

Why Do Students' Identities and Stages of Development Matter for Learning?

“End of Story”

Yesterday in my Economics class, we were discussing an article about the cost of illegal immigration to the US economy. The discussion was moving along at a brisk pace when one student, Gloria, began to intervene quite forcefully, saying the reading was biased and didn't represent the situation accurately. Another student, Danielle, responded: “Gloria, why do you always have to bring up race? Why can't we just discuss the figures in the articles without getting so defensive?” A third student, Kayla, who had been quiet up to this point in the semester, said that, as far as she was concerned, illegal immigrants should be arrested and deported, “end of story.” Her grandparents were Polish immigrants, she continued, and had come to the US legally, worked hard, and made good lives for themselves, “but now even my dad says this country is getting sucked dry by Mexican illegals who have no right to be here, and it's just plain wrong.” At that point, the rest of the class got really quiet, and I could see my three Hispanic students exchange furious, disbelieving looks. Annoyed, Gloria shot back: “Those ‘illegals’ you're talking about include some people very close to me, and you don't know anything about them.” The whole thing

erupted in an angry back-and-forth, with Gloria calling Kayla entitled and racist and Kayla looking close to tears. I tried to regain control of the class by asking Gloria to try to depersonalize the discussion and focus on the central economic issues, but when we returned to the discussion I couldn't get anyone to talk. Kayla and Gloria sat silently with their arms folded, looking down, and the rest of the class just looked uncomfortable. I know I didn't handle this situation well, but I really wish my students were mature enough to talk about these issues without being at each other's throats over secondary, unrelated points.

Professor Leandro Battaglia

Too Many Reasons

I used to think I was pretty good at getting students to participate in class, but lately I've been facing a "wall of silence." Knowing a few colleagues who do mid-semester feedback in their courses, I decided to give it a try and specifically asked my students why they don't participate more during class. Boy, did they give me an earful! One student wrote that, on top of a full course load, they are working late hours at two jobs. By the time they get to my class, they are too exhausted to think. One reported that she (I'm assuming it's a she) tried participating early in the semester but stopped when she didn't feel like her contributions were appreciated—like the time two male students made essentially her same points and were praised for the stolen ideas. Another disclosed that they are on the autism spectrum and have a hard time navigating social interactions, like when to jump into a discussion without being rude or weird, or how to disagree without sounding angry or condescending. . . . To avoid the uncertainty, they simply don't participate. Yet another mentioned feeling hurt when they were misgendered in class and, after that, they disengaged. And yet another wrote that professors, especially Southern ladies like me, don't really want to hear from their Black students. That stung. I try not to make assumptions about my students, but they seem to have no problem making assumptions about me. On and on it went. There were as many reasons for not participating as there were students. I tried to find some common theme that would point to one clear solution, but no. I want to help my

students, I truly do. But each one seems to want something different from me, and I can't personalize my course for each individual student. Plus, now I'm even afraid I'll say the wrong thing and make it worse. What should I do?

Professor Charlotte Calhoun

WHAT IS GOING ON IN THESE TWO STORIES?

In both of these stories, students are bringing important aspects of their identities into the classroom, and these identities create a powerful lens for how they see and respond to the learning experience. Although Professor Battaglia has assigned a reading that touches on a controversial topic, he expects his students to be able to discuss the material in terms of economic principles rather than personal experience and ethnic identity, which in his mind are mutually exclusive. What begins with an intellectual discussion of the reading quickly devolves into a highly charged exchange about racial issues—in his mind, only marginally related to the course content—culminating in hurt feelings, discomfort, disengagement, and ultimately a complete collapse of the discussion. Professor Battaglia finds himself unable to rein in the chaos. The fracas that arises leaves him feeling helpless and wondering why students are unable to stay on topic or at least be civil about their disagreements.

If Professor Battaglia's discussion was derailed by vociferous conflict, Professor Calhoun's course is marred by silence and disengagement. Here is an educator who understands the value of course participation, tries her best, and uses best practices such as mid-semester feedback to assess her teaching, only to discover a seemingly endless list of explanations for non-participation. Some of the reasons are beyond her control, like the outside commitments some students have, and yet her course is suffering the consequences. Some responses would make many of us realize how much of our social interactions we take for granted, like in the case of the student on the spectrum, but again are way outside of Professor Calhoun's capacity to help. Some she likely didn't even realize until they were brought up, like the misgendering or the misattributing student contributions. And some are painful to read, like the student stating she doesn't care about Black students. It feels like an intractable predicament even for a

well-meaning instructor, or as many intractable predicaments as there are students in her course. Either way, the learning experience for everybody is negatively affected.

WHAT PRINCIPLE OF LEARNING IS AT WORK HERE?

Even though the students in these stories were ostensibly part of the same learning environment, they were affected by it, and in turn affected their environment, in different ways. Their experiences were colored by their values and belief systems, their histories, identities, and other individual characteristics. In subsequent chapters, we will focus on processes that are common across all students. For instance, everybody needs to pay attention to learn something. Everybody needs practice opportunities and constructive feedback to develop skills, and so on. The strategies stemming from this approach will maximize our efficiency as educators, because they will apply to most of our students. But the uniqueness and individuality of our students also play a crucial role in the learning process, and we need to start there for an important reason.

The empirical evidence we rely on emerges from many studies involving tens of thousands of students in total, and the results are averaged across students to arrive at teaching and learning strategies that work for the average student. But as statisticians point out, often the average does not exist. Just like no family has exactly 2.3 children (the average number of children from the classic demographic studies of the 1960s), the average student loses any individuality that the actual students in those studies possessed, with an inevitable loss of information. In this trade-off, we give up a nuanced understanding of each student for a synthetic understanding of the average student, with definite advantages but also disadvantages. In particular, some researchers point out that most quantitative educational research in the United States is “essentially raceless” (Patton et al., 2015).

We will delve into the powerful results from this body of research in the next chapters, but we want to start by acknowledging that the uniqueness and individuality of our students, as well as the systems of power and inequity in which we are all situated, play a crucial role in the learning process. Accordingly, our first principle calls attention to the unique backgrounds and perspectives our students’ bring to the learning environment (see Figure 1.1).

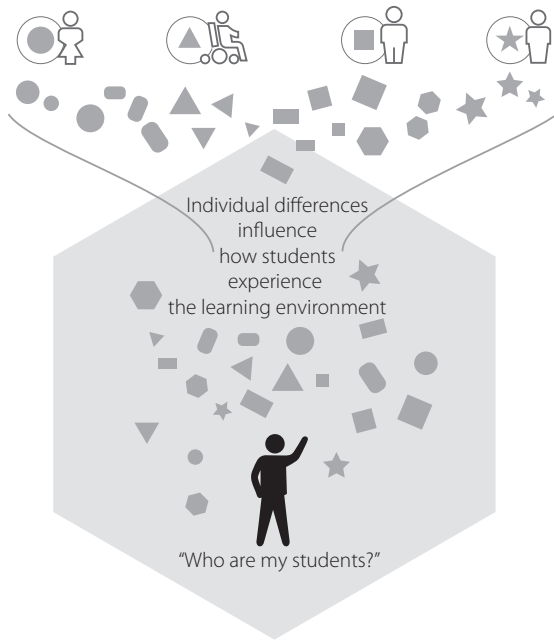


Figure 1.1. Students Bring Their Backgrounds and Lived Experiences into the Learning Context

Principle: *Students differ from each other on multiple dimensions—for example, in their identities, stages of development, and personal histories—and these differences influence how they experience the world and, in turn, their learning and performance.*

If learning was about filling empty brains with knowledge, there would be no need for this chapter. But learning also means integrating knowledge and skills into one's worldview; therefore, we need to unpack the role that developmental stage, identities, and experience play in learning. Furthermore, these crucial components of learning are not static, but they are evolving and developing through the life span, so it is important to examine some crucial insights from

developmental theory, particularly as related to social identity development and intellectual development.

The concept of life span development acknowledges that people face developmental challenges at every stage of life, but two considerations are important when dealing with college students. First, the college years are particularly important when it comes to developmental milestones. In fact, a preponderant body of research over decades documents that the developmental gains students make during college are considerably greater than the cognitive gains over the same span of time (Mayhew et al., 2016; Pascarella & Terenzini, 1991). Second, unresolved developmental challenges can derail our students' academic pursuits if they have not yet learned to channel them productively.

Ultimately, we have to teach the students we have at whatever developmental stage they occupy, not the enlightened version of the students we wish we had. But the good news is that if we understand how these variables influence the learning process, we can let this understanding inform our teaching.

WHAT DOES THE RESEARCH TELL US ABOUT INDIVIDUAL DIFFERENCES?

Just as the holistic movement in medicine calls for doctors to treat patients, not symptoms, student-centered teaching requires us to teach students, not content. Thus, it is important to recognize students as individuals who bring their unique combination of social, emotional, and intellectual characteristics to our courses. By considering “Who are my students?” along various dimensions of difference, we can better understand and support their learning needs.

This is an important part of making higher education more accessible and inclusive, and yet it is important to acknowledge that it can lead to several tensions. First, our natural inclination might be to treat all students the same, rather than giving different types or amounts of support to some. However, equal treatment would only advance student success if all of our students came to us with identical starting conditions. The concept of *equity* in education focuses on creating a learning environment that achieves *parity in the educational outcomes* experienced by groups of students who differ along dimensions such as race, gender, sexuality, and first-generation status (see Center for Urban Education, 2021; McNair et al., 2020). Preliminary steps to achieving equitable outcomes include

recognizing where inequities currently exist and understanding what external factors likely contributed to underperformance (e.g., inadequate previous resources) so that they can be addressed. Research on dimensions of difference that have historically shown inequitable student outcomes can help us proactively make a positive difference for our students. This might require not treating all students the same (equality), but giving each student what they need (equity).

The second tension related to understanding and supporting our students' different learning needs is captured by this question: How could one course or faculty member ever tailor instructional supports to meet each student's unique social, emotional, and intellectual needs? This is precisely the question Professor Calhoun is asking. While differentiating instruction for each individual student may not be realistic, there are research-based strategies we can employ across situations to acknowledge, value, and leverage the diversity we find in our classes.

The third tension lies in the paradox between a common set of learning mechanisms that apply to all students—that is, the eight principles in this book—and the variety of ways those mechanisms unfold for individual students, based on the experiences and opportunities they have had. In other words, throughout the book we aim to strike a balance between describing general principles that hold across students and empowering instructors to apply those principles to their particular situations, contextualizing the relevant strategies accordingly. For this first principle on individual differences, there is an important implication. As instructors, when we observe different patterns of learning among our students, we should *not* interpret disparities in performance as inherent differences in the learning mechanisms or learning capabilities of students from particular groups (e.g., the mistaken interpretation that “those students just learn differently”). Instead, research demonstrates that many other factors explain these disparities including insufficient access to learning opportunities and resources, lack of positive societal expectations regarding students' success, history of being dismissed or mistreated, and more general societal influences such as racism, sexism, and classism. The good news is that, as teachers, the more we know about these factors, the more effectively we can mitigate them. Indeed, many examples highlight that when educators work to address these disparities in thoughtful and deliberate ways, they can be reduced and even eliminated (Maton et al., 2016; Treisman, 1992).

It is worth highlighting that one response to the desire to recognize observed differences in learning has been to hypothesize that students have

different “learning styles”—that individuals differ with regard to what mode of instruction or study is most effective for them (e.g., “visual learners” versus “auditory learners”) and so tailoring instruction to match students’ learning styles will enhance learning outcomes. While many learners may have a preferred mode in which they like to learn or in which they believe they learn better, out of the many studies that have investigated possible impacts of learning styles, there is virtually no evidence that students actually learn better when instruction is matched to their learning style (Pashler et al., 2008; Stahl, 1999). Unfortunately, myths about learning styles persist, perhaps because learners’ expressed preferences are so strongly felt and/or because individuals can differ in their aptitudes for processing particular types of information. However, the very robust result from the literature is that changing instruction to align with students’ learning style does *not* have an impact on learning. Indeed, this is an example of how research on individual differences can tell us that we need *not* adjust our instruction to address learning styles or preferences as a way of enhancing outcomes.

By looking to other individual differences—including more visible (e.g., race, age) as well as less visible ones (e.g., socioeconomic status, sexual orientation, social identity, and intellectual development)—where the research does show interventions can have a positive effect, we can focus our efforts where they will make a difference. The remainder of this section thus delves into several areas of research that offer actionable insights for improving teaching and learning. We begin with identity characteristics, including intersectional identities. Then we turn to students’ different levels of development, first focusing on social identity development and then on intellectual development. Next, we highlight research that seeks to leverage the differences among students as an asset, demonstrating the advantages that diversity can create. Finally, we summarize the implications of this research and make additional connections back to the stories from Professors Battaglia and Calhoun.

Identity Characteristics

We already posed the crucial question in this chapter—Who are my students? Subsequent chapters will help us explore this question further in recognition of the fact that our students possess different prior knowledge, singular motivation profiles and beliefs about their personal agency, distinctive skill sets, and a multitude of goals and hopes for the future. Here, however, we will consider a set of variables related to students’ visible and invisible social identities, in other words,

race, gender, sexual orientation, ability, age, socioeconomic status, religious beliefs, and so on. Why do we need to consider these variables? In a neutral world, we might not need to, but in the world we live in these variables predict achievement to a considerable degree. Research has consistently shown that students from different racial groups have different outcomes when it comes to enrollment, grade point average, retention, and graduation (Chen, 2013; NASEM, 2016; Reardon, 2011). These differences are systematic, not random. Other identity variables beyond race have been shown to affect achievement as well (e.g., Gonyea & Moore, 2007; Rankin et al., 2010), including first-generation status and transfer status.

We want to be very clear about an important point. As we said, the learning mechanisms in the brain are similar across students. There are no biological variables that would predict lower achievement on the basis of demographic variables alone. When scholars talk about addressing racial disparities, they are really talking about addressing the consequences of structural racism and other *isms*. For instance, even today, despite all the progress that has been made, we live in a society where children are raised differently according to their identities. As just one example, cisgender women are socialized to be less assertive and to speak accordingly. Often, the prevailing attitude with cisgender men is that of “boys will be boys,” which shapes their risk-taking and boundary-pushing attitudes and behaviors. These forces have obvious implications for learning and performance. Gender non-conforming children face pressures to conform and many end up expending considerable energy concealing and repressing their natural reactions (DiPietro, 2012). Similarly, Black and Hispanic students face pressures to conform in their speech, attire, and behaviors, resulting in mental energy expended in *code-switching* between their culture and the normative culture and documented consequences on performance (Terry et al., 2010). Higher education has taken heed of these statistics, and many universities have launched initiatives to address these disparities, such as the statewide African American Male initiative in the University System of Georgia (USG, 2011); the Meyerhoff Scholars Program at University of Maryland, Baltimore County (Maton et al., 2016); and Women@SCS at Carnegie Mellon University (Blum, 2004). That these initiatives even exist is proof of the need, and also a demonstration that, when student identities are centered, it is possible to bridge these gaps.

If we posit an encyclopedic knowledge of all the research on all these different student characteristics as a required foundation for effective teaching, we will effectively paint ourselves into a corner, as Professor Calhoun quickly

realized. The purpose of research is to understand in detail, which leads to specialization. This idea suffers from the “curse of dimensionality” (Bellman, 1957), as there are simply too many variables to corral. For instance, the research on trans people identifies over 30 possible developmental milestones, depending on whether they identify as binary or nonbinary, decide to transition or not, do it through hormones or surgeries, decide to disclose their identity to others or not, and so on (Beemyn & Rankin, 2011). For educators, it would be ineffective and inappropriate to speculate, or downright ask, which students have had what surgeries. Instead, we need an approach that enables us to take into account the particulars of student characteristics in ways that point to sound and actionable pedagogical principles. One way in which these variables affect student learning and performance is that they can affect students’ sense of belonging to the institution. Chapter 7 elaborates on the construct of social and academic belonging and its implications for student learning. For now, suffice it to say that fitting in and feeling welcomed into one’s environment influences students’ ability to succeed (Braxton, 2012; Tinto, 2012).

Another mechanism that influences student learning and success is their physical and psychological health and well-being. For instance, we know that health and well-being can influence class attendance, perceived competence, and concentration (NCMHC, 1999), as well as GPA and graduation (Eisenberg et al., 2009). Furthermore, we know that some of these variables intersect with students’ identities as in the documented case of lesbian, gay, bisexual, and transgender (LGBTQ+) students being more likely to skip classes they perceive as negatively influencing their mental well-being, for instance, when the instructor makes casual or intentional homophobic comments (Rankin et al., 2010).

Not all of the identities and demographic characteristics of every single student are salient in every educational environment, but it is important to remember the intersectionality of multiple identities (Crenshaw, 1989). Intersectionality here refers not only to the fact that each student comes with a unique *profile* of identities, but that one identity can trouble our understanding of how another identity can play out in certain contexts. For instance, the discourse about women in the classroom has centered from the very beginning on the erasure and invisibility of women (Hall & Sandler, 1982). Women students are more often ignored when they ask questions, not given credit for their contributions in discussions, assigned menial roles in group projects such as notetakers, and so on (Babcock et al., 2022; Hall & Sandler, 1982). When we turn our attention to Black women in the classroom, however, some of them experience

the same invisibility, but many others report being called on frequently, to provide “the Black perspective.” Even though the Black women in this predicament are only acknowledged as one-dimensional members of a group and not in all of their complexity as human beings, they nevertheless find themselves in a position of hypervisibility, with every word they utter scrutinized as representative of an entire race (Stewart, 2018).

For many students, their identities influence how they have been seen and treated in the world, including in pivotal educational experiences that have shaped their experience. Chapter 2 discusses the ways in which prior knowledge affects learning, focusing on content knowledge. But we need to realize that knowledge beyond what is covered in our courses can shape our students' learning experience. Many students, in ways that are very real to them, “know” whose opinions matter in their courses. They know who is expected to succeed or fail. They know which students are assumed to be bright, or lazy, or cheaters. In fact, many instructors unconsciously make assumptions about students' experiences or knowledge, abilities, and identities and viewpoints, and these assumptions shape the attributions they make such as whose request for an extension is justified, or which paper with an unusual sentence is worth investigating for plagiarism. DiPietro (2007) has organized some of the assumptions under each of the three categories, and that checklist is reproduced in Appendix A as a set of reflective questions. These assumptions are influenced by students' visible, assumed, or disclosed identities, or even by things as trivial as clothing (Morris et al., 1996). When the anonymous student commented on Professor Calhoun's evaluations that professors don't want to hear from Black students, that assertion was likely coming from previous experiences that have convinced the student this is the case. We all might envision the ideal scenario: When a student raises their hand, they would be called on, time permitting; when a student makes a comment, that comment would be acknowledged and incorporated in the discussion or redirected if the comment was factually inaccurate; when a student doesn't understand something, the instructor would diagnose where comprehension broke down and offer an alternative explanation. Unfortunately, our educational system has not always lived up to this ideal. Many students report being routinely ignored by their professors when they raise their hands or having their comments unacknowledged. Sometimes, their comments are credited to other students if they volunteer them later in the discussion. And even more discouragingly, some students see their lack of understanding attributed to one of their identities, as in the case of the women who have been told by their professors that they will

never excel at math because of their gender. As this last example starts to illustrate, these micro-inequities (Hall & Sandler, 1982) cluster within certain social groups. Scholars call this phenomenon *privilege* (McIntosh, 2003), meaning that what should be the standard for all students ends up becoming a privilege only for certain groups. It is not difficult to see the implications of this fact. Professor Calhoun's students opted to not engage in discussions. Others might have to expend emotional labor to suppress their immediate responses or risk being labeled confrontational and problematic, like Gloria. Students will, in general, find coping strategies, but they are not necessarily conducive to learning and academic success.

Considering these individual differences is therefore crucial, especially at a time when university demographics have shifted greatly. The gender distribution of college students has shifted to a female majority (Belkin, 2021). The racial mix of students is more diverse than ever, with White students being the minority despite White people being the majority in the general population (National Center for Education Statistics, 2019). Students who identify as members of the LGBTQ+ community are also overrepresented in higher education (Association of American Universities, 2020). One student in five reports having a disability (National Center for Education Statistics, 2021). More than half of college students are first in their family to go to college (RTI International, 2019), and 2% are undocumented (Feldblum et al., 2020). Nontraditional students (over 25 years of age, who also hold a job) make up a staggering 75% of the student body (National Center for Education Statistics, 2020). Beyond these identities, 9% of students suffer from post-traumatic stress disorder (Read et al., 2011), often brought on by physical or sexual violence. And finally, a worrisome percentage of college students display basic needs insecurity, including 39% of students who have experienced food insecurity and 17% of students who were unhoused in the previous year (Baker-Smith et al., 2020).

As humans, we default to prototypes in our thinking (Rosch, 1973), but the prototypical image of a college student in our brain does not resemble most of today's students. If we don't check our perceptions, we risk planning courses with only a small percentage of our actual audience in mind, the percentage who is ready to learn, has no reasons to distrust the educational system, and can devote all its energies to our courses. In the words of McClusky (1963), these students have ample *margin* for learning. He defines margin as power divided by load. Traditional students have considerable power in many forms—physical (energy, health), social (strong connections from being part of a cohort straight

out of high school), mental (reasoning capacity), and economic (family support). Likewise, their load is rather small, as being a college student is their main task. By contrast, many other students experience considerable load, both external, such as job and family demands, and internal (experiences that have made them feel marginalized and distrustful of the educational system), and they can experience their power as restricted—physically if they are older, economically if they are financially insecure, and so on. As the ratio of power to load shifts, their margin shrinks and they are less able to devote energies to learning. These students can still succeed, as long as they are supported with strategies that increase their power or lessen their load.

Levels of Development: Social Identity Development and Intellectual Development

Students, and indeed humans, are always developing. A classic model of student development by Chickering (1969) articulates seven “vectors” along which 17- to 22-year-old students develop as they go through college. These vectors include developing competence (in intellectual, physical, and interpersonal skills), autonomy (from parents to relying more on peers and finally toward personal autonomy), identity (through establishing a sense of self and comfort with one’s own body and appearance, gender and sexual orientation, and racial and ethnic heritage), and purpose (via nurturing specific interests and committing to a particular profession and/or lifestyle). It is easy to see how these dimensions can have consequences for learning and performance. For instance, a student who does not need to rely on their parents to be woken up in the morning and not miss class has developed an autonomy that will serve them well in college and in life.

Other models acknowledge and study the process of development as it unfolds for individuals beyond 17 to 22 years of age. For example, based on a longitudinal study that followed a subgroup of former students into their twenties and thirties, Baxter-Magolda (2001, 2008) developed a stage model for how people transition into *self-authorship*—moving from doing what is expected of them to experiencing conflict between external sources of authority and their internal interests and then to choosing their own belief system that they can use to navigate life’s challenges, choose relationships, and build a strong sense of self. As an example, Gloria from Professor Battaglia’s course seems to have progressed to a stage where she is not interested in other people’s approval and does not

hesitate to speak for something she believes is right. In the final stage of Baxter-Magolda's self-authorship theory, individuals leverage a belief system that is strong but not rigid; it takes into account the ambiguity and uncertainty of life such that one does not need other people to agree with them or to validate their opinions. In that sense, perhaps none of the students in Professor Battaglia's course have fully achieved this stage and its associated equanimity.

Finally, Knowles (1984) developed a model of *andragogy* that highlights several characteristics that are distinctive to adult learners and that continue to develop over time. For example, as adults mature, they accumulate experiences that become an increasing resource for learning. Additionally, adult learners (more than younger learners) need to know the reason for learning, seek immediate application, and are oriented to problems rather than content. From these characteristics, it is clear that an individuals' stage of development and stage of life make a difference in their learning.

Among all the dimensions in which students develop, we believe two of them have direct implications for learning and performance: social identity development and intellectual development. So far, we have discussed the general importance of student identities. But identities are constructed rather than static, and so it is important to understand how students come to understand their membership in certain groups as part of their social identities (Tajfel, 1978). In addition, students' intellectual maturity is also developing. As they deepen their understanding of what it means to know something, their capacity to grapple with instructional material also grows.

Most developmental models share a basic conceptual framework, so we can start there. Typically, development is described as a response to intellectual, social, or emotional challenges that catalyze students' growth. It should be understood, though, that developmental models depict student development in the aggregate (i.e., in broad brushstrokes) and do not necessarily describe the development of individual students. In fact, individual students do not necessarily develop at exactly the same pace relative to other students, or even relative to other areas of their own self. A student can be highly developed in one area (say, intellectual maturity) and less developed in another area (say, moral maturity). Furthermore, movement is not always in a forward direction. That is, under some circumstances, a student might regress or foreclose further development altogether. In many models this movement is described as stages, but research points out that life is not a video game where the character levels up and never has to revisit lower levels. For this reason, some models describe development as

the reworking of certain key themes through the life span across multiple pathways (Beemyn & Rankin, 2011; Erikson & Erikson, 1997). A complete review of the student development literature is beyond the scope of this book. Rather, we wish to highlight some insights from that body of research that can illuminate the challenges Professors Calhoun and Battaglia are facing. For a broader treatment of student development models, we recommend the excellent treatise of Patton et al. (2016).

Social Identity Development As we have seen in the opening stories, students bring all of who they are to the learning environment. As much as we wish we could just focus on the content and bracket everything else out of our courses, that is simply impossible. Students' identities inform how they look at the world, including our content. Indeed, believing that the "normal" way to teach and learn a topic is to only focus on the content, undisturbed by extraneous elements, as Professor Battaglia wishes, might too be an expression of our identities (Collins, 2018). Therefore, understanding how identity, and in particular social identity, develops is a solid investment in our pedagogical growth. Identity development models are usually psychosocial, meaning they describe both the psychological changes people experience as their self evolves as well as how these changes affect their behaviors (such as social interactions), including those in the classroom. The basic premise of identity theory is that identity is not a given; instead, it needs to be achieved and continually negotiated as individuals try to balance developmental tensions and tasks throughout their lives (Erikson & Erikson, 1997). For students, much of the work of identity development happens as they begin to question values and assumptions inculcated by parents and society and start to develop their own values and priorities (Marcia, 1966).

One aspect of student identity development that is particularly salient for college students is that of social identity—the extent and nature of their identification with certain social groups, especially those groups that are often targets of prejudice and discrimination. Social identity has been studied extensively in relation to race/ethnicity, for example, the development of Black identity (Cross, 1995), Asian American identity (Kim, 2012), Latino and Latina identity (Gallegos & Ferdman, 2012), Indigenous people's identity (Choney et al., 1995), and Jewish identity (Kandel, 1986). Sexual identity has also been investigated, for instance, gay and lesbian identity (Cass, 1979) and bisexual identity (Gómez & Arenas, 2019). In addition, research has investigated gender identity, particularly for transgender individuals (Beemyn & Rankin, 2011), as well as the development of individuals with disabilities (Forber-Pratt & Aragon, 2013; Gibson 2006;

Gibson et al., 2018) and religious identity development, such as faith identity development (Fowler, 1981), Muslim identity development (Peek, 2005), and atheist identity development (Smith, 2011). Unfortunately, space does not allow for an extensive treatment of all this research, but we wish to highlight some fundamental insights from social identity development theory. We are keenly aware of the tension of generalizing across so many categories in a chapter dedicated to individual differences, and we do so with care. What we hope to transmit is the sense that this is just the beginning of a larger conversation. One does not need to become a social psychologist in order to teach effectively, but some key insights from this literature can have a positive impact on our teaching.

Many social identity development models describe similar trajectories, which culminate with the establishment of a positive social identity as a member of a specific group (Adams et al., 2007). At the same time, other models reject the idea of a unified trajectory and underscore how people in the same social group can have radically different perspectives on the world, each of them valid in and of itself and not as a precursor to a “more developed” stage (Choney et al., 1995; Gallegos & Ferdman, 2012). In our treatment, we will start from a generalized trajectory and then delve into some of the unique aspects of key models.

Hardiman and Jackson (1992) have proposed a social identity development model that describes two developmental paths, one for minority groups and one for dominant groups. This model pulls the threads together from other models, highlighting the similar stages members of minority groups go through, but underscores the fact that for any given stage, members of majority groups have to deal with complementary developmental challenges. Therefore, we will use this model as the point of departure.

The first stage of the Hardiman-Jackson model corresponds to early childhood, where individuals start out in a *naïve* stage, devoid of any preconception or prejudice. They see differences in the people they observe, such as skin color, but they do not attach value to those. It is only in a second stage that, through persistent and systematic societal reinforcement, conscious or unconscious *acceptance* of certain messages about different groups sets in—the socially constructed ideas about which groups are healthy, normal, beautiful, lazy, smart, sinful, and so on. For example, Kayla’s perception that immigrants are “sucking this country dry” might come from this stage. Both dominant and minority groups at this second stage accept broader societal attitudes. For minority students, this can have several results. They may have negative attitudes about themselves—in other words, internalized racism, homophobia, sexism, and so on—and behave so as to

conform to the dominant image. For example, gay students at this stage may use homophobic language and try to act “straight.”

Many students stop here, unless their worldviews are challenged by more information, different perspectives, recognition of injustice, or meaningful work with people from different groups. If they are challenged, it can move them forward to a stage of *resistance*. In this stage, students are acutely aware of the ways in which *isms* affect their life and the world. In addition, members of dominant groups usually experience shame and guilt about the privilege resulting from their own membership in it. Conversely, members of minority groups tend to experience pride in their own identity, often valuing their group more than the socially dominant one, which is sometimes seen as the source of societal evils. These students tend to go through a phase of *immersion* (Cross, 1995), in which they prefer to socialize with members of their own group and withdraw from other groups. Fries-Britt (2000) documents the struggles of high-ability Black students who are torn between identification with their academics and identification with their racial group, which might view their academic excellence as “acting White.” In her book *Why Are All the Black Kids Sitting Together in the Cafeteria?* Beverly Daniel Tatum (2017) lucidly analyzes such racial dynamics. Moreover, she points out that racial minority students are usually aggressively questioning societal racism at the same developmental juncture when White students are feeling overwhelmed by the same accusations, a stage that Helms (1993) calls *disintegration*. The first story portrays one such tension. Gloria is very conscious of the racial subtext underpinning immigration debates, but Danielle sees it only as Gloria’s pet peeve. Kayla’s highly emotional reaction can be seen as an example of disintegration. In this emotionally fraught situation, they are unable to move forward with a productive discussion.

Unique phenomena are experienced by other groups in these stages. For lesbian, gay, and bisexual students, a crucial step toward positive self-identity is coming out. D’Augelli (1994) points out that adopting a lesbian, gay, or bisexual identity necessitates abandoning an implied heterosexual identity, with the consequent loss of all its attendant privileges. This underscores the point that many of our students’ identities will not be directly visible to us, yet students will still be processing their experiences through those identity lenses. Rankin (2003) documents the feelings of LGBT students who, in response to marginalization experienced in their courses on the basis of their sexual and gender identity, report spending all their free time at the LGBT center on campus as a way to experience a positive environment for themselves, even at the cost of not

spending enough time studying and struggling in those courses. Professor Calhoun's student who stopped participating after being misgendered might be adopting a similar stance, disengaging from a situation they do not see as affirming of their identity, even as they realize the academic cost of such behavior. In the case of students with disabilities, including students on the spectrum, Gibson (2006) points out that they go through a stage called *realization*, where they come to see themselves as having a disability and realize that this affects how they are treated. One of the features of this stage is varied attempts at managing this concern. The student who disengaged from Professor Calhoun's class might be seeking to minimize the likelihood of being labeled by their classmates as weird and different in response to previous attempts at participation.

If students successfully move through this stage, they arrive at more sophisticated stages, those of *redefinition* and *internalization*. In these stages, students redefine their sense of self, moving beyond the dominant–minority dichotomy. These identities become one part of their makeup but not the defining feature. They no longer experience guilt or anger, but they might commit to work for justice in their spheres of influence.

Intellectual Development Intellectual development in the college years has been studied since the 1950s. Although the formulation presented here is that of Perry (1968), it is extended in the work of later researchers who have found very similar developmental trajectories (Baxter-Magolda, 1992; Belenky et al., 1986). Even though these models contain different numbers of stages, all of them describe a student's trajectory from simplistic to more sophisticated ways of thinking. A student's movement forward is usually propelled by a challenge that reveals the inadequacies of the current stage.

In the earlier stages, students' reasoning is characterized by a basic *duality* in which knowledge can easily be divided into right and wrong statements, with little to no room for ambiguity and shades of gray. Kayla's exclamation—"It's just plain wrong!"—exemplifies this way of thinking. Students at this stage of intellectual development believe that knowledge is something absolute, that it is handed down from authorities (the teacher, the textbook), and that the role of students is to receive it and give it back when asked. This is a quantitative view of knowledge, with education seen as a process of amassing piles of "right" facts. The implicit assumption is that all that is knowable is known, and great instructors have the answers to any question. Students start at this stage because most of their prior instruction has been delivered in this way, focusing on the right answer and the right way of thinking about a topic. Freire (2000) challenges this

pedagogy, which he terms the “banking model of education,” where instructors make little incremental deposits of knowledge in the students’ brains. He points out they still “own” the knowledge and can demand it back at will, on the test, or on a pop quiz. When professor Battaglia’s readings are challenged by Gloria, he has choices. If he sticks to his plan, he is unconsciously employing the banking model, and communicating to the students that the right way, indeed the only way to think about immigration, is as a cost. Freire points out that the banking model reinforces the very societal inequalities education is supposed to tackle. When students are taught in this manner, they initially do not recognize different perspectives and are not likely to see discussions as a legitimate way of gaining knowledge about an issue.

Challenged with a sufficient number of questions where the answers are yet unknown, or with issues for which there is no clear right answer, students move forward to a stage of *multiplicity*. Knowledge now becomes a matter of opinions, and anybody can have an opinion on an issue. Students at a multiplistic stage view evaluation as very subjective and can become frustrated if their opinion does not score them a good grade. At this point they have difficulty seeing how to differentiate among different opinions, as they all seem valid. The instructor might no longer be seen as an authority but only as another perspective among all the possible ones. At first it might be hard to see how this stage represents a move forward, but two important things have happened in this stage. First, students are now more open to differences of opinions because they are no longer fixated on the “right one.” This crucial transition is foundational for all further development in later stages. Second, learning can now become personal. They, too, are entitled to their own opinion and can legitimately dialogue and disagree with the instructor or the textbook, which means they can start to construct their own knowledge. Gloria’s claim that the readings are biased could not have come from a student in an earlier developmental stage.

With enough insistence that opinions need to be justified with evidence, students progress to stages characterized by *relativism*. Students with this worldview realize that opinions are not all equal and that indeed their pros and cons can be understood and evaluated according to general and discipline-specific rules of evidence. This transition marks a shift from a quantitative to a qualitative view of knowledge. Instructors become guides and facilitators, expected to provide good models of how to interact with the content in a critical way, which is how the role of the student is now understood. As students hone their analytic and critical skills, they find the empowerment inherent in this stage, but they

might also experience some frustration as they realize that all theories are necessarily imperfect or incomplete.

Students who successfully navigate this challenge move to the last set of stages, which are characterized by a sense of *commitment*. While it is true that all theories have pros and cons, learners realize they must provisionally commit to one as a foundation to build on, refining it as they go. In a sense, they have come full circle, as they now choose one theory or approach over the others, but unlike in the dualistic stage, their choice is now nuanced and informed. It is easy to see how this sense of commitment might apply to moral issues as well as cognitive ones. In fact, Kohlberg (1976) and Gilligan (1977) have formulated moral development theories that echo Perry's, in which students move from strongly held but unexamined views about right and wrong to more nuanced, responsible ethical positions where actions are evaluated in context according to a variety of factors. One of the lessons from their work is that moral development cannot be divorced from learning. For example, both Kayla's and Gloria's positions on immigration are indeed as much moral as they are intellectual.

Other developmental researchers have expanded Perry's work to focus on gender differences in the various stages. For example, Baxter-Magolda (1992) has found that, in dualistic stages, men might prefer to engage in a game of displaying their knowledge in front of their peers whereas women might focus on helping each other master the material. In their study of women's intellectual development, Belenky and others (1986) found two parallel ways of knowing. For some women, studying something means isolating the issue from its context and focusing on deep analysis of one feature—which the researchers term *separate* knowing. For other women, studying something means asking questions such as “What does this mean for me? What are the implications for the community?”—which they term *connected* knowing. We should reiterate that these empirical differences in ways of knowing and learning do not mean that women learn differently but that they have been socialized to focus on community and care. And, of course, both ways of knowing can be found among men as well. Danielle, who is very comfortable limiting the discussion to only the figures in the readings, is an example of separate knowing, whereas Gloria, who cannot divorce the readings from her firsthand knowledge of undocumented immigrants, is an example of connected knowing.

The research underlying these models clearly indicates that intellectual development takes time—it does not happen overnight and cannot be forced.

Given the kind of development involved in the later stages, it is perhaps not surprising that Baxter-Magolda's research also shows many students leave college still in multiplistic stages, and that their development toward relativistic and committed stages continues well beyond college. This is good news if we consider that people who do not go to college tend to stay in dualistic stages, but it is also below the expectations that most instructors have for their students. Instructors, therefore, must make sure their expectations are reasonable given students' current level of intellectual development: what is reasonable for a graduating senior may not be for a first-year student, and vice versa. However, although development cannot be forced, it can be nurtured and encouraged by posing appropriate challenges and providing the support necessary to foster intellectual growth (Vygotsky, 1978). The strategies at the end of the chapter provide some suggestions in this direction.

Asset-Based Approaches

While understanding and navigating the differences among students may feel like a task that is added to our teaching activities, it is important to remember that, in addition to helping to create more just and equitable educational experiences, cultivating diversity in groups has tangible benefits and should thus be considered an asset. Research supports the notion that heterogeneous groups often perform better than homogeneous ones. For example, in studies of diversity in various industry settings, a consistent finding is that more diverse groups produce more innovations (e.g., Díaz-García et al., 2013; Nathan & Lee, 2013). One explanation for diversity's benefits is that people working in diverse teams are better at considering multiple perspectives and using a broader lens when solving problems (e.g., Hong & Page, 2004). For example, in his book *The Difference*, Page notes that when groups of intelligent individuals are working to solve hard problems, the diversity of the problem-solvers matters more than their individual ability (Page, 2008). For example, in one study conducted with sorority and fraternity members, temporary teams of three were composed of members from a single sorority/fraternity and assigned to solve a murder mystery. When a fourth member was added to each team from either the same sorority/fraternity or not, the "mixed" teams' solutions were more likely to identify the correct suspect (Phillips et al., 2008). These results suggest that as educators we can cultivate and disseminate the benefits of diversity in our classrooms by reminding students that their individual differences are important and helpful—in the

sense of enhancing their overall capacity for solving problems and learning together.

Research on gender diversity in teams supports the related hypothesis that heterogeneous groups engage in better processes that, in turn, can lead to better outcomes (e.g., Bear & Woolley, 2011; Nielsen et al., 2017; Woolley & Malone, 2011). Across numerous studies, Woolley and colleagues have shown that having more women in a group leads to more evenly distributed contributions from team members and hence more varied information and ideas shared. Thus, if we consider our class of students as members of a collaborative team, research supports the idea that diversity is a strength for the group's processes and outcomes.

In addition to these benefits, students who are learning in contexts with diverse others have greater opportunities to become aware of their own biases and learn to see things from other perspectives, especially when they are explicitly encouraged to engage meaningfully with each other as individuals. We cannot expect this to happen on its own—just because a student is in a group with diverse others—but rather we can foster interactions where students get to know each other and learn about their different backgrounds and experiences. For example, first-year college students who were exposed to such collaborative learning activities experienced a greater frequency of interacting with diverse others, and, in turn, demonstrated greater openness to diversity (Loes et al., 2018). Given that our students' future careers will more and more likely involve working with diverse others and being expected to engage effectively in diverse teams, supporting students to develop these positive skills and attitudes in our courses will serve them well during their studies and beyond.

Implications of This Research

Even though some of us might wish to conceptualize our classrooms as culturally neutral or might choose to ignore the cultural dimensions, students cannot check their sociocultural identities at the door, nor can they instantly transcend their current level of development. Professor Battaglia knows that immigration is a loaded topic, but he thought students could consider the economic aspects alone. In fact, Gloria's and Kayla's identities as Hispanic and Polish American, respectively, as well as their level of intellectual development and preferred ways of knowing, obviously influence

their approach to the course topic, what aspects of the readings they focus on, how they make sense of the material, and what stances they take as a result. Similarly, Professor Calhoun's students' decisions to participate or not during discussions is shaped by their identities and circumstances. Therefore, it is important that the pedagogical strategies we employ in the classroom enable multiple ways to engage and reflect an understanding of social identity and intellectual development so that we can anticipate the tensions that might occur in the classroom and be proactive about them. The strategies in this chapter explicitly link pedagogy, individual differences, and developmental considerations.

WHAT STRATEGIES DOES THE RESEARCH SUGGEST?

Here are a number of strategies that may help you support your students' different identities and encourage student development. Note that these strategies do not require tailoring your teaching to meet every individual student's needs. Instead, they provide various ways instructors can be more aware of student differences, communicate the value of and leverage diversity among students, and be more deliberate and transparent in fostering student development.

Strategies to Address Awareness and Self-Reflection

Examine Your Assumptions About Students Because assumptions influence the way we interact with our students, and those interactions in turn affect their learning, we need to uncover—and at times question—those assumptions. It is common for instructors to assume that students share our background and frames of reference (e.g., historical or literary references). It is equally common to make assumptions about students' ability (e.g., Asian students will do better in math), identity and viewpoint (e.g., students share your sexual orientation or political affiliation), and attributions (e.g., tentative language indicates intellectual weakness). These assumptions can result in behaviors that are unintentionally alienating and can affect climate and students' developing sense of identity. Setting aside time to probe for such possible assumptions can create opportunities to consider how they might arise in your teaching actions and where you might want to make adjustments.

Consider Your Own Intersectional Identities An activity called the Social Identity Wheel (e.g., University of Michigan, 2022) invites us to identify and reflect on our own social identities (e.g., race, gender, ability/disability, sexual orientation, etc.). Specifically, this activity asks which identities matter most in our self-perception and which matter most in others' perception of us. Focusing on how our different identities are more or less keenly felt in different contexts can help us recognize that privilege operates to normalize some identities (the ones we don't experience as salient) over others. For example, someone who speaks English as their first language can reflect on why they rarely need to think about their language as an aspect of their identity, whereas those who identify language as a key aspect of their identity may feel this dimension very keenly in the classroom. Engaging in this activity fosters personal reflection that can help educators become more aware of and more sensitive to the impact that different identities have on all of us. (Note: the Social Identity Wheel can also be used effectively as an activity that students complete as a prompt for them to engage in this same kind of reflection.)

Educate Yourself About Identities Other Than Your Own It is natural to have much greater knowledge and experience about the identities we inhabit, but as this chapter highlights, it is critical to recognize that “our students are not us,” and we likely have a knowledge gap about their different identities. Rather than burdening students from marginalized groups to “teach” us, we should take on the responsibility to learn more ourselves, cultivating humility and curiosity as we do so. A concrete way to approach this might involve leveraging resources (books, articles, podcasts), especially those created by individuals representing marginalized identities, for professional (and even personal) development. These could be from the popular press, as many such reading/listening guides have been created in recent years, and/or they could include more scholarly resources (see, for example, the references for this chapter).

Anticipate and Prepare for Potentially Sensitive Issues We usually know from our own or our colleagues' past experiences what issues seem to be “hot topics” for some of our students. Preparing students to learn from these opportunities requires careful framing (e.g., an acknowledgment that the topic can have personal significance for many students and also an articulation of the expectations for the tone of the discussion), an explanation for why the course is dealing with the issue (e.g., the necessity to hear all sides of the debate to arrive at a multifaceted understanding), and ground rules that ensure a civil discussion (see Appendix B on ground rules). In addition, many teaching center websites have

sample documents (e.g., ground rules, discussion norms, or invitations) and specific suggestions regarding process (e.g., how to engage students in coauthorship and co-implementation of ground rules).

Strategies to Address Students' Identities

Use Multiple and Diverse Examples Using examples is a great way to help students understand that theories and concepts can operate in a variety of contents and conditions *as long as* students can understand—and, ideally, relate to—those examples. When you are leveraging an example, think about how it could be more relevant and meaningful to your particular students and how more than one example could increase the likelihood of students relating. Some helpful tips in this regard involve identifying and using examples that can work across cultures and relate to people with different gender identities, sexual orientations, socioeconomic statuses, and ages. For example, using gender neutral terms and seeking applied contexts that students might naturally encounter on campus (as shared experience) can help. This simple strategy can help students feel connected to the content as well as a sense of belonging in the course or field, and it can reinforce their developing sense of competence and purpose.

Encourage Learners to Bring Their Own Experiences and Backgrounds to Bear As with prior knowledge, inviting students to connect their past experiences and backgrounds with the course material supports enhanced learning. There are many ways to do this. For example, you can ask students to relate course concepts to something from their own experience or ask them to share aspects of their culture(s) that provide a particular lens for interpreting a reading. Many faculty members find that when they leverage their students' diversity in this way, everyone (instructor included) can learn from the variety of perspectives in a given class.

Broaden the Curriculum Consider the readings, authors, and theories from which you typically draw. Do they include traditionally underrepresented voices and perspectives? How might your course and syllabus design incorporate a broader set of perspectives? Likewise, consider expanding your learning objectives in ways that could highlight knowledge, skills, and dispositions associated with diversity, equity, and inclusion.

Avoid Deficit Thinking When seeking to support students' different identities, stereotypes or other assumptions focused on dysfunction or shortcomings may come to mind. Rather than looking at differences as deficits, explicitly work

to reframe your thinking: cultivate an asset-based approach in which your default assumption is that all of your students are capable of succeeding and each student brings distinctive strengths. Then be sure to translate that asset-based thinking into your language and in your pedagogical choices. For example, instead of making the well-intentioned comment that certain students are underprepared, recognize that these students likely bring unique experiences that, if capitalized on, can enrich the learning environment. In addition, recognize that other students may actually be *over*-prepared given various enrichment opportunities they have had the privilege to enjoy.

Convey High Standards Plus Assurance When Providing Feedback Given historical as well as students' personal experiences, students with marginalized identities may feel stigmatized or stereotyped when they receive criticism. To offset these effects, Claude Steele recommends in his book *Whistling Vivaldi* (2010) to accompany your feedback with explicit acknowledgment of what is motivating your feedback and an explicit assurance that you believe the student can achieve the standards you have set, with appropriate strategies and effort. For example, some sample language might draw on the approach used in research on this topic: "It's obvious to me that you've taken this task seriously, and I'm going to do likewise by giving you some straightforward, honest feedback. . . . Judging by the standards of the assignment, here are some comments that I hope you find helpful. . . . Remember, I wouldn't go to the trouble of giving you this feedback if I didn't think that you are capable. . . ."

Acknowledge and Grapple with the Larger Sociopolitical Context Particular political issues and national or global events have a greater impact on some students than others, making for an uneven playing field. Rather than ignore how societal issues might be weighing on your students' minds, acknowledge that they may be grappling with difficulties as a result. Also, be proactive in connecting students to university resources for support, for example, campus food pantry, veterans affinity groups, office of disability resources. Many faculty members share information on these resources in their syllabus or course home page and offer reminders throughout the semester.

Think About Students as Individuals People often treat another culture as monolithic even while treating their own as multifaceted. This is likely a result of the greater familiarity and exposure we have to our own culture, not a reality about the other culture. Remember that each student is just one individual and should not be presumed to represent their broader group identity, let alone reflect any general trends given they are a unique individual. Be on the lookout

for this group-based thinking. One way to help prevent it is to focus on your students as unique individuals, for example, “How is <insert specific name> experiencing my class, given his/her/their unique set of experiences and identities?”

Discuss Communication Styles Explicitly Students' comments often reveal the communication style they have been socialized into. For instance, a student might say, “This is probably a stupid question, but . . .” Another student might change the intonation of their comment at the end to make it sound like a question. We can treat these comments as opportunities, and explicitly discuss how they work to self-sabotage the speaker and make them seem less confident.

Vary Teaching Methods and Provide Choice in Assignments By incorporating a variety of methods in your instruction and assessment, you are giving students greater opportunity to show what they know in ways that work best for them. In addition, giving students choice in assignments, when appropriate, allows students to have more agency over their own learning and to address topics that are culturally relevant to them. For example, if your course has a project or paper, you might allow students to choose the topic or format (e.g., oral presentation, recorded podcast, or written report). Incorporating students' voices and choices regarding topics of discussion and learning can even come into instruction. For example, you could reserve some time at the beginning of the semester and poll your students about what they would like to learn.

Consider the Impact of Trauma and the Value of Trigger Warnings Trauma is defined as an event that overwhelms our capacity to cope with it and therefore produces symptoms. Some of the material we teach is meant to challenge the students, but for students who have been already traumatized, exposing them to triggering content unexpectedly or without allowing them to regulate their exposure in some way can have a deleterious impact, particularly when we teach about rape, racism, violence, and so on. The conversation on the value of trigger warnings is not settled, but it behooves all of us to consider how specific types of content affect our more vulnerable students and how we can best prepare them for it.

Incorporate Universal Design for Learning Universal design for learning (UDL) leverages the flexibility of digital technologies to offer options and provide accessibility for diverse learner needs. More important, this approach starts with diverse learner needs and builds that into the design process, acknowledging that such designs can be beneficial to all learners regardless of their particular needs. Some strategies for UDL include providing multiple means of representation of the material—including visual, text, audio, and video—and ensuring that

information is accessible to all learners (e.g., by using accessible language, clear organization of content, and digitally accessible formats for students with visual, auditory, or physical disabilities). Digital accessibility is a component of UDL that involves many aspects, from font size, screen-reader compatibility, transcripts for audio, and more. Many institutions provide digital accessibility support that you can draw on, and there are online resources available for all (e.g., see udloncampus.cast.org/).

Strategies to Address Developmental Stages

Make Uncertainty Safe For those students who are comfortable in black-and-white worldviews, there can be an emotional resistance to intellectual development, and it can be helpful to support students in dealing with ambiguity. There are various ways to do this. Validate different viewpoints, even unpopular ones. Explicitly express to students that part of critical thinking is embracing complexity rather than oversimplifying matters. Explain that even though it might seem frustrating, the point of classroom discussions is not always to reach consensus but rather to enrich everybody's thinking. Finally, model this attitude in your own actions and comments as it applies to your disciplinary context.

Resist a Single Right Answer Textbooks present information very linearly, but knowledge is generated and contested over time. If you want students to be in dialogue with the texts in your discipline, create a structure that can support it. You can ask students to generate multiple approaches to a problem or debate a devil's advocate position. Ask them to articulate their perspectives before you volunteer yours so as not to bias them. When appropriate, use assignments with multiple correct solutions, and highlight how a range of responses are appropriate.

Incorporate Evidence into Performance and Grading Criteria If you want students to support their opinions with evidence, use rubrics and other tools to scaffold this practice. You can educate students to use a rubric by modeling how it is applied to a sample piece of work and by asking students to read each other's work and circle the pieces of evidence to highlight them visually (see Appendix E). Incorporating evidence in your grading scheme will also reduce "grade grubbing" based on the notion that personal opinions are subjective and cannot be graded fairly.

Explain the Importance of Stretching Outside One's Comfort Zone Despite the lack of empirical evidence, the discourse about learning styles proliferates. Many students treat their learning preference as an identity, and this can foreclose development. Some instructors preface the content by explicitly discussing the fact that multiple learning preferences are present in any given course. They add that their duty as the instructor is to use the way of presenting the material that best fits the content, and that when multiple ways are possible they will vary their teaching methods to reach all students in the classroom. Therefore, approaching the material only in one way will lead to missing key aspects. They go on to explain the plasticity of the brain and reassure the students that once they start stretching outside of their comfort zone, unfamiliar ways of reasoning will gradually become more approachable.

Strategies to Address Margin, Power, and Load

Increase the Power We can't easily affect student's economic power, but we can work on their mental power by discussing better ways of reasoning and strategies for time management. We can also increase their social power by building social connections in our courses. For instance, on the first day of class some instructors direct all students to turn to their left and their right and exchange contact information with the two closest students, explaining that everybody at some point will have to miss class due to illness or emergencies and it will be important to feel comfortable reaching out to fellow students to catch up.

Decrease the Load One way to increase the margin for learning is to lessen the load. The strategy of connecting students to campus resources such as the food pantry can help decrease the external load, but we can also help our students to let go of some internal load in the form of self-sabotaging habits and behaviors, such as perfectionism, procrastination, or others.

Reflect on the Impact of Our Pedagogical Choices on Power and Load Sometimes, well-meaning instructors include tasks in their courses with the purpose of increasing their students' power, but the impact might not be uniform on all students. For instance, these instructors might include group work outside of class to enable students to tackle real-world rather than rote problems, thus increasing their power. However, the effect might be the opposite for some students. Students with jobs and family commitments who have to squeeze in group meetings at inconvenient times might find their load increased, unless the work

can be done asynchronously. As instructors, we should be sure to look at our assignments and activities from a range of perspectives to avoid unintentionally exacerbating load and/or reducing power.

SUMMARY

In this chapter, we have argued that we need to consider students holistically as intellectual, social, and emotional beings with unique identities and experiences that influence their learning and their performance. We have reviewed the research that documents how students are still developing in many areas, particularly in their sense of identity and epistemological processes, and we have documented how their level of development too can influence learning and performance. We have advocated that this diversity of experiences, identities, and developmental stages not be treated as a problem to fix but a benefit to our courses that can enrich the learning experience for everybody when leveraged appropriately. We have suggested strategies to examine our assumptions and our own identity as educators as those, too, influence the learning environment, as well as concrete techniques to try out in our courses. Each of the next chapters will focus on specific aspects of the learning process and the pedagogical strategies that it suggests.