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Non-traditional Students, Non-traditional Teaching: Pathways to Academic Success Include Resourcefulness and Adaptation Skills

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Resourcefulness and Adaptation Skills

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Abstract

Today, students entering higher education are diverse and include many students who in previous generations did not attend higher education. Research shows that these non-traditional students (e.g., first generation students, students with disabilities, older students) often feel less prepared for higher education (Reed et al., 2006; Stebleton & Soria, 2012; Zafft, 2008). An option for non-traditional students seeking entry to university or professional programmes is to upgrade their academic skill through college pathway programmes. Regardless of how one might come to higher education, being prepared in higher education involves resourcefulness and resilience. Highly resourceful students use a number of self-management strategies when faced with challenges (Rosenbaum, 1990; Kennett & Keefer, 2006). Akgun and Ciarrochi (2003) showed that while high resourceful and low resourceful students face similar academic stresses, there is a greater impact of that stress on the performance of low resourceful students. Indeed, resourcefulness is predictive of student belief in their academic abilities, university adaptation, and higher grades (Kennett & Keefer 2006; Kennett & Reed 2009). Yet, non-traditional students are frequently less resourceful, less adapted and less able to balance their multiple academic and non-academic roles (Reed & Kennett, 2016; Reed, Kennett, & Emond, 2015). Here, we examine the concept of resourcefulness and resilience in today's higher education classroom. We argue that, given the diversity of the student population, strategies should be implemented within programs, such as pathways programs, to increase student resourcefulness and resilience as both will have far reaching benefits in higher education and beyond.

Keywords: non-traditional students, resourcefulness, resilience, diversity, pathway programs, strategies

Non-traditional Students, Non-traditional Teaching: Pathways to Academic Success Include

Resourcefulness and Adaptation Skills

When asked what attributes students should possess upon graduation from higher

education, faculty members and higher education administrators easily agree that students should

be able to think critically, have academic knowledge, think analytically, use information literacy

skills, communicate well, work in teams, have professional skills, be creative, have the ability to

manage projects and act ethically. These attributes are often understood as intellectual and

professional attributes and the belief that these attributes will well prepare undergraduates toward

post-graduate success is long held (e.g., Heath, 1980). No doubt, such graduate attributes would

strengthen student ability to be successful in their chosen field and beyond. Yet, when reflecting

upon the students arriving at colleges and universities today, one wonders whether these

attributes are enough and whether students should be prepared for life beyond intellectual

enhancement and professional skills. Indeed, the diversity of students arriving at institutions of

higher education suggest that higher education is evolving. This evolution might necessitate that

graduates also possess resiliency, coping and resourcefulness skills, transferable problem solving

skills, an understanding of the effort needed to succeed and an ability to balance the many roles

that they will face in the dynamic work/life environment. Yet, such non-traditional attributes

appear to be in competition with traditional intellectual and professional attributes and are often

not considered in college and university curriculum. Why they should be considered is the focus

of this paper.

Greg's story:

Greg was placed in foster care and throughout his teenage years, he moved from home to home and school to school. For Greg, school was always about just scraping by. At the end of high school, he was working in retail jobs. At 19, Greg was reunited with his mother who suffered severe mental health issues. Greg became his mother's care taker and advocate. It was through this experience, that he learned he was well-suited and highly interested in psychiatric nursing. But Greg did not have the high school grades nor the appropriate courses to be considered by any university or college nursing program. He decided to enroll in the General Arts & Sciences Pathways program to upgrade

Susan's story:

Susan never felt the need to take high school too seriously. Her focus was about having a good time and if that meant skipping classes on a regular basis, so be it. Yet, when she made even minimal efforts she did surprisingly well, however, school was just not a priority for her. Upon graduation, Susan attained employment at a car assembly plant. Though making good money, she found the work to be extremely boring. Within a year, Susan started looking at her options. For the first-time ever, she began to consider potential career paths. Being a naturally compassionate individual, nursing truly resonated with her. She enrolled in the General Arts & Sciences Pathway Program.

Increasing Access to Higher Education

Not long ago, post-secondary students like Greg and Susan were far less common. In fact, today students arriving at colleges and universities are more diverse than in previous generations (Hornsby & Osman, 2014) because governments have encouraged better access to higher education for their populations (Ogilvie & Eggleton, 2011; Ontario Human Rights Commission, 2005; Prudence & Li-Tien, 2013; Rossi, 2010). Changes in access in most countries (such as upgrading through pathway programs) were to encourage employment in knowledge and technology industries (Rossi, 2010). Access to higher education results in better employment outcomes (Ontario Human Rights Commission, 2005), however, access and persistence in higher education varies among students due to barriers (e.g., financial, preparation) that are inherent in higher education systems (Prudence & Litien, 2013; Zhang, 2007). Regardless, the net result of changes in higher education is that more non-traditional students like Greg and Susan are attending. These non-traditional students differ from the traditional student (middle class, direct entry from high school, financially secure) in terms of some or all of

the following; their preparation for higher education, their financial stability, their socioeconomic class, their understanding of requirements, their first language, and their obligations outside of the classroom. Most often, in research, these non-traditional students are defined as students with disabilities, mature students, first generation students (those first in their family to attend university), students who work more than ten hours per week, and students who are parents. However, many students who are categorized as non-traditional have many of these qualities; that is, one student may be mature, first generation, lower socioeconomic status and have family responsibilities (Garrison & Gardiner, 2012). It is becoming increasingly clear that non-traditional students make up a significant and growing segment of the higher education population (Garrison & Gardiner, 2012; Haskins, 2016). In 2002, for example, the US Department of Education reported that 83% of students enrolled in higher educational institutions have traits (e.g., are employed) that might be non-traditional (Choy, 2002). Thus, understanding the experiences of non-traditional students will assist in curriculum development.

Stress and the Non-Traditional Student

Many researchers have examined the characteristics of non-traditional students and the barriers they face in higher education. These characteristics and barriers, while generalized over heterogeneous groups of students, do provide some insight to difficulties that non-traditional students face on campuses. Studies show, for example, that non-traditional students frequently report that they do not feel prepared for higher education or have less belief in their own abilities than do their peers; and their professors often agree (Reed, Lund-Lucas, & Lewis, 2006; Vogel, Fresko, & Wertheim 2007; Woodson-Day et al., 2011; Zafft, 2008). Further, non-traditional students state that they feel they do not fit into university, suggesting difficulties with both academic and social integration. For example, Collier and Morgan (2008) found that first

generation students and traditional students share many commonalities when it comes to misunderstanding around academic assignments in courses (e.g., basing effort on due dates rather than complexity) but non-traditional students also have difficulties in prioritizing goals of assignments and will focus on mechanics of the assignment (e.g., spelling and style) rather than content.

One of the roles of post-secondary education is to enable students to learn and operate in an environment where a certain degree of stress does exist. It can be argued however, that lack of preparedness amongst the growing non-traditional student base has increased the level of stress that today's students are experiencing. An APA study from 2014 reported that mental health issues found in college students is on the increase – and 1/3rd of students interviewed indicated they have difficulty *functioning* due to mental health issues (Novotney, 2014).

Coping with Stress Through Learned Resourcefulness, Academic Resourcefulness, Resilience and Academic Achievement

Learned Resourcefulness

Learned resourcefulness (sometimes referred to as general resourcefulness) is the ability of an individual to apply self-management skills when faced with challenges that block them from their goals in order to reduce stress (Rosenbaum, 1980). Under stress, individuals have both physiological and emotional responses that can distract them from meeting challenges. Applying self-management skills assists the individual in refocusing and resolving the stress-inducing challenge (Rosenbaum, 1980). Rosenbaum suggests that four skills are involved in being resourceful. First, resourceful individuals are able to employ positive self-statements (e.g., "I can cope") when faced with challenge and these statements assist in controlling physiological

and emotional effects of the stressor. Second, resourceful individuals have a repertoire of

problem solving strategies that can be applied to the current challenge. These strategies include

the ability to plan, define the problem, evaluate the alternatives and anticipate outcomes and

consequences. Third, resourceful individuals can delay small rewards (e.g., go out for coffee) in

order to focus on the present challenge. In other words, they do not avoid the challenge. Finally,

resourceful individuals believe that they can achieve a positive outcome to their challenge

through their own efforts (Rosenbaum, 1980). Rosenbaum and others argued that

resourcefulness is learned through life experiences (Leung & He, 2010; Rosenbaum, 1980) that

allow them to understand alternatives available to them when faced with challenges and to

understand the impact and influence of internal and external events (e.g., emotions and

circumstances) when under stress. Many researchers have shown that those high in general

resourcefulness are less prone to feeling helpless (Rosenbaum & Ben Ari, 1985), able to deal

with stress more effectively (Rosenbaum, 1989; Akgun, 2004), use more problem solving

strategies and less problem avoidance (Akgun, 2004), and students with high general

resourcefulness are better in dealing with academic stress (Leung & He, 2010). Further, Akgun

and Ciarochi (2003) and Kennet and Pettis (2001) found equal levels of academic stress in

students with high and low general resourcefulness, but stress had a greater impact on the

academic performance (e.g., grades) of those students with low resourceful skills. Kennett and

Reed (2009) found that students who do not persist in higher education have lower

resourcefulness skills.

Academic Resourcefulness

When learned resourcefulness is applied to the academic environment it is referred to as academic resourcefulness. Kennett and Keefer (2006) and Kennett and Reed (2009) refer to academic resourcefulness as the ability of a student to set appropriate learning goals, problem solve effectively by planning and evaluating alternatives when faced with academic challenge, think of academic challenge as positive, draw on academic resources such as the course outline, the library, student services, etc., understand and structure their studying appropriately for the challenge, and apply consequences (e.g., reward) for learning, including learning from their mistakes. These academic resourcefulness skills allow the student to cope with stress during academic challenges. Kennett and Reed (2009) examined academic resourcefulness in university undergraduates and showed that those who are more academically resourceful achieve higher grades and that those who were more academically resourceful are more likely to persist in higher education. Resourcefulness in students, based on persistence data, is likely related to student resilience.

Resilience

Resilience is typically considered a trait that moderates the negative effect of stress by promoting the ability to adapt to the stressor (Huang & Lin, 2013). Generally, it is the resistance to and the recovery from stressful events such as failure (Li & Nishikawa, 2012). Wagnild's (2009) review indicated that those who are not resilient are more anxious and depressed. Huang and Lin (2013) suggest that resilient people possess a number of traits that include the ability to problem solve, cognitive maturity, a belief in their own ability to control events and are positive in their approach. In other words, researchers suggest that resilient people may have high resourcefulness approaches.

Surprisingly, there are very few studies of resilience as related to academic outcomes. Gonzalez and Padilla (1997) showed in high school students that those who were most resilient had a greater sense of belonging and higher grades. Further, Allan, McKenna and Dominey (2014) reported that resilience was predictive of academic performance in female undergraduate students but not male students. Paul, Sriram, Subalukshmi and Mala (2015) found that resilience was positively related to student motivation to learn while Martin (2013) showed students who are less resilient are more likely to be disengaged from learning. Otto, Howerter, Bell, and Jackson (2014) found that students who have higher resilience also have a stronger feeling of well-being.

One of the most promising aspects of resourcefulness and resilience is that they are experienced based skills and thus can be learned. Given that some studies show a relationship between student outcomes (e.g., college adaptation, grades, persistence) and resourcefulness/resilience, it is possible that teaching these skills within the context of an academic course/program could improve student learning and assist them in dealing with their multiple roles (e.g., help them balance).

The Benefits to Teaching Resourcefulness and Resilience

As noted above, general resourcefulness, academic resourcefulness and resilience are experience based skills. There is ample evidence that both resourcefulness and resilience can be taught. Steinhardt and Dob (2008), for example, developed a four-week educational course that focused on aspects of resilience such as reframing stress, coping, taking responsibility and using social supports. Steinhardt and Dob found that students who participated in this course showed higher scores on resilience measures following the course. In addition, McWhiter and Burrow-Sanchez (2008) stated, based on previous research, that resourcefulness can also be increased

through conditioning, modelling and instruction. However, while experience may be related to
resourcefulness, Ceyan and Ceyan (2010) did not find, in college students, any change in
resourcefulness over a four-year period; this suggests that support is needed to develop a
repertoire of resourcefulness skills. The benefit to developing both resilience and
resourcefulness skill is that both have been linked, as noted above, to positive higher education
outcomes in terms of grades, persistence and adaptation. However, how these skills are taught
likely matters. Higher education instructors often treat the development of student skills (e.g.,
writing, self-efficacy, problem solving, resourcefulness) as a personal student responsibility,
outside the context of an academic course. Yet, Barefoot (2006) suggested that student skills are
better taught in the core curriculum. This idea might apply to both traditional intellectual
attributes and non-traditional attributes such as resourcefulness. Barefoot argues that if skills are
not taught within core curriculum, students see them as extras rather than core to their program
and thus will put in minimal effort to develop such skill. Crede & Niehoster (2012) show that
student grades are best predicted by academic adjustment and suggest that predictions are
strongest when the support for students comes from the institution and the faculty members.
Thus, the development of traditional and non-traditional attributes within the context of an
academic course (core curriculum) demonstrates to students that such skills are necessary for
student success.

Integrating traditional and non-traditional attributes into an academic course.
Students arrive on campus deficient in academic skills (Farquar, 2000) and students that are
offered remediation in higher education fare better (Kuh, 2008). Many universities offer
mandatory and non-mandatory skills courses. Research indicates that students enrolled in skills
courses show positive outcomes in terms of grades and retention relative to those who do not

participate (Pancer, Pratt, Hunsberger & Alistat, 2004; Bailey & Karp, 2003). These courses

target a variety of academic skills (e.g., reading, writing, information literacy) that are precursors

to the development of intellectual or traditional attributes (e.g., analytical thinking, critical

thinking, academic knowledge), but given that student engagement with their professors and

courses provides positive outcomes generally and has a higher benefit for those students most at

risk (Kuh, 2008), it may make most sense to develop all skills as part of the basic course

curriculum and beyond the traditional intellectual skills. Targeting some intellectual attributes

(e.g., critical thinking, academic knowledge, analytical thinking, writing) is part of most courses,

but teaching resourcefulness and resilience is not. How to implement these skills into a course

without taking away from academic content is a challenge, but may benefit all students.

Reed et al. (2009) and Kennett and Reed (2009) developed an academic preparation

course that included academic content as part of a core curriculum. This course was intended to

assist students with remediation while at the same time develop a repertoire of resourcefulness

skills. The course focused on academic content (psychology of learning) and presentations,

assignments, reading material and tests were created to help students with resourcefulness,

including the ability to set goals, problem solve effectively (plan and evaluate alternatives), think

positively about academic challenges, draw on resources such as the course outline, library, peer

support, and student services, structure learning through appropriate study techniques and apply

consequences for learning. Students were pretested on a number of psychosocial measures

including learned resourcefulness, academic resourcefulness, academic self-efficacy, their

attributions for failure, anxiety, impulsivity, and attentiveness and were post-tested at the end of

the course on these same measures. In addition, students' grades and persistence were also

followed one term later. Kennett and Reed found that students who were most disadvantaged at

the beginning of the course were most likely to make the highest gains in terms of decreases in

impulsivity, increases in attentiveness, reductions in anxiety, increases in academic self-efficacy

and a reduction in pessimistic attitudes towards failures. They also found that those who made

the greatest improvements in academic resourcefulness and showed the greatest declines in

impulsivity by the end of the course, were most likely to attain the highest second term grades.

Reed et al. (2009), in another study, entered students with learning disabilities into this

preparation course (course intervention) to determine how these students would fair relative to

students with learning disabilities who chose to have weekly individual skills/academic

interventions through the center for students with disabilities (high-intervention) and to students

with learning disabilities who chose not to participate in any regular organized interventions

(low-intervention). Reed et al. found that students with disabilities who took the preparation

course, and those who participated in high interventions showed increases in their academic

resourcefulness and self-efficacy. Further, those that took the course based intervention, relative

to the high-intervention group showed decreases in attributing failures to bad luck and increases

in their general resourcefulness. Finally, those in the course intervention group had higher Grade

Point Averages (GPA) at the end of the academic year than those who did not receive

interventions.

Reed, Kennett, Lewis and Lund-Lucas (2011) also compared the post-course

performance of the students with learning disabilities to their non-disabled peers and found that

both groups of students had similar performance on psychosocial measures (learned

resourcefulness, academic resourcefulness, academic self-efficacy, their attributions for failure,

anxiety, impulsivity, and attentiveness) at the beginning of the course. Further, both groups of

students increased their attentiveness, academic and general resourcefulness and their academic

self-efficacy by the end of the course. Yet, students with learning disabilities showed greater

gains in self-efficacy relative to their non-disabled peers and both groups attained similar second

term grades. In other words, benefits were found for both the traditional and non-traditional

students taking the preparation course.

These studies reveal that non-traditional attributes can be taught within the context of an

academic course and that they benefit all students, but may particularly benefit non-traditional

students who are often seen as higher risk for failure and lack of persistence.

While integrating non-traditional attributes at the course level shows promise, adding

attributes at the program level as part of the program expectation might result in better adoption

by individual course instructors. One program type that would particularly benefit from a

program level design that includes these non-traditional attributes is Pathways to Higher

Education programs. These programs particularly target non-traditional students.

Developing Academic Skills: Pathways to Higher Education

Pathway programs, also known as bridge or foundation programs, are academic

preparatory courses for students like Greg and Susan who are seeking the

credentials/training/skills necessary to receive admission into higher educational institutions

(Clark & Gzella, 2013). From a public policy perspective, the objective of most pathway

programs is to provide the educational opportunities to populations who would benefit from

specialized programs designed to enhance their enrollment chances in college or university.

Ultimately, this leads to enhanced employment prospects within these targeted sectors (Deloitte,

2012).

Variations of pathway opportunities are offered at educational institutions world-wide.

For example, Great Britain possesses the highest number of preparatory programs per capita in

the world, known as the Access to Higher Education Program or HE for short (Clark & Gzella,

2013). In Mexico, a recent emphasis and growth in education has necessitated development of

extensive preparatory programs (for example, bachillerato/preparatorio; Clark & Monroy, 2013).

There are a wide variety of higher education preparatory programs in the United States,

including American community colleges which essentially serves as a pathway for many

students to transfer to 4-year university programs (Long & Kurleander, 2009).

A representative pathway initiative offered at the Ontario college level, is the General

Arts and Science (GAS) program. It serves to prepare students for entry into highly competitive

or challenging programs (Ontariocolleges.ca, 2016). GAS programs can offer a general

curriculum or focus upon technology, business or health, leading to specific higher education

studies. For example, the pre health program can lead to acceptance into the Bachelor of Science

Nursing stream at university or Practical Nursing (PN) at College.

Regardless of the area of specialty, similar to most other pathway programs, Ontario's

GAS initiative focuses upon three main objectives. It is designed to enable the student to:

1. Gain a better understanding of an area of study to help them decide if they are truly
   interested in pursuing it at the higher education level.
2. Achieve the academic credentials and grades to gain entry into the actual higher
   education program.
3. Acquire the skill set to excel in a higher educational setting.

Pathway programs, by their mandate, are designed to service the needs of the non-traditional

student as we have defined it in this paper. These students have taken an indirect route from

high-school to higher education studies. They tend to be older, for example Durham College's

Pathway's Efficacy study found only 11% of students in their GAS program to be under 21 years

of age (Durham College, 2014). Choy (2002) found that older students more frequently have

work and family commitments to balance with school, and for many of these students, the idea of

embarking upon a higher education was not something they had thought about or prepared for during their high school tenure.

Like Greg and Susan's stories, the reason students do not pursue higher education varies and often can be complicated. For many, their high school academic performance (either perceived by the student or advised by faculty) was not considered to be at a level required for success in the higher education environment (Looker, 2002). Others, simply preferred or needed to move directly to the job market only to find limitations for advancements. Further, many were not clear which career paths to choose so decided to wait until they figure out their direction. (Horn, Cataldi & Sikora, 2005).

The background and circumstances of pathways students and the general objectives of pathway programs are clearly in line with each other. And to a large extent, research shows that the target sector receives clear benefits from completing a preparatory program (e.g., Durham College, 2014; Nunez, 2009; Percival, DiGuiseppe, Goodman, LeSage, Hinch, Samis et al., 2015). It is also clear that two of the three objectives, listed above, of most preparatory programs are readily met.

Greg's Pathway Experience:	Susan's Pathway Experience:
Greg entered the program with a great amount of determination. He saw value in the material that he was learning and he worked hard.	*Susan applied herself for the first time ever in school. She was surprised at just how much she enjoyed the subject matter and how easy it was to understand the nursing material presented in pathways courses. Susan ended up receiving the highest point average in the entire Program.*
Though he had to juggle many family and work commitments, he managed to earn the highest grades he had ever received in school.	
Greg received acceptance into a university Nursing Program.	*Susan received acceptance into a university Nursing Program*

Consistent with Greg and Susan's story, preparatory students gain a better understanding to help them make an informed decision about the particular program that is best suited for them (Objective 1). A survey of recent GAS graduates from Durham College reported that a major benefit was receiving "academic goal clarity and career clarity" (Durham College, 2014). That same study found that 73% of pathway student graduates received admittance into their target program college or university program. In other words, pathway programs such as Ontario's GAS program appear to provide students with the academic credentials to gain entry into their target college and university programs (Objective 2). Further, studies comparing GPA of preparatory to non-preparatory students found that the academic performance of these two groups appear to be equivalent (Durham College, 2014).

Greg's University Experience:

Greg was very surprised just how different the learning expectations were between college and university (especially in terms of the depth of knowledge and independent learning that was required).

He came up with new strategies to better fit these new demands, though he is not achieving grades as high as he did in the pathways program, he is making his way through his first year of nursing,

Susan's University Experience:

Susan was very surprised just how different the learning expectations were between college and university were (especially in required depth of knowledge and independent learning).

By week three, Susan left the program and has returned to the car assembly plant.

Like Greg and Susan's experience, the aspect of preparatory training which has proven to be more challenging is the third objective of providing the skill set to excel in post educational programs. Durham College focus group data of pathway graduates who successfully gained admission into their target program, indicated that their pathway program would have benefitted from more rigor to prepare for the increased workload and higher expectations set by their target program (Durham College, 2014). Percival et al. (2015) found pathway graduates would have benefitted from an enhanced focus on communication and critical thinking skills.

Each pathway program emphasizes the resources available to be successful. Most programs require students to take one or more communications courses, for example. We would however argue that there might be a disconnect between familiarizing students with resources available to them and assisting the student in developing their own resourcefulness skills. Second, the focus in most preparatory programs is to provide the students with the academic credentials and high enough grades to get into their target program. As a result, the level of academic rigor of preparatory programs might not be as high as they could be. Though these students may for the first time be learning that they can actually be successful in an academic setting, providing high academic rigor allows the student to learn from the experience of academic disappointment and develop the resiliency skills to overcome academic challenges. We believe pathway programs that can truly assist the student with developing their own resourcefulness and resiliency training that will lead to a high degree of future academic and career success. The challenge for higher education institutions is to embed resourcefulness and resiliency into higher education curriculum.

Adding Non-Traditional Attributes: What Type of Activities Would Help All Students?

Intentional curriculum design requires that the learning objectives of a program are clearly defined, and learning outcomes are articulated. In Ontario, defining learning objectives and articulating outcomes are mandated through government (Ontario Council of Academic Vice Presidents, 2005). Typically, program outcomes are consistent with intellectual graduate attributes (e.g., ability to critically think, communicate, work in teams, be analytical, etc.). Here, we are suggesting that further non-traditional attributes are needed to assist students to cope with academic challenge and persist in higher education. We suggest that program administrators and instructors target three areas where non-traditional attributes of resourcefulness and resilience

could be fostered; within course lectures, assignment design and test design. While a full

discussion of strategies to foster resourcefulness and resilience is beyond the scope of this paper,

for each of these areas, below we provide a few examples within each area.

Resourcefulness and Resilience Skills

Intentional course and program design requires an understanding of the end goals for the

course. For example, if one of the goals is that students are resourceful and resilient, one first

must review what behaviours would indicate resourcefulness and resilience. If we want students

to be academically resourceful (e.g., cope with the stress of academic challenge) we need them to

- set appropriate learning goals,
- problem solve effectively by planning and evaluating alternatives
- think of academic challenge as positive
- draw on academic resources
- understand and structure their studying appropriately for the challenge,
- and apply consequences (e.g., reward) for learning, including learning from their mistakes.

And if we want them to be resilient we need them to:

- have resistance to and the recovery from academic disappointments.

If I am designing a course or program, I need to consider what I can do within the

academic context to promote resourcefulness or resilience. For example, if my goal is to have

students set appropriate learning goals, I might articulate in the first class what those goals are

(e.g., my expectation for what they will learn) and encourage students to make steps towards

those goals by providing learning checks (e.g., non-graded in-class questions they are required to

answer), have a step-wise assignment where feedback is provided at each step (and they must

address all feedback), and have small value quiz as we scaffold them towards the learning goal.

I might also teach them early about resiliency by having moderately challenging small value

quiz, so they can learn resiliency when disappointed with a grade and restructure their studying.

Articulating and evaluating program/course goals may not seem new to many readers, but there is often a tendency of instructors to focus on course content rather than program outcomes; in part because many instructors are only involved in one or two courses within a program, so they may not know or understand the desired outcomes. Here, we suggest rather than focusing only on the academic content of each course, the instructor be informed by the program of the desired program outcomes and how their course contributes to each outcome. The instructor can then be encouraged to consider how to get to each outcome, how to evaluate if their students have met an outcome and what to do if students are unable to meet it (e.g., assist the student in accessing supports inside (e.g., peers) and outside (e.g., student services) the classroom). In addition, here, we also argue that implementing methods to include non-traditional outcomes is needed, especially when educating today's diverse students; because when students are not resourceful or resilient, they may also not persist.

We have argued there are benefits for emphasizing academic resourceful and resiliency skills at not only the pathway level, but throughout college and university programs. This might make the difference for the many Gregs and Susans, not to mention the more traditional student in our class, all of whom could benefit from effectively applying academic stress reducers, to help them to achieve their highest potential.

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