Article

Through the Eyes of Students

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Vincent Tinto[1]

Abstract

For years, our prevailing view of student retention has been shaped by theories that view student retention through the lens of institutional action and ask what institutions can do to retain their students. Students, however, do not seek to be retained. They seek to persist. The two perspectives, though necessarily related, are not the same. Their interests are different. While the institution's interest is to increase the proportion of their students who graduate from the institution, the student's interest is to complete a degree often without regard to the institution in which it is earned. Although there has been much written from the former point of view, much less has been written from the latter. This article seeks to address this imbalance by laying out a conceptual model of student institutional persistence as seen through the eyes of students. Having done so, the article asks what such a model implies about institutional action to promote student persistence.

Keywords

theory, persistence, motivation

For years, our prevailing view of student retention has been shaped by theories that view student retention through the lens of institutional action and ask what institutions can do to retain their students.[1] Students, however, do not seek to be retained. They seek to persist. The two perspectives, though necessarily related, are not the same. Their interests are different. While the institution's interest is to increase the proportion of their students who graduate from the institution, the student's interest is to complete a degree often without regard to the institution in which it is earned. Although there has been much written from the former point of view, much less has been written from the latter. This article, which

[1]Syracuse University, Campbell, CA, USA

Corresponding Author:
Vincent Tinto, Syracuse University, 10 La Paloma, Campbell, CA 95008-4203, USA.
Email: vtinto@syr.edu

builds upon the work of Allen (1999) and Bean and Eaton (2000), seeks to address this imbalance. It does so by proposing a conceptual model of student motivation and institutional persistence and asking, as did Bean and Eaton (2001), what a focus on student motivation implies about institutional action.

At the outset, it must be pointed out that it is not the intent of this article to elucidate a full model of student motivation and persistence. Rather by highlighting several factors shaping student motivation that are within the capacity of institutions to influence the article seeks to continue a much-needed conversation about the ways in which institutional action can promote student motivation to persist and in turn increase student persistence to completion.

Persistence as Motivation

Seen through the eyes of students, persistence is but one manifestation of motivation (Bandura, 1989; Graham, Frederick, Byars-Winston, Hunter, & Handelsman, 2013). Students have to want to persist and expend the effort to do so even when faced with the challenges they sometimes encounter. Without motivation and the effort it engenders, persistence is unlikely. Motivation, however, is malleable. It can be enhanced or diminished by student experiences in college. As such, one can ask about the nature of those experiences and how they come to influence student motivation to persist in college and in turn their willingness to expend the effort needed to do so.

Given the goals that lead students to begin college, it is argued that the impact of student college experiences on motivation can be understood as the outcome of the interaction among student goals, self-efficacy, sense of belonging, and perceived worth or relevance of the curriculum (Figure 1).[2]

Goals

Regarding student goals, though it is evident that having the goal of completing college is necessary condition for completion, it is not a sufficient condition. This is the case not only because events during college can influence students' goals and motivation but also because the goal itself may vary in both character and intensity.[3] For instance, not all students intend to complete their degree at the institution in which they first enroll. They intend to transfer to another institution to do so. Other students may not intend to transfer but do not place great importance on completing their degree in the institution in which they first enroll. They may be committed to the goal of completion, but only weakly committed to do so in their institution of initial enrollment. Conversely, others students may enroll in a particular institution because their goal is to obtain their degree from that institution. It is their *first choice*. Other things being equal, such students are typically more likely to complete their degrees in their initial institution.

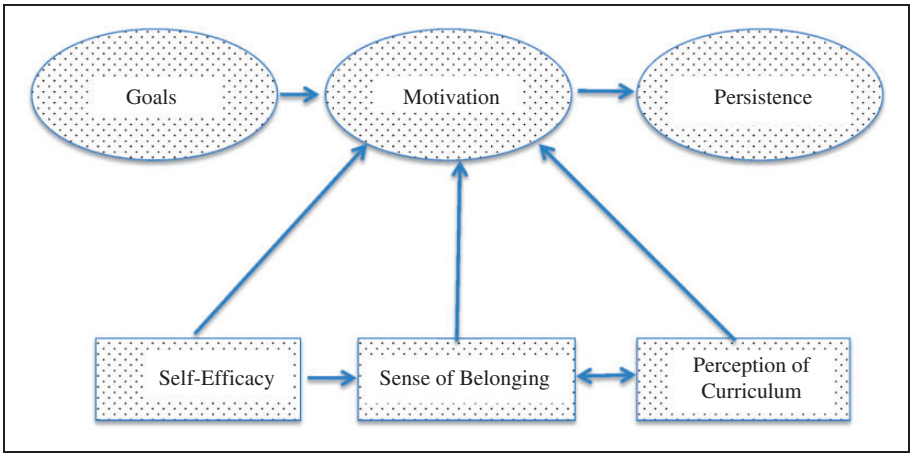

Figure 1. A model of student motivation and persistence.

Students may also differ in their motivations for attending college. Some students may be more concerned with the intrinsic benefits of college (e.g., learning, affiliation, development, autonomy), while others more concerned with the perceived extrinsic benefits of college (e.g., income, occupation, further education). But not all students are clear in their reasons for attending college. Their lack of clarity can undermine completion (Dietsche, 2009). Others may be only weakly committed to the goal of completion. Even the smallest of events can sway their desire to persist.

Such differences in the character and intensity of student goals matter because students with different goals and motivations for going to college are likely to be differentially affected by their experiences in college (Guiffrida, Lynch, Wall, & Abel, 2013).[4] It is to these experiences that we now turn. In doing so, we make the assumption that students begin college with at least some degree to commitment to complete their degree in the institution in which they first enroll and ask what experiences influence their self-efficacy, sense of belonging, and perceptions of the value or relevance of their studies and in turn their motivation to persist.

Self-Efficacy

Self-efficacy is typically defined as a person's belief in their ability to succeed in a specific situation or at a specific task (Bandura, 1977, 1994). It is one manifestation of how individuals come to perceive themselves from experiences and interactions with others and their capacity to have some degree of control over their environment (locus of control). Self-efficacy is learned, not inherited. It is not generalizable in that it applies equally to all tasks and situations but is

task and challenge specific. Believing one can succeed in one task does not imply that one believes in the likelihood of success at a different task (Bandura, 1994).

Sense of self-efficacy influences, in turn, how a person addresses goals, tasks, and challenges. A strong sense of self-efficacy promotes goal attainment. Persons with high self-efficacy will engage more readily in a task, expend more effort, and persist longer in the completion of that task and do so even when they encounter difficulties (Chemers, Hu, & Garcia, 2001). Conversely, a weak sense of self-efficacy tends to undermine achievement (Bong, 2001; Lent, Brown, & Larkin, 1987; Schunk, 1995; Yuong, Brown-Welty, & Tracz, 2010). As such, self-efficacy is the foundation upon which student persistence is built. Students have to believe they can succeed in college. Otherwise, there is little reason to continue to invest in efforts to do so.[5]

A strong sense of self-efficacy cannot be assumed. Although many students begin college confident in their ability to succeed, some do not, in particular those whose past experience, educational or otherwise, has led them to question their ability to succeed. In this regard, one of the challenges of development education is not only helping students acquire needed academic skills but also reshaping their belief in their ability to succeed (Hall & Ponton, 2005). Low self-efficacy can also be the result of negative stereotypes others hold of individuals or the groups to which they belong, as is sometimes the case for students from underrepresented groups (Steele, 1997; Steele & Aronson, 1995). Even brief reminders of those stereotypes can undermine goal attainment (Steele, 1999).

It is important to recognize, however, that challenges to one's self-efficacy can affect all students not just those with weak academic records or from specific groups. Even those who enter college confident in their ability to succeed can encounter challenges that serve to weaken their sense of self-efficacy. Experience matters. This is particularly true during the critical first year, as students seek to adjust to the heightened demands of college education. Thus, the finding that self-efficacy assessed at the midpoint of a course is more predictive of course performance than self-efficacy measured at the beginning (Gore, 2006).[6]

Students' belief in their ability to succeed in college is not just an academic issue. It can also reflect their perception of their ability to manage the larger task of going to college especially while trying to manage other responsibilities. This is but one reason why first-generation and low-income college students and those with responsibilities beyond the campus (e.g., working students and those with families) are, on average, less likely to complete than full-time, non-first-generation students (Pell Institute, 2015).

None of the above should be taken to suggest, however, that student academic ability does not matter. Rather it argues that without a belief in one's ability to succeed, even students with the ability to do so may struggle in college and become discouraged. Conversely, even a strong belief in one's ability to succeed at a particular task does not ensure success in that task if the student does not possess the academic skills required to do so.

Sense of Belonging

Believing in one's ability to successfully complete a particular course of action, though essential to persistence, does not in itself ensure persistence. What is also required is that students come to see themselves as a member of a community of faculty, staff, and other students who value their participation, that they matter and belong (Bean & Eaton, 2000; Bergen & Milem, 1999; Kuh, Kinzie, Schuh, & Whitt, 2005; Stebleton, Soria, Huesman, & Torres, 2014; Strayhorn, 2008, 2012; Tovar, 2013). The result is a bond, often expressed as a commitment, which serves to bind the individual to the group or community even when challenges arise (Tinto, 1987). It can refer to specific smaller communities within the institution as, for instance, with students with whom one shares a common interest or more broadly to the institution generally. Although the former can facilitate persistence, as it may help anchor the student to other students on campus, it is the latter that is most directly related to student motivations to persist within the institution. This is the case because the former does not ensure the latter, as a smaller community of students may see itself as an outcast from the larger institution (Sidanius, Laar, Levin, & Sinclair, 2004).

It is here that engagement matters, at least as it pertains to their engagement with others on campus (Komarraju, Musulkin, & Bhattacharya, 2010; Trolian, Jach, Hanson, & Pascarella, in press). But it is not so much engagement per se that matters, though more engagement with others is generally better than less, as it is students' perceptions of those engagements and the meaning they derive
1 from them as to their belonging (Hurtado & Carter, 1966; Strayhorn, 2012).[7] Thus the term *sense of belonging*. Although sense of belonging can mirror students' prior experiences, it is most directly shaped by the broader campus climate and the perceptions of belonging students derive from their daily interactions with other students, faculty, staff, and administrators on campus and the messages those interactions convey about their belonging (Hurtado & Ponjuan, 2005; Stebleton et al., 2014). Students who perceive themselves as belonging are more likely to persist because it leads not only to enhanced motivation but also a willingness to engage others in ways that further persistence (Hausmann, Schofield, & Woods, 2007). By contrast, a student's sense of not belonging, of being out of place, leads to withdrawal from contact that further undermines motivation to persist (Walton & Cohen, 2007).

Perceptions of Curriculum

Motivation to persist is also influenced by students' perception of the value or relevance of their studies (Zepke, in press). Among a number of issues that shape such perceptions, two stand out, namely students' perceptions of the quality of the curriculum and its relevance to matters that concern them (Tessema, Ready, & Yu, 2012).

Perceptions of the quality and relevance of the curriculum reflect a complex interplay among a variety of issues including faculty teaching methods, perceived institutional quality, and student learning style preferences and values. This is the case because the curriculum is not merely a collection of facts but also a set of values that influence not only which facts and concepts are presented in the curriculum but also the perspectives that are deemed appropriate to the analysis of those facts (Zepke, in press). Although what constitute quality and relevance is far from simple, the underlying issue is clear, namely that students need to feel the material to be learned is of sufficient quality to warrant their time and effort (Frick, Chadha, Watson, Wang, & Green, 2009). Only then will students be motivated to engage that material and in turn persist (Becker, 1964; Reason, 2009; St. John, Cabrera, Nora, & Asker, 2000; Terenzini & Reason, 2005). Curriculum that is seen as unrewarding, irrelevant, or of low quality will often yield the opposite result.

Before turning to a discussion of implications for practice, it bears repeating that the conceptual model proposed here is not intended as a full model of motivation but one that focuses only on those experiences on campus that shape student motivation that are within the institution's capacity to influence. Its focus is as much on institutional practice as it is theory. It is not concerned with those experiences beyond campus that may also influence motivation. For instance, it is entirely possible that even the most motivated students may be forced by external events to withdraw from college. By contrast, it is possible that some students may persist even when there is little sense of belonging or perceived relevance of the curriculum. This may be the case when the perceived extrinsic benefits of earning a college degree are sufficiently great to require completion.

Persistence: The Institutional Response

Given how students view persistence, the question can now be asked what institutions can do to enhance the likelihood that more of their students will want to persist to completion. Beyond the need for institutions to help students clarify their goals and acquire needed academic skills, how can they address issues of self-efficacy, sense of belonging, and perceptions of the curriculum?

Student Self-Efficacy

Regarding self-efficacy, institutions cannot assume that all students enter believing that they can succeed in college or that their beliefs in their ability to succeed do not change over the course of the first year. Students' belief in their capacity to succeed must be built, reinforced, and maintained throughout their journey through the institution (Dweck, 2002). While this may be especially true among students whose past experiences, educational or otherwise, have been less than

successful, it can also apply to students who, despite their prior success in secondary school, struggle to adjust to the academic demands of the institution.

Therefore, while it is important that institutions address the implicit, if not explicit, existence of stereotype threats on campus through interventions that provide alternative ways of understanding one's identity (Aronson, Fried, & Good, 2002; Yeager & Walton, 2011), they also have to monitor and frequently assess student first-year performance and provide academic, if not social, support when needed to help students succeed in the first year, especially in the classrooms of the first year.[8] Without support to improve performance, many lose their motivation to persist and subsequently dropout.

In response, colleges need to offer a range of first-year academic support programs, the most effective of which are those directly connected to or contextualized to the individual courses in which students are enrolled (Perin, 2014; Perin, Hare Bork, Peverly, & Mason, 2013). Supplemental instruction and corequisite remediation are but two instances that demonstrate that such classroom-based support can enhance student performance (Cho, Kopko, Jenkins, & Jaggars, 2012; Kenney & Kallison, 2006). This is the case because contextualization enables students to more readily apply the support they receive to the specific demands of the course in which they seek to succeed.

Knowing when support is needed is, however, no easy task. It is for this reason that many institutions have implemented *early-warning* systems that alert faculty and staff to student struggles and allow for early intervention before their struggles undermine motivation and in turn persistence. Here, the key word is early, as students' early struggles if left unaddressed will tend to erode their self-efficacy and further undermine performance. It is also why frequent formative assessment and feedback that enables students to monitor and adjust their behaviors over the course of the first year must be part and parcel of the first-year experience.

For some students, social support is also important to their persistence. As noted earlier, this is especially true for first-generation and low-income students as well as those who attend part time or have other responsibilities beyond campus, as such students often have difficulty managing the task of going to college. Here is where support arising from advising or counseling and mentoring programs can be helpful. So also can cohort and other forms of shared academic experiences such as learning communities. This is the case because when properly implemented, social support arises from the shared social activities within the group, community, or cohort (Tinto & Engstrom, 2008a, 2008b).

Support aside, academic performance is also affected by the nature of the classrooms in which students participate. Two attributes of classrooms that concern us here are the pedagogies that shape how students engage in learning and the attitudes and values of those in the classroom, in particular the faculty. Regarding pedagogy, those that require students to actively engage with each other in the pursuit of learning, especially when they have to apply their learning

to concrete tasks or problems, have been shown to enhance motivation and improve classroom performance (Johnson & Johnson, 1985; Perez-Pena, 2014). In doing so, they enhance students' belief in their capacity to succeed. The more students learn, the more they come to believe they can learn.

Students' belief in their ability to succeed is also influenced by the attitudes and values of others in the classroom, especially those of the faculty (Trolian et al., in press). Their views of students' ability frequently convey often-subtle messages that are all too quickly picked by students as to their capacity to succeed in the classroom. Self-fulfilling behaviors tend to follow. Thus the concept of *self-fulfilling prophesy* and the observation that *no one rises to low expectations*. In response, institutions need to invest in faculty development to better ensure that faculty not only posses the skills they need to better help all students learn and succeed in the classroom but also are aware of how their behaviors, intentional or otherwise, also influence student success.

Student Sense of Belonging

Enhancing students' belief in their ability to succeed in college is one thing. Developing a sense of belonging is another. Sense of belonging is shaped by a complex array of forces not the least of which are the person's own perceptual frame that is a product of past experience and their perception of how others in the environment perceive them. Institutions can help promote students' sense of belonging in a variety of ways. They can ensure, as best they can, that the makeup of the administration, staff, and faculty are reasonably representative of all students and that there are sufficient numbers of students of similar backgrounds on campus to allow for the development of self-sustaining student communities. No student should ever find him or herself *out of place* or unrepresented by the interests of others on campus. Feeling out of place, however, is not solely a function of representation. It is also reflective of the broader campus climate and the perceptions of belonging students derive from their daily interactions with others inside and outside the classroom and the messages those interactions convey about their belonging (Boysen, 2012; Boysen, Vogel, Cope, & Hubbard, 2009; Chavous, 2005; Harper & Hurtado, 2007; Stebleton et al., 2014; Strayhorn, 2008, 2012). Here, the actions of the administration are especially important because they speak to the institution's commitment to serve the interests of all students. The same can be said for faculty for their actions help establish the climate within the classroom that shapes success of all students within the classroom. That being said, it is still the case that every interaction matters for even a single negative interaction can reverberate in ways that alter students' sense of belonging within the institution.[9] It bears repeating that it is not engagement per se that drives sense of belonging, as it is students' perceptions of their belonging that derives from their engagements. Not all engagements lead to that perception.

While the shaping of attitudes and values on campus is no simple matter, institutions can also promote students' sense of belonging by promoting those forms of activity that require shared academic and social experiences. In the academic realm, this can take the form of cohort programs, learning communities, and within classrooms the utilization of pedagogies, such as cooperative learning, that when properly implemented, require students to learn together in ways that include each group member as equal partners in the learning enterprise. In the social realm, they can take steps to provide for a diversity of social groups and organizations that allow all students to find at least one smaller community of students with whom they share common bond. This is especially true of learning communities where students coregister for two or more courses that are linked by a common theme, issue, or problem to which the courses are applied. In those communities that also employ active learning strategies that require students to learn together, students are not only likely to learn more but also more likely to want to persist and in fact do so (Tinto & Engstrom, 2008b). They do so in large measure because of the sense of belonging that arises within the community.

It should be observed that sense of belonging is not just a reflection of a student's perception of their place in the social environment. It also mirrors their perception of their academic belonging. This can apply not only for students who find the academic demands of the institution excessively challenging, as is often the case for developmental education students, but also for those who find it insufficiently challenging. Both can feel out of place. It can also arise from a sense of academic disconnect when students finds that their academic interests are not supported by the institution.

However promoted, it is important that institutions address issues of sense of belonging at the very outset of the student journey, indeed as early as orientation. As is the case for self-efficacy, developing a sense of belonging during the first year serves to facilitate other forms of engagement that further student development, learning, and completion.

Student Perceptions of the Curriculum

Though it is evident that student persistence is shaped by students' perception of the value of the material they are being asked to learn, how institutions can address this issue is less clear. This is the case because student perceptions of the curriculum vary not only among different individuals but also between the various subjects they are asked to learn. Nevertheless, there are steps institutions can take to enhance the likelihood that more students will perceive the value of what they are being asked to learn. First, they have to ensure that all students find themselves in a field of study appropriate to their needs and interests, find the material within those courses sufficiently challenging to warrant their effort and, with academic support, reasonably within their reach. Second, they can ensure

as best they can that the curriculum, in particular in the social sciences and humanities, is inclusive of the experiences and histories of the students they serve. Third, institutions need to be explicit in demonstrating how the subjects students are asked to learn can be applied to meaningful situations. This is particularly important in first-year introductory courses, as they serve as gateways to courses that follow. Too often, meaningful connections in those courses are left for students to discover. In this regard, it must be pointed out that student perceptions of the lack of relevance of a subject do not necessarily mean the subject has no relevance, only that students do not perceive its being relevant or that the course has failed to make its relevance explicit.

One way of making those connections is through the utilization of problem and project-based pedagogies that call for students to apply what they are learning to address meaningful problems (Johannes & van Barneveld, 2009). Another is through contextualization where material students are asked to learn is learned in the context of another field. The effectiveness of this approach has been amply demonstrated in the practice of developmental education where basic skills are taught in the context of another field of study as, for instance, when developmental English is taught using material from an accounting class in which students are also enrolled (Perin, 2014; Tinto, 1994). In this and similar cases, students are more likely to want to learn basic skills because it helps them learn a subject in which they are interested. One promotes the learning of the other. Contextualization can also be achieved through the use of learning communities. When properly implemented, students coregister in two or three courses that are linked through an issue, problem, or project that provides a unifying theme to the community. Not insignificantly, such multiple course linkages also promote a form of interdisciplinary learning that is not easily achieved in standalone courses (Tinto, 1994).

But the above presumes that students have been advised in ways that enable them to locate a field of study that addresses their needs and interests. Therefore, while much of the preceding conversation reflects the actions of faculty, the issue of relevance is also a function of advising in helping students locate that field of study. This is particularly important for new students many of whom are undecided as to their major as well as for continuing students who seek to change their field of study.

Closing Thoughts

Understood from the student perspective, persistence is but one form of motivation that is shaped not so much by student behaviors and interactions with others on campus, though clearly it is, as it is student perceptions of those interactions and the meanings they derive from them as to their capacity to succeed in college, their sense of belonging in the institution, and their perceptions of the value of the curriculum they are asked to study for their degree.

What then of theories that while stressing engagement do so from a largely structural frame that focuses attention on the academic and social environments of institutions in which students are enrolled; a frame that asks how institutions can retain students. Although not inconsistent with those theories, the conceptual model presented here in adopting the students' view of their experience seeks to describe the ways in which those environments and the actions institutions take influence students motivation to persistence. In doing so, it provides a dynamic interface between the actions of the institution that seeks to retain students and the decisions of students make as to their persistence in the institution. As importantly, it does so in ways that enable us to better understand how issue of income, race, and gender, among others, that influence student perceptions come to influence student persistence.

This is not to say that students' decisions to persist or depart are not shaped by other issues such as finances, family obligations, and work. They are. Nor is it to say that there are not other models of persistence that shed light on the process of student persistence in ways this perspective does not. There are (e.g., Astin, 1984; Bean, 1983; Bean & Eaton, 2000; Eaton & Bean, 1995; St. John et al., 2000; Tierney, 1999). Rather it is to say that understanding persistence as a form of motivation that is shaped by student perceptions of their experiences adds another dimension to our understanding of the complex process of persistence and completion.

For institutions, an understanding of student perceptions, not simply their behavioral manifestation, and their impact upon student decisions to stay or leave is a prerequisite for the development of a more comprehensive strategy to further enhance the persistence and completion of all, not just some, students. Only when institutions understand how student perceptions shape decisions to persist and how their actions influence those perceptions can institutions move to impact those decisions in ways that enhance the likelihood of greater persistence while also addressing the continuing gap in college completion between students of different attributes and backgrounds.

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Notes

1. This article also draws upon Fishbein and Aizen (1975), Guiffrida (2006), Graham et al. (2013), and Zepke (in press). Their work did much to inform this article.

2. In several respects, the model is similar to the self-determination perspective that sees self-determination as shaped by competence, relatedness, and autonomy (Deci, Vallerand, Pelletier, & Ryan, 1991).
3. It is important to note that some students, in particular those who enroll in community college, have more limited goals that do not require completion. They leave without a degree. Although they may see themselves as having been successful in college, the institution may not share that view.
4. The one exception is where the perceived extrinsic rewards to college completion are so great as to drive the student to complete regardless of experience.
5. It might be added that such beliefs also depend on one's perception of their ability to control events that shape that outcome (i.e., internal locus of control; Baker, 2004; Findley & Cooper, 1983).
6. This is but one reason why *risk models* that seek to predict attrition based on student attributes measured before the start of the first semester have to be taken with a grain of salt.
7. In stressing the importance of students' perception of engagement and its relationship to sense of belonging, I mean to argue that our current focus on largely behavioral measures of engagement is only part of a more complex picture and if used out of context may mislead us as to the underlying dynamics of student engagement and persistence (see Zepke, in press).
8. Yeager and Walton (2011) demonstrated that even minor early presentations that counter such threats lead to enhanced self-efficacy and improved performance.
9. For underrepresented students, in particular, the sum of many microaggressions can yield the same outcome (Minikel-Lacocque, 2013; Solórzano, Ceja, & Yosso, 2000).

References

Allen, D. (1999). Desire to finish college: An empirical link between motivation and persistence. *Research in Higher Education*, *40*(4), 461–485.

Aronson, J., Fried, C., & Good, C. (2002). Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence. *Journal of Experimental Social Psychology*, *38*, 113–125.

Astin, A. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, *25*(4), 297–308.

Baker, S. (2004). Intrinsic, extrinsic and amotivational orientations: Their role in university adjustment, stress, well-being and subsequent academic performance. *Current Psychology*, *23*(3), 189–202.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*, 191–215.

Bandura, A. (1989). Human agency and social cognitive theory. *American Psychology*, *44*, 1175–1184.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71–81). New York, NY: Academic Press.

Bean, J. (1983). The application of a model of turnover in work organizations to the student attrition process. *The Review of Higher Education*, *6*(2), 129–148.

Bean, J., & Eaton, S. (2000). A psychological model of college student retention. In J. Braxton (Ed.), *Rethinking the departure puzzle: New theory and research*

on college student retention (pp. 48–62). Nashville, TN: Vanderbilt University Press.

Bean, J., & Eaton, S. (2001). The psychology underlying successful retention practices. *Journal of College Student Retention*, *3*(1), 73–89.

Becker, G. (1964). *Human capital* (2nd ed.). New York, NY: Columbia University Press.

Bergen, J., & Milem, J. (1999). The role of student involvement and perceptions of integration in a causal model of student persistence. *Research in Higher Education*, *40*(6), 641–664.

Bong, M. (2001). Role of self-efficacy and task-value in predicting college students' course performance and future enrollment intentions. *Contemporary Educational Psychology*, *26*(4), 553–570.

Boysen, G. (2012). Teacher and student perceptions of microaggressions in college classrooms. *College Teaching*, *60*(3), 122–129.

Boysen, G., Vogel, D., Cope, M., & Hubbard, A. (2009). Incidents of bias in college classrooms: Instructor and student perceptions. *Journal of Diversity in Higher Education*, *2*(4), 219–231.

Chavous, T. (2005). An intergroup contact-theory framework for evaluating racial climate on predominantly white college campuses. *American Journal of Community Psychology*, *36*(3/4), 239–257.

Chemers, M., Hu, L., & Garcia, B. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology*, *93*(1), 55–64.

Cho, S., Kopko, E., Jenkins, D., & Jaggars, S. (2012). New evidence of success for community college remedial English students: Tracking the outcome of students in the Accelerated Learning Program (ALP) (CCRC Working Paper No. 53).

Deci, R., Vallerand, R., Pelletier, L., & Ryan, R. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist*, *26*(3 & 4), 325–346.

Dietsche, P. (2009). *The Ontario College Student Engagement Survey 2006–2009: Final report*. Toronto, ON: Report prepared for the Ontario Ministry of Training, Colleges and Universities.

Dweck, C. (2002). Messages that motivate: How praise molds students' belief, motivation, and performance (in surprising ways). In J. Aronson (Ed.), *Improving academic achievement*. New York, NY: Academic Press.

Eaton, S., & Bean, J. (1995). An approach/avoidance behavioral model of college student attrition. *Research in Higher Education*, *36*(6), 617–645.

Findley, M., & Cooper, H. (1983). Locus of control and academic achievement: A literature review. *Journal of Personality and Social Psychology*, *44*(2), 419–427.

Fishbein, M., & Aizen, L. (1975). *Belief, attitude, intention, and behavior*. Reading, MS: Addison-Wesley.

Frick, T., Chadha, R., Watson, C., Wang, Y., & Green, P. (2009). College student perceptions of teaching and learning quality. *Association for Educational Communities and Technology*, *57*(5), 705–720.

Gore, P. Jr. (2006). Academic self-efficacy as a predictor of college outcomes: Two incremental validity studies. *Journal of Career Assessment*, *14*(1), 92–111.

Graham, M., Frederick, J., Byars-Winston, A., Hunter, A., & Handelsman, J. (2013). Increasing persistence of college students in STEM. *Science*, *341*, ▮▮.

Guiffrida, D. (2006). Toward a cultural advancement of Tinto's theory. *Review of Higher Education*, *29*(4), 451–472.

Guiffrida, D., Lynch, M. F., Wall, A., & Abel, D. (2013). Do reasons for attending college affect academic outcomes? A test of a motivational model from a self-determination theory perspective. *Journal of College Student Development*, *54*(2), 121–139.

Hall, J. M., & Ponton, M. K. (2005). Mathematics self-efficacy on college freshman. *Journal of Developmental Education*, *28*(3), 26–33.

Harper, R., & Hurtado, S. (2007). Nine themes in campus racial climates and implications of institutional transformation. In S. Harper & L. Patton (Eds), *New direction for student services, issue 120. Special issue: Responding to the realities of race on campus* (pp. 7–24). San Francisco, CA: Jossey-Bass.

Hausmann, L., Schofield, J., & Woods, R. (2007). Sense of belonging as a predictor of intentions to persist among African American and white first year college students. *Research in Higher Education*, *48*(7), 803–839.

Hurtado, S., & Carter, D. (1966). Latino students' sense of belonging in the college community: Rethinking the concept of integration on campus. In F. K. Stage, G. L. Anaya, J. Bean, D. Hossler & G. Kuh (Eds), *College students: Evolving nature of research* (pp. 123–136). Needham Heights, MA: Simon & Schuster Custom Publishing.

Hurtado, S., & Ponjuan, L. (2005). Latino educational outcomes and the campus climate. *Journal of Hispanic Higher Education*, *4*(3), 235–251.

Johannes, S., & van Barneveld, A. (2009). When is PBL more effective? A meta-synthesis comparing PBL to conventional classrooms. *Interdisciplinary Journal of Problem-Based Learning*, *3*(1), 45–58.

Johnson, D., & Johnson, R. (1985). Motivational processes in cooperative, competitive and individualistic learning situations. In C. Ames & R. Ames (Eds), *Research on motivation in education* (Vol. 2, pp. 249–286). New York, NY: Academic Press.

Kenney, P., & Kallison, J. (2006). Research studies on the effectiveness of supplemental instruction in mathematics. New Directions for Teaching and Learning*, Winter*, *1994*(60), 75–82.

Komarraju, M., Musulkin, S., & Bhattacharya, G. (2010). Role of student faculty-interactions in developing college students' academic self-concept, motivation, and achievement. *Journal of College Student Development*, *51*(3), 332–342.

Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2005). *Student success in college: Creating conditions that matter*. San Francisco, CA: Jossey-Bass.

Lent, R., Brown, S., & Larkin, K. (1987). Comparison of three theoretically derived variables in predicting career and academic behavior: Self-efficacy, interest congruence, and consequence thinking. *Journal of Counseling Psychology*, *34*(29), 293–298.

Minikel-Lacocque, J. (2013). Racism, college, and the power of words: Racial microaggressions reconsidered. *American Educational Research Journal*, *50*(3), 432–465.

Pell Institute. (2015). *Indicators of higher education equity in the United States*. Washington, DC: Pell Institute.

Perez-Pena, R. (2014, September 2). Active role in class helps Black and first-generation college students. *New York Times*.

Perin, D. (2014). Facilitating student learning through contextualization. In S. Armstrong, N. Stahl & H. Boylan (Eds), *Teaching developmental reading* (2nd ed.). New York, NY: MacMillan Publishing.

Perin, D., Hare Bork, R., Peverly, S., & Mason, L. (2013). Contextualized curricular supplement for developmental reading and writing. *Journal of College Reading and Learning*, *43*(2), 8–38.

Reason, R. (2009). An examination of persistence research through the lens of a comprehensive conceptual framework. *Journal of College Student Development*, *50*(6), 659–682.

Schunk, D. (1995). Self-efficacy, motivation, and performance. *Journal of Applied Sport Psychology*, *7*(2), 112–137.

Sidanius, J., Laar, C., Levin, S., & Sinclair, S. (2004). Ethnic enclaves and the dynamics of social identity on the college campus: The good, the bad, and the ugly. *Journal of Personality and Social Psychology*, *87*(1), 96–110.

Solórzano, D., Ceja, M., & Yosso, T. (2000). Critical race theory, racial microaggressions, and campus racial climate: The experiences of African American college students. *Journal of Negro Education*, *69*(1/2), 60–73.

St. John, E., Cabrera, A., Nora, A., & Asker, E. (2000). Economic influences on persistence reconsidered: How can finance research inform the reconceptualization of persistence models? In J. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 29–47). Nashville, TN: Vanderbilt University Press.

Stebleton, M., Soria, K., Huesman, R. Jr., & Torres, V. (2014). Recent immigrant students at research universities: The relationship between campus climate and sense of belonging. *Journal of College Student Development*, *55*(2), 196–202.

Steele, C. (1997). A threat in the air: How stereotypes shape the intellectual identities and performance of women and African-Americans. *American Psychologist*, *52*(6), 613–629.

Steele, C. (1999). Thin ice: "Stereotype threat" and black college students. *The Atlantic Monthly*, *284*(2), 44–47, 50–54.

Steele, C., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African-Americans. *Journal of Personality and Social Psychology*, *69*(5), 797–811.

Strayhorn, T. (2008). Fittin' in: Do diverse interactions with peers affect sense of belonging for black men at predominantly white institutions? *Journal of Student Affairs Research and Practice*, *45*(4), 953–979.

Strayhorn, T. (2012). *College students' sense of belonging*. New York, NY: Routledge.

Terenzini, P., & Reason, R. (2005). *Parsing the first year of college: Rethinking the effects of college on students*. Paper presented at the Annual Conference of the Association for the Study of Higher Education, Philadelphia, PA.

Tessema, M., Ready, K., & Yu, W. (2012). Factors affecting college students' satisfaction with major curriculum: Evidence from nine years of data. *International Journal of Humanities and Social Science*, *2*(2), 34–34.

Tierney, W. (1999). Models of minority college-going and retention: Cultural integrity versus cultural suicide. *Journal of Negro Education*, *68*(1), 80–91.

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago, IL: The University of Chicago Press.

Tinto, V. (1994). *Building learning communities for new college students* (with Goodsell Love, A., & Russo, P.). A publication of the National Center on Postsecondary Teaching, Learning, and Assessment, Pennsylvania State University, University Park, PA.

Tinto, V., & Engstrom, C. (2008a). Access without support is not opportunity. *Change*, *40*(1), 46–51.

Tinto, V., & Engstrom, C. (2008b). Learning better together: The impact of learning communities on the persistence of low-income students. *Opportunity Matters*, *1*, 5–21.

Tovar, E. (2013). *A conceptual model on the impact of mattering, sense of belonging, engagement/involvement and socio-academic integrative experiences on community college intent to persist* (CGU Thesis & Dissertations, Paper 81). Claremont Graduate University, Claremont, CA.

Trolian, T., Jach, E., Hanson, J., & Pascarella, E. (in press). Influencing academic motivation: The effects of student-faculty interaction. *Journal of College Student Development*.

Walton, G., & Cohen, G. (2007). A question of belonging: Race, social fit, and achievement. *Journal of Personality and Social Psychology*, *92*(1), 82–96.

Yeager, D., & Walton, G. (2011). Social-psychological interventions in education: They're not magic. *Review of Educational Research*, *81*(2), 267–301.

Yuong, M., Brown-Welty, S., & Tracz, S. (2010). The effects of self-efficacy on academic success of first-generation college sophomore students. *Journal of College Student Development*, *51*(1), 50–64.

Zepke, N. (in press). Student engagement research: Thinking beyond the mainstream. *Higher Education Research and Development*.

Author Biography

Vincent Tinto