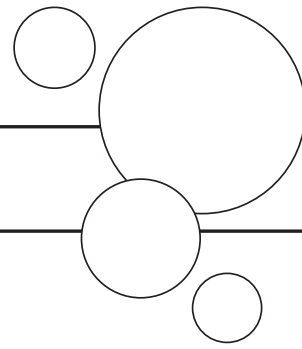# Why Do Student Development and Course Climate Matter for Student Learning?

End of Story

Yesterday in my Economics class, we were discussing an article about the cost of illegal immigration to the U.S. 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 has been pretty 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 U.S. legally, worked hard, and made good lives for themselves, "but now 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 getting so emotional.

    Professor Leandro Battaglia

No Good Deed Goes Unpunished

There's been a lot of discussion in my department about how to get more female students into Electrical Engineering. This is something I believe is very important, so I've gone out of my way to support and encourage the women in my classes. I know engineering can be an intimidating environment for women, so I always try to provide extra help and guidance to female students when they're working on problem sets in small groups. I've also avoided calling on women in class, because I don't want to put them on the spot. So you can imagine my frustration when a student reported to me a few weeks ago that one of my teaching assistants had made a blatantly derogatory comment during recitation about women in engineering. I've had a lot of problems with this TA, who has very strong opinions and a tendency to belittle people he doesn't agree with, but I was particularly unhappy about this latest news. I chastised the TA, of course, and gave him a stern warning about future misconduct, but unfortunately the damage was already done: one female student in that

recitation (who seemed particularly promising) has dropped the course and others have stopped speaking up in class. I braced myself for complaints on the early course evaluations I collected last week, and some students did complain about the sexist TA, but what really baffled me was that they complained about me too! One student wrote that I "patronized" female students while another wrote that the class was "unfair to us guys" since I "demanded more from the men in the course." I have no idea what to make of this and am beginning to think there's simply no way to keep everyone happy.

Professor Felix Guttman

WHAT IS GOING ON IN THESE TWO STORIES?

In both of the stories described above, unanticipated social and emotional dynamics in the classroom have complicated 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 emotional 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 check their emotions at the door.

Professor Guttman's situation, however, is completely unrelated to his course content. Here we see a well-meaning instructor,

doing his best to reach out to women, whom he worries (with some reason) may be marginalized in a male-dominated field. He is justifiably upset by the blatantly sexist behavior of his TA and addresses it immediately, yet he is unaware of how his students are perceiving his own behavior. In fact, his attempts to support female students by providing extra help and reduced pressure backfires: to the women in the class, it signals a lack of faith in their competence and abilities, while the men perceive it as just plain unfair to them. As a result, students seem dissatisfied and disaffected, to the point where classroom participation is negatively affected and one promising student has dropped the course altogether.

WHAT PRINCIPLE OF LEARNING IS AT WORK HERE?

Two interacting concepts are at the core of the two stories. The first is that of holistic student development, and the second is of classroom climate. As educators we are primarily concerned with fostering intellectual and creative skills in our students, but we must recognize that students are not only intellectual but also social and emotional beings, and that these dimensions interact within the classroom climate to influence learning and performance. Figure 6.1 summarizes this model. In both stories, emotions and social processes hamper the students' ability to engage productively with the material and to learn.

Students are still developing the full range of social and emotional skills. To some extent, people are always developing in those areas, but two considerations are important when dealing with college students. First, emotional and social processes are particularly salient during this phase of life. In fact, a preponderant body of research documents that the social and emotional
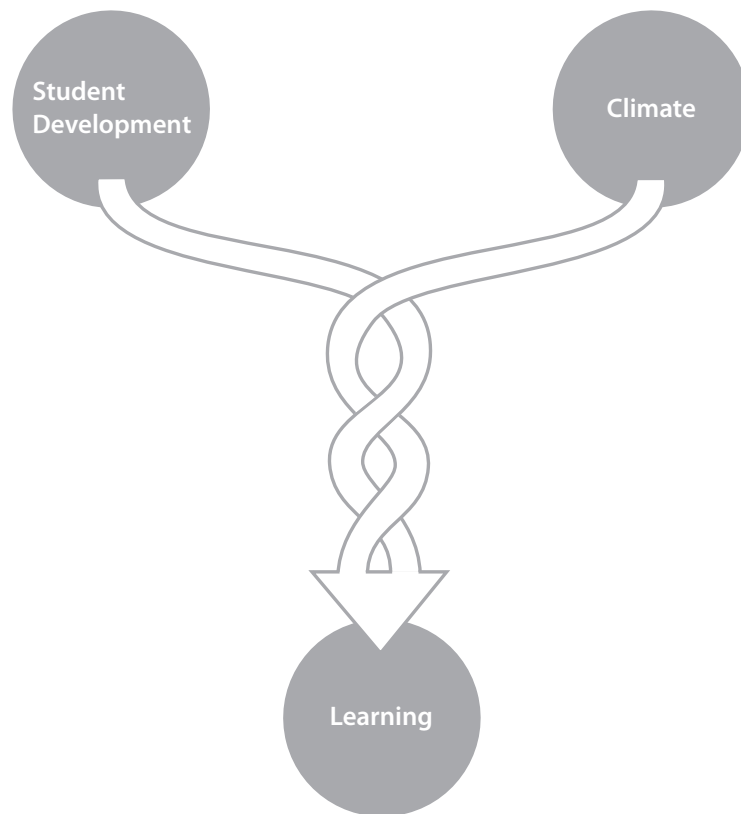
Figure 6.1. Interactive Effect of Student Development and Course Climate on Learning

gains that students make during college are considerably greater than the intellectual gains over the same span of time (Pascarella & Terenzini, 1991). Second, these emotions can overwhelm students' intellect if they have not yet learned to channel them productively.

Although we cannot control the developmental process, the good news is that if we understand it, we can shape the classroom climate in developmentally appropriate ways. Moreover, many studies have shown that the climate we create has implications for learning and performance. A negative climate may impede learning and performance, but a positive climate can energize students' learning (Pascarella & Terenzini, 1991).

> **Principle:** *Students' current level of development interacts with the social, emotional, and intellectual climate of the course to impact learning.*

As shown in Figure 6.1, student development and classroom climate interact with each other to affect learning. However, for expository purposes we review the research on student development and classroom climate separately. The two strands come together in the strategies section, where we provide pedagogical strategies that take both student development and classroom climate into account.

WHAT DOES THE RESEARCH TELL US ABOUT STUDENT DEVELOPMENT?

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 the complex set of social, emotional, and intellectual challenges that college students face. Recognition of these challenges does not mean that we are responsible for guiding students through all aspects of their social and emotional lives (for instance, we need not and should not be in the business of coaching students in financial planning or matters of the heart). However, by considering the implications of student development for teaching and learning we can create more productive learning environments.

Students between the ages of seventeen and twenty-two are undergoing momentous changes. As they make the transition from high school and learn to manage the intellectual demands of college, they must also learn to live independently from their parents; establish new social networks; negotiate differences with

room- and floormates; manage their finances; make responsible decisions about alcohol, drugs, sexuality; and so on. In their courses, but also in their social interactions, they must grapple with ideas and experiences that challenge their existing values and assumptions. They must chart a meaningful course of study, choose a major, and start to view themselves as members of a disciplinary field. As they get ready for graduation, they must decide on jobs or graduate programs and face the exciting, but daunting, prospect of being an adult in the "real world." In other words, in addition to the intellectual challenges students are facing in college, they are also grappling with a number of complex social, emotional, and practical issues.

How can we make sense of all the ways in which students develop? 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 (that is, 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. Furthermore, movement is not always in a forward direction. That is, under some circumstances, a student might regress or foreclose further development altogether. In addition, a student can be highly developed in one area (say, intellectual maturity) and less developed in another area (say, emotional maturity). Finally, it should be noted that although some models have been revised in light of changing student demographics, most currently focus on traditional-age, rather than older or returning, students and reflect a Western perspective.

Our approach here is not a complete review of the student development literature (for a broader treatment of student development models, see Evans et al., 1998). Rather, we start with the

Chickering model—a comprehensive model that systematically examines the range of issues students are dealing with in their college years. We then highlight two aspects of student development that we believe have particularly profound implications for the classroom. These are intellectual development and social identity development.

The Chickering Model of Student Development

Chickering (1969) provides a model that tries to systematically account for all the developmental changes students experience through the college years. He groups them in seven dimensions, which he calls vectors. They build on each other cumulatively:

- *Developing competence.* This dimension involves intellectual, physical, and interpersonal competence. Intellectual competence includes everything from developing study skills appropriate for college to developing sophisticated critical thinking and problem-solving abilities. Physical competence involves athletic activities, but also the realization on the part of students that they (and not their parents) are now responsible for their health and well-being. Interpersonal competence includes communication, group, and leadership skills. These three competences together give the individual a general sense of confidence that she can successfully deal with challenges that come her way. As Professor Guttman avoids calling on women in class, he might inadvertently hinder the development of their sense of intellectual and interpersonal competence, because this act highlights an assumption that women would not be able to perform as well on the spot.
- *Managing emotions.* This dimension involves being aware of one's own emotions (including anxiety, happiness, anger, frustration, excitement, depression, and so on) as well as expressing

160

them appropriately. The students in the Economics class are clearly in touch with their own emotions, but have trouble expressing them in a productive way in the discussion, with the result that the discussion does not explore the content fully and everybody's learning is diminished.

- *Developing autonomy.* This dimension involves disengaging from one's parents, relying more on peers, and finally developing personal autonomy. This process happens through the development of emotional independence (freeing oneself from the need for parental approval) and of instrumental independence (ability to deal with challenges on one's own terms). Research on Millennials (those students born in 1982 and after) suggests current students might struggle more with this dimension (Howe & Strauss, 2000). Later on, the challenge becomes how to reincorporate interconnectedness with others so that interdependence is the final goal (Chickering & Reisser, 1993). Again, as Professor Guttman provides extra help to women in small groups he might inadvertently interfere with the development of their sense of autonomy, which can impact their performance.

- *Establishing identity.* This is the pivotal dimension in Chickering's theory. It builds on the preceding vectors and serves as the foundation for the ones that follow. It culminates in the development of a sense of self. It involves comfort with one's own body and appearance, gender and sexual orientation, and racial and ethnic heritage. Students with a well-developed sense of self feel less threatened by new ideas involving beliefs that conflict with their own. In the economics class, some students appear to be working through such challenges, but they are clearly not mature enough yet to consider alternative points of view without their whole sense of identity feeling threatened.

- *Freeing interpersonal relationships.* This dimension involves achieving mature interpersonal relationships. It necessitates an

awareness of differences among people and a tolerance of those differences. The development of meaningful intimacy in the context of a romantic relationship is also part of this vector.

- *Developing purpose.* Once identity is achieved, the question is no longer "Who am I?" but "Who am I going to be?" This dimension involves nurturing specific interests and committing to a profession, or a lifestyle, even when it meets with opposition from others (such as parents). The TA's sexist comment might be challenging the women's sense that they belong in engineering. The woman who dropped the course and the other women who stopped speaking up in class are examples of the implications of this dimension for learning and performance. Indeed, many women in traditionally male-dominated fields report being told in college or graduate school that they would never succeed in science because of their gender (Ambrose et al., 1997; Hall, 1982).

- *Developing integrity.* This dimension speaks to the tension between self-interest and social responsibility. When navigated successfully, it culminates with the adoption of a set of internally consistent values that guide and direct behavior. We can understand Gloria's outburst as her trying to gain integrity and speak her own truth.

As we can see, these developmental vectors involve a number of social and emotional as well as intellectual processes. How students negotiate these processes shapes how they will grow personally and interact with one other, the instructor, and the content of their courses. It will also influence their level of engagement, motivation, and persistence, as well as their sense of agency and identity in their chosen field. Developmental processes, in other words, have profound implications for learning.

Even though Chickering's model looks at development very broadly, in a classroom situation we cannot control all those dimensions. Each of the models below focuses on an aspect of

particular relevance to the classroom. They describe development as a stage-like process, whereby individuals undergo a series of qualitative shifts in how they think and feel about themselves, others, and their social environment.

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 (Belenky et al., 1986; Baxter-Magolda, 1992). 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 in these stages 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 to which we do not yet know the answers, 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.

164

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 illegal 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. Of course, both ways of knowing can be found among

165

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 first-hand knowledge of illegal 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.

Social Identity Development

Another developmental area that can affect learning is identity. The development of identity involves psychological changes that affect 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, 1950). 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, 1981), Chicano identity (Hayes-Bautista, 1974), and Jewish identity (Kandel, 1986). All these models describe similar trajectories, which culminate with the establishment of a positive social identity as a member of a specific group (Adams et al., 1997). This general model also parallels the identity development process of members of other social groups, most notably gay and lesbian individuals (Cass, 1979) and individuals with disabilities (Onken & Slaten, 2000). 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 thread together from all the 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. In our description of social identity development, we will use the Hardiman-Jackson model as our base model, occasionally highlighting pertinent insights from other models.

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 (1997) 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. The discussion is effectively stalled by Gloria's accusation of racism to Kayla. Analogous phenomena are true for other groups as well. 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 (LGB) identity necessitates abandoning an implied heterosexual identity, with the consequent loss of all its attendant privileges. Rankin (2003) documents the feelings of lesbian, gay, bisexual, and transgendered (LGBT) students who, in response to marginalization experienced in their courses on the basis of their sexual orientation, 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.

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 make-up 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.

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. Therefore, it is important that the pedagogical strategies we employ in the classroom reflect an understanding of social identity development so that we can anticipate the tensions that might occur in the classroom and be proactive about them. The strategies at the end of the chapter explicitly link pedagogy and developmental considerations.

WHAT DOES THE RESEARCH TELL US ABOUT COURSE CLIMATE?

Just as we need to consider student development holistically, we also need to consider the various facets of course climate that influence student learning. By course climate we mean the intellectual, social, emotional, and physical environments in which our students learn. Climate is determined by a constellation of interacting factors that include faculty-student interaction, the tone instructors set, instances of stereotyping or tokenism, the course demographics (for example, relative size of racial and other social groups enrolled in the course), student-student interaction, and the range of perspectives represented in the course content and materials. All of these factors can operate outside as well as inside the classroom.

A common but simplistic way of thinking about climate is in binary terms: climate is either good (inclusive, productive) or

170