

REFLECTIVE PRACTICE

Tinto's South Africa lectures

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The following are transcripts of the four lectures given by Prof. Vincent Tinto, Distinguished University Professor Emeritus, Syracuse University, at the regional symposia “Conceptualising a coherent approach to student success” organised by the Council on Higher Education in Pretoria, Durban and Stellenbosch in August 2013.

Lecture 1: Theoretical underpinnings and research framework for student success

Let me start by saying what an honour it is for me to be here with you who are working to improve the success of your students. Writing articles and books on improving student success as I do is the easy part, being able to do something about an issue that is so critical to the future of South Africa is the hard part. Yet the issues you face are some of the same issues with which we also struggle in the United States. The gap between high- and low-income students in college completion in our country is large and has been increasing over time. Like you, we are concerned about the success of our students because, as it is for you, our future lies in our students' future. But in speaking with you today let me be clear that I am not here to tell you what to do. It is presumptuous for someone from another country working in a different educational system to tell you what actions you should take here in South Africa to promote student success. But as I have been working on this project of increasing student success for some 40 years, I have had the opportunity not only to write and carry out research on student success but also work with many institutions both in the United States and a number of countries in Europe, Asia and South America. I have worked with over 400 institutions over these more than a few years. I have also worked with foundations, with states and federal governments. Over that time, I have come to see some patterns of action that distinguish those universities that have improved their completion rates, especially among low-income students, and those that have not. In turn I have learned important lessons about what seems to characterise those institutions. This morning I want to share with you three important lessons that I have learned which frame our conversations in subsequent presentations.

First lesson: Providing students access without support is not opportunity. Without support, academic, social, and financial, too many students do not complete their programmes of study. It is my view that once an institution admits a student, it becomes obligated to provide, as best it can, the support needed to translate the opportunity access provides to success.

Second lesson: The classroom experience is central to student success. Most students commute to campus. Few have the privilege of living on campus. In the United States only 20% of our students do so. Despite the movies you may have seen about higher education in United States, most of our students work, many attend part-time and an increasingly large number are from low-income backgrounds who do not have the privilege, the time, or the resources to live on campus. For these students, indeed for most students, when they come to a campus, the first place they go is to the classroom. When class is over they leave, because they must. It follows that however we define student success, however we measure it, the one place success must arise is in the classrooms of our campuses. For most students, the classroom is the only place where they meet each other and engage with their peers and faculty in learning activities. Consequently however we think about the strategies of promoting success, our efforts must begin, but not end, with students' classroom experiences. Recall the object of our work is not simply that students are retained, but that they learn while begin retained. Student learning is the object of our work; retention is only a vehicle through which it occurs.

The third and final lesson: Improvement in institutional rates of student success does not arise by chance. It is not simply the result of good intentions; although good intentions are clearly a requirement, improvement in rates of student success requires more. It requires an intentional, structured and coherent set of policies and actions that coordinate the work of many programmes and people across campus; actions that are sustained and scaled up over time and to which resources are allocated. There is no magic cure to improvement. It simply takes time and sustained effort.

These lessons will serve as the basis for our conversation today. The goal is to begin what the Council hopes to achieve, namely that these conversations you have with your colleagues here today, with your colleagues in the universities in which you work, will form the basis of an ongoing conversation about the programmes and strategies you will implement in the future to improve the success of your students at your universities and across all of South Africa. It's not a short-term project. Once you begin you must stay the course even when faced with challenges. Your students and your nation need your effort.

Finally, on a personal note, I have long held the view that when we admit students to our universities we sign, in effect, a contract with our students that obligates both us and them to a series of actions. For their part, it is a contract that obligates them to take advantage of the opportunity that so many of their peers do not have; to take their studies seriously and exert the effort needed to complete their programmes of study. For our part, we take on an obligation that calls for us to translate, as best we can, through our actions the promise access provides into a meaningful opportunity to complete our students to successfully complete their studies. You are only too well aware that there are many things

that affect student success: personal lives, economic resources, etc. The unavoidable fact is that though we aspire to help all our students, there are many things that affect their success over which we have little control. But we do have control over their experience on the campus; experiences that are now shaped by decisions and actions we have made in the past. We can and should improve their experiences and in turn their success by changing our decisions and actions. It is to this end, a rethinking of what we do, that our conversation today is directed.

Let me now turn to the first of what will be four presentations today about improving student success. In doing so let me point out that it reflects the Council request that I first talk about the origins of my work, its theoretical propositions, and the research underlying it since it has long been shown to be an effective guide to the development of effective strategies to improve student success. It also reflects the Council interest in having you base your proposed course of action on sound theory and research.

Before I talk about these issues, you may ask why theory matters, in this case why we need to focus on theories of student success? We need to because theory allows us to move beyond empirical descriptions of behaviour, such as student success or the lack thereof, to an attempt to understand why those behaviours occur. The point of theory is to explain how those behaviours arise so that when something goes awry, that is when students do not succeed; you have a strategy, a way of thinking about what in turn you do to improve success. In this manner, theory becomes a guide to action. The Council wants your proposals to have some framework that provides a way of thinking about what you plan to do, why you do it, and what you need to do next. But it is important to understand that there are limits to what any theory can explain. Though theory can and does provide a useful guide to action, there is no substitute for experience and the learning that arises from experience. So while there is good reason to employ theory and prior research in the development of your projects, you should not do so in such a narrow way that you do not modify your proposals based upon your experience.

The need to do so is not only a reflection of the limits of any theory, but also of the social and cultural context from which theory springs. In this case it is important to see my theory as reflecting the issues about student attrition that were being debated during the late 1960s in the United States, a period of dynamic tensions that gave rise to the civil rights movement of the time. At that time, theories of student attrition, or what was referred to as “dropout”, tended to blame the victim, namely the student who dropped out. Dropouts were typically seen as not sufficiently motivated, as not being able to defer immediate gratification, or simply not having values appropriate to the succeeding in university studies. No one questioned the role the university played in constructing the failure of its own students.

Yet like many others at The University of Chicago I was part of a vibrant anti-establishment movement that the focused on issues of inequality and its roots in existing power structures of society. We were intent on shedding light on the role of the “system” in the construction and maintenance of the prevailing patterns of inequality, in my case with patterns of dropout and its correlation with income and race. Together with other

graduate students, I focused on the role of the system – the university – in constructing patterns of “dropout” within the university. It is a perspective that continues to inform my work, namely that in exploring issues of student attrition and efforts to enhance student persistence and graduation, we have to ask about the actions of the university and what the university should do to change its practices and policies to promote greater student success and do so in ways that also address issues of inequality.

In the development of my work, I had sought to develop a way, through social theory, of explaining how the “system”, the institution, works to shape the success of its own students. As I sought out a way of doing so, I participated in an interdisciplinary seminar with other graduate students and faculty – a common event at the university at the time – in which were presentations on psychology, anthropology, economics, history and sociology. One graduate student gave a presentation on Emile Durkheim, the first chair of sociology at the University of Paris, and his theory of suicide, when individuals choose in a real way to leave a human community. Durkheim wrote of the role of intellectual and social integration or the lack thereof as shaping an individual’s decision to remain in the community or leave it. As soon as I heard the presentation I immediately saw the analogy between membership in a human community such as a village, and membership in the community of the university. It was an instantaneous flash of recognition. I am sure many of you in the audience know the experience. You are working with someone, discussing some issue, when a light bulb suddenly turns on. So too in my case. It immediately became apparent that I could translate Durkheim’s work to an analysis of student “dropout”. But let me observe, however, that while Durkheim, like other French intellectuals at the time, was concerned with the impact of immigration on French culture and therefore took integration to mean assimilation, that is not what we in the 1960s in the United States took the term to mean. For us, given our sad history of slavery and racial segregation, the term integration meant the opposite of segregation. In today’s context, a more useful term would be the term “inclusion” as it contains no hint of assimilation.

In translating Durkheim’s theory of suicide to a theory of educational suicide, namely “dropout,” I employed the concepts of academic and social integration and developed a “theory” or more accurately described as a conceptual model that sought to translate how social and academic integration and the resulting membership in educational communities on campus arise. I sought to explain the impact of other people’s behaviours and the organisations and structures they construct on students within the university; actions and policies that lead people and their constructed organisations to act in ways that knowingly and/or unknowingly include or exclude individuals from their communities and their institutions of university in which they are located. Thus the development of the so-called “Tinto’s Theory of Student Attrition”.

A confluence of a number of factors at the time led it to become the primary, but not only, way academics, practitioners and policy-makers approached the issue of student dropout and in turn student persistence. Over time, it helped shape the adoption of a range of actions, programmes and policies that I will soon discuss aimed at increasing student persistence and completion, not least of which is the emphasis on the need to involve all students in the academic and social communities of the university.

But like any other theory, my work has evolved over time. This resulted not only from what I learned from a wide range of visits to different colleges and universities, but also the work of other researchers who sought to apply my work to other situations and the resulting suggestions they made for improvements. For me the most important is the research of Hurado and Carter on the role of culture, values and perceptions of membership in students' decisions to leave an institution. They correctly pointed out that it is not interaction or engagement per se that drives dropout, but the perceptions individual derive from those interactions that underlie student decisions to dropout. Not all interactions are positive. Those that are lead to retention. Those that convey the opposite, lead to withdrawal. My point is simple. People act on what they perceive. Therefore while we should measure engagement, as some engagement is better than none, we should ascertain whether engagement leads a student to see him/herself as a valued member of an academic and social community. The need to do so is particularly important when the student body is diverse.

Another change in my theory reflects my own particular autobiography. I went to The University of Chicago, and having received a fellowship, was able to live on campus and avoid the need to work. Yet most students in the United States do not live on campus, must work, often full time, are older, and have family obligations beyond campus. For these students, time on campus is limited, their engagement constrained by forces external to the campus. Consequently, I began to see the issue of involvement not so much as the presence of involvement per se but as the ways in which involvement in the communities of the campus can serve to keep students attached to the institution when external communities may pull them away.

The question then arose as to what types of involvement matter most for these students. Once I studied student patterns of behaviour on campus, it quickly became apparent that the answer to that question lies in the classrooms of the campus because those places of learning were very often the only place on campus where they spent time and engaged with faculty and other students. It follows that any discussion of enhancing student involvement/engagement and in turn student retention and completion must centre, indeed begin, with students' experiences in the classroom. It is not surprising then that over the last two decades my work has increasingly focused on the role of student classroom experience in student success and the types of policies and actions we must pursue to change classrooms in ways that promote greater student engagement and success. For me the point of theory is not merely that it helps explain what we see, but that it leads to actions that can change what we see.

As regards the issue that concerns us today, namely improving student retention and completion, change is occurring, albeit not as rapidly as many of us would prefer. One change is the development and use of surveys to measure and track student engagement. In the United States, the most widely used surveys are the National Survey of Student Engagement that is intended for four-year institutions, otherwise known as NSSE, and the Community College Survey of Student Engagement, typically referred to as CCSSE, that is used in two-year colleges. The former, NSSE, has been adapted for use in your country,

here known as SASSE, and in Australia and New Zealand where it is referred to as AUSSE. These have proven useful if only because they enable institutions to ascertain students' level and types of engagement and, when used over a number of years, ascertain how engagements change over time. Understandably there are limits to what such surveys can tell us, not the least of which reflects the fact that they often are plagued by low response rates. Nevertheless, they have served to focus our attention on the importance of student engagement and its role in student success.

Another change, one that concerns us here today, is the growing recognition that classrooms matter and student success in the classroom is the building block upon which student retention and completion is built. That has led us to acknowledge the critical role academics play in student retention and completion. Their actions in the classroom are critical to student classroom success and in turn to student retention and completion. Yet unlike educators in elementary, middle and secondary schools, academics in higher education, including myself, are not trained to teach their students. I do not mean to suggest that there are not many gifted academics who have the ability to engage students in learning in powerful ways. There are. But as a matter of our prior training, we have not been trained to teach our students. I have a PhD from The University of Chicago. What did I learn about teaching methods? Little. What about curriculum development? Nothing. Student development theory and student learning styles? Again nothing. Assessment of student learning? Again nothing. What qualifies me to teach? I have a PhD that has trained me to carry out research and write research articles. Let me be clear. I do not blame the academics. Instead I fault the system from which we spring that prepares us for our work in the universities. Clearly this must change.

Fortunately, there are now movements in address the issue of the preparation of academics. For instance, Queensland University of Technology in Australia now requires all lecturers to be part of a two-year training programme before they get a position as a lecturer. Derby University in Great Britain does the same thing. Please visit their websites. Whatever model we adopt, it is clear we must all focus on the training of new academics for their important work in the classroom and ask in turn as to the skills academics must acquire to be effective in the classroom and actively engage their students in powerful learning activities. In this regard we need to heed the evidence that speaks to the power of collaborative pedagogies and interdisciplinary learning communities in promoting student learning to which I will speak later. Whatever reforms we adopt, we must ensure that our classrooms include all voices in our diverse societies.

Let me now turn briefly to issues of quality enhancement. Though we in the United States are also concerned about quality, our forms of accountability are somewhat different from yours. We do not have a national system of higher education. Our system is divided into separate states. Each state has its own policy. One state could have one policy and an adjacent state can have a very different policy. Nevertheless, an increasing number of states, most notably the state of Tennessee, now fund institutions not only on enrolment but on output as you do. But rather than count the number of graduates, as you do, these states are determining budgets based upon the efficiency of throughput, namely the proportion of

those who start who finish five years later. Such accountability makes it in the institution's interest, you would hope, to do something about improving graduation rates. Indeed we are beginning to see changes in institutional practice.

Fortunately, there is a good deal of research on the issue of improving student retention and completion. You can start by reading my books as well as those of George Kuh that stress the importance of student engagement to student success. What concerns us here is the research on the link between classroom engagement and learning. This is important because the object of our work is not simply that students stay, but that they learn while staying. Without learning, retention in my view is a hollow achievement.

Let me now speak to future directions of research on student retention and completion. One, not surprisingly, is online education and its impact on student enrolment, engagement, and retention. Though there is clearly promise in online education, as it provides students access to a range of much richer resources than available through textbooks, evidence and institutional experience tells us that that promise has yet to be fulfilled. While enrolments have increased, retention in online courses is lower, in some case, considerably lower than face-to-face courses. Understandably there is a good deal of variation among online and face-to-face courses, but on average online retention rates are lower. In part this reflects the fact that building meaningful engagement in learning is more difficult in online courses than in face-to-face courses. At the same time, we know that students from college-educated backgrounds, especially those from high-income backgrounds, are much more likely to succeed in online environments than low-income students who are first in their family to attend university. This reflects the fact that success in online education requires skills and resources that are not evenly distributed in our societies. Nevertheless, like any "new" strategy, there is a tendency for people to rush, pell-mell, to employ that strategy in the hope that it alone can solve complex problems. Unfortunately, there is no "magic bullet". My advice: wait and learn from the experiences of other institutions' use of online education before jumping into the pool.

My own experience tells me that blended or hybrid classrooms can be quite effective as they enable more students to participate without having to entirely distance themselves from their classroom peers. Similarly there is promise in the movement to translate massive online learning environments to what are called "flipped classrooms". Students do their reading and work online before class and then come to the classroom to apply what they learned online. This is important because deep learning arises not by reading or listening but by doing, that is applying what is read or heard. .

Another promising development is the increasing use of what is referred to as predictive analytics. Though you may not have heard the term, you already know what predictive analytics can do. How many people have made purchases on iTunes, Amazon, or Netflix? When you make a purchase, what happens next? Typically you will receive a message that says "People like you have purchased this...". That recommendation is the result of predictive analytics. Once a website has information about you, as they all do, they will make recommendations for additional purchases based on what they know of the buying habits of people like you and on your previous purchase. The more you purchase,

the more refined the recommendation(s). That's predictive analytics. What concerns us here today is that universities are beginning to use predictive analytics in providing feedback to students. For example, a number of universities in the United States have developed online advising systems that employ predictive analytics to fine-tune the advice they provide individual students to better meet their specific needs as reflected in students' response to a series of questions. Though such systems do not entirely replace advisors, it greatly reduces their work as it provides students with up-to-date, accurate information that does not have to be repeated by the advisor. Again a caution: predictive modeling for education is still in its infancy. In their current form, it tends to be better at "predicting" the needs of the "average" student than those who are "not average". Consequently, before you rush into using a product employing predictive analytics, pilot test it to ensure it is equally effective for the various groups of students you serve.

Another development that will soon shape your efforts here in South Africa reflects the recognition that it is one thing to successfully complete an individual course; it is another to successfully compete in a programme of study and earn a university degree. Completion of a programme of study requires completing a sequence of courses, one after the other over time. I make this often overlooked point because the strategies we now employ to help students successfully complete a course, will not, on their own, help students complete a programme of study. Though our current strategies still matter, other issues shape the completion of a sequence of courses over time.

One is the impact of curricular structure upon completion. For instance, consideration is being given to move from what are called mainstream programmes to extended programmes in which students have more time and more options to complete their programmes of study. If you have not heard about it, you soon will. From my own distant perspective, I think it is a good idea. Why? Many students fresh out of secondary school often do not yet know what they want to study. They will be obliged to pick a major when it may not be the best choice. Being able to explore options in the first year can only help. At the same time, some students will have to repeat a course they failed in the first year. A constrained timeframe and course schedule will only make it more difficult to complete their programmes in the prescribed timeframe. In any case, the same things happen in the United States; we are asking the same questions. I should point out that we in the United States are also looking at the structure of our curricula and asking how we change them to increase the likelihood of programme completion.

Another issue concerns the role of student development. Though it is sometimes difficult to discern, students do change over time. Eighteen-year old students, who typically see the world as bimodal, become twenty-one year olds who tend to have a more complex and nuanced view of the world. In other words, they mature and their social and academic needs change. My point is simple. While we have understandably focused our efforts to help students succeed in the first year of university study, as that is the year when students' struggles are greatest, it does not follow that students do not struggle afterwards. Many do. To help students complete their programme of study, not simply their first year, we have to sequence our actions over time in ways that respond to their changing developmental needs.

One final issue. Much of the research on student retention has occurred in disciplinary silos; sociology, psychology, economics and so on. My own work, for instance, is primarily that of a sociologist who looks at the impact of the actions of other people and structures on individual behavior. A researcher in the field of psychology, however, is more likely to be concerned with the impact of individual attitudes on student success, while a researcher in the field of economics more with the effect of finances. At some point, however, we have to get out of our disciplinary silos to develop interdisciplinary theories of student success that combine these perspectives in ways that allow us to build more powerful strategies to promote student completion. My comments on the need to take account of theories of student development are but one such instance when combining different fields of research can further our efforts.

But there are other possible combinations. One lies in the use of network analysis and the role of networks of affiliations in student persistence. Specifically, one can conceive of persistence in a university as a process in which people form networks of affiliation that bind them to other people and in turn to the university. Students who establish such networks, especially during the first year, are more likely to stay in the university than those who are unable to establish those connections. Another lies in role theory, specifically in its view that being successful in any setting is akin to learning to play a role deemed appropriate in that setting. Much like an actor or actress who learns to a role in a play, a student seeking to be successful within a university has to learn to play a "student role" with its script, dress codes, interaction instructions, etc. From this perspective, it follows that strategies to promote student success have to be more intentional in helping students understand what is required to be successful in the fullest sense of the word. I need not remind you that many of your students, like myself, come from families with little prior educational experience and therefore have few ways of learning what is required to be a successful student in a university setting.

In closing, let me point out that the goal of theory is not simply that of explanation, but that of action. Your work as researchers in developing theories of student success appropriate to the South African context is to develop forms of explanation that lead to educational action, action which is not simply about helping student stay and finish their programmes of study, but do so in ways that lead to powerful learning.

In the final analysis our goal is student learning. Student retention is simply the vehicle for that to occur.

Lecture 2: Access without support is not opportunity

For too many of our students, providing access without appropriate support does not provide meaningful opportunity to succeed in the university. This is the case because many begin university ill-prepared for the academic and social demands of university study and are unaware of what university studies demand. Like a young lady I was talking to yesterday, many are from small rural villages and are the first in their families to attend university. She, like many other students, will likely need some support to be able to successfully navigate the often stormy waters of university life.

A variety of supports exist that can help students. One reflects the fact that new students, especially those who are first in their families to attend university, need to learn to navigate university. Unlike students who have parents who were university trained or brothers and sisters who are university trained – these students have no resources upon which to draw. This is why universities have orientation programmes.

Listen to the voice of this student who talked about his experience with orientation:

“I was kinda confused on everything ... I was like, what about turnin’ over here ... and then I just ended up sittin’ in a room, and then she just started givin’ people papers. I’m like, where am I? She says you are in Orientation. I was, oh, I accidentally fell on Orientation! So I got that out of the way by accident, but I’m glad I did it, ’cause I learnt a lot of stuff I did not know. And as soon as I walked out of Orientation I knew exactly what I needed to go and do.”

(Student video clip 1)

The challenge with the more common traditional orientation programmes is that they are voluntary and often too brief and as they occur prior to the start of university studies do not provide students with an opportunity to get answers to questions that arise only after they begin their studies. This is why many universities extend some orientation activities into the first semester most commonly in the so-called ‘first year seminar’ to which we will refer later.

Two points. First, he said it as by accident. That should not be the case. Do not leave it to the students to accidentally find orientation. Rather make it a requirement. Second, when he left orientation he knew exactly what he had to do. That is important. If do not know how to navigate the university, to find resources and support, it is much more difficult to succeed in the university.

This should also be the case for advising. Some students, again most often first-generation university students, don’t have the requisite cultural resources to know how to think about university study, what to study and what courses to take. In fact many are undecided, though they might not admit that because they feel obliged to pick a field because their parents want them to. In the United States, nearly half of all students who begin in universities are undecided as to their major and many change majors during their studies. Even among those who finish in a major, research tells us that nearly half will end up working in other fields. Thus the challenge for advising is to help those who are unsure of their major as well as those who are.

Listen to what this low-income young woman says about advising:

“I think that is so, so important because the schools I am looking into now to transfer to, I have to see what classes I need to take to get to where I need to go. If I don’t sit down with an advisor and take that time, what’s the point? I’d be taking classes that’d be irrelevant. I won’t use any of the credits. I mean, it is always good to learn, but we have a goal. It’s like, what progress am I making towards that goal?”

(Student video clip 2)

Let me repeat some of the things she said. She said, "It is great to take courses, but if it doesn't lead to progress, I don't have the time". In fact, they often don't have the money.

Regrettably universities rarely have enough advisors, in particular those who are professionally trained, to address the advising needs of all students, especially those who are undecided. This is why the development of online advising systems that are based on the use of predictive analytics is so appealing. Such systems do not replace the importance of personal advising. But it does allow students to get some degree of advising 24 hours a day, seven days a week, if they have a computer and internet service to gain access to that information.

But as very few universities can afford such technologies, many have turn again to the first-year seminar to address advising needs by including some developmental advising and career counseling activities. If your universities move to giving students more options in the first year, you will find that the first year seminar can provide a forum to advising that is unlikely to be otherwise available to all students.

Given the proven success of the first year seminar in improving student persistence, it is little surprise that on many campuses it has become an academic "one stop" shop that has included in it a variety of academic support services. For instance, for students who are academically underprepared, the first year seminar will contain academic skill-building activities.

Again, listen to one student who talked about his experience in a first year seminar:

"I was told it is an easy grade, and since I have never been to college before so I figured it could be helpful so I took the class, like study skills, writing, getting research – it is like everything, like built into like one class basically. It is helpful. It is."

(Student video clip 3)

Increasingly, a number of universities now require all first year students to take a first year seminar. But as not all the first year students have the same needs, universities have begun differentiating their seminars such that different groups of students attend seminars that have different emphasis (e.g. skill-building vs. advising).

Students often need academic support as they are engaged in their studies, support that goes beyond the capacity of first year seminars. For that reason universities employed a range of academic support programmes for such as learning centres, tutorials, study halls, and so on. It is important to note that academic support proves to be more effective when it is contextualised to the course in which students need support. That is to say when it is linked to the course in such a way that the academic support students receive deals specifically with the issue of succeeding in that specific course. Simply put, the closer support is linked to the specific demands of the course, the easier it is for students to translate the support they receive to the practical problem of succeeding in that course.

There is a range of such techniques now being successfully employed to help students succeed in their courses. One is supplemental instruction where students who are struggling in a course will attend small tutorial sessions led either by a student who had a high grade in the course the prior year or a support person. In either case, the tutorials are directly

timed to the specific demands of the course, one class at a time. Research has shown that courses with supplemental instruction have higher average grades than similar courses that do not because there are many fewer Ds and Fs, and there is the rub. Another effective strategy are learning communities where students enroll in two or more courses together. As applied to students who need additional academic assistance, one of those courses will be a basic skills course. In this case the content of the course, let's say accounting, to which the basic skills course is linked will provide the content for the application of basic skills. In this way, students are learning basic skills as they are learning accounting.

Listen to what one student said about her experience in such a linked course learning community.

“The relationship between accounting and ESL (English as a Second Language) is helping a lot because the accounting professor is teaching us to answer questions in complete sentences, to write better. And we are more motivated to learn vocabulary because it is accounting vocabulary, something we want to learn about anyway. I am learning accounting better by learning the accounting language better.”

Support can also come from other people. It can come from counsellors, individual academics, individual staff members, and from peer mentors. For many of our disadvantaged or under-represented students, in the United States, having a mentor of similar backgrounds matters. It matters because a mentor can say to the person with whom he or she works, “If I have been able to successfully walk this path so can you, and I'm gonna show you how”.

Listen to what one student said about mentors:

“Each student, somewhere somehow, should be assigned to like a mentor. Sometimes kids do get demotivated and then they need a little push and they need a little encouragement. Sometimes their friends they want to help them, but they don't know exactly what to say. So sometimes I think we do need that mentor to keep us going.”

But if you have mentors, as some of your universities do, they must be trained. Training is important because mentors have to possess skills that most students do not have. At the same time, mentors have to be able to access university resources (e.g. counselling, health) because they will sometimes discover personal problems that dwarf their capacity to respond.

Learning communities and cohort programmes where students travel through the curriculum together as a group can also provide support. So too can student clubs and organisations. The very process of staying together as a group and sharing common experiences can provide significant social support. Here's the quote from a woman I interviewed in New York. She was 37 at the time, had three children and worked two jobs to pay for the family. She had a history of struggle and was unable to finish college after several attempts. Finally she found herself in a learning community where students constantly meet each other in and outside class.

Listen to what she said:

“In the learning community, we knew each other. We were friends; we discussed everything from all the classes. We knew things very, very well because we discussed it all so much. We had discussions about everything. It was like a raft running the rapids of my life.”

Without the support of her peers she said she would not have succeeded. This is not because the academics or support staff did not care for her. Rather it was her peers whose support helped her succeed. Whatever form social support takes, individual, group, or programme, what matters is that students gain a sense of belonging, that they matter to the university.

Though it is evident that most students need support sometime during their stay at the university, it is not always clear when they need support. That is why universities are developing “early-warning” systems that notify them when students need support, especially academic support in the classroom. To be effective, warning of students difficulties must be early. This is the case because students who struggle early in a classroom, or have problems in residence halls, will tend to get discouraged and begin withdrawing. The sooner you respond to their needs, the more likely it is you can help them out of those struggles. Here is where technological solutions, such as predictive analytics, can be helpful. So too can peer mentors. In many cases the first year seminar can also serve that purpose, especially those that have a peer mentor assigned to the seminar.

Speaking of the first year seminar leads to one final issue that is the focus of Diane Grayson's current work, namely the role of student development and the nature and timing of support. Given what we know about the developmental sequence that characterises the growth and maturation of traditional age students, it follows that support has to be timed to the changing needs of students as they progress through the university, not just during the first year.

A final thought. Effective student support does not arise by chance. It is not solely the result of good intentions. Rather it requires the development of an intentional, structured, proactive approach that is coherent, systematic and coordinated in nature.

Lecture 3: Promoting student classroom success

Student success, however defined and measured, necessarily arises in the classroom, one course at a time, overtime. Lest one forget, the object of student persistence is not merely that students complete their programmes of study, but that they learn while doing so. Learning is the object of our work, persistence is merely a vehicle to achieve that end. Though learning can occur in a variety of places outside the classroom, it is in the classroom experience that is central to student learning in their field of study.

Given our focus on student success, one can therefore ask what we know about the attributes of classrooms that promote success, especially during the critical first year of university. Not only do most dropouts arise in the first year, but the learning that arises in the first year is the foundation for subsequent learning in the years that follow. If students do not succeed in the first year courses, it is unlikely that they will succeed subsequently. This does not mean that learning in the second, third and fourth year do not matter. Rather it means that learning in the first year is critical to all that follows.

What then do we know about the characteristics of successful classrooms in the first year? First, expectations matter. Students need to know what to expect of their university studies and the courses in which they enrol. But not all students, in particular those who are first in their family, know how to navigate the university or navigate a university classroom. Though orientation may help as regards the university generally, student classroom expectations are framed not only by what instructors write in their syllabi, but also what they do in the classroom. Unfortunately, syllabi are not necessarily accurate portrayal of what is actually required. The result is that students have to discern what is expected during the course. Not all students are able to do so.

But while clear expectations matter, high expectations matter more. No one rises to low expectation. Yet many new students, in particular those who have had a history of academic struggle, do have high expectations of their capacity to succeed. Some are told they will never succeed; others come to have low expectation given their prior experience. Regardless, having or coming to have high expectations for oneself matters. Listen to this student as he talks about how an instructor's expectation affected his own:

“When I came in a certain teacher that would tell me, ‘You begin the first day in the class, you are starting out with an A; don’t lose your A.’ And that stuck with me. And even if I got a class where the teacher didn’t tell us that, in my mind I’m starting with an A. And I’m gonna fight to keep this A. And when that stuck, I took every semester as a challenge and entered every class: ‘I’m starting out with an A. And I’m not gonna lose it.’”

It is important to note that expectations can also be shaped by students' early experiences in the classroom. As Yeager and Walton of Harvard University have demonstrated, even small successful classroom experiences early in the first semester can enhance students' expectations for their success in the university.

High expectations are one thing; being able to reach those expectations is another. Thus the second attribute of effective classrooms, namely the availability of support, in particular academic support. Universities, of course, have a range of academic support programmes. But as noted in my prior speech, academic support is most effective when it is connected to and/or contextualised to the specific course in which students require support. One of the most common forms of contextualised support, that I described earlier, is supplemental instruction. Listen to what one student says about her experience in supplemental instruction:

“Well, thankfully, our college has a supplemental instruction programme in which a student who previously did the class and aced it, and knows this professor, this class, and you get together once a week, twice a week sometimes, and you go over the material that’s been discussed in class and anybody can come to it. So I got to meet a lot of great people doing that and we formed our own study group on top of that one just to help us out a little bit more, but it has really saved me big time.”

Not only did she get academic help, she and other participants formed their own groups. These often become little communities of their own in which students support each other. As you know, students working together typically do better than students working alone. The same phenomena occur in basic skills-teaching communities that we also discussed earlier. Students not only get academic support, they also gain social support from the peer groups in the learning community.

The two-year colleges in the State of Washington in the United States have gone one step further by embedding academic support within certain courses. Like many two-year college across the United States, a majority of students require some sort of academic support. In this case, technical and vocational courses are being co-taught by an academic support person and an academic. They work together so that the academic skills students have to acquire are embedded in their curriculum and are applied in the classroom.

A third characteristic of successful classrooms is the presence of assessment of student performance and its use to trigger academic support when needed. Universities have a range of assessments and that do sometimes trigger academic support. What matters, however, is not simply that support is available, but it's being provided earlier enough in the semester to make a difference. Thus the development of what are referred to as "early-warning" systems. The key term is "early." The earlier the better. This is the case because the longer students' confusion and problems in a course remain, the more difficult it is to help them catch up to coursework and succeed.

Given the challenge of getting faculty to provide early-warning, universities are beginning to explore technological solutions. Some of these are driven by predictive analytics as is the Signals system first implemented at Purdue University in the United States that relies on students taking their exams online. When they do poorly, the system generates a red light that alerts students, instructors and support staff that the student needs support. But such early-warning systems are not very useful if students do not avail themselves of support. Email warnings will not suffice. What is required is for instructors and support staff to be proactive in reaching out to the student urging them to get support.

Some academics are now doing in-class assessments of student learning. Eric Mazur at Harvard University, for instance, uses automated clickers to assess student learning during class. In this instance, an instructor who is, let's say teaching Physics, will stop during class and pose a question to students about the topic being covered in class. They will then have to choose one of several possible answers on their clickers, the result of which will immediately appear on the instructor's computer screen. Depending on the number of incorrect answers, the instructor will quickly review the material before going on. Other instructors, as I have, use the so-called "one-minute paper" technique that ask students, at the end of class, to identify writing, without identifying themselves, what was unclear during in the class, or what is referred to as the "muddiest point". After reviewing those papers, the instructor will identify three of the most often cited muddiest points. At the outset of the next class the instructor will review those points to make sure confusion does not continue. There is a wonderful book by Thom Angelo and Patricia Cross called

Classroom Assessment Techniques that is composed of multiple chapters each with a different assessment technique. It should be on the shelves of all instructors.

In either case, these techniques provide a very early warning to the instructor about learning in the class. More importantly, research has shown that such techniques, when used consistently, improve learning in the classroom. They do so for a number of reasons. First, students get immediate feedback so that confusion does not continue beyond that class to the next. Second, because, students do not identify themselves, they can honestly tell what they do not know. Third, if done consistently, students come to expect that they will again be asked what they do not understand. That in turn leads more students to actively question their learning during class, a reflective process we refer to as critical listening that also improves learning. Finally, the instructors get feedback about their teaching and therefore the opportunity to improve their teaching.

The fourth attribute of effective classrooms is engagement. Simply put, students who interact with faculty and students and indeed staff – when appropriate – in or around the classroom, do better in the classroom. Engagement matters. But some types of engagement matter more for learning than others. That which is most predictive of learning is active engagement with other students in the class in learning activities. It is, in part, because students who spend more time with their classmates in active learning also spend more time studying. But studying is not just sitting alone at one's desk, but also being actively engaged with others in trying to learn.

This is why increasing number of academics are turning to pedagogies such as cooperative learning, problem-based or project-based learning that require students to be actively engaged with their peers in classroom learning. The latter two pedagogies also require students to apply what they are learning together to solve problems or complete projects. More than anything else, application of what is being learned enhances learning.

Listen to what this student says about his experience in a classroom that employs cooperative learning:

“They give us group assignments in the classes where we have to communicate with other students and we can connect with them online through discussion boards and stuff like that and we have to do different assignments together as a group which has helped me, otherwise I wouldn't probably communicate with anyone else in my class.”

Notice that he said, “we have to communicate with other students”. My point is that such engagements do not arise by chance. They have to be intentionally structured into the very fabric of the classroom that requires students to engage. Then he said, “Otherwise I may not have ever talked to anyone else”. The same can be said of learning communities where students share two or more classes together and cohort programmes that require students proceed through the curriculum together.

Listen to another student:

“You know, the more I talk to other people about our class stuff, the homework, the tests, the more I'm actually learning ... and the more I learn not only about other people, but also about

the subject because my brain is getting more, because I'm getting more involved with other students in the class."

Notice that he equates learning to "getting more involved with other students in class". Given our knowledge of student development, it is not surprising that for many traditional-aged students social engagement is often a precursor to academic engagement. By contrast, students who are socially isolated often do not become academically engaged. Thus the power of pedagogies that require active learning with others.

He concludes his comment with, "I'm getting more involved with the class even after class." What he was referring to was that involvement in the class leads him and others in class to keeping talking about their learning even after class. They do so in part because social engagement is the glue that leads them to continue together after class. That is what he meant by "class after class". Study time expands because they have a social as well as academic reason to do so.

To summarise, classrooms that hold high expectations for their learning, that provide support for their learning, that use assessment and feedback to trigger support when it is needed, and require students to be actively engaged with their peers in learning, are classrooms in which students are more likely to learn and in turn succeed. And the more frequently students succeed in their courses, one course at a time over time, the more likely they are to persist and complete their programmes of study. Again, such classrooms do not arise by chance. It requires an intentional, structured and proactive course of action directed toward the goal of student learning, not simply course completion. It also requires collaboration among the academics and those support persons working with them. In the final analysis, though academics play the primary role in shaping classrooms, it proves that everyone's action, in particular support staff, can improve student learning.

Lecture 4: Improving institutional rates of student success

Student success does not arise by chance. Nor does improvement in institutional rates of student success. When you look at institutions or indeed programmes within institutions that are successful in graduating their students you will find they share one common characteristic, namely that they do not leave student success to chance. Their success is not a random occurrence. It is the result of an intentional, structured course of action that is systematic and coordinated in nature, involving many people across campus.

What does it mean to be intentional? First, it means an institution or programme has a long-term course of action with clearly-defined goals that can be measured so as to enable it to assess to what degree it is achieving those goals. It is too often the case that programmes are unable to clearly define the goals they are trying to achieve or the degree to which they are successful in doing so. My point is simple: before you begin, make sure you can clearly define the goals of your efforts, how you will measure those goals, and in turn determine whether you are successful in achieving those goals. There are many outcomes that are not easy to measure. Doing so may involve the collection of both quantitative as well as qualitative evidence.

This leads to a second point, namely the need for data. You need consistent, reliable data, quantitative and/or qualitative, to drive your decision-making. At the same time, you need to collect data to determine not only whether the programme is achieving its goals, what is known as summative assessment, but also data to inform you how the programme can be improved over time, which is known as formative assessment. As regards the former, you need to establish measures, typically quantitative, that are agreed upon by the various stakeholders whose support is needed for programme continuation. As regards the latter, formative assessment, you should establish a mechanism that allows you to hear the voices of students talk about their experiences in the programme. You should do so in a manner that would approximate, as best you can, what they would say about their experience as if you as an academic, support staff, or administrator were not present. In other words you need to need what they say about the programme, or institution for that matter, when they talk among themselves.

Being intentional also requires that you allocate the resources necessary to achieve the goals of the programme. Though resources are always limited, you still need to plan ahead and determine what resources, human, financial and educational, you need to ensure as best you can programme success. While doing so, do not underestimate the time and effort required for programme success.

What does it mean to be structured? It means that you establish a coherent organisational structure to guide your actions with clearly defined lines of responsibility and linkages to other parts of the university. In the case of a university action plan, institutions often establish an office, position (e.g. Dean of Student Success), or committee and assign to that entity the responsibility and resources to guide, coordinate and oversee the action of other programmes and people within the university. My point is simply this: you need to establish an office, position, or committee that has as its responsibility to oversee and bring structure to action. Without the assignment of responsibility and some degree of authority, structured action typically does not follow and coordination is very hard to achieve and maintain.

What does it mean to be systematic and coordinated? Systematic means that you attempt to address the various facets of student experience that shape the outcome you seek to achieve. Realistically you cannot address every facet of student experience. But you can and should attempt to shape those student experiences related to the sought-after outcome over which you already have some degree of control. As I argued earlier, if the intended outcome is greater rates of student success as defined by completion, it follows that you must address student classroom experience because classroom success is the building block on which student completion is built.

It follows that being systematic requires that you also bring together other offices, programmes, and/or people who are concerned with that part of the activity that you are not in order to coordinate their varying actions. Doing so requires having clear linkages of communication between the office, position or person who is charged with overseeing action with other offices, programmes or persons who have responsibility for related actions. Making institutional-level changes requires many offices, programmes and people working together for the same goal.

Let me share my own experience, some years ago, in directing a university-wide effort at Syracuse University to improve graduation rates overall and reduce the gap in graduation rates between white and African-American students. I was asked by the Chancellor of our university, president or rector in your system, to develop a committee to address the issue of university rates of retention and the retention of African-American students, most of whom with from low-income families. When I began, some 25 years ago, the overall graduation rate of the university was approximately 54% and the difference between African-American students and white students, primarily of European descent, was roughly 23% or approximately the national average. Currently our overall graduation rate is about 84% and the gap between white and African-American students is about 6% even though we continue to admit a sizeable percentage of low-income students. In fact, among private universities in the United States, Syracuse University now has one of highest proportion of low-income students. Our graduation rate improved even as we became more diverse. It is a noteworthy achievement.

But it took time and a long-term strategy that was structured and systematic in nature. My first step was to bring together all the key stakeholders in the university, those who were located at key leverage points within the university. Not just people who you know and like but those who have authority to get things done in different domains of action within the university (e.g. academic and student affairs, administration, residential staff, etc.). My goal in doing so was to establish trust and obtain their willingness to work together to achieve our common goal. It took over a year of meetings to do so before we moved to establish a plan of action. But once that trust was established, it was much easier to agree on a common course of action.

The first step was to obtain and in turn distribute across the university data on student progression and completion rates for students overall, for different groups of students, and for different programmes within the university. We had to establish a commonly agreed-upon set of facts that would serve as the foundation upon which all subsequent action could be judged. We shared information, we shared data, we exposed our dirty laundry. It was not easy, but that's a condition of collaboration.

We moved to implement a series of actions, often one at a time, and measure each year our progress in improving student success. Each year we would publish the same set of data. Each year we would host a meeting to share with the university community what was being done to improve student success. It was a slow process, but after 25 years of effort, we can say with some pride, we were successful. But, let me repeat, it took time and a willingness to keep working together. Too often initiatives start and stop and do not give themselves the time to see their actions take root.

I should point out that one of the important steps we took, very early in our efforts, was to address the traditional gap between academic and student affairs. We sought to break down the traditional silos that separated the two domains of action. We did not want to repeat the pattern where an action was lead either by one or the other, but not both. We were very conscious of the need for joint effort and the collaboration between academic and student affairs, especially those in academic and social support. Like a number of

universities, we sought to integrate the two within one office, one division so that they would meet together in the same space and over time learn from each other. In effect we recognised that significant improvement in university graduation rates also required some degree of reorganisation of our own efforts.

Implementing effective programmes

Let me now turn to the development of programmes to address issues shaping student success within the university. Once we identified a possible course of action, let us say a first-year seminar, we read as much as we could about them, we visited websites and, importantly, talked to other people who were running the same programmes at other universities that were like our own. Despite all we read, and all the websites we visited, it proved to be the case that talking to other people about their programmes was the most valuable. So let me urge you, if you are thinking about building a mentoring programme, for instance, like the one at Stellenbosch University, call them up and talk with them.

But when you talk to someone who is running a successful programme elsewhere, do not just ask them what they are doing; ask them how they got to do what they are doing now. The first question is about their current action. The second concerns how they implemented their programme in a way that allowed them to be successful. While it is important to know the attributes of a successful programme, knowing how to successfully implement it is more important. Poor implementation undermines any action however successful elsewhere.

Let me offer you several pieces of advice about successful implementation. First start small and pilot test. The larger the programme you start at initiation, the more managerial problems you have that may undermine the programme before it begins. Second, carry out both summative and formative assessment. The latter is especially important because you will invariably discover that regardless of how much you read and talk to other people about a programme, implementing a programme in your context will reveal issues that you did not consider.

Third, all programmes that succeed go through an initial three- to four-year period of slow growth as they assess and make changes before the programme “takes off.” This is sometimes referred to as the “tipping point” in programme development when one observes increased outcome effect over time. Unfortunately too many efforts stop before they get to that point. They do not give themselves the time it takes to succeed.

It turns out most studies of change over time, whether it's revolutionary change, voting patterns, school participation or programme development reveal that most improvement over time takes on the forms of an S-curve over time or what is known as a Sigmoidal Curve. At the outset change is small, but once improvement takes hold, typical three to four years into programme development, outcome efforts increase. Eventually, you reach what is known as the “ceiling” to any programme, namely that no one programme can address all the issues that impact the goal of the programme. There is only so much any one action can achieve. Hence the need for a systematic approach that addresses a range of issues shaping student success.

One reason why I have spent time on the character of implementation and the time it typically takes to generate noticeable improvements is to urge you to make it clear to those whose support you need to develop a programme or course of action that they should not rush to judge the actions successful before it has time to fully develop. This is but one reason why many actions stop because those whose support is needed reach the premature conclusion that the action is not working.

If you are getting resources from a foundation for the programme like CHE, Department of Higher Education, or your own institution, make sure they understand the time it takes to develop an effective action and urge them not judge your programme after just one or two years. In the United States, for example, a major national project to improve completion in our two-year colleges, called Achieving the Dream, has taken five to six years before it reached a tipping point. Why? Because the project is working not just with one or two colleges, but with many colleges across the nation each of which has its own particular set of circumstance. It takes time.

Sustaining action

It's one thing to begin an initiative to improve student success; it's another to ensure that it endures over time after its initial implementation. This is not simply a matter of the issue that we just discussed. Rather it is a function of the fact that too many programmes do not plan at the outset for their continuation over the long term. To do so you should plan for your replacement at the very outset of your work and recruit others to join you who might replace you over time.

Several thoughts

First, evidence matters. Unless the programme can demonstrate in a convincing manner that its impacts outweigh the costs associated with its operation, it is unlikely that any institution would continue the programme over time. What one hopes to achieve is that the evidence is sufficiently convincing that the institution is willing to support the programme and build the cost of the programme into their ongoing budget. In other words, it becomes part of what the institution does each year. What type of support does a programme have to obtain? Clearly you need administrative support because they control the purse strings of the institution. You may also need the support of your colleagues in academic affairs or student affairs whose work is part of the programme. In any case, you will need the support of students who are willing to participate in the programme, that is if it is voluntary. The question then is what type of evidence do you need to gain the support of these groups? For administrators, numbers of programme impact matter. For academics like you, it is evidence that it is possible, given their work lives, to join your efforts and doing so will yield positive results. For students, it is evidence that the programme helps them and is possibly fun. Whereas the first set of data can be presented by programme and institutional research staff, the second is best delivered by other academics who participate in the programme. For students, other students in the programme are best conveyers of evidence.

Gaining long-term support is important, but not sufficient to ensure programmes continue over time. Eventually those who initiate a programme get tired and move on. Therefore those who initiate a programme have to plan, at the very outset, for their eventual replacement. But to recruit replacements, the initiators have to be willing to let those who assume responsibility for the programme have a voice in how it will operate in the future. This typically means that programmes that sustain themselves over time invariably change somewhat as new people take responsibility for the programme.

Scaling up action

But of the programmes that endure, only a very small proportion scale up to serve a large proportion of students. Most remain boutique programmes that serve a relatively small proportion of students, in part because many began as targeted programmes serving a specific group of students. Generating significant improvement in institutional rates of completion, however, requires that programmes scale up beyond their initial target group. Doing so requires that the programme demonstrate its usefulness to many different segments of the university. Typically this is most likely in the first year of university study before students become separated into their majors. Perhaps it is not surprising that the one initiative that has scaled up is the first year seminar. It has because the seminar, while serving the same function, can be adapted to serve varying student needs. Again, data matter. That is to say that to scale up the programme has to demonstrate that it can help students of varying fields of students succeed in the first year. In the United States the evidence of the effectiveness of the first year seminar, when properly implemented, is widespread. In fact a number of universities now require all first year students to take a first year seminar.

Closing thoughts

As we close our conversation, it bears repeating that student success and improvement in rates of student success does not arise by chance. It requires intentional, structured and proactive course of action that is systematic in nature and coordinated in application. It requires collaboration among many programmes, offices and individuals. And it requires time and the willingness to see programmes through to their maturation. As you are part of a national effort to improve graduation rates across South Africa, a goal which is central to your country's future, it is more important than ever that you see this initiative through. Doing so will take 10 or more years of effort. In the United States, we have been involved for over 20 years in an effort to improve our graduation rates and we are not yet done. There is still much to do.

A final note. These efforts will not be easy; you will sometimes disagree and no doubt become tired. Remember this is not about you. Nor, in the United States, is it about me. It is about our students. Their future is our future. Their future is our nation's future. As you go forward please do not be reluctant to contact me if I can be of help. Thank you.

REFLECTIVE PRACTICE

Selected publications of Vincent Tinto

- 2013 Isaac Newton and student college completion. *Journal of College Student Retention*. 15, 1-7.
- 2012 *Completing College: Rethinking institutional action*. Chicago: The University of Chicago Press.
- 2011 Moving from theory to action: A model of institutional action for student success. In A. Seidman (Ed.), *College Student Retention: Formula for Student Success. 2nd Edition*. Westport: Greenwood Publishing.
- 2008 Learning better together: The impact of learning communities on the persistence of low-income students (with C. Engstrom). *Opportunity Matters*. 1, 5-21.
- 2008 Access without support is not opportunity (with C. Engstrom). *Change: The Magazine of Higher Learning*. 40, 46-51.
- 2008 Moving beyond access: College success for low-income, first-generation students (with J. Engle). *The Pell Institute for the Study of Opportunity in Higher Education*.
- 2000 Linking learning and leaving: exploring the role of the college classroom in student departure. In J. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 81-94). Nashville: Vanderbilt University Press.
- 1997 Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education*. 68(6) (Nov/Dec), 599-623.
- 1993 *Leaving College: Rethinking the causes and cures of student attrition* (2nd. edition). Chicago: The University of Chicago Press.

- 1993 Stages of student departure: Reflections on the longitudinal character of student leaving. *Journal of Higher Education*, 59 (July/August): 438-455.
- 1982 Limits of theory and practice in student attrition. *Journal of Higher Education*, 53(6), 687-700.
- 1982 Defining dropout: A matter of perspective. *New Directions for Institutional Research: Studying Student Attrition*. 36: 3-15.
- 1975 Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89-125.