. The difference is that they require different mathematical skills to be solved.

Extending the exercise, I asked a third math question, this one not quite as simple. Question 3: *On Saturday, you run several errands. You first go to the grocery store, where you buy 3 apples, 4 bananas, and 2 pears. You also buy 2 heads of lettuce, 8 large carrots, 3 zucchinis, and 5 onions. You then stop at Wal-Mart, where you buy 6 bars of soap, 4 100-watt light bulbs, and 1 broom handle. Finally, you stop at the hardware store, where you purchase 1 Phillips-head screwdriver, 1 crescent wrench, 8 nuts, 8 bolts, and 7 drywall screws. How many total items did you buy?* The answer is:  $3 + 4 + 2 = 9$  fruits;  $2 + 8 + 3 + 5 = 18$  veggies;  $6 + 4 + 1 = 11$  household items;  $1 + 1 + 8 + 8 + 7 = 25$  hardware items; for a total of  $9 + 18 + 11 + 25 = 63$  items. And finally, the *real real* question: *What is the difference between Question 1 and Question 3?*

The answer to the *real real* question is that whereas the difference between math Question 1 and math Question 2 is about *Skills* development (from addition to multiplication), the difference between math Question 1 and math Question 3 (which is just more addition) is about the development of character, or dispositions, or *habits of mind*.<sup>1</sup> Let’s take some time to consider the character traits necessary to complete math Question 3 (in contrast to math Question 1). It is still just simple arithmetic, so the “skill” required seems to be the same. What seems to be different is that Question 3 requires perseverance, confidence, focus, stamina...or some combination thereof. This conclusion seemed pretty clear to everyone in the audience, which was the point of starting with a simple but illustrative example.

I then asked my audience to return to the opening question about what they had learned in Focused Inquiry. But now I wanted them to consider a different question. Instead of “What have you learned to do in Focused Inquiry?,” I wanted them to answer the question: “Who are you now, after

Focused Inquiry? What are you now that you were not before starting Focused Inquiry?” Their answers were far more interesting than what they had recorded in response to the initial question. Some characteristic responses to this second question included “someone who questions authority, learned how to learn” (C. Horlick, personal communication, April 9, 2015), “more confident speaker, more skeptical observer, and more inquisitive researcher” (J. Cummings, personal communication, April 9, 2015), “confident, unafraid of asking questions, more considerate of others’ opinions, more logical, empowered, harder worker, dedicated” (A. Polk, personal communication, April 9, 2015), and “more confident, more passionate...I’m more brave—able to speak up for what I believe in” (C. Sorey, personal communication, April 9, 2015). Consider this last response: I am more brave. Yes, that is more interesting in so many ways than learning how to cite properly in MLA. Of course the challenge is figuring out exactly when and how that development is happening—it is much easier to make a quiz to test citation skills than to test for bravery. And yet we want our students to become more confident, more critical, more compassionate, and more brave as much as we want them to acquire discrete professional skills.

When I think of students’ habits of mind, particularly in terms of apparent deficiencies, what most readily comes to mind is the ability to sustain interest and focus—i.e. time on task. I too often have students who cannot maintain focus on an in-class activity for more than 20 min, and I have far too many who complain that they are “sick” or “bored” with a research topic after a couple weeks. In such instances, I often remember (and sometimes tell my students) the story of John Harrison, which vividly illustrates human potential when it comes to time on task. John Harrison was an otherwise humble clock maker who managed to solve the “longitude problem.” Because longitude was much more difficult to determine than latitude, ships would routinely get lost at sea, often with catastrophic losses of cargo and lives. “In a single such accident, on October 22, 1707 ... four homebound British warships ran aground and nearly two thousand men lost their lives” (Sobel & Andrewes, 1998, p. 8). “The active quest for a solution to the problem of longitude persisted over four centuries and across the whole continent of Europe” (p. 8). “Renowned astronomers approached the longitude challenge by appealing to the clockwork universe” (p. 8), but it was “English clockmaker John Harrison...[who] devoted his life to this quest” (p. 9) and solved the problem after spending forty years on the task (p. 13), including a full 19 years working on a single clock, designated H-3, the third of four clocks that he built consecutively. Nineteen years! “No one suggests that the workaholic Harrison dallied or became distracted. Indeed, there is evidence that he did nothing *but* work on H-3, almost to the detriment of his health and family” (Sobel & Andrewes, 1998, p. 121). The lesson we can learn from people like John Harrison is that skills, no matter how highly developed, without the requisite habits of mind to make full use of those skills, are impotent.

## 2. Literature review

Attention to the issue of habits of mind development within higher education is not new. Building upon numerous important works from decades ago, which urged for greater discussion of the role of habits of mind and character development in both public education and higher education (see Allen, 2003; Fine, 1995, for example), there has more recently emerged a larger conversation about the potentially crucial role of habits of mind development. Perhaps most widely known are the four volumes edited by Costa and Kallick (2000a, 2000b, 2000c, & 2000d). In those four influential works, Costa and Kallick identified and discussed 16 habits of mind, presented classroom strategies for building those habits of mind, offered methods to assess habits of mind development, and began to discuss how habits of mind pedagogy could be built into curricula and educational culture. [As a point of reference, those habits of mind are: persisting; listening with understanding and empathy; thinking about your thinking (metacognition); questioning and posing problems; thinking and communicating with clarity and precision; creating, imagining, and innovating; taking responsible risks; thinking interdependently; managing impulsivity; thinking flexibly; striving for accuracy; applying past knowledge to new situations; gathering data through all senses; responding with wonderment and awe; finding humor; and remaining open to continuous learning (Costa & Kallick, 2009; p. x).] In later work, Costa and Kallick (2009) presented several more best practices from teachers who have implemented habits of mind pedagogy into their courses.

Additional scholars have contributed to the growing literature—or perhaps movement—on habits of mind in several ways. Some scholars have focused sustained attention on particular habits of mind, as with Krovetz’s (2008) focus on resilience, Anderson’s (2009) focus on alertness and knowledge transfer, and Fletcher et al.’s (2015) emphasis on confidence, self-efficacy, and knowledge/skills transfer; while other scholars have explored the development of habits of mind within particular disciplines, as with Lloyd’s (2009) examination of mathematics and Saleh and Khine’s (2009) examination of the sciences.

Moreover, still more scholars and educators are contributing to this conversation, albeit from a slightly different perspective or with a slightly different vocabulary, as with concern for the development of moral “character” (see Schnorr, 2009, for example) and the “Formation by Design” project, centered at Georgetown University (see “Formation”, 2014). Regarding the latter, although the phrase “habits of mind” is not used in their 2014–2015 project progress report—instead using the language of “holistic learning”, “formation,” and education of “the whole person”—the parallels between these two bodies of literature is clear. As the report states:

Formation is a concept of learning and development that pays attention to the individuality of each student as a distinctive person with unique potential. When we put the whole student at the center of our curricular and co-curricular designs in institutions of higher learning and embrace the interconnectedness of the students’ journey, we help students progress toward a wholeness and fullness, shaping not just what they know, but forming who they become. We believe there is a false dichotomy that pits this kind of holistic education against a more pragmatic preparation for workplace success. To the contrary, we believe that an education that is designed for the whole person—developing knowledge and skills within the wider traits that characterize learning, engagement, reflection, and integration—prepares students for a lifetime of success in a rapidly changing, complex, and uncertain world. (“Formation”, 2014).

Even more clear is the parallel between the habits of mind articulated by Costa and Kallick—recall the list above—and the “five outcome areas” articulated by the Formation by Design project:

These five outcome areas (learning to learn, well-being, resilience, empathy, and integration) share several critical cross-cutting traits which help inform the instruments that we believe can be useful in measuring where students are in terms of these dispositions. These include: curiosity, creativity, risk-taking, humility, collaboration, cross-cultural competence, integrity, moral discernment, ethical judgment, imagination, and reflectiveness (“Formation”, 2014).

However, within all of this existing literature on habits of mind, there have been relatively few efforts thus far to generate curriculum maps for habits of mind—or rather, to re-map an existing curriculum map for habits of mind instead of for disciplinary knowledge or academic skills (see Costa & Kallick, 2000d; Goldfine, 2009, for example). Hence, regarding part one of this project, this essay seeks to contribute to this significant body of literature by supplementing its primary focus on classroom activities and course assignments (i.e. best practices) designed to facilitate the development of habits of mind with an actual curriculum map (for a specific course sequence), which might serve as a conceptual template for other courses or curricula. In addition, within all of this existing literature on habits of mind, relatively little attention has been paid to the precise relationship—specifically, the “dialectical” relationship—between skills (or other course content) and habits of mind (see Costa & Kallick, 2000a, for example). Hence, regarding part two of this project, this essay seeks to contribute to this evolving body of literature by supplementing its primary focus on habits of mind development as complementary to academic skills development and course content acquisition—wherein habits of mind are often characterized as “non-academic” or “soft” skills (see Dionne, Newport, & Reinsel, 2015, for example)—with an (albeit preliminary and incomplete) examination of the influence of each upon the other. Together, it is hoped that these initial steps toward a dialectical curriculum map for habits of mind will contribute to and stimulate further discussion of the potential value of habits of mind and of the logistical challenges attendant to their introduction and integration into existing courses and curricula.

### 3. Curriculum mapping for habits of mind

If we take seriously the idea that the development of students' habits of mind are just as important as the development of academic skills and acquisition of disciplinary knowledge, then we should commit ourselves to the task of generating a curriculum map that tracks the development of habits of mind in the same way that we have created curriculum maps (within our programs, departments, and schools) that track the development of skills and knowledge—i.e. at the end of INTRO 101, students “should BE” habits of mind a, b, c, as well as “should know” content m, n, o, and “be able to do” skills x, y, z. Of course, we know that the development of skills is occurring over any educational span, be it high school or college. And many teachers are cognizant that the development of habits of mind is occurring in tandem with skills development and content acquisition. Even still, professional educators are not typically as intentional about the latter as they are about the former—consider SOLs, for example—if they are aware of it at all. In my own experience—I was a physics major as an undergraduate—I cannot now recall any indication ever that my professors were thinking about the development of habits of mind. To the contrary, the prevailing sentiment (if there was one) seemed to be that some people “have what it takes” to do physics, which is at best arrogant and elitist and at worst an abrogation of an educator's duty to actually educate and transform.

A curriculum map for habits of mind might begin, therefore, by attempting to track the anticipated or desired development of particular habits of mind across the units of an individual course or across a series of courses within a curriculum—for example, across Units I, II and III of either Univ 111, Univ 112, or Univ 200 (the three courses comprising Tier I of the General Education Curriculum at VCU) or, alternatively, across the entirety of Univ 111, Univ 112, and Univ 200. Shown in parallel with the anticipated development of particular academic skills, a preliminary curriculum map for habits of mind might look like the following:

Skill Set: Written Communication

drafting & reflecting → reflecting & revising → soliciting & incorporating peer feedback

Skill Set: Oral Communication

informal speaking → arguing → debating

Habit of Mind: Humility

self-reflection → self-improvement → humility

Habit of Mind: Courage

overcoming fear → taking risks → courage

The idea here is to consider not just (i) the particular habits of mind which we might seek to plant and nurture in our students, but also (ii) how those habits of mind might be developed incrementally across a semester within a course or across a series of courses within a curriculum.

To begin, let's ask what the most paramount habits of mind might be, which we would like to inculcate into our students. Assuming that an attempt to systematically integrate all 16 of Costa and Kallick's (2000c) habits of mind into a single course or course sequence may be overzealous, if not foolhardy, this preliminary question is highly situational insofar as any instructor or department should be selective about the habits of mind which they seek to target and emphasize. Indeed, some educators have (seemingly) sought to collapse several of those habits into a more manageable overarching concept, such as “grit” (see Dionne et al., 2015; Weinhold and Strang, 2015, for example). Consequently, for the curriculum I teach, my colleagues and I would want to generate a list of habits of mind analogous to our existing list of target academic/professional skills. In Focused Inquiry, the series of three courses that I teach, those skills are:

- Critical thinking
- Written communication
- Oral communication
- Information fluency
- Collaborative work
- Quantitative reasoning
- Ethical reasoning

Just as these target skills were and remain the subject of discussion and debate, we could undoubtedly engage in lengthy debate about how many habits of mind to focus on and which ones are most important for the continued personal and professional success of our students. However, allow me to suggest as a starting point the following six:

- Humility
- Perseverance
- Courage
- Curiosity
- Integrity
- Empathy

*Random House unabridged dictionary* (1987) defines humility as “the quality or condition of being humble; modest opinion or estimate of one’s own importance, rank, etc.” (p. 932). As suggested in the “map” above, the lack of humility is most often (and too often) present in the first-year classroom in the form of students who don’t think you could possibly have anything to teach them, as in “I took AP English in high school” ...and so, they apparently conclude, they are completely done with all of English. Speaking for myself and my colleagues, we would very much like to instill some humility and openness to criticism in many of our students. Ideally, this would lead to a degree of humility by which our students would routinely seek assistance and invite feedback.<sup>2</sup>

Perseverance is defined as “steady persistence in a course of action, a purpose...etc., esp. in spite of difficulties, obstacles, or discouragement” (*Random House*, 1987, p. 444). Time on task. Attention span. Everything exemplified by John Harrison and which our modern society of 30-min situation comedies, 30-s commercials, and 140-word tweets militates. While this may not be the most important habit of mind, students’ deficiency when it comes to perseverance may be the most frustrating on a daily basis, as we constantly work to get students to put down their phones and focus on the task-at-hand for at least most of a 50-min class. And the ability to persevere in the face of failures or discouragement is extremely important, especially in the context of “negative feedback,” which for some students is any (critical or productive) feedback that dares suggest their first draft might not be perfect in every way. Indeed, we have all experienced how some students will take even innocuous suggestions as a personal attack, and more disturbingly how accurate but un-tempered criticism can make some students shut down or withdraw completely—sometimes literally withdrawing from a course.

Courage is defined as “the quality of mind or spirit that enables a person to face difficulty, danger, pain, etc., without fear; bravery” (*Random House*, 1987, p. 64). Perhaps the loftiest of goals, courage is certainly difficult to foment. Here, we speak not of confidence in one’s abilities, but of the personal courage to take risk, to allow oneself to be vulnerable in speaking from the heart—such as the courage to write or speak (or even research) about the obstacles of being a queer student on a college campus rather than churning out another “legalize marijuana” paper. This is the bravery of which Sorey spoke—recall the discussion above. Of the five habits of mind under consideration, courage may be the most dependent on the instructor’s ability to create and maintain a classroom

environment in which students can feel safe enough and are encouraged enough to express their own beliefs, interrogate their own values, and develop the courage to stand behind them.

Curiosity is “the desire to learn or know about anything; inquisitiveness” (*Random House*, 1987, p. 491). In the context of developing this particular habit of mind for undergraduates, curiosity is all about fostering within them an intrinsic motivation to learn rather than continuing to depend upon the extrinsic motivation of grades. Nurturing curiosity is very much about resuscitating the natural wonder and propensity to question that seems intrinsic to children but is too often stifled or suffocated by formal education. To be sure, the importance of curiosity as a habit of mind to our shared mission is clearly evidenced by the amount of discussion within higher education about “creating lifelong learners,” but there is far too little development beyond that maxim in terms of curriculum design: how do we actually design experiences within or outside the classroom to rejuvenate and nurture curiosity and a love of learning? And how might the maturation of curiosity be contingent upon the concurrent (i.e. dialectical) development of academic skills? For example, can becoming a better writer empower one to become a more curious person, or a person imbued with a more sophisticated form of curiosity? We often think of curiosity as the spark for critical reflection, research, inquiry, and argument, but it may also be that the development of those skills are embers further fueling the fire of intellectual curiosity.

Integrity is defined as “adherence to moral and ethical principles; soundness of moral character; honesty” (*Random House*, 1987, p. 90). In the context of undergraduate education, integrity most obviously means not cheating. But it also means developing respect for other people’s work and developing the requisite habits of attribution that distinguish one’s own contributions from those of others. More generally, integrity means taking ownership for both one’s contributions and one’s shortfalls. In my experience, integrity is perhaps most at issue when students work on group projects, where integrity entails both being (morally) responsible to other members of the group and (morally) answerable for one’s failures to fulfill those obligations. As with all of these attributes of character (as well as all of the academic skills), first-year college students run the full spectrum. Just as first-year college students’ writing ranges from the eloquent to the grammatically deficient, so too do they range from Olympic-caliber excuse-makers who refuse to accept responsibility for anything to students who proactively take full responsibility for their failures out of genuine concern for classmates.

Finally, empathy is defined as “the intellectual identification with or vicarious experiencing of the feelings, thoughts, or attitudes of another” (*Random House*, 1987, p. 38). I was tempted to opt for “tolerance” here, but I believe that the development of empathy, and the intellectual habit of mind to seek it, is often a necessary precursor for tolerance. It is difficult to be tolerant in any deep or genuine way without empathy to anchor it. And empathy, as a habit of mind, ramifies in numerous ways: seeking out new experiences and new “contacts of life” (see Dewey, 2012), exploring differing perspectives and viewpoints, engaging in earnest with people of a different race, ethnicity, gender identity, or life experience, actively researching the beliefs, experiences, and lives of other people and other cultures.

With these six target habits of mind selected and defined (within the context of a particular course or curriculum), the perhaps even more difficult work begins of generating an extended curriculum map for each of these habits of mind. Because of space limitations and, more importantly, because any such effort to construct a complete curriculum map needs to be both a collaborative and localized effort, I will not offer a complete map here. But, in parallel with my department’s curriculum map for the development of target skills—see Appendix A for an excerpt of our curriculum map for three of the seven target skills across the first two courses (Univ 111 and Univ 112)—I can offer here a tentative (and admittedly incomplete) curriculum map for Humility and Courage, spanning the entirety of our three course sequence (Univ 111, Univ 112, and Univ 200)—see Table 1 on the following page. Besides the incompleteness of addressing only two of the six selected habits of mind, the curriculum map offered here is also somewhat sketchy at this preliminary stage in formulating



specific assignments that target those habits of mind—though a curriculum map should not be overly prescriptive. In any case, please note the need to maintain focus on what students will BE rather than on what content they will know or what skills they will be able to do.

#### 4. Dialectical curriculum mapping

As I approach the thirtieth anniversary of my college graduation, it seems no accident that the two academic experiences that remain most vivid in my mind have far more to do with the evolution of character than the acquisition of skills. The first vivid memory is my Astronomy Mid-Term Exam in my first semester. I can recall reading the first question and realizing that I had no idea how to answer it. My blood pressure increased. I turned the page and read the second question, now sickening as I again had no idea how to answer it. I repeated this process for the third and fourth questions,

**Table 1. Habits of mind curriculum map (proposed)**

Curriculum goal	Course goals	Learning outcomes	Assignments
<i>Humility:</i> “the quality or condition of being humble; modest opinion or estimate of one’s own importance, rank, etc.”	In 111, students will reflect upon their own strengths and weaknesses	After 111, students will BE able to: <ul style="list-style-type: none"> <li>• Less arrogant about their own abilities</li> <li>• More able to take ownership of their own weaknesses</li> </ul>	Univ 111: <ul style="list-style-type: none"> <li>• Metacognitive activities and self-reflective writing in which students identify their own weaknesses</li> </ul>
	In 112, students will develop action plans for addressing their weaknesses	After 112, students will BE: <ul style="list-style-type: none"> <li>• More modest and honest about their academic and professional needs</li> <li>• More open to feedback and more willing to be proactive about their own professional growth</li> </ul>	Univ 112: <ul style="list-style-type: none"> <li>• Drafting/revising assignments that respond to self-assessment</li> <li>• re-presentations</li> </ul>
	In 200, students will invite outside feedback and seek outside assistance in accordance with their evolving action plans	After 200, students will: <ul style="list-style-type: none"> <li>• Possess demonstrable humility in terms of inviting and seeking critical feedback and assistance</li> </ul>	Univ 200: <ul style="list-style-type: none"> <li>• Aggressive revising of work following elaborate self-assessment and incorporation of invited feedback and assistance</li> </ul>
<i>Courage:</i> “the quality of mind or spirit that enables a person to face difficulty, danger, pain, etc., without fear; bravery”	In 111, students will develop comfort expressing ideas in an academic setting	After 111, students will BE able to: <ul style="list-style-type: none"> <li>• less prone to pick “safe” topics for academic assignments</li> <li>• more comfortable speaking or writing publicly about their own beliefs and values</li> </ul>	Univ 111: <ul style="list-style-type: none"> <li>• Classroom discussion of controversial topics</li> <li>• Impromptu, low-stakes speaking exercises on controversial subjects</li> </ul>
	In 112, students will engage in greater risk-taking in critically interrogating, researching, and discussing viewpoints	After 112, students will BE: <ul style="list-style-type: none"> <li>• More comfortable voicing or defending unpopular viewpoints</li> <li>• More embracing of advocacy without the felt need for personal disclaimer</li> </ul>	Univ 112: <ul style="list-style-type: none"> <li>• Counter-point assignments to their own previously argued positions</li> <li>• Devil’s advocacy assignments</li> </ul>
	In 200, students will develop the intellectual courage necessary to pursue or advocate for unpopular positions	After 200, students will BE: <ul style="list-style-type: none"> <li>• Courageous in the rigorous pursuit of answers to questions with greater regard for conviction and justice than personal reputation or public opinion</li> </ul>	Univ 200 <ul style="list-style-type: none"> <li>• Mock-trial or moot-court assignments</li> <li>• Pre-major assignment free-writing designed to identify and motivate research and writing on topics of personal relevance and conviction</li> </ul>

and was close to being fully stricken with panic, contemplating how I was going to fail out of college and how my life was going to be in ruins. For some reason, I managed to collect myself—though I do not know what the precursors were for this first moment of transformation. I thought to myself first that I had studied very hard and did in fact know the material and second that my professor would not give us questions that we could not answer—a bit of faith there. So I flipped back to the first question and systematically dissected it, determining what the question was asking for, what information was provided in the question, and both what equations ( $F = ma$ , and so on) and what constants (speed of light, and so on) I had memorized that might be needed. I was able to answer all of the questions, prevented the total annihilation of my existence, and left the exam a far more confident (and less panic-prone) human being. What I did not realize at the time was that this had been the first time I had been presented with a math or science question that required multiple steps—far more complicated than what I'd been accustomed to in high school—and critical scrutiny—the questions provided some information that was in fact extraneous, thereby mimicking much more accurately real-world problem-solving.

The second vivid memory came 2 years later, this time in my Thermodynamics Final Exam. I had completed the entire exam except for one question, and I simply could not remember the equation that was needed to solve the problem. Being that it was a 3-h final exam and I had a full hour and a half remaining, I collected my wits and focused—having learned how to do this in my Astronomy experience. I then spent the next hour deriving the equation needed to solve the problem. I left that exam feeling particularly god-like, with a newfound confidence that would in some ways backfire. [Shortly thereafter I realized that, absent the “challenge” of physics—it's supposed to be really hard, right?—I had little intrinsic interest or passion for the subject. A few years passed before I fully extricated myself from that career path and reinvented myself in the humanities.] Particularly interesting to note about this second experience are (i) how it was, I am certain, conditional upon the first experience—I could not have derived the equation needed to answer the question without the confidence gained in Astronomy, and also (ii) how that further development of confidence (bordering on arrogance, at least for as long as it took to saunter out of the building) was dependent on the development of skills that had occurred in the 2 years between the two experiences—I could not have gotten to that next tier of self-confidence without the skill to actually derive an equation, something I could not have done as a first-year college student. These two experiences, the most vivid of my entire undergraduate education, demonstrate the important role of the development of habits of mind in education. Indeed, I cannot even remember for certain whether the second occurred in Thermodynamics, or in Mechanics, or in Electricity & Magnetism, so the memory is about the development of character rather than any substantive course content. Both events were moments of epiphany and transformation, involving the evolution of character and almost certainly related to, perhaps even triggered by, the development of skills.

Similarly—please recall the story above—John Harrison would not have solved the longitude problem without the requisite habits of mind to remain focused and diligent for nineteen years (on the third clock alone), and, conversely, without that focus and diligence he would not have perfected his clock-making skills to the degree of mastery necessary to build the fourth clock. Hence, his story also illustrates the (dialectical) manner in which skills and habits of mind are interdependent.

So far, this isn't clearly anything new, is it? True enough. Lots of people think about education in terms of the development of character/habits of mind as much or more than in terms of the development of academic skills or acquisition of disciplinary knowledge. Many proponents of service learning and experiential learning, for example, are explicit about the aims of service learning concerning the development of character as well as traditional course content. Eyler (2009) explicitly names “habits of mind” (p. 2) alongside skills as a central learning objective of service learning, while Carver's (1996) “ABC” framework of experiential learning includes the development of individual “agency” and communal “belonging” alongside skills-based “competence.” Such approaches broaden our understanding (and our obligation) of what it means to teach. Indeed, as one faculty member

wrote in response to my second question (in Section 1) about who did you become in Focused Inquiry:

This is why I teach Focused Inquiry. To transform my students from pinballs into flippers, from pawns into players, from residents into citizens, from watchers into doers, from complainers into solvers. (N.A. Ellis, personal communication, April 9, 2015)

Obviously, she had thought about all of this before and was cognizant of the dimension of character as well as skills in the development and growth of her students.

So, is there anything new here? Yes, I believe so. What this essay ultimately seeks to offer is neither an analysis of skills development alone nor an analysis of the development of habits of mind alone—of course we know that both are happening, though we tend to focus our attention on one or the other at any given time. Nor does it seek to offer an analysis of skills development alongside or in synchrony with the development of habits of mind. Instead, this essay seeks to offer an analysis of the development of both skills and habits of mind as they occur simultaneously and interdependently—in other words, an analysis of the *dialectical relationship* between the two.<sup>3</sup> The central question, then, is how are skills development and the development of habits of mind interrelated and interdependent within a spiral curriculum? How does the development of skills empower the development of habits of mind and how do stronger habits of mind empower further skills acquisition?

The second task, therefore, is to investigate how we can intentionally design curricula, from entire courses down to individual assignments, to make strategic use of the *dialectical relationship* between skills development and the development of habits of mind. In other words, how can we design curricula to trigger advancement along the dialectical chain—such as in moments of epiphany and transformation? To aid in answering this central question, this essay now turns to the “dialectical rhetorical criticism” method of analysis developed and illustrated by rhetorical theorist J.W. Murray, a method inspired by the writings of famed novelist and essayist George Orwell. At this juncture, therefore, this essay will briefly discuss the nature of the dialectical relationship between discourse and thought (in general) and between academic skills and habits of mind (in particular), and clarify that relationship with a few examples, with the hope that this discussion and clarification will establish a theoretical framework with which to continue the project of dialectical curriculum mapping.

In his essay “George Orwell, sexspeak, and the dialectical critic,” Murray (1997) states that the aim of the “dialectical critic” is to “simultaneously examine the ways in which social and political ideologies shape rhetorical practices and in turn how those very rhetorical practices function to shape social and political reality” (p. 30) and that George Orwell is “an exemplar of such a dialectical mode of rhetorical criticism and that his writings demonstrate a sensitivity to the dialectical inter-relationship of rhetoric and ideology” (p. 31). This mode of analysis is committed to examining “rhetorical practices in their dialectical relationship as both the product of and precursor for social and political ideological commitments” (p. 31). Murray (1997) continues to lay the groundwork for this dialectical mode of analysis when he states that:

In selected writings, George Orwell reflects and enacts a theoretical and critical sensitivity to the dialectical inter-relationship of rhetoric and ideology. In the case of *Nineteen Eighty-Four*, the socio-political reality of Oceania relies upon the conversion of individuals to the Party. This ideological conversion from individuality to collective conformity is characterized by Orwell as both a product of and a precursor for the corresponding conversion in rhetorical practices, specifically from Oldspeak or standard English, to Newspeak. (p. 31)

In the “Principles of Newspeak,” the appendix to 1984, Orwell (1984) states that “Newspeak was the official language of Oceania and had been devised to meet the ideological needs of Ingsoc, or English Socialism” and that “the purpose of Newspeak was not only to provide a medium of expression for the world-view and mental habits proper to the devotees of Ingsoc, but to make all other modes of thought impossible” (p. 246).

Newspeak, then, is first understood as the means by which to achieve the reduction of thought desired by Ingsoc, i.e. the means to achieve the social (loss of individual) identity and political (loss of autonomous) agency of Ingsoc. In this manner, Orwell sees Newspeak as the means by which an alternative ideology can be constructed (Murray, 1997, pp. 31–32).

But perhaps more important,

Orwell acknowledges that the implementation of Newspeak must be gradual. Newspeak cannot simply replace Oldspeak... [because they] are mutually dependent and can only be realized through a gradual process in which the introduction of Newspeak makes possible the loss of one concept which makes possible the loss of one more word which makes possible the loss of one more thought (Murray, 1997, p. 32).

In “Politics and the English language,” Orwell (1991) explains:

But an effect can become a cause, reinforcing the original cause and producing the same effect in an intensified form, and so on indefinitely. A man may take to drink because he feels himself to be a failure, and then fail all the more completely because he drinks. It is rather the same thing that is happening to the English language. It becomes ugly and inaccurate because our thoughts are foolish, but the slovenliness of our language makes it easier for us to have foolish thoughts (p. 77).

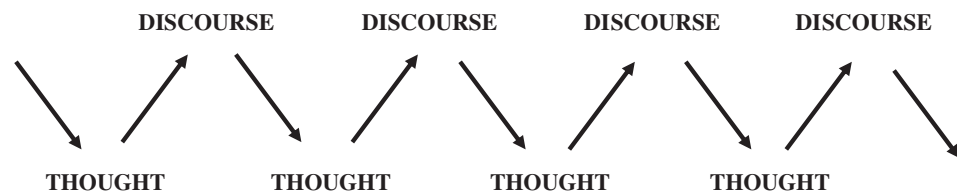
In the illustrative case of Newspeak, Orwell (1984) maintains that:

In the year 1984 there was not as yet anyone who used Newspeak as his sole means of communication, either in speech or writing... It was expected that Newspeak would have finally superseded Oldspeak (or standard English, as we should call it) by about the year 2050. Meanwhile, it gained ground steadily, all Party members tending to use Newspeak words and grammatical constructions more and more in their everyday speech. The version in use in 1984, and embodied in the Ninth and Tenth Editions of the Newspeak dictionary, was a provisional one, and contained many superfluous words and archaic formulations which were due to be suppressed later. It is with the final, perfected version, as embodied in the Eleventh Edition of the dictionary, that we are concerned here (p. 246).

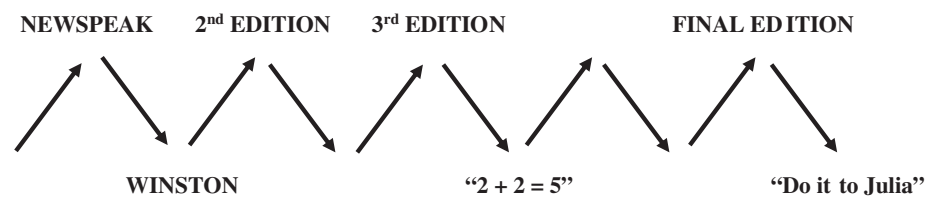
In any case, the general point is that our actions and our thoughts are dialectically interdependent and that they grow (or atrophy) in dialectical relationship with one another. We cannot speak or act in a particular way unless we have the requisite concept, and we cannot have a particular concept without a way to express or enact it.<sup>4</sup>

What all of this suggests for a consideration of undergraduate education and pedagogy is that the academic skills and the habits of mind that students develop are dialectically related. The development of particular skills may require certain habits of mind (as a prerequisite) while the further development of those habits of mind requires certain skills (as a prerequisite). [And, by corollary, the development of certain habits of mind may be conditional on proficiency with certain skills with the further development of those very skills requiring strengthened habits of mind.] The point above about Newspeak needing to go through several editions is of critical importance insofar as it suggests not only that there may be a dialectical relationship between discourse and thought (or, in the present case, between academic skills and habits of mind), but that that dialectical relationship may be *necessary* for the ongoing development of either. Indeed, Orwell’s implicit dialectical theory of the evolution (or devolution) of DISCOURSE  $\leftrightarrow$  THOUGHT suggests that the development of skills may be dependent upon the simultaneous development of habits of mind and that the development of habits of mind may be dependent upon the simultaneous development of skills. See Figures 1–3 below for visualization of this dialectical framework, both in Orwell’s writings and applied to the present consideration. With respect to Figure 2, recall that in 1984, it is only *after* O’Brien has gotten Winston Smith to utter (and believe) “2 + 2 = 5” that he is able to prompt Winston Smith, when faced with his gravest terror, to utter the statement that completely (and irreversibly, according to Orwell)

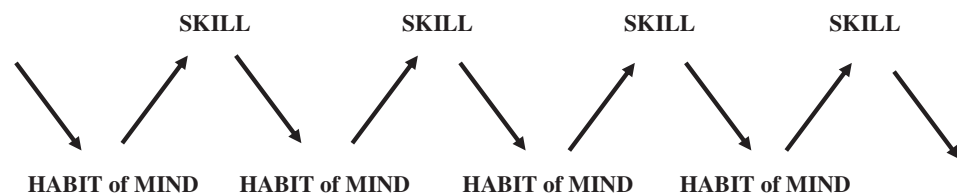
**Figure 1. Orwell’s dialectical relationship between discourse and thought.**



**Figure 2. The necessity of the dialectical relationship between discourse and thought.**



**Figure 3. The corollary dialectical relationship between academic skills and habits of mind.**



shatters Winston’s humanity: “Do it to Julia” (see Murray, 1997, pp. 34–35). In other words, the two events had to occur in that order: Winston could not have uttered the latter if he had not already been made to believe the former. The annihilation of Winston Smith is a dialectical progression.

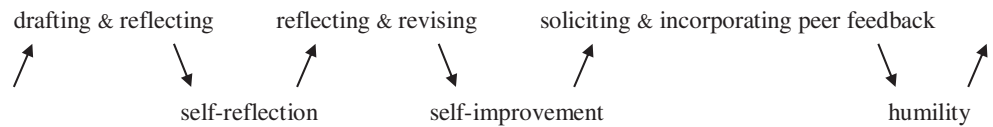
In the context of undergraduate education, this dialectical model reminds us that we should not only (i) recognize that our students don’t magically transform from one state (at matriculation) to another (at commencement) but instead undergo a gradual stepwise evolution, but also (ii) commit ourselves to better understanding precisely how that gradual stepwise evolution occurs, primarily by examining the interdependence of and dialectical relationship between the development of academic skills and the development of habits of mind within our courses and curricula.

How then can we intentionally design curricula to make strategic use of the *dialectical relationship* between skills development and the development of habits of mind? How can we design curriculum to trigger advancement along the dialogical chain and to elicit moments of epiphany and transformation? Similar to the frequent absence of any intentional curriculum design when it comes to developing habits of mind, so too is the dialectical relationship between skills and habits of mind too often overlooked. We know that if this dialectical progression has not been well planned (if intentionally planned at all, or even acknowledged), students can face significant difficulties when the gaps are too big. Most apparent, perhaps, is the move from high school to college, where there is often a significant gap to overcome. Some students have the skills necessary to be successful in a college curriculum, but lack the habits of mind (e.g. study habits, focus, motivation, ability to sustain time-on-task, time management habits) to be successful. Other students have the requisite habits of mind (e.g. maturity, drive, will to succeed), but lack the academic skills that they are presumed to have acquired. And of course some students are fully behind on the dialectical path and lack both the academic skills and habits of mind necessary to succeed.

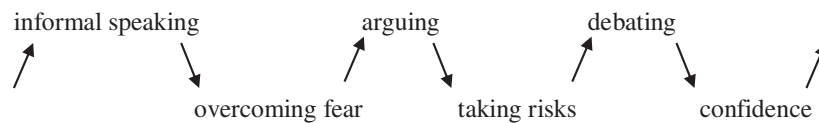
Returning to the preliminary curriculum map provided earlier, such a dialectical map of ACADEMIC SKILLS ← → HABITS OF MIND would attempt to identify instances of synergy between particular advances in habits of mind with particular requisite skills and, vice versa, between particular advances in skills acquisition with particular requisite habits of mind. Again, across Units I, II, and III of a

Focused Inquiry course or across the entire three-course sequence, a preliminary dialectical curriculum map of targeted academic skills and targeted habits of mind might look like the following:

Dialectical relationship between written communication and humility



Dialectical relationship between oral communication and confidence



Once again, now the very difficult work begins of generating a fuller dialectical curriculum map for the predominant synergies between particular skills and particular habits of mind. To begin, we can see how the tentative curriculum map of habits of mind (recall Table 1) has already been informed by the dialectical sensitivity advocated in this essay, understanding that certain habits of mind cannot be developed without certain skills in place and that certain skills-focused assignments may require the presence of certain habits of mind. Nevertheless, we can continue this investigation by trying to isolate some of the more predominant (or troublesome) transformative “steps” along the dialectical ACADEMIC SKILLS  $\leftrightarrow$  HABITS OF MIND chain.

As a first example, consider how a powerful dialectical synergy may exist between writing and humility if one designs an early writing assignment to ensure that every student will struggle with some aspect of it. If some students struggle with the entire assignment, it will likely not be transformative of humility insofar as those students will likely reject, revolt, or retreat from the assignment rather than reflecting meaningfully on their performance and areas in need of improvement. Similarly, if some students don’t struggle with any aspect of the assignment, there will likely be no development of humility in parallel with little to no development of writing skills.

As a second example, consider the opportunity for confidence building in the timing and subject of small oral communication assignments. Asking students to speak “publicly” about their own views on controversial issues too early in a course, before a basic level of comfort and feeling of safety with the class has been established, will likely exacerbate anxieties rather than transform the overcoming of fear into confidence-building risk-taking. Alternatively, asking students to speak more impromptu on controversial topics or to defend more conversationally unpopular viewpoints that might come up in the normal flow of a classroom discussion might be powerful moments to build confidence in one’s views (and one’s ability to defend them with reasoned arguments) without the erosion of confidence that can accompany the nervous perseverating of scheduled presentations.

There are, of course, a multiplicity of such potential synergies and dialectical nodes of transformation. At risk of being once again derelict in pursuing this difficult task further, I would insist that such work is most appropriately done both collaboratively and locally—within individual departments and curricula, and with all faculty members invested with these dual obligations of developing students’ academic/professional skills and the correlative attributes of character/habits of mind

enumerated above. The objective here, in other words, is not to generate a quasi-universal template of a dialectical curriculum map, which could then be applied to any situation, but rather to explore, discuss, and perhaps sketch the general contours of any such dialectical curriculum map.

In each of the previous examples provided in this essay—the examples from Orwell (above) concerning a man who takes to drink, Newspeak, and the annihilation of Winston Smith, as well as the examples from Murray (Note 4) concerning “sexspeak,” Ted Bundy, and anti-Semitic Nazi ideology—the BELIEF  $\leftrightarrow$  BEHAVIOR dialectic proceeds “successfully” along its intended trajectory. Similarly, in the context of higher education pedagogy, any ACADEMIC SKILL  $\leftrightarrow$  HABIT OF MIND dialectic would ideally proceed along its intended trajectory—though in this case toward a decidedly positive outcome, unlike the dangerous, criminal, or genocidal end-games of the previously cited examples. So, it must first be noted explicitly that the dialectical process discussed in this essay can be deployed for moral or immoral purposes—as with the arts of persuasion and pugilism, the dialectical path along which individuals can be intentionally steered can lead to either a noble or ignoble destination. It should also be noted that the dialectical process discussed in this essay need be neither intentional nor orchestrated. There is no suggestion, for example, that the “sex industry”—see Note 4—has conspired to create a dialectical path for the consumers of its products; a dialectical progression can occur without any intentional or conscious design. And in the case of Orwell’s man who takes to drink, for example, the dialectical spiral down which the man descends is not the sinister endgame of some external agent; a dialectical progression can occur by one’s own hand, a sort of auto-indoctrination. And perhaps most important (for the present discussion), it must be noted as well that the intended dialectical path might not proceed the way one anticipates or to the end-point for which one had hoped.

As it pertains to the context of higher education pedagogy, we must remember—and plan for the contingency—that our so carefully crafted curriculum design may fail to do what we had so judiciously intended. Like any individual lecture, classroom activity, or assignment, things can go mildly or horrifically wrong, whether that be for the majority of the class or for only a few individual students. As one reviewer of this manuscript cautioned, we must be diligent to remember “the potential difficulty in the dialectic unfolding of skills sets and habits of mind, the unpredictability of the process, the danger inherent to such undertakings, and the ever-present occurrence of [obstacles] through which dialectic progress is temporarily halted, stifled, and/or frustrated.” To offer just one example (from the diagram above), we might design an argumentative oral communication assignment to facilitate students’ development of confidence, from “overcoming fear” to “taking risks,” only to find that for some students, or perhaps even just one, the assignment creates more anxiety, not less, and moves them backward, not forward, on the intended dialectical path. Obviously hundreds upon hundreds of such setbacks can occur. Consequently, this essay is not suggesting that dialectical curriculum mapping is a simple, risk-free, or cure-all approach. Yet it is suggesting that if (1) our curricular goals are to develop students’ habits of mind as well as academic skills, and (2) we recognize the necessary dialectical relationship between habits of mind and academic skills, then (3) we are far more likely to be successful in ushering our students toward those curricular goals if we consciously, intentionally, and systematically engage ourselves in the sort of dialectical curriculum mapping which this essay attempts to describe and for which this essay advocates.

## 5. Conclusion

If you are like me, Thin Mints are your favorite Girl Scout cookie. And if, like me, you have ever eaten an entire row at one time, you have had ample time to read the box. In providing information about The Girl Scout Cookie Program, the side of the box states that “Selling Girl Scout Cookies helps girls develop **5 skills** that they use throughout their lives: (1) Goal Setting, (2) Decision Making, (3) Money Management, (4) People Skills, (5) Business Ethics” (emphasis added). Interestingly, the back of the box similarly states the habits of mind that the organization seeks to develop in young women: “Girl Scouting builds girls of **courage, confidence** and **character**, who make the world a better place” (emphasis added). Indeed, making the world a better place requires *both* the skills and the character with which to do it.

This essay has sought to elucidate the dialectical relationship between academic skills development and the development of habits of mind in undergraduate general education, exploring how the two are interrelated and interdependent within a spiral curriculum. This essay first attempted to generate a tentative curriculum map for a selected set of habits of mind, analogous to an existing curriculum map for academic skills. This essay then, following an overview of the theoretical framework of dialectical rhetorical analysis, began to identify major points of potential synergy between skills development and the development of habits of mind. Both of these undertakings were motivated by the goal of enriching and expanding the ways we think about undergraduate general education and spiral curriculum design.

The concern here is with better understanding the role of undergraduate pedagogy in shaping the professional character and academic habits of mind that we wish our students to develop and to inhabit. Toward that end, we should both (i) recognize that our students don't magically transform from one state to another but instead undergo a gradual stepwise evolution, and also (ii) commit ourselves to better understanding precisely how that gradual stepwise evolution occurs, primarily by examining the interdependence of and dialectical relationship between skills development and the development of habits of mind within our courses and curricula. More generally, we should be mindful in our program-level curriculum design, development, and mapping, as well as in our course-level course design and intentional lesson planning, of not only the escalation of particular skills as students move across the semester and through the curriculum but also of the escalation of the student's/habits of mind, particularly as an evolving and increasingly engaged and independent learner. The difference, it seems, is between allowing ourselves to be content with focusing our attention on what students can do (i.e. skills) and know (i.e. content) rather than embracing the larger challenge of also focusing our attention on the focus, passion, perseverance, confidence, and bravery (i.e. character) with which they do it.

#### Funding

The authors received no direct funding for this research.

#### Author details

Jeffrey W. Murray<sup>1</sup>

E-mail: [jwmurray@vcu.edu](mailto:jwmurray@vcu.edu)

<sup>1</sup> Department of Focused Inquiry, Virginia Commonwealth University, 5165 Harris Hall, 1015 Floyd Ave., Richmond, VA 23284, USA.

#### Citation information

Cite this article as: Skills development, habits of mind, and the spiral curriculum: A dialectical approach to undergraduate general education curriculum mapping, Jeffrey W. Murray, *Cogent Education* (2016), 3: 1156807.

#### Notes

1. Regarding the phrase "habits of mind," one reviewer of this manuscript raised the serious concern that:

This term seems reductive and inaccurate when compared to the view of the subject that the paper endorses, which is multi-faceted from an "emotional" and "normative" perspective... To label the development of the individual's "moral/ethical" character a "habit of mind" gives the disingenuous impression that a form of metaphysical dualism is lurking in the paper that splits mind/body and also sets up the erroneous view of the theory-practice divide—both views that the paper clearly seeks to transcend in the dialectic between "skills development and habits of mind."

While I tend to agree with the reviewer's concerns, I find myself compelled to defend the selection of "habits of mind," primarily on the practical grounds that that phrase, though certainly not universal, is widely

used to discuss the sorts of character traits under discussion—from this essay's list of references, for example, see Allen (2003), Anderson (2009), Costa and Kallick (2000a), Costa and Kallick (2000b), Costa and Kallick (2000c), Costa and Kallick (2000d), Costa and Kallick (2009), Fine (1995), Fletcher, Najarro, and Yelland (2015), Goldfine, (2009), Lloyd (2009), Saleh and Khine (2009), and Schnorr (2009), all of which include "habits of mind" in their titles. Moreover, this essay and much of the existing literature focus on aspects of character that directly impact education, as opposed to romantic relationships, spiritual growth, etc. Here too, there is no categorical distinction to be made, but one benefit of the phrase "habits of mind" (over "moral character," for example) is that within the context of higher education pedagogy, it does not claim as broad (or even limitless) a scope of influence.

One could certainly argue that "character" or "dispositions" are less reductive terms, but (again) these terms are simply not as widespread in the existing literature with which this essay is attempting to converse, and ultimately any term would be potentially reductive insofar as it is offered as a dialectical counterpart to "skills." I suspect that the growing literature on educating "the whole person"—see "Formation" (2014), for example—is in part motivated by the desire to avoid such mind/body dualism (and any similar intellectual knowledge versus moral character dichotomies) and to deal with students as "multi-faceted" beings. Similarly, Costa and Kallick (2014) seem to be reorienting their own discourse away from "habits of mind" in favor of "dispositions." And yet, my reckoning is that (1) the bulk of existing literature is still employing the phrase "habits of mind" and that (2) any critical dissection of student learning—and certainly any dialectical one—must necessarily employ a theoretical framework and terminological apparatus, and thereby



introduce distinctions and taxonomies that, although dangerous in creating distinctions where they do not exist in nature, nevertheless provide insight into (in this case) the process of educational development.

2. I am tempted to include confidence as a seventh habit of mind. Confidence is defined as “belief in oneself and one’s powers or abilities; self-confidence; self-reliance; assurance” (*Random House, 1987, p. 427*). Particularly when it comes to oral communication, first-year students can be notorious for having little to no confidence in their speaking abilities. [And this is quite often warranted insofar as their skills are lacking as well. The need to attend to a dialectical escalation between speaking skill and speaking confidence is particularly apparent.] But a lack of confidence can manifest in other ways as well, such as an unwillingness to work hard on written assignments or undertake aggressive revisions—often driven by the mistaken view that they are innately “not a good writer.” And although humility and confidence are in many ways at odds, they both branch from the same trunk, which is Socratic knowledge of oneself: confidence in one’s abilities and humility about one’s weaknesses and not-yet-realized potential.
3. Murray (1998) clarifies the particular sense of “dialectic” operative in his theoretical framework:  
“[D]ialectic” is used in a modified Platonic sense rather than a Hegelian or Marxist one. The notion of a “dialectical” progression attempts to capture the back-and-forth or conversational nature of ideology development, in which texts (written or spoken discourse) speak to and inform actions (performed discourse), and in which actions in turn speak to and inform texts. And... the notion of dialectic also attempts to reflect the idea that such a conversation between rhetorical texts can proceed in a step-wise manner, leading not to Platonic “Truth” but to a (rhetorically) constructed “truth” (p. 43).
4. Further on in “George Orwell, sexspeak, and the dialectical critic,” Murray (1997) offers a concrete illustration of the dialectical relationship between discourse/behavior and thought/character. He offers “a dialectical analysis of the effects of the discursive practices of the ‘sex industry’ upon the attitudes and behaviors of the consumers of those discourses,” arguing that “calloused attitudes and aggressive behaviors toward women are dialectically linked to sexually-objectifying depictions of women” (p. 37). According to this dialectical view:  
Seemingly innocuous depictions of women which emphasize sexuality, such as the annual *Sports Illustrated* swimsuit issue, might represent the first edition of ‘Sexspeak.’ The second edition, perhaps, would be Hooters restaurants. Intermediate editions include publications such as *Penthouse*, and a wide range of x-rated or near x-rated films such as *Debbie Does Dallas* and *9 1/2 Weeks*. And if the ninth or tenth edition is represented by ‘snuff films’ in which women have become wholly dehumanized as objects of sexual desire and aggression, then perhaps the eleventh edition—‘the final, perfected version’—includes a multitude of criminal behaviors against women including sexual harassment, domestic violence, rape, and even murder (Murray, 1997, p. 41).  
And while this account of the potential dialectical relationship between sexually explicit media and hyper-sexualized attitudes toward women may strike one as overstated, Murray (1997) goes on to offer the case of Ted Bundy as compelling support: An extreme

example of this type of dialectical progression might be the case of serial rapist and murderer Ted Bundy. Biographers Michaud and Aynesworth (1983) recount a few key stages in Bundy’s apparently dialectical progression. Prior to his first known attack on 4 January 1974, Bundy had already developed ‘a strong appetite for violent pornography’ and he often ‘crept around the University District late at night. Sometimes he stole things from houses. Sometimes he peeped into women’s windows’ (p. 76). Michaud and Aynesworth also report that Bundy had ‘once shoved [his forearm] up against [one lover’s] throat while making love’ and that another partner ‘did allow him to tie her up a few times before they made love’ (pp. 79–80). In short, Bundy’s dialectical progression developed from violent pornography, petit theft and peeping, to (relatively) mildly aggressive behaviors and role-playing, to violent battery and ultimately to kidnapping, rape and murder (pp. 40–41).

Note here that the dialectical critical model suggests that there is an interdependence between discursive practices/behaviors and the being/character of the individual engaged in those practices. In the case of pornography, it “can be viewed as a set of rhetorical practices, and participation in those discourses can be understood to affect the very being of the consumers of those discourses and to provide the rhetorical and ideological framework necessary to participate in more advanced versions of pornography” (Murray, 1997, p. 43).

In a later essay Murray (1998) traces the dialectical development of Nazi ideology, arguing that “understanding the involvement of ‘ordinary Germans’ in the atrocities of the Holocaust” requires an examination of “the dialectical development of anti-Semitic Nazi ideology throughout Hitler’s rise to power” (p. 42). Murray (1998) continues:

The transition from the existing anti-Semitism of 1918—the year of Hitler’s entrance into politics—to the initiative to exterminate all European Jews in 1941 was accomplished through a *rhetorical dialectic* which involved the systematic use of: (1) anti-Semitic propaganda, which appeared in oratory, newspapers and films, for example; (2) the validation of developing anti-Semitic sentiment through legislative action, such as the anti-Jewish boycott of 1933 and the Nuremberg Laws of 1935; and (3) the public performance of the developing anti-Semitic Nazi ideology, largely through a sustained reign of terror against the Jews, such as the anti-Jewish pogrom of 1938 known as *Kristallnacht* (“Crystal Night”) (p. 42).

And repeating the point that this dialectic concerns that between discursive practices and the very character/being of individuals involved in those discursive behaviors, “the claim is that the transition from pre-existing anti-Semitism to the Holocaust occurred through a dialectical progression which involved the construction and continued development of the Nazi *subject position*” (Murray 1998, p. 42).

Finally, such a mode of dialectical analysis offers an antidote to dichotomous thinking, such as in assuming that:

the ‘ordinary German’ either had to have been coerced/forced into complicity, or had to have been strongly anti-Semitic from the outset. What is left out in this account is the possibility that persuasion played a significant role in bringing ‘ordinary Germans’ into adherence

with Nazi policies: a persuasion effected not through coercion or intoxication, but through a systematic dialectic which appealed to pre-existing sentiments, organized those sentiments into a new symbolic order, and mobilized that resulting ideological formation. In the process, the 'ordinary German' subject position of 1918 was reorganized into the 'ordinary German' subject position of 1941 (Murray, 1998, p. 52). This too is important for a consideration of undergraduate pedagogy insofar as we are indeed concerned with the development of our students' "subject position" (see Foucault, 1972)—i.e. the professional character and academic habits of mind that we wish for them to come to inhabit.

### References

- Allen, W. B. (2003). *Habits of mind: Fostering access and excellence in higher education*. New Brunswick, NJ: Transaction Publishing.
- Anderson, J. (2009). Increasing alertness: Teaching habits of mind for transfer. In A. L. Costa & B. Kallick (Eds.), *Habits of mind across the curriculum: Practical and creative strategies for teachers* (pp. 207–212). Alexandria, VA: Association for Supervision and Curriculum Development.
- Carver, R. (1996). Theory for practice: A framework for thinking about experiential education. *Journal of Experiential Education*, 19, 8–13.  
<http://dx.doi.org/10.1177/105382599601900102>
- Costa, A. L., & Kallick, B. (Eds.). (2000a). *Habits of mind: Activating & engaging* (Vol. 2). Alexandria, VA: Association for Supervision and Curriculum Development.
- Costa, A. L., & Kallick, B. (Eds.). (2000b). *Habits of mind: Assessing and reporting* (Vol. 3). Alexandria, VA: Association for Supervision and Curriculum Development.
- Costa, A. L., & Kallick, B. (Eds.). (2000c). *Habits of mind: Discovering & exploring* (Vol. 1). Alexandria, VA: Association for Supervision and Curriculum Development.
- Costa, A. L., & Kallick, B. (Eds.). (2000d). *Habits of mind: Integrating & sustaining* (Vol. 4). Alexandria, VA: Association for Supervision and Curriculum Development.
- Costa, A. L., & Kallick, B. (Eds.). (2009). *Habits of mind across the curriculum: Practical and creative strategies for teachers*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Costa, A. L., & Kallick, B. (2014). *Dispositions: Reframing teaching and learning*. Thousand Oaks, CA: Corwin.
- Dewey, J. (2012). *Democracy and education*. New York, NY: Simon and Brown.
- Dionne, R., Newport, S., & Reinsel, J. (2015, 16 October). *True grit: Leveraging studio art pedagogies to develop grit and character in STEM students*. Lilly conference on College and University Teaching and Learning, Traverse City, MI.
- Eyler, J. (2009). The power of experiential education. *Liberal Education*, 95, 24–31.
- Fine, M. (1995). *Habits of mind: Struggling over values in America's classroom*. San Francisco, CA: Jossey-Bass.
- Fletcher, J., Najarro, A., & Yelland, H. (2015). *Fostering habits of mind in today's students: A new approach to developmental education*. Sterling, VA: Stylus Publishing.
- Formation by design project progress report, 2014–2015: *Designing the future(s) of the university*. (2014). [Powerpoint] Washington, DC: The Office of the Provost, Georgetown University.
- Foucault, M. (1972). *The archaeology of knowledge* (A.M.S. Smith, Trans.). New York, NY: Pantheon.
- Goldfine, M. (2009). Creating curriculum with habits of mind at the heart. In A. L. Costa & B. Kallick (Eds.), *Habits of mind across the curriculum: Practical and creative strategies for teachers* (pp. 135–144). Alexandria, VA: Association for Supervision and Curriculum Development.
- Krovetz, M. L. (2008). *Fostering resilience: Expecting all students to use their minds and hearts well*. Thousand Oaks, CA: Corwin Press.
- Lloyd, C. T. (2009). Discovering habits of mind in mathematics. In A. L. Costa & B. Kallick (Eds.), *Habits of mind across the curriculum: Practical and creative strategies for teachers* (pp. 94–102). Alexandria, VA: Association for Supervision and Curriculum Development.
- Michaud, S. G., & Aynesworth, H. (1983). *The only living witness*. New York, NY: Linden Press.
- Murray, J. W. (1997). George Orwell, sexspeak, and the dialectical critic. *The New Jersey Journal of Communication*, 5, 30–46.  
<http://dx.doi.org/10.1080/15456879709367314>
- Murray, J. W. (1998). Constructing the ordinary: The dialectical development of Nazi ideology. *Communication Quarterly*, 46, 41–59.  
<http://dx.doi.org/10.1080/01463379809370083>
- Orwell, G. (1984). 1984. New York, NY: Signet Classic.
- Orwell, G. (1991). Politics and the English language. In G. Orwell (Ed.), *Shooting an elephant and other essays* (pp. 77–92). New York, NY: Quality Paperback Book Club.
- Random House Unabridged Dictionary* (2nd ed.). (1987). New York, NY: Random House.
- Saleh, I. M., & Khine, M. S. (Eds.). (2009). *Fostering scientific habits of mind: Pedagogical knowledge and best practices in science education*. Rotterdam: Sense Publishers.
- Schnorr, C. (2009). Habits of mind as character education. In A. L. Costa & B. Kallick (Eds.), *Habits of mind across the curriculum: Practical and creative strategies for teachers* (pp. 76–81). Alexandria, VA: Association for Supervision and Curriculum Development.
- Sobel, D., & Andrewes, W. J. H. (1998). *The illustrated longitude: The true story of a lone genius who solved the greatest scientific problem of his time*. New York, NY: Walker.
- Weinhold, C., & Strang, K. (2015, 15 October). *Pedagogical approaches to fostering hope and grit in your students: Can it impact student success?* Lilly conference on College and University Teaching and Learning, Traverse City, MI.

### Appendix A. Skills Curriculum Map (existing)

Core curriculum goal	Focused inquiry course goals	Course learning outcomes	Shared course assignments
<p><i>Oral communication:</i> courses provide students with opportunities to express and develop their oral capabilities</p>	<p>In 111, students will</p> <ul style="list-style-type: none"> <li>Participate in whole class and small group discussion</li> <li>Build the oral communication skills essential for academic work and life</li> </ul>	<p>After 111, students should be able to</p> <ul style="list-style-type: none"> <li>Contribute verbally to class activities and discussions</li> <li>Share views or ideas respectfully with others</li> <li>Practice verbal and non-verbal communication skills (eye contact, utterances, dress, time, posture, rate, volume, etc.)</li> <li>Practice active listening by offering constructive feedback</li> </ul>	<p>A minimum of two oral presentations are required in all sections of UNIV 111 and UNIV 112. Timing and format of oral presentations are up to the individual instructor, but one presentation should be a group presentation, and one should be an individual presentation</p>
	<p>In 112, students will</p> <p>Present their ideas orally, in formal and informal contexts</p>	<p>After 112, students should be able to</p> <ul style="list-style-type: none"> <li>Take a leadership role in class</li> <li>Demonstrate competency in verbal and non-verbal communication skills (confidence, eye contact, utterances, dress, time, posture, rate, volume, etc.)</li> <li>Shape communication to conform to academic and professional expectations</li> <li>Generate appropriate responses to others' contributions</li> </ul>	
<p><i>Critical thinking:</i> courses encourage critical self-awareness, helping students apply critical thinking strategies to foster more disciplined approaches to learning</p>	<p>In 111, students will</p> <p>Think critically about texts, ideas, and the elements of argument</p>	<p>After 111, students should be able to</p> <ul style="list-style-type: none"> <li>Generate relevant questions</li> <li>Consider multiple perspectives</li> <li>Identify arguments within a variety of texts</li> <li>Identify and critique assumptions</li> <li>Analyze arguments and evaluate evidence</li> <li>Formulate a cogent argument</li> <li>Reflect on the central role of these activities in academic culture</li> <li>Engage in analysis of a multimodal text</li> </ul>	<p>Univ 111</p> <ul style="list-style-type: none"> <li>Reflective narrative that may incorporate observational evidence</li> <li>Writing that puts texts in conversation and engages in summary and analysis</li> </ul> <p>Writing that makes a claim and incorporates outside texts</p>
		<p>In 112, students will</p> <p>Apply critical thinking strategies to analyzing and creating arguments, including academic arguments</p>	
<p><i>Ethical and civic responsibility:</i> students reflect on their culturally inherited values, thinking critically about the relationship between these values and global context</p>	<p>In 111, students will</p> <p>Explore principles of ethical and civic responsibility</p> <p>Analyze ethical problems and viewpoints</p>	<p>After 111, students should be able to</p> <ul style="list-style-type: none"> <li>Assess their own values</li> <li>Recognize ethical issues in a variety of settings</li> <li>Identify the social contexts of ethical problems</li> <li>Acknowledge alternate viewpoints and values</li> <li>Formulate judgments about right and wrong human conduct</li> </ul>	<p>See above (especially, third assignment in Univ 112)</p>

Core curriculum goal	Focused inquiry course goals	Course learning outcomes	Shared course assignments
	In 112, students will Consider multiple ethical viewpoints Apply methods of ethical reasoning to texts and arguments	After 112, students will be able to: <ul style="list-style-type: none"> <li>• Identify and assess ethical questions, even when the given issue is not overtly ethical</li> <li>• Apply different approaches to ethical questions</li> <li>• Represent opposing viewpoints accurately and address them fairly</li> <li>• Evaluate the ramifications of potential courses of action</li> <li>• Formulate precise judgments about right and wrong human conduct and interrogate those judgments with evidence of critical reflection</li> </ul>	



© 2016 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:  
 Share — copy and redistribute the material in any medium or format  
 Adapt — remix, transform, and build upon the material for any purpose, even commercially.  
 The licensor cannot revoke these freedoms as long as you follow the license terms.



Under the following terms:  
 Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.  
 You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.  
 No additional restrictions  
 You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

**Cogent Education (ISSN: 2331-186X) is published by Cogent OA, part of Taylor & Francis Group.**

**Publishing with Cogent OA ensures:**

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

**Submit your manuscript to a Cogent OA journal at [www.CogentOA.com](http://www.CogentOA.com)**

