Curricular Change and the Ship of Theseus

Kevin D. Egan
Drexel University

Abstract: In this essay, I will use the "ship of Theseus" paradox as a thought experiment to tease out what can and should remain the same when a student makes curricular changes. This thought experiment, which questions whether a ship remains the same ship if all of its component parts are changed over time, provides us with a conceptual framework to examine circumstances in which curricular change is the rule and not the exception. Such changes are positive steps in a student's learning and development, rather than signs of indecision or immaturity. As such, the paradox is useful in helping advisers and mentors think about the student's curriculum as it evolves and changes over time. I also draw on Aristotle's four causes of change as conceptual language to navigate the ship of Theseus paradox. I argue that advisers should promote meta-learning through guided reflection in order to maintain a consistent path towards student learning despite curricular change. Finally, the essay culminates with some tools and techniques that prioritize process in pursuit of the kind of meta-learning that supports student development and success.

Keywords: curricular change, design thinking, logic of the curriculum, self-authorship, exploratory students, individualized majors

The purpose of this essay is to provide academic advisers a means of thinking about how change takes place over a student's collegiate career. I look to better elucidate the relationship between student development, as understood through self-authorship theory; student learning; and changes in a student's academic pursuits, primarily through changes in curriculum. Specifically, I introduce a thought experiment—the ship of Theseus paradox—to argue that an emphasis on student learning and personal growth should remain consistent when students make curricular changes and to offer insights into how advisers may best guide students at these moments. As students construct and navigate curricular changes, it is the job of academic advisers to emphasize processes of meta-learning as part and parcel of learning and development in relation to those changes. Students who change

majors, take "nontraditional" paths, have a hard time deciding on a major, and otherwise meander and explore academically are too often thought of as lacking focus or purpose or as immature, misguided, or under-prepared. By thinking more critically about change, the academic advising community can not only better help these students but can also reframe them as learners who are actually well suited to succeed and meet the demands of our everchanging world.

Students are not static learners. Self-authorship theory, which derives from the work of Kegan and Baxter Magolda, informs this understanding of dynamic learning and student development, especially at key transition points in a student's academic career. Self-authorship is defined as "the internal capacity to define one's beliefs, identity, and social relations," which represents a shift away from relying solely on external figures as authoritative voices guiding decision-making (Baxter Magolda, 2008, p. 269). Baxter Magolda (2004) maps out four phases of self-authorship—following formulas, crossroads, becoming the author of one's life, and internal foundation. For the purposes of this essay, I am focusing on the crossroads moment because of its significance as a transitional moment between relying on external authorities and developing an understanding of one's self. A number of significant events or experiences in college can map onto the "crossroads" moment when students recognize that their path may not necessarily be the right one to achieve the goals and sense of self they are seeking (Baxter Magolda, 2004; Baxter Magolda & King, 2008). In other words, crossroads moments are those that force students to fundamentally rethink their path and potentially choose a new direction as they develop a sense of self as the locus of intention and action.

In her work building on the crossroads phase, Pizzolato (2005) argues that the crossroads can comprise a "compilation of experiences that culminates in a provocative moment…represent[ing] an experience that resulted from jarring disequilibrium on the student's part in terms of her or his ways of knowing" (p. 625). Interestingly, Pizzolato (2005) finds that selection of a major, while an "externally catalyzed situation," does not present as provocative a moment (p. 633). This means that the process of choosing a major does not drastically force a student to reconsider their ways of knowing. This actually seems like a lost opportunity because many students experience so much volatility surrounding their choice of major. Students often choose a major because of external forces such as familial pressures and expectations. But, as these students discover more about themselves—perhaps they are dissatisfied with their major, struggle mightily with the coursework, or are simply curious about other fields—they begin to explore other opportunities, and they reciprocally learn even more about themselves the more that they explore.

Indeed, over the course of an undergraduate career, it is not uncommon for a student to change majors or for their plan of study to alter and evolve in a number of other ways. There is a range of estimates for the number of undergraduate students who change majors, but a 2017 report by the U.S. Department of Education found that nearly one-third of students who enrolled in college for the first time in the academic year of 2011–12 changed majors within three years (U.S. Department

of Education, 2017). The report also found that nearly one in ten changed majors more than once. Simultaneously, colleges and universities are also facing increased pressure to provide more opportunities for curricular flexibility to better meet the demands of the job market as well as to help students facing financial, personal, and professional obligations. The combination of these two phenomena means a proliferation of academic programs that offer greater degrees of flexibility, responsiveness, and nimbleness than more traditional disciplines and majors. But even traditional majors must grapple with a certain degree of flexibility both from forces internal and external to the institution. In turn, this means that academic advisers must progressively do more to help students make informed choices about course and major selection as well as to help make sense of a curriculum that may be in a state of semi-permanent flux.

The rise of interdisciplinary, exploratory, self-directed, and competency-based programs reflects the dovetailing of these two phenomena in the modern university. Such programs offer the flexibility and agility to allow students greater degrees of freedom to "course correct" as they advance in their studies. For example, the advent of so-called "meta-major" programs, like those at Georgia State or Rhode Island College, allow freshmen to enter college without declaring a major; instead, they enter learning communities or disciplinary clusters which expose them to multiple fields that relate to their general areas of interest (Georgia State, n.d.; Logue, 2015; Rhode Island College, 2020; Straumsheim, 2016). Georgia State offers seven meta-majors, including STEM, Education, and Policy/Social Science, which "provide clarity and direction in what would otherwise be a confusing and unstructured registration process" (Georgia State, n.d.). Such programs promote structured exploration and experimentation early in a college student's career, thereby allowing them to make a more informed decision on a major at a later time. Similarly, my experience in directing an individualized major program—a program akin to New York University's Gallatin School or Duke University's Program II— has demonstrated that such programs encourage students to forge new curricular paths in response to both the demands of a rapidly changing economy and the challenges posed by new and more pressing problems (and often these two motivations are interrelated). Finally, to more readily meet the needs of nontraditional student populations, competency-based programs, like the University of Wisconsin System's flexible option, provide for self-pacing while capitalizing on prior knowledge and experience (Fain, 2014; University of Wisconsin, n.d.).

Programs such as these, as well as students who change majors and explore fields through general education requirements and the strategic use of minors, certificates, and free electives, require academic advising that is attuned to making sense of change. Such advising is imperative to help students recognize curricular changes as crossroads moments, make intentional decisions based off that recognition, and develop their own sense of agency in navigating those changes. Speaking from experience as the director of a program in which students can design their own majors, there have been numerous instances where I have worked with

students who, after having taken part in intensive research projects or internship/cooperative education experiences, return to their academic endeavors with new insights and goals. These instances usually entail curricular changes, as well. Indeed, I have also worked with many students who spent their first year of college struggling with their major and eventually make the leap to explore and create something new for themselves. So, how should academic advisers help students capitalize on these crossroads moments so that they can make better sense of these changes? Drawing on the ship of Theseus paradox and Aristotle's four causes, I argue that advisers should guide students towards recognizing, reflecting, and acting upon moments of curricular change by keeping a focus on their learning and development.

For the purposes of this argument, I use the ship of Theseus paradox as a parallel to curricular change. A brief mythology refresher will help set the stage: Theseus is immortalized in Greek mythology as the Athenian hero who slayed the minotaur in Crete, thereby putting an end to the sacrifice of young Athenians in King Midos's labyrinth. In honor of Theseus's success, the Athenians kept his boat for several centuries as a tribute to the god Apollo. In his work, *Theseus*, the Greek biographer Plutarch (ca. 75 C.E./1683) writes of this memorialization as such:

> The ship wherein Theseus and the youth of Athens returned had thirty oars, and was preserved by the Athenians down even to the time of Demetrius Phalereus, for they took away the old planks as they decayed, putting in new and stronger timber in their place, insomuch that this ship became a standing example among the philosophers, for the logical question of things that grow; one side holding that the ship remained the same, and the other contending that it was not the same.

This has become what is known as the ship of Theseus paradox—a thought experiment that forces us to consider the nature of identity and change over time. In essence, the question is whether a ship—or any object, for that matter—remains the same if all of its constituent parts are replaced over time.

One could ask a similar question about curricular change—what remains and what is different in light of changes to the curriculum? What remains the same if a student changes out all of the courses that they had initially intended or were required of them? On the surface, this might be an extreme, even absurd, question to ask; a complete reconfiguration of a student's plan of study is certainly akin to a change of major, and majors are not interchangeable as being of the same kind (i.e., a biology major is not a business major is not a graphic design major). Nevertheless, the thought experiment is instructive because it helps us maintain focus on the relationship between curricular changes and student development and learning.

As indicated above, it is certainly not uncommon for a student to make alterations to their plan of study, whether it is a dramatic alteration like a change of major or more incremental in the case of flexible programs like individualized majors. Often, these changes will come on the heels of a significant moment of self-

discovery that takes place through an experiential learning opportunity, a crossroads moment. Perhaps this is not the same as the slaying of a minotaur, but it may still very well feel like the student is emerging from a labyrinth of self-doubt and unknowing. A rigorous research experience, a particularly impactful internship, a prolonged cooperative education work experience, an immersive study abroad opportunity, an eye-opening service-learning project—all of these may be experiences in which students have an epiphany about who they are and what they want to learn and achieve. The role of the adviser is to help the student figure out how they are going to act on that epiphany.

Those, like me, who serve as advisers and mentors in individualized major programs have certainly had at least one moment like this where a student has returned from such an experience, bursting through the office door with exuberance, detailing their experience and self-discovery, and concluding that while most of their plan of study is still right for them, they just need to tweak a little bit of it... maybe *just* substituting out about one-third of their coursework for some field that is new and more relevant to their pursuits. While this extremity might be unique to individualized major programs, similar instances manifest in more traditional majors through a student's addition of a minor (even multiple minors) or choices for free electives. Regardless, the job of the adviser is to help make sure that these decisions and the new course choices are not capricious, arbitrary, and reactive. Instead, they should be intentional and informed—the adviser must help the student understand the context in which they are making these decisions and to recognize and articulate how these choices fit with their overarching goals. Ideally, they will help the student make linkages across the courses they are stitching into their plan of study to understand the "logic of the curriculum" (Lowenstein, 2000). This should be an iterative process.

In these moments, the ship of Theseus paradox is a useful thought experiment in helping advisers and mentors think about the student's curriculum as it evolves and changes over time. For example, one of the hallmarks of individualized major programs is their ability to be nimble and responsive to student needs; such flexibility allows for "course correction" as a student continues to grow and develop. But what do we make of the curriculum along the way? If a student proposes a combination of A, B, and C fields for their major, but graduates with a transcript that indicates A, some of B, and new combination of Y and Z, should that raise concern? Is this a completely new major that the student has achieved, something completely different from what was initially proposed? Or has that curricular ship of Theseus somehow remained the same?

To offer some context and insight into that question, we can turn to another ancient Greek thinker, Aristotle. In both *The Physics* and *Posterior Analytics*, Aristotle addresses the nature of change through "the four causes." These are: the material cause, the formal cause, the efficient cause, and the final cause. The material cause refers to the physical makeup of an object; in terms of the ship of Theseus, this would be the wood of the planks that constitute the ship. For the

curriculum or plan of study, we might say that the material cause comprises the courses themselves.

The formal cause refers to the arrangement, shape, or design of an object; the schematics and layout of the ship are integral to its formal cause. For the student's plan of study, I contend that the "logic of the curriculum" would be the formal cause. To be clear, I am using this term in the way that Lowenstein (2000) defines it, that is, as encompassing an overall goal articulated by the student, as well as the sub-goals that contribute to the overarching goal and the consequent courses (and their interrelationships) chosen to achieve those sub-goals. In other words, the logic of the curriculum is a tool by which students can navigate the constellation comprising their goals and curricular choices—the schematic of their learning.

The efficient cause refers to those external agents who affect change on the object; the carpenters who built the ship and replace its planks are the efficient cause. For the curriculum, we can identify a number of external agents contributing to the efficient cause—faculty, academic advisers, and students, among others.

The final cause refers to the purpose of the object; the final cause of the ship is to sail or transport individuals. The most cynical may say that the bachelor's degree is the final cause of the curriculum, but, more optimistically, I contend that student learning is the final cause of the curriculum. Student learning can mean a number of different things, and while learning the content of a chosen field is important, my focus here is on learning in service of students better understanding themselves and their own development.

This line of argumentation merits emphasizing that I am certainly not contending that courses are absolutely interchangeable in any form or fashion. To say that course interchangeability might not essentially matter could lead down a slippery slope to thinking of the curriculum as effectively detached from any meaningful learning. Again, this means that I am making a fundamental assumption about the end goal of higher education—its final cause—which is that it is ultimately about student learning and not just the degree. Otherwise, simply equating the final cause to degree attainment could lead to a line of thinking implying that the degree is merely a signal for credentialing. One could look to Bryan Caplan's arguments on student learning and the value of a college degree to get a sense of those implications in his essay on education and signaling (Caplan, 2018). With this in mind, we can dispense with the material cause; replacing each plank (i.e., course) along the way to a degree would inarguably change the nature of that degree. But that does not change the nature of student development and learning, especially when that learning is about understanding processes of learning and developing a more robust sense of self. As we shall see, this is also what unites curricular exploration and preparation for a meaningful career(s). With this in mind, I will continue to operate on the assumption that the final cause of the student's curriculum is to foster learning.

Applying Aristotle's causes to the ship of Theseus paradox results in different interpretations and conclusions for attempting to resolve the paradox. For example, one might say that, based on the material cause, the reconstituted ship is most

certainly different than the original because all of the wooden planks, or courses, have been replaced by new ones. Similarly, one might look to the formal cause and recognize that it is a different ship because elements of its design have changed. However, the goal here is certainly not to resolve the paradox but to think about how Aristotle's four causes might help us grapple with students' changing curricula. Looking to these causes can help academic advisers prioritize the process of student learning as well as provide both advisers and students with some ideas and tools on how to better capture and evaluate that process. Invoking the importance of process here demonstrates that a final cause stays consistent while still being an ongoing entity. For example, a ship's final cause of sailing is itself a process that entails a number of ongoing practices to make sailing happen. Similarly, student learning and development maintain consistency as the final cause while still relying on practices that guide them.

It is worth noting that the four causes do not all carry equal weight in Aristotle's work, nor do they operate independently of one another as causal explanations for change. The formal and final causes are closely associated, and they also maintain a position of primacy in Aristotle's teleological argument. Hennig (2009) teases out that association, noting that the two often have a reciprocal relationship:

> Since the typical course of a natural change is determined by the paradigmatic form of the changing thing, the final cause of the change is also determined by the formal cause of the thing. Conversely, since the ways in which natural beings change belong to their nature, the natural changes they undergo determine their paradigmatic form. (p. 155)

In other words, the formal cause (the schematic or the paradigmatic form) of a thing determines the final cause, or what Hennig refers to as the typical or natural course of change, and that typical/natural course of change also determines the paradigmatic form. With the thought experiment at hand, the logic of the curriculum, functioning as the formal cause, informs the final cause of student learning. Reciprocally, a student's continued learning about themselves and their goals informs and determines their understanding of the logic of the curriculum. It follows from this that some curricular changes are necessary for a student given the interplay between formal and final causes and their importance in Aristotle's teleology.

Hennig is also quick to note that although closely associated, the formal and final causes are not the same. They differ because the final cause exists outside any particular instance of a change. Returning to sailing as a final cause, it is not a singular thing but rather an ongoing series of activities that make up sailing—piloting, navigating, rowing, trimming, etc. It is not possible to "imagine a perfect and still presently ongoing change…[f]or to imagine a process is to imagine it as ongoing" (Hennig, 2009, p. 156). Similarly, student learning is a final cause that is ongoing as a series of practices, activities, and techniques. This emphasizes the

importance of process in relation to the causes, and this is particularly relevant when it comes to the logic of the curriculum, which is further explicated below.

In order to help unpack this interrelationship, I would like to focus on the association between the formal and efficient causes in pursuit of that final cause of student learning. This will help us think through the dynamics and the import of curricular change over time. Let us think about the formal cause of the plan of study as akin to the logic of the curriculum. Again, drawing upon Lowenstein's (2000) essay on advising and the logic of the curriculum, such logic entails the groupings and relationships among courses that help students achieve defined goals. As such, I see the logic of the curriculum serving as a tool much like the schematic of a ship—this tool helps users make sense of all the constituent pieces and how they relate to each other and function together. For the efficient cause, let us focus primarily on the student and academic adviser—they are generally the principal agents in navigating the curriculum, and, in doing so, this advising relationship focuses primarily on constructing and deriving the meaning of the logic of the curriculum.

The goals set forth by the student will undoubtedly change over time. That is unquestionably the nature of education, and as one accumulates more knowledge and has more exposure to various fields of study, research experiences, studying abroad, and workplace experience, understanding of one's self and one's goals will shift, evolve, and become more refined. In turn, students will select new courses and incorporate different disciplines in ways that they never originally intended; given the nature of more flexible academic programs, there is greater responsiveness to working with these changes. It is the job of the academic adviser to assist the student in being cognizant of the logic of the curriculum and to use it in guiding their development. To do so requires a certain level of meta-learning that entails reflection, critical assessment, and some strategic planning guided by creative problem-solving. By meta-learning, I mean how one learns about their own sense of self, that is, the constellation of how they learn, how they construct and understand their goals, and how they grow and evolve those goals in relation to their learning. That meta-learning is related to self-authorship, and it helps to maintain consistency for the student over the course of an evolving curriculum—while individual learning goals might change, along with the courses that support the pursuit of those goals, there is the final cause in the meta-learning that takes place through a critical engagement with the logic of the curriculum.

We can see here that the relationship between the formal cause (the logic of the curriculum) and the final cause (student learning) hinges upon the practices enacted by the efficient cause. This brings us back to Hennig's (2009) explanation of the efficient cause. He argues that "the 'efficient cause' of a natural change is thus at the same time (1) the agent that directs this change according to its nature and (2) what this agent does in accordance with its nature in order to do so" (p. 149). As such, the efficient cause manifests the techniques and processes of advising, of learning the logic of the curriculum (what the agents do), undertaken by the student and adviser (the agents themselves). The efficient cause is the student–adviser

tandem and the processes they undertake, and these are guided by a relationship to the formal cause through meta-learning, which in itself is the final cause of a student's education.

Ultimately, then, the key to sustaining student learning at the core of a changing curriculum is to emphasize processes of meta-learning that take place as the student constructs and navigates curricular changes. The academic adviser plays a key role in this, and there are some key tools and techniques that can be implemented to help facilitate that learning. Some of these are seemingly basic, but their simplicity should not mask their importance. For example, building in time and exercises for guided self-reflection is essential to helping students think critically about their education. Part of this is about helping the student to justify course choices and connect them to bigger picture goals, and, in fact, helping them to define those goals in the first place. This work should be done both dialogically and through a writing process—students should be encouraged to create their own plan of study (at least to the degree they are able depending on the strictures of their program) and to justify it verbally and in writing. This will help attune students to thinking critically and intentionally about their education and advocating for themselves in the pursuit of that education. Ongoing advising meetings should revisit the plan and require the student to articulate and defend changes along the way.

More intensive and creative tools can be used to foster a continual process of meta-learning. For example, a twist on the above involves students constructing curricula for each other, which is an exercise our program uses in one of its foundational courses. In the exercise, students are paired up and exchange an "elevator pitch" version of their academic goals with each other. They then spend time individually building a plan of study for their partner; to do so, they must explore the course catalogue and think about their prior classroom experiences. They may even have to do a bit of external research on particular fields and topics to gain a greater understanding of what they entail in an academic context. Finally, they need to assemble a curriculum that they believe will help their partner achieve the goals expressed during their conversation. At a follow-up meeting, the two discuss the outcomes of the process. This exercise encourages meta-learning in a few different ways. For one, by getting the student out of the "confines" of their own particular major and plan of study, it promotes exploration and strategic planning.

Sometimes the myopia of one's own curricular pursuits limits their understanding of the logic of the curriculum. By getting students to examine fields with which they are unfamiliar, it forces them to consider the relationship between classes, as well as the interrelationship between content and structure (that is, how and why pre-requisites operate the way they do or the rationale behind general and/or core education requirements). It also helps open students up to possibility and exploration—by becoming resources for one another, they can encourage their partners to look further afield than they might have initially considered. Peer mentorship and curricular design can be a powerful partnership in helping students draw new connections.

Finally, using design thinking principles and visualizations can be an immensely helpful way for students to think creatively about their education. If the logic of the curriculum is the formal cause of education, then design thinking helps to bring that schematic to life and activate it in service of student learning and development. Some of the core guiding principles of design thinking also help to illuminate the significance of the efficient cause—the relationship between adviser and student—in service of the formal cause. These principles, as outlined by the Design Council (2015b), emphasize the relationship between and among people: putting people first, communicating visually and inclusively, and collaborating/co-creating. Taken together, these principles point to the co-construction of knowledge, even knowledge of the self, and the adviser plays a key role in this process. The fourth principle, "iterate, iterate, iterate," emphasizes the process itself (Design Council, 2015b).

A particularly beneficial design thinking tactic and visualization that our office has employed as an iterative exercise is the Design Council's "double diamond." To help visualize this, imagine two diamonds next to each other in what would look like part of an argyle pattern. As the Design Council (2015b) notes, "The two diamonds represent a process of exploring an issue more widely or deeply (divergent thinking) and then taking focused action (convergent thinking)." In essence, the double diamond helps students visualize moments of convergent/divergent thought (often those crossroads moments that are cause for reflection and adjustment) as well as moments of focus and expansion/exploration of curricular and academic pursuits (the actions that take place because of those crossroad moments).

As a traditional design thinking tool, the expansion half of the first diamond represents discovery and insight into a problem space; the contraction half of the first diamond represents definition and focus on a specific area of a problem. In the second diamond, the expansion half represents the development of a possible solution, while the contraction half represents delivery of a solution. For the purposes of helping students think about the changing nature of their curriculum, the use of the double diamond helps to emphasize the process of learning along with mapping out curricular change as a function of pivotal, crossroads events. The stages of expansion and contraction represent moments of exploration and focus. The points of contraction on the diamonds signify those moments where active reflection should be taking place to assess those events—ideally, with the assistance of the academic adviser. The points of expansion should be the result of those reflections; these are opportunities for further exploration and discovery. This expansion and contraction should take place iteratively throughout the undergraduate career.[1]

For example, as shown in Figure 1, a student enters college in a program with a general sense of what they may want to pursue academically (this would represent

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[1] For a good primer on using design thinking, and particularly the double diamond, for services, refer to the Design Council's (2015a) "Design Methods for Developing Services."

the initial point of the diamond); they then take part in a first-year experience program and embark on general education requirements (this begins the first stage of exploration and is represented by the expansion of the diamond). After that first year, they revisit their academic interests and better define what they want to study—perhaps they declare an official major or better refine their exploratory major (this is the first contraction of the diamond). They then deploy that new focus in a variety of possible ways—possibly a combination of conducting an intensive research project, taking part in an internship, and participating in study abroad, all the while also taking courses that help fulfill the vision of this new focus (this is represented by the expansion of the second diamond). Finally, they begin to fully synthesize all of this work and bring it together in a culminating experience like a senior capstone project (this is the final contraction of the second diamond). Undoubtedly, the content of the student's coursework is critical to their education, but charting the student's path in such a way helps to highlight the significance of the process in supporting student learning. In fact, it helps students to recognize this as a process in the first place and that their experiences and self-development work in tandem with their coursework.

Figure 1

Double Diamond for Mapping Curricular Change
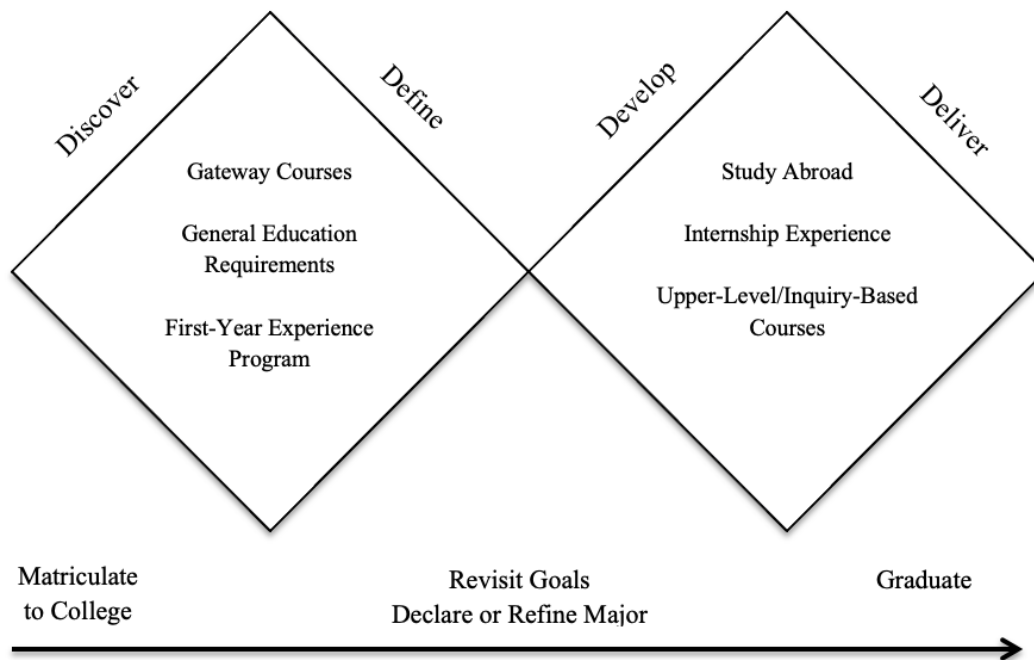
Note. Adapted from "What is the Framework for Innovation? Design Council's Evolved Double Diamond," by Design Council, 2015 (https://www.designcouncil.org.uk/news-opinion/what-framework-innovation-design-councils-evolved-double-diamond).

In fact, one could argue that the process of learning mapped out in this example is even more important than what is learned in the classroom. Insights drawn from self-authorship theory can point us in that direction, and it is here that we can see where this sort of meta-learning can dovetail with preparing students for life after college. Baxter Magolda (2008) describes two ways in which self-authorship contributes to young adults being better prepared to face the needs and challenges of the contemporary world: the ability to "engage in collaborative social relations with diverse others" and the ability to keep pace with knowledge production (pp. 269–70). Both of these capabilities make young adults better suited to thrive in a world of ever-increasing interconnectedness. They can also contribute to career success, as employers actively seek out both of these abilities. On the first of these abilities, Baxter Magolda notes a 2007 Association of American Colleges and Universities (AAC&U) survey indicating that, "76% of employers wanted colleges to place more emphasis on teamwork skills in diverse groups and intercultural competence" (p. 270). On the second of these abilities, citing the same survey, 64% of employers wanted a "greater emphasis on complex problem solving" (p. 270). Self-authorship theory demonstrates how a more developed sense of self can contribute to these capabilities, and the adviser-assisted approach to meta-learning that I have outlined here helps to demonstrate how meaningfully navigating curricular changes contributes to the kinds of learning and development indicative of self-authorship.

Subsequent AAC&U surveys bear out the importance of meta-learning and associated skills for future careers. In a 2013 survey of 318 employers conducted by Hart Research Associates on the behalf of the AAC&U, it was found that, "nearly all those surveyed (93%) agree, 'a candidate's demonstrated capacity to think critically, communicate clearly, and solve complex problems is more important than their undergraduate major" (p. 1). Five years later, these assessment holds study as another AAC&U survey confirms. This 2018 survey notes that business executives and hiring managers prioritize "demonstrated proficiency in a variety of skills and knowledge areas that cut across majors" (p. 11). These include such skills as effective communication, critical thinking, and self-motivation. Indeed, it would appear that in the employer realm, choice of major is less critical than the skills that are developed as the student engages in the process of self-authorship.

Furthermore, it is not just employer needs that illustrate the importance of the work at hand. In his book *Range*, Epstein (2019) makes the case for the kind of exploration for which this essay advocates as a means of becoming a generalist rather than a specialist. In more nuanced terms, he examines how exploration, experimentation, and a broad diversity in interests help lead to what he calls "late specialization" and a more meaningful and successful career trajectory. In other words, one should seek to learn with developing range in mind rather than narrowing one's focus too much and too soon in their education. A concept that he introduces that might best characterize the benefits of range is that of "match

quality," which refers to "the degree of fit between work and one's proclivities and skills" (p. 128).

Citing research by economist Ofer Malamud, Epstein highlights how greater exploration and experimentation in school can lead to better match quality in their careers. Malamud compares English and Welsh school systems to the Scottish system. In the former, students specialized before college and then entered more highly specified programs, while in the latter students spent their first two years exploring different fields and were able to maintain some breadth throughout their studies (p. 129). These two approaches help us get at the kind of learning that is imperative in higher education—the sort of meta-learning to which I have referred throughout. Epstein notes:

> If the benefit of higher education was simply that it provided skills for work, then early-specializing students would be less likely to career switch after college to a field unrelated to their studies: they have amassed more career-specific skills, so they have more to lose by switching. But if a critical benefit of college was that it provided information about match quality, then early specializers should end up switching to unrelated career fields more often, because they did not have time to sample different matches before choosing one that fit their skills an interests. (pp. 129–30)

Malamud's work confirmed that early specializers were indeed switching careers more often, while those students who were afforded opportunities to explore had greater match quality in their careers. Epstein concludes that in a college education, "learning stuff [is] less important than learning about oneself" (p. 130).

Curricular exploration can help students better understand themselves, contributing to the kind of growth and development indicative of self-authorship. It seems to also have the added benefit of helping students match their skills and interests with their career choices, which makes sense: greater sense of self along with greater abilities to make informed decisions would translate to match quality. The meta-learning for which I have advocated here is precisely what can help to connect all of these pieces, and academic advisers are in a unique position to assist students with that meta-learning. To return to the ship of Theseus, it is indeed better to keep changing the planks on the ship to keep it afloat. The Athenians were certainly aware of this, and they made it their mission to continue to replace the planks of wood that made up Theseus' ship in order to honor the god Apollo. As they did so, they were sure to maintain the design of the ship, to pay homage to the formal cause of the ship. Similarly, the mission of the academic adviser working with the student is to maintain a focus on understanding the design of the curriculum and how that relates to their own development. In doing so, the adviser must emphasize how a thoughtful process of engaging with the logic of the curriculum can allow for change while keeping the student's learning and self-development as the end goal, or what I have referred to here as the final cause. By employing these tools and strategies, the academic adviser can better help the

student not just grapple with change over time but actually capitalize on change as a means of developing knowledge of the self. And, while the ship of Theseus paradox remains unresolved, it offers a useful insight into thinking about how students grow and develop as a function of changes in their academic pursuits and the curricular components supporting them.

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Kevin D. Egan is director of academic programs for the Pennoni Honors College at Drexel University. He helped to launch the Custom-Designed Major at Drexel in

2011, and since that time, he has assisted over 120 students in creating their own unique, self-directed, and interdisciplinary majors.