STUDENT SUCCESS PLAN: CONSTRUCTING AN EVIDENCE-BASED STUDENT SUPPORT SYSTEM THAT PROMOTES COLLEGE COMPLETION

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Gateway to College National Network (GtCNN) implements educational innovations in partnership with colleges and K-12 school districts across the U.S. We help build institutional capacity to better serve students so that more young people attain high school and college credentials. Gateway to College programs serve young people (age 16-21) who have left high school without a diploma or are significantly behind in credits for their age and unlikely to graduate. The college-based program allows students to complete their high school diploma requirements while simultaneously earning college credit toward an associate's degree or certificate. GtCNN also has developed a second innovative program, Project DEgree, which helps underprepared college students (age 18-26) accelerate their progress through developmental education and to transfer-level courses.

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INTRODUCTION

WHAT IS THE STUDENT SUCCESS PLAN (SSP)?

In 2003, Sinclair Community College in Dayton, Ohio began the development of a case management software program, Student Success Plan (SSP), to increase retention and graduation rates (http://www.studentsuccessplan.org). SSP helps an institution identify and monitor groups of students throughout their academic career and provides web-based support for students so that they can take more responsibility for their own academic success. Additionally, it supports an institutional process that facilitates holistic student support and bridges communication gaps among faculty, advising and counseling professionals, and students.

Because SSP was designed by student service professionals for student service professionals, it boasts an inherent flexibility and accommodates a variety of processes and workflow challenges. SSP is currently offered to institutions in an open source platform in an effort to reach more colleges and is easily adaptable, allowing for relevant changes to be made to customize the software.

SSP is a comprehensive case management tool that supports a culture of engagement, builds structured pathways for progressing through an academic program, and supports holistic student support. The components of SSP include:

- **Student Intake** –An electronic form where students identify academic goals and challenges
- **Action plans** –Tasks and timelines for students to overcome identified challenges to success
- **Journals** – Note taking for advising and counseling professionals
- **Early Alert** – A system to connect faculty to student advisors and coaches
- **My Academic Plan (MAP**) – Documents course advising and a student's pathway to degree completion
- **References Guides** – Connects students to campus and community resources

Case management can be defined as the coordination of services that a college provides to its students. But SSP provides more than just coordination; it encourages a collaborative process that includes assessment, planning, support, facilitation, and advocacy to help students thrive in the college environment. The collaborative nature of a good case management system ensures that all faculty and staff who provide services to the student can assist the student in navigating the institution and work toward their academic goals. Additionally, effective college advising and case management has been shown to have positive effects on retention (King, 1993; Lotkowski, Robbins, & Noeth, 2004).

SSP initially drew on work in the areas of student engagement (Astin, 1999; Karp, Hughes, & O'Gara, 2008; Tinto, 1975), structured pathways (Fonte, 1997; Karp & Bork, 2012; Scott-Clayton, 2011), and student support theories (Center for Community College Student Engagement, 2012; Kuh, Kinzie, Schuh, & Whitt, 2010; Tinto, 1975). These tools help define how an institution engages with a student. In this paper, we discuss each of these three academic areas and we illustrate how practical applications of SSP are grounded in these philosophies. We conclude with recommendations on how these concepts can be measured and how the SSP technology can be utilized in that process.

Prior to addressing the concepts of engagement, structured pathways and student support theories, it is important to understand two foundational concepts: *thriving* (Bundick, Yeager, King, & Damon, 2010; Lerner, Brentano, Dowling, & Anderson, 2002; Lerner, 2005) and the *ecological framewo*rk (Bronfenbrenner & Morris, 2007;

Bronfenbrenner, 1979; Evans, Forney, Guido, Patton, & Renn, 2010). Together, they help us define what a student needs from an institution and provide the foundation to why we theorize that a comprehensive case management system will help student persistence and graduation rates.

FOUNDATIONAL CONCEPTS

Understanding what students are facing as individuals when they enter the college will help an institution determine what will best help their student population. Students do not attend college in isolation. They are affected by their prior school experiences, their family and community, and the college itself. This is why we take a broad, holistic view of college success that includes academic success as well as individual development (Kuh et al., 2010; Schreiner, 2010) and concur with Chickering and Gamson (1987, p. 3) that "An undergraduate education should prepare students to understand and deal intelligently with modern life." We argue that colleges should also contribute to a student's successful development or thriving (Lerner et al., 2002) in order to maximize academic success and degree completion.

Thriving & Positive Relationships

In preparing students to successfully negotiate adulthood, the college experiences not only foster academic and technical skills, but also intentionally address individual growth. Lerner's (2005) positive youth development framework argues that positive relationships are one of the main ways that individuals can thrive. Thriving is defined as individuals who are "involved over time in such healthy, positive relations with his or her community, and on the path to…'idealized personhood' (Lerner et al., 2002, p. 15)." Idealized personhood describes individuals who contribute to society, their own lives, and others (Lerner et al., 2002). This means that to support students thriving, the college experience needs to include a community that cultivates positive relationships with other students, faculty, and staff members. This will foster student exploration into what idealized personhood means for them. On the college campus individual thriving does not happen in isolation of academic achievement in the classroom.

In this paper, we demonstrate that many of the non-cognitive factors identified as critical to student success, such as self-regulation, self-efficacy, sense of purpose, and academic perseverance (Damon, 2009; Duckworth, Grant, Loew, Oettingen, & Gollwitzer, 2011; Farrington et al., 2012; Lotkowski et al., 2004) are equally important for an individual to thrive (Bundick et al., 2010; Scales & Benson, 2005). Students on the college campus span a wide age range and come with diverse experiences and, consequently, students are at different developmental stages. In addition, we know some students join the college community easily, while others struggle. The field of psychology establishes that individual behavior can change (Farrington et al., 2012; Lerner, 2006). Thus, the systems and support in a college setting can, and should, facilitate this behavior change for students who struggle and encourage development so that more students are successful both in college and in their communities. As mentioned above, one of the most important conditions for young people to thrive is positive and sustained relationships between youth and adults (Gestsdottir & Lerner, 2008). On the college campus, this means relationships with advisors, counselors, and faculty mentors (Kuh et al., 2010; Tinto, 1997). Using SSP is one way to encourage these relationships and other processes that provide broad support for students on the college campus.

Ecological Framework

Bronfenbrenner's (1979) ecological framework reinforces that individual development is influenced by interactions with others and the world around them. Applying the ecological model to college students reveals the complexity of their lives and needs beyond academic support (Arana, Castaneda-Sound, Blanchard, & Aguilar, 2011; Evans et al., 2010; You & Sharkey, 2009). Bronfenbrenner (2000) argues that microsystems (family, peers, school); exosystems (neighborhoods, state policies, politics, media); macrosystems (culture); chronosystem (historical context); and the mesosystems (connections between all these systems) should all be considered to understand

human development. For example, a new community college student is engaging closely with his or her family, job, and other students (microsystems). Students are also affected by college policies and the general economy in both direct and indirect ways (macrosystems). The mesosystems, or connections, exist where systems or contexts overlap. Paying attention to these multiple layers of influence on human development and the ways in which mesosystem linkages can bolster student success is important.

How SSP Supports the Foundational Concepts

SSP, and the processes it supports, fosters student success by taking into account a student's unique ecological context. SSP encourages student support professionals to assist students in identifying strengths and challenges and builds on their strengths to be successful as college students. When advisors acknowledge strengths and challenges outside of academics and how those strengths and challenges relate to college success, advisors are helping students thrive by focusing on each student's microsystems (i.e. family, work, school) and the mesosystems (connections between systems) that will best help the student succeed. For example, SSP's intake feature brings to light a student's challenges so that an action plan can be created to connect students to resources on campus and in their community that will help them overcome these challenges.

Additionally, the action plan highlights the students' academic goals and strengths so that the message of the action plan is positive. These challenges and strengths may or may not be academically related. As Bronfenbrenner (1979, 2007) and others (Arana et al., 2011; Evans et al., 2010; Kuh et al., 2010; You & Sharkey, 2009) discuss, individuals develop within these multiple systems, so challenges in one may interact with or create challenges in others, affecting the way students negotiate the college campus. These tools allow student service professionals to address the whole student rather than just academic issues.

The MAP component of SSP addresses academic success and helps define the students' academic program by providing clear expectations for the academic pathway needed for successful completion. A student's advisor or coach personalizes this map so that it is reflective of the student's work schedule or other life needs, thus, being prescriptive but not stringent. The conversations that advisors have with students during this process continue to build the foundation of a strong positive relationship between the student and advisor. The personalization of the map requires the advisor to listen to the student's interests and concerns. It may also include the continuation of addressing challenges within the student's microsystems beyond school (i.e. work, family, and neighborhood). For example, if a student works full time, courses need to be offered at specific times in order for the student to be able to attend. An advisor who is able to understand and adequately address the concerns of a student when their job, family, and school life intersect is more likely to create a plan that meets a student's needs. Furthermore, the student feels heard, and sees that successful completion is possible.

Using the journaling and early alert features builds strong connections within the student's support system at the college by breaking down the traditional divisions between faculty and student support service professionals. Journaling, and the stronger connections it facilitates between staff members, often happens without student awareness. While students may not know how information is being shared, they should feel that their teachers and student support service professionals are in sync and giving them consistent information. The early alert feature pulls the team together in a more visible way to students. An example of how this team approach may work would be a faculty member recognizing that a student could benefit from the tutoring services offered at the college. Faculty members would indicate that they recommend tutoring and they would also tell students that they are alerting an advisor so the advisor can assist the student. The advisor can contact tutoring and help facilitate a meeting or have tutoring reach out to the student directly. The additional support provided to the student will hopefully ensure that the student accesses the resources that he or she needs to be successful.

In order for this to all happen successfully, it is important to note that while SSP provides the structure and process for case management and student support, the student support team still needs to engage and collaborate. It is also important that college faculty and staff understand that their role in student success goes beyond delivering content knowledge. Their role includes building relationships and helping a student navigate the college system because students are more likely to be successful when they find support within the classroom, their department, the school, or the program (Arana et al., 2011; Kuh et al., 2010; Lotkowski et al., 2004; Pascarella, 1980; Wood & Turner, 2010).

ENGAGEMENT

DEFINITION

The concept of engagement reflects both the individual and the institution. For the student, this is a multi-dimensional construct that includes three major elements: behavioral engagement (participation, attendance), cognitive engagement (investment in learning, self-regulation, learning goals), and emotional or affective engagement (sense of belonging, attitude toward learning/institution) (Fredricks, Blumenfeld, & Paris, 2004; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Kuh et al., 2010).

Engagement also refers to the ways the institution interacts with the student. Institutional student support processes can strengthen or constrain all three of the student dimensions. In this paper we use Kuh's definition of engagement, "**student engagement represents both the time and energy students invest in educationally purposeful activities and the effort institutions devote to using effective educational practices"** (Kuh et al., 2008, p. 5), because it broadly includes the multi-dimensionality of the construct and includes both student and institutional roles in engagement. We then further define *educationally purposeful activities* to include coursework along with any activities that help students develop their non-cognitive or metacognitive (Conley, 2013) skills and activities to develop critical thinking and problem-solving.

RELATIONSHIP BETWEEN ENGAGEMENT AND ACADEMIC OUTCOMES

There is a long history of research investigating engagement and student success in the college setting (Bean & Eaton, 2002; Bean, 2005; Kuh et al., 2008; Tinto, 1975, 1997). Engaged students have been shown to have better academic outcomes and better persistence (Kuh et al., 2008, 2010; Pascarella & Terenzini, 1980; Pascarella, 2005). These effects are stronger for students who have risk factors for success, such as students with poor academic preparation, students from under-resourced communities, and minority students (Cruce, Wolniak, Seifert, & Pascarella, 2006; Kuh et al., 2008). It should be noted that this relationship is complex, and may not be linear and universal (Hu, 2010).

Student engagement is a prominent component in Tinto's theory of departure, which he developed in his work to identify why students drop out of college. This theory is the basis of much of the work in higher education to better serve students. Tinto's concepts of institutional and social integration are well regarded and help us understand the complexities of student engagement (Braxton, Sullivan, & Johnson Jr., 1997; McClenney, 2007; Napoli & Wortman, 1998; Pascarella & Terenzini, 1980). Tinto posits that students who are more integrated within the college campus and engaged with college-going individuals within their social circle are more likely to persist. Integration can happen in and outside the classroom (Kuh et al., 2008; Tinto, 1993). Supporting student success at an institutional level could include facilitating activities that integrate students onto the campus; providing opportunities to apply what they learn; broadening their world perspective; or engaging with faculty in informal ways. This is consistent with Bronfenbrenner's (2007) and Lerner's (2005) theories that support relationship building in order for an individual to thrive.

For community colleges the classroom is critical for successful integration, as many students may only be on campus for class (Barnett, 2010). Research indicates that students who experience faculty validation have better persistence (Barnett, 2010; Terenzini et al., 1994). The concept of faculty validation for students includes being known, receiving caring instruction, perceiving a respect for diversity, and having access to mentoring (Barnett, 2010). Barnett (2010) argues that validation may be a precursor to integration. Thus, faculty members have the unique opportunity to connect with students in a way that will contribute, either positively or negatively, to their identity as college students (Lundberg & Schreiner, 2004; Pascarella, 1980). This explains why colleges that provide

opportunities for formal and informal interactions between faculty and students have seen better persistence outcomes (Barnett, 2010; Pascarella, 1980; Wood & Turner, 2010). These interactions can be small, such as a faculty member greeting each student by name or engaging in conversation with students while waiting for class to begin. They can also be more meaningful, like following up with a student who appears distressed in class.

In addition to faculty members, how every staff member at the institution engages and talks to students about their academic pursuits contributes to how students perceive themselves and their place within the institution (Kuh et al., 2010). Therefore, it is essential that someone on campus demonstrates that they care, especially for students who may not come to college feeling confident about where they fit in (e.g. non-traditional students, first generation students, minority students) (Terenzini et al., 1994). Depending on their cultural background and experiences, different students will find validation and sense of belonging in different places on campus (Hurtado & Carter, 1997; Johnson et al., 2007; Strayhorn, 2008). Some students may find it in the classroom, while for others a connection to campus clubs or organizations will solidify their membership in the campus community.

Many students who question their role as a college student are also vulnerable to stereotype threat. Stereotype threat affects students who identify with groups that are associated with negative preconceived notions about their academic performance regardless of the student's actual academic ability. Awareness of the stereotype creates anxiety about confirming the stereotype and letting their group down, resulting in poor performance which students then attribute to the stereotype (Steele & Aronson, 1995). There is extensive research demonstrating the connection between stereotype threat and academic achievement (Aronson, Fried, & Good, 2002; Syed, Azmitia, & Cooper, 2011). These students need more support to succeed. Along with extra support from advisors and mentors, one way to minimize stereotype threat is to bolster students' identification as college students (McGlone & Aronson, 2006). Fostering engagement with the college campus naturally reinforces the student's role or self-identification as a college student and minimizes vulnerability to stereotype threat.

Taken together, the research on sense of belonging, validation, and stereotype threat reinforces the need to create opportunities for college community membership and validation of each student's rightful place on campus as ways to bolster academic success. Engagement on campus is important for all college students. Whether the focus is on academic or social integration or ways to bolster student's identification as a college student, engagement is a bidirectional process that reflects the institution and the individual student (Tinto, 1975). As college faculty and administrators consider engagement, it is important to identify the opportunities provided to students to engage with each other and faculty. Making students feel welcome and demonstrating that someone on campus cares are the first steps to helping students engage with campus and provide support for them to thrive and ultimately improve their academic outcomes.

HOW SSP SUPPORTS ENGAGEMENT

Advisors and coaches can influence student and institutional engagement across all dimensions. All the Student Success Plan (SSP) features are designed to support institutions and advisors in engaging students more fully. The most obvious of these are the resource list, student intake, and action plan. The resource list gathers together campus and community resources to help students with needs such as childcare, housing, and transportation. Providing these resources not only supports students in engaging in campus activities, but shows students that the institution cares.

The student intake and action plan work hand in hand with these resources. Students can work through a set of questions on their own that will then facilitate a meaningful conversation with the student's advisor or coach around their strengths, challenges and academic goals. When used well, advisors can reinforce a college student's identity with the strengths, while the challenges will link up to concrete resources to help overcome obstacles to

success. These can be taken a step further to create an online action plan for the student so they have ownership of their own success. Most importantly, it creates a process that provides the advisor an opportunity to listen to a student's concerns and respond in a way that is individual to the student's needs. In addition to the traditional use of resources, an advisor or coach can free write an action item into the plan that is unique to the student. For example, to assist study patterns and help the student come to campus for more than course work, they could task the student with going to the library one time a week. Similarly, if the student is looking for more engagement with other students with similar interests, the student can be tasked with signing up for an intramural team or service opportunity. While these resources may not meet immediate needs such as tutoring or housing, they do provide structured opportunities for students to engage with peers and increase their social integration. These features speak directly to Tinto's (1975, 1997) argument that an increase in the amount of time a student spends on campus with other college students will ultimately increase his or her likelihood to persist.

On the institutional side of engagement, it is important for faculty and advisors to have appropriate formal and informal interactions with students (Lundberg & Schreiner, 2004; Pascarella, 1980; Wood & Turner, 2010). As mentioned above, the resources, student intake, and action plan facilitate a formal conversation with a student during their first advising session. However, all the SSP tools are intended to increase engagement as well as document these interactions. Journaling is the primary feature to document these interactions. Documentation allows advisors, coaches, faculty and all staff with the appropriate credentials to better remember a previous conversation while, simultaneously, providing a platform for all staff members to have the information regarding a student. Not having to revisit conversations that have previously occurred and sharing that information provides the opportunity for a higher quality of interactions between students, advisors, and faculty. A faculty or staff member who reviews notes before speaking with a student will be better informed and have the best response to help the student, but will also indicate to the student that the faculty member knows who they are which speaks to Barnett's (2010) work on the importance of validation.

The MAP (My Academic Plan) feature helps document the ideal pathway for a student to succeed in their college program. This tool gives the student ownership of their success each time they register for classes and is created and personalized with an advisor. The MAP sets up appropriate goals and expectations for a student. If the student misunderstands the length of time that it will take to degree completion, or the ramifications of dropping a course that is part of a sequence, it can cause frustration and hurt the relationship that has been built with advisors and faculty. The MAP can be seen by faculty members who may assist in advising a student in the classroom. This allows everyone to have the best information possible. This feature can also be brought into the classroom in a more formal way, as part of the college success course curriculum, further connecting professional staff, faculty members and students around the common interest of student engagement and reinforcing that a unified team exists who cares about the student and his or her success.

Lastly, the early alert feature in SSP allows faculty and advisors to work together to engage students who are struggling. Students who have been absent can be called and encouraged to participate in class and students who are struggling academically can be connected with tutoring services. But, it is also flexible enough to address a multitude of concerns. For example, if a student mentions they have day care trouble, a problem paying for books, or issues with transportation, the system is designed for faculty members to send alerts to help the students get the resources they need in order to be successful. The early alert system allows for easy communication between faculty and advisors creating another way to engage with students, connect them to campus, and show that someone cares.

MEASURING ENGAGEMENT

Student engagement is a multi-dimensional construct and a variety of scales have been developed to measure it. Handelsman and colleagues provide an overview of a course-related measure (Handelsman, Briggs, Sullivan, & Towler, 2005). There are several surveys designed for colleges to understand the aggregate engagement on campus including: Community College Survey of Student Engagement (www.ccsse.org), College Student Experiences Questionnaire (http://cseq.iub.edu/), and the Student Engagement Instrument (Appleton, Christenson, Kim, & Reschly, 2006).

Many campuses take part in the assessments offered by the Center for Community College Student Engagement (CCCSE). They offer two assessments to help institutions understand how engaged their students are on campus: the Community College Survey for Student Engagement and the Survey of Entering Student Engagement (www.CCSSE.org). They also provide an assessment for Faculty. All three assessments are multidimensional, evidence-based, and reliable and are used by over 200 colleges each year (www.ccsse.org/aboutsurvey; Martin, 2009).

While the Student Success Plan does not specifically measure engagement, we hypothesize that implementation of the student-focused processes prompted by the use of these tools will increase student engagement. Therefore, if used correctly, tracking the practices in place for the institution to engage with a student through the number of journal entries; academic plans created; early alerts triggered and resolved; action plans created; and other formal interactions with faculty, staff, and students is one way to tap into the construct of engagement. These data can supplement the above measures in a larger research project or can be used for college or departmental evaluation.

As with any process, the quality of the implementation will affect how the results can be used. This is why SSP also provides the information you need to engage in continuous improvement and program evaluation. College leaders and managers can use the tool to ensure that tasks are being operationalized in a way that achieves the intended goals and balances quality and quantity. For example, an increase in early alerts does not necessarily mean a quality intervention was provided to the student. Instead, pairing the number of alerts with number of alerts resolved, length of time for that resolution, and reviewing the quality of the alerts provides managers with a more complete understanding of how early alerts are being used.

SSP does not just provide basic counts; it is a flexible reporting tool that allows managers to use SSP to create quality measures that can be easily tracked. For example, a manager could require that advisors contact students each semester if their MAP indicates that they are off plan. To track this, advisors could be required to check off the task in a journal note to document that they took the action. A successful implementation of the process would show that all (or most) students who were off MAP also had this task completed. The reporting tools in SSP can help a manager quickly see that information. This type of measure could be further refined to only apply to certain groups of students, such as students on academic probation or first year students. SSP is flexible enough so that an institution can measure and track these constructs in a way that is meaningful and useful. This process is relevant to measuring engagement, structured pathways, and holistic student support. In addition, the continuous improvement process provides an avenue for managers to give meaningful feedback to their departments and staff.

STRUCTURED PATHWAYS

DEFINITION

In order to be successful in college, students have to accomplish much more than academic coursework, they have to learn how to navigate the college as an institution (Conley, 2008). This includes digesting large amounts of information when registering for courses. Many colleges have adopted structured pathways to help provide clarity to students when they make registration and program decisions (Dadgar, Venezia, Nodine, & Bracco, 2013). **Structured pathways have clearly defined requirements, courses, and timelines to degree that are vetted by the college faculty and administrators and make it easier for students to make choices that move them forward toward completion** (Center for Community College Student Engagement, 2012; Rosenbaum, Deil-Amen, & Person, 2006; Scott-Clayton, 2011).

RELATIONSHIP BETWEEN STRUCTURED PATHWAYS AND ACADEMIC OUTCOMES

Choice architecture, how a student is presented with choices and options along with the college policies, is an important part of the ecological context for students (Thaler, Sunstein, & Balz, 2010). The decision makers at the college are the *choice architects.* As they develop their registration policies, academic guidelines and advising models, they are designing the choice architecture for their institution (Thaler et al., 2010). The choices these choice architects make affect how a student decides when selecting a program, how a student sets up a plan of study, and how a student enrolls in appropriate courses. Ultimately, these policies and guidelines will determine how easy it is for students to go off track. Developing a choice architecture that includes structured pathways is one option to support students as they navigate their college experience successfully. In this section we discuss the literature that supports structured pathways and why structured pathways can improve academic success.

Community colleges are generally open access institutions. Students at community colleges are taking courses for personal interest, gaining additional employment training, exploring possible programs of study, working toward transferring to four-year institutions, and working toward two-year certificates and degrees. This breadth of opportunity has led to an overwhelming amount of options for students when they go to register. For students with goals of completing an academic credential or transferring to another institution, lack of structure is often a barrier to program completion, especially compared to vocational colleges and for-profit institutions (Center for Community College Student Engagement, 2012; Fonte, 1997; Gandara, Alvarado, Driscoll, & Orfield, 2012; Rosenbaum et al., 2006; Scott-Clayton, 2011).

Rosenbaum and colleagues (2006) argue that college administrators and faculty are making incorrect assumptions about a student's ability to navigate the vast amount of information available regarding courses and pathways at most community colleges. The current lack of structure provided around academic choices results in a maze of choices that are difficult for students to navigate (Ackerman, 2006; Rosenbaum et al., 2006; Scott-Clayton, 2011; Thaler et al., 2010). Scott-Clayton (2011) builds on the work of Tinto (1975, 1993), Ackerman (2006) and Rosenbaum and colleagues (2006) to argue for the structure hypothesis. The structure hypothesis posits that community college students will do better in structured pathways with "little room to deviate on a whim—or even unintentionally—from paths to completions, and with limited bureaucratic obstacles for students to circumnavigate (Scott-Clayton, 2011, p. 1). Exploration is important for adolescents who are in the midst of identity development (Lerner, 2005; Steinberg & Morris, 2001). However, for community college students who juggle classes with other responsibilities, navigating the sheer number of pathways to their goal can become an insurmountable barrier (Ackerman, 2006; Braxton et al., 1997; Braxton, 2000; Gandara et al., 2012; Grubb, 2006; Rosenbaum et al., 2006; Scott-Clayton, 2011). The structure hypothesis suggests that career exploration is more effective if it is built into constrained pathways that move students toward a credential as they engage in

exploration (Dadgar et al., 2013; Scott-Clayton, 2011). Fonte (1997) helps frame the argument for structured pathways with the idea of "structured versus laissez-faire open access." He suggests that structured programs and advising would not limit open access but, rather, would increase student success (Fonte, 1997). Fonte (1997) describes a set of policies at South Suburban College, including identifying students' educational objectives early and providing proactive information about degree audits for students before registration each term, which he attributes to an increase in the schools' completion rates.

Fonte's (1997) characterization of structured and laissez-faire institutional philosophies was likened to Lareau's parenting approaches, *concerted cultivation* and *natural development* (Lareau, 2011; Scott-Clayton, 2011). Lareau's (2011) research on childrearing and social class describes the way middle class families' typically raise their children as concerted cultivation. This parenting style teaches children to navigate institutions, negotiate for what they want, and provides numerous structured activities outside of the school day. Natural development is associated with the typical working class family parenting style. This second parenting style provides children fewer organized actives and more time for free play. The latter can provide strong leadership skills, but not necessarily the ability to advocate for yourself or within institutions. Lareau (2011) highlights the benefits of both parenting approaches, but argues that schools are structured to reward students who are the products of concerted cultivation. Therefore, students from families who parented with natural development may have more barriers to success due to the institution's assumption that all students have the skills that result from concerted cultivation parenting. Thus, structured open access becomes a way to scaffold students who cannot easily navigate a laissez faire institution, and actually supports rather than constrains students (Fonte, 1997; Scott-Clayton, 2011).

In thinking about how to best assist students and what type of choice architecture an institution should build, Gandara and colleagues (2012) suggest that student success in community college is partially shaped by the advising they receive and the courses they take in the first term. The process of who sees an advisor, when someone sees an advisor, what orientations are available, what is optional and what is required, all shape how a student makes choices. As we discuss later in holistic student support, orientations, academic goal setting, intrusive advising, structured first year experience, student success courses and learning communities have all been identified as promising practices that support successful completion (Center for Community College Student Engagement, 2012; Kuh et al., 2010). Therefore, it's not enough to create a structured pathway, a colleges needs to incorporate a process for the student so they get continuous clear information that moves them towards completion. This will typically be done through advising and a structured first year experiences.

Community colleges need to pay attention to both open access and supporting all students in completing their goals (Engle & Tinto, 2008; Rosenbaum et al., 2006). Admitting students, without providing proper tools to succeed, is a disservice to students. Students who fail to navigate the system correctly and take unneeded class, or those that dropout before reaching their academic goal are confronted with serious consequences. Many students require financial aid and unsuccessful attempts at higher education creates additional financial debt (Gladieux & Perna, 2005). The financial hardships are not offset by higher earning power if the program was not completed. Furthermore, it may create a barrier in accessing financial aid for future attempts at attaining a credential. There are likely psychological and developmental consequences as well. Regardless, the effects of unsuccessful attempts to earn a college credential are very real to the student.

Completion by Design (CBD) (http://www.completionbydesign.org/) is a current initiative to put structured programs in place for community college students, and address completion alongside access. CBD draws heavily on the work of Rosenbaum and colleagues (2006) and Fonte (1997). The Center for Community College Student Engagement also supports this approach (Center for Community College Student Engagement, 2012; McClenney, 2007). The initiative will provide the opportunity to further understand the best practices around structured

pathways for community college students. Currently, CBD recommends prescriptive, but not restrictive pathways. A defined pathway is provided for each program that the advisor and student can adjust to best fit that particular student's needs and interests. Therefore, electives still exist, but default electives are included in the pathway. This strategy ensures that *no decision* is still a decision to enroll in courses that moves them towards completion. This creates a choice architecture that moves the student through their program of study and eliminates the need for a student to navigate through an overwhelming set of choices (Scott-Clayton, 2011). Ultimately, structured pathways are one way to provide an institutional environment that supports students in reaching their college goals.

HOW SSP SUPPORTS STRUCTURED PATHWAYS

The MAPs (My Academic Plan) tool in SSP directly address the recommendations made by Scott-Clayton (2011) to limit the overwhelming choices a student faces and Fonte's (1997) arguments that providing timely information to students prior to registration assists in student persistence. In addition to providing a structured pathway, MAP allows departments and advisors to provide student-specific notes regarding courses, sequences, and recommendations for each term. The breadth of knowledge that can be transferred to students after an advising session through this technology allows the student who might struggle to maneuver the college system to easily do so successfully. The process also provides a student who has different needs to take full advantage of the available options. As we discussed above, students come into the college system with different needs and this technology supports processes that are flexible to the individual student.

There are two major steps that need to happen for this type of choice architecture to be put into place. The pathway needs to be agreed upon and created, and it needs to be delivered to students well so that choices are limited but they still have some autonomy in the process. The first step is for a department to clearly document the ideal pathway including providing placeholders for electives. Typically, departments do have some sense of which elective might be more useful for the average student, and this is the ideal place holder. The department will provide detailed notes about the program and the courses to help advisors assist students best. These notes may include information about course offerings, prerequisites, or complex sequences. Ideally, advisors will have the opportunity to add notes to the template as well. There is also an option for standard student notes, like noting a course is an elective or there are multiple options to fulfill the requirement. The final product is considered to be the ideal pathway template.

Once pathways are completed, advisors will use the template to create an individualized student MAP. Using the MAP technology supports student academic planning in three ways. First, the program provides access to the ideal pathway template for the advisor to use with the student. For example, a student wants to earn an associate's degree in early childhood education. The advisor meets with the student and pulls up the ideal pathway for the degree. The advisor then works with the student to put classes in an appropriate order, change electives where appropriate, and add in any prerequisites, such as developmental education courses, that the student may need. Finally, the advisor will provide any additional notes that are relevant to the specific student. With the use of the template and the ease of electronic documentation, the advisor can focus on having a meaningful session that personalizes the template. Additionally, the student has a role in how they work through the program but the choices they make are done with accurate relevant information, and with the assistance of their advisor.

Second, once the MAP has been created, it is now accessible to the student, advising, and faculty who can all use the information to help the student stay focused on their goal of a degree in early childhood education. When the student returns to advising any advisor can then see what was advised previously and make appropriate changes quickly based on changing circumstances and availability of courses. In addition to everyone being able to view the information in the student MAP, the development of the structured pathway and its visibility reduces the

confusing mixed messages a student may receive from the different groups supporting a student. Faculty members, who often advise students to take courses based on specific interests can still do so, but they can show the student where they can make the modification on their map, and remind them to communicate with their advisor to make the change officially, keeping the structured pathway and choice architecture in place.

Finally, when MAP is connected to registration, a student who wants options can add other courses based on the notes the advisors left for them, but the student who wants the structure and ease of limited options sees only what has been advised. When the student registers, the program is typically set up to notify the student if they are about to go off MAP and suggests seeing an advisor. Advisors can then easily review their caseloads and see which students have gone off map, allowing them to be proactive and contact students who need it.

Ultimately, the MAP tool provides structure around the way the college defines degree requirements, how that information is passed to the student, and helps limit choice so students are not overwhelmed and default to registering for appropriate courses (Ackerman, 2006; Center for Community College Student Engagement, 2012; Grubb, 2006; Scott-Clayton, 2011). It provides structure within the college toward completion, makes information available to students and college advisors, and allows for flexibility to accommodate each individual student.

Measuring Structured Pathways

The structure hypothesis posits that creating structured pathways for students increases the likelihood that the student persists. For colleges that want to investigate this hypothesis, SSP provides the data on students who have MAPs and which students stayed on MAP. These data can be combined with other college data to provide further insight into any relationships between structured hypothesis and persistence. The structure hypothesis also suggests that students prefer the clarity of structured pathways. Evaluating how students respond to MAP requires collecting information from the students themselves through qualitative interviewing or surveys. While creating a unique survey would be needed to measure MAP specifically, some of the student surveys discussed in the engagement chapter do tap into the choice construct and could provide meaningful information.

As an electronic documentation system, the data on the use of MAP is easily accessed. Data can be used to establish how MAP is implemented at a given institution. SSP contains reports showing which advisors are creating MAPs, how many templates exist, what percentages of students have a MAP, and how many students are on plan. Using this information, a college decision maker can track implementation and make evidence-based decisions to improve the implementation of structured pathways for students. Good structured pathways may shorten time to completion for traditional fulltime students by eliminating registration mistakes and keeping students on track with course sequences. Using SSP to analyze time to completion for students using MAPs is another way to evaluate if the structured pathways are working to serve students better.

HOLISTIC STUDENT SUPPORT

DEFINITION

Holistic student support assumes that everyone who enters the institution has the capacity to become a successful college student. **The five core principles of holistic student support are: building genuine relationships, providing a safe environment, focusing on student strengths, using a solution focused approach, and providing a supportive community** ("Principles of holistic student report," 2012, *Training: Principles of Holistic Student Support*, 2013). The cornerstone of holistic student support is creating a genuine relationship between college staff, faculty and students (Cox, McIntosh, Terenzini, Reason, & Lutovsky Quaye, 2010; Kuh et al., 2008; Wood & Turner, 2010) and then providing a safe environment where students can express themselves, take risks, and support each other (Bloom, 1995; Burdge, Sinclair, Laub, & Russell, 2012; Mitchell, Wood, & Witherspoon, 2010; Ozer & Weinstein, 2004).

Support provided to students is individualized and based on the student's strengths. Students strengths are recognized by staff and students are provided opportunities to build on their strengths as they work toward continued academic success (Maton, 2003). When a student has a challenge or barrier to success, the staff members are solution focused (Kelly, Kim, & Franklin, 2008) so that the student can come up with a resolution, rather than faculty providing a fix. This approach allows the student to take ownership for the changes that need to be made and focus on their future.

Finally, community support, or wrap around support, is provided to assist students with navigating the college institution, manage home responsibilities, and access help so they are successful in their classes (Conley, 2008; Lerner et al., 2002; Scales & Benson, 2005). However, it should be noted that in addition to the student receiving support from the college community, they are also expected to contribute to that community, and idea that is supports the goal of a student working toward idealized personhood (Lerner et al., 2002). While not outlined as a core principle, holistic student support assumes the need for intrusive advising in order to achieve the objectives above as it is a requirement for ongoing, intentional, proactive, one-one contact with students (Smith, 2007). Ideally, holistic student support is provided throughout the college.

RELATIONSHIP BETWEEN HOLISTIC STUDENT SUPPORT AND ACADEMIC OUTCOMES

The tenets of holistic student support all draw on well-documented research on student success and persistence, especially those who may have fewer resources or struggle with navigating college (Arana et al., 2011; Burdge et al., 2012; Conley, 2008; Cox et al., 2010; Gandara et al., 2012; Kelly et al., 2008; Kuh et al., 2008, 2010; Maton, 2003; Ozer & Weinstein, 2004; Scales & Benson, 2005; Wood & Turner, 2010; Yen & Abdous, 2011). This is why when programs operationalize the concepts of holistic student support, such as formal advising, structured first year experiences, or mandatory orientations, there is often an increase in student persistence (Center for Community College Student Engagement, 2012; Kuh et al., 2010; Kuh, 2009; Smith, 2007). In particular, counseling in conjunction with formal academic advising, has been argued to best support students in developmental education classes since the 1970s (Boylan, Bonham, & White, 1999; Boylan & Saxon, 2002; Kuh et al., 2010; Tinto, 2004). Formal advising, counseling and coaching provides students the opportunity to develop their strengths and learn to better negotiate the college system, while also continuing to engage students with college staff members (Kuhn, 2008). Similarly, structured first year experiences or college success classes provides more opportunities for formal and informal interactions between students and faculty. The consistent interaction coupled with a focus on helping students build on their strengths and navigate the institution support student success and persistence (Cox et al., 2010; Lillis, 2011; Wood & Turner, 2010). Mandatory orientation helps develop the concept of community support by providing a new student with information about campus opportunities and resources (Center for Community College Student Engagement, 2012; Kuh et al., 2008; Kuh, 2009). Though, it is important to

note that a mandatory orientation is only a good first step. Many students will need extra support to access the resources and opportunities available to them and ensuring that they have access to strong community support is more complex than providing information; it is immersion into the community and assisting each student to thrive within that community.

In thinking further about community support, it is also important to focus on the principles of safety. In the last decade, the importance of physical and emotional safety in school and college environments has received attention, in part, due to highly publicized incidents of violence (Kaminski, Koons-Witt, Thompson, & Weiss, 2010). Making campus *feel* physically safe for students is a combined effort of actual and perceived safety (Wilcox, Jordan, & Pritchard, 2007).

In addition to the physical safety of campus, holistic student support requires that students feel emotionally safe so they know it is safe to take risks. This could be as simple as students feeling safe speaking up in the classroom, but for some students even speaking up in class requires a strong sense of belonging (Johnson et al., 2007). Therefore, any student who does not feel like they fit on campus needs a safe place to find their niche and explore their identity. The community support and safety concepts behind holistic student support suggest that providing these students with mentors, clubs, or activities that help them find their place (Barnett, 2010; Gandara et al., 2012; Scales & Benson, 2005; Strayhorn, 2008) and promoting integration (Tinto, 2004) supports these students and helps them continue to work toward success on campus. The end result of a strong sense of belonging is the student identifying himself or herself as a successful college going individual that has value to the community.

If students do not develop a strong sense of belonging (Johnson et al., 2007; Syed et al., 2011), they may struggle. In addition, if these students belong to a group that is associated with negative preconceived notions related to academic performance, then their academic achievement may be at risk, regardless of their actual academic ability (Steele & Aronson, 1995). This phenomenon has been termed stereotype threat (Steele & Aronson, 1995). This is one theory that helps us understand some of the structural barriers that minority students face, especially if their campus has a low density of diverse students (Arana et al., 2011; Aronson et al., 2002; Gandara et al., 2012; Strayhorn, 2008; Syed et al., 2011). Stereotype threat has been studied most often in the context of African-American students. However, it is also relevant for any student who belongs to a group that is subject to stereotyping (Aronson et al., 1998, 2002). This research highlights the importance of institutions being mindful of the effect of stereotypes and identifying the need to provide extra support for students who could identify in any way as a minority group. Part of providing holistic student support is creating a culture that values a growth mindset and putting in place interventions that teach students that intelligence is malleable (Aronson et al., 2002).

Mindset reflects the way individuals view intelligence (Dweck, 2008). Those with a fixed mindset do not perceive intelligence as malleable, while someone with a growth mindset believes that intelligence is something that can be cultivated and improved through learning (Dweck, 2008). Research has demonstrated the importance of fostering a growth mindset in our students. Students with a growth mindset weather the transitions from high school to college more successfully, with better grades (Dweck, 2008). They also tend to focus more on learning goals or mastery and the importance of the effort rather than merely grades (Dweck, 2008). In studies of math and science classes, students identified as having a growth mindset did better in their classes. Furthermore, simply teaching students about malleability of their own intelligence have shown positive effects on academic achievement in K-12 students (Dweck, 2007a, 2007b, 2008) and in college students (Aronson et al., 2002). Similar effects have been shown in young children around character (Yeager, Trzesniewski, & Dweck, 2012). The principles of holistic student support rely on faculty viewing all their students as having the capacity to be successful. Thus, in addition to students needing a growth mindset, the faculty and staff who are supporting them should understand and foster a growth mindset as well (Dweck, 2007b). Knowing how the power of having a growth mindset can impact student

success, colleges should be incorporating interventions to facilitate a growth mindset into their introductory programs for students. When done well, these interventions set students up to succeed and put in motion some recursive processes that will shape students over the course of their time on campus (Yeager & Walton, 2011).

Holistic student support and intrusive advising (sometimes referred to as proactive advising) share many of the same tenets. This is why intrusive advising is an integral part of full implementation of holistic student support on a campus. Both include proactive and strength based advising as ways to promote strong relationships between students and advisors which are critical to retention (Lotkowski et al., 2004). Intrusive advising has been shown to increase persistence and provide positive experiences for student populations who are vulnerable in some way (i.e. first generation, need developmental education, non-traditional students) (Chickering & Gamson, 1987; Heisserer & Parette, 2002; Lotkowski et al., 2004). This requires recurring advising appointments and advisors and/or coaches to initiate contact with the intent to demonstrate an interest in the student (Garing, 1993; Heisserer & Parette, 2002). Over the course of the sessions, advisors can work with students to identify strengths, assist in accessing resources, and develop their academic plan.

Being proactive helps advisors identify students' needs before they are in crisis. However, crises do happen and this type of advising allows for increased involvement when a student does have a critical challenge, such as being placed on academic probation or warning (Garing, 1993; Heisserer & Parette, 2002; Smith, 2007). For non-academic crises, advisors can coordinate with counselors to ensure that students with special needs or who have a history of trauma or mental health concerns get their needs addressed while reinforcing that campus is a physically and emotionally safe place (Bloom & Sreedhar, 2008). Ultimately, to work well, intrusive advising is led by advisors, but they cannot fully support students in isolation. Faculty members are often the first to recognize if a student has additional needs because they see them regularly in the classroom. This places faculty in the unique position to provide meaningful information to advisors that can have a lasting effect on student success. Therefore, advisors, faculty, coaches, counselors, and other members of the college community must work together when students need intervention or extra support.

Overall, holistic student support requires that faculty and student support professionals prioritize the development of the whole student and puts into place intentional processes and programs for student support. Considering the ways that the programs and policies facilitate opportunities for strong relationships, provide physical and emotional safety, highlight student success, and foster a growth mindset are all ways to help students thrive and succeed as college students. It is important that these processes are flexible so they can accommodate students with different needs and that additional support is available for students who are most vulnerable.

HOW SSP SUPPORTS HOLISTIC STUDENT SUPPORT

SSP promotes holistic student support by providing a flexible resource that gives the opportunity for meaningful conversations and collaboration in an effort to understand the whole student. It does this by allowing multiple audiences access to information. This begins to eliminate communication silos that often prevent individuals within a college system from helping a student succeed. Holistic student supports argues that building genuine relationships is beneficial to student success (Lillis, 2011; Yen & Abdous, 2011). If the individuals who support students are providing conflicting information and causing the student to be confused this does not benefit the student and can damage the relationships. Conversely, the availability of information prevents students from "misremembering" information or suggesting that another member of the college staff provided inaccurate information to further their cause. Furthermore, institutional components that are not working together can cause frustration to all parties or duplication of work, which eventually will affect the quality of care a student receives.

The intake assessment, resources and action plan are designed to provide a constructive conversation with a student about their successes, challenges, and academic goals. Operationalized well, this process should highlight the student's strengths and provide concrete tasks that will help the student overcome challenges. The student has ownership of these tasks and the technology provides the student, faculty, and staff constant access to the student's action plan.

The MAP (My Academic Plan) feature continues the information sharing and allows everyone to assist in advising the student accurately. Students, faculty, and advisors can access a student's plan at any time, which reduces conflicting information. The student also has ownership of their own program and can use it to make informed decisions.

Early alerts provide an easy way for faculty to alert student support professionals if they are concerned about a student or need to connect that student to resources on campus. In SSP early alerts are not automatic, but rather are initiated by faculty. Class attendance, which has been shown to be a reliable predictor of success (Credé, Roch, & Kieszczynka, 2010), can be monitored and advising or counseling can be alerted if a student is consistently not showing up. Holistic student support, which surrounds the student with caring adults (including faculty), suggest that college staff reach out to students who are struggling in order to help prevent attendance issues. Additionally, faculty members can send alerts if they are aware that a student cannot buy textbooks, is having test anxiety issues, needs tutoring, or has transportation issues. In this way the early alert system taps into holistic student support by fostering faculty student relationships, and providing community resources, and demonstrating that someone cares. This will, ultimately, lead to students being more successful in their courses. The faculty, advisors, or even counseling staff, can all work together to help students overcome their challenges to success. The early alert feature also closes the loop on an alert so a faculty member knows that an action was taken.

In building relationships, it is important that there is clear communication between the faculty and staff with whom the student interacts. In addition to all the services provided to the student, the journaling feature provides a space for case notes. Journaling allows everyone involved to document what has occurred with a student and encourages staff and faculty to communicate about students to each other. Sharing this information allows each individual to build on the work of another, makes interactions as seamless as possible, and supports the student with the most accurate information.

Measuring Holistic Student Support

Holistic student support targets quality of relationships, environment, and college community. It prescribes a solution focused and strength based approach to assisting students in overcoming obstacles as they learn how to successfully, proactively, and independently address their own goals and challenges. The end goal is that students receive the support they need from members of the institution so they can be successful. This is a complex multidimensional construct that can be partitioned to measure some components around each of the main tenets, or measures can be put in place to determine a program that was implemented to help address the issues that holistic student support raises.

Overall, holistic student support can be operationalized in a number of ways, but having a way to measure the processes an institution puts in place and improve upon them is key. From a management perspective, SSP provides college administrators and faculty with the opportunity to develop operational processes that speak to the goals of holistic student support and then measures those processes. For example, if all advisors are expected to ask students about strengths and challenges prior to advising on courses each semester, a track in the journal notes can be created that includes this detail. Reports are available to allow college administrators to review how

often the detail was completed. Additionally, a faculty member teaching a college success course may learn information that is relevant to advising while teaching the course. Training faculty to either document this information in journal notes or send early alerts helps structure the communication through the first year experience. Reports can be generated from SSP to review which faculty members are using the software, the type of notes or alerts generated, and if certain groups of students are receiving more contact.

All of this information provides insight into how the holistic student support processes are operationalized in the institution. Gathering and reviewing this information is an important part of evidence-based management and ongoing quality improvement. In addition, Schreiner has developed a thriving quotient designed for college students that may be useful in identifying how students are doing within a culture of holistic student support (Schreiner, 2010).

CONCLUSION

Colleges have the opportunity to do more than just deliver course content, they can make dramatic impacts on the lives of their students and the wider community. The policies and processes that are in place at an institution can either help a student succeed or create a barrier to success. In this paper, we have shown that implementing a process that intentionally encourages student engagement, structured pathways, and holistic student support provides more opportunities for students to achieve and persist towards college completion. In addition, we have demonstrated the need for colleges to cultivate student thriving by providing the opportunity to build positive relationships with college staff and that addressing a student's non-academic needs is important for a student to be academically successful.

Making lasting institutional changes that address the issues of student support requires more than college administrators implementing new policies or requiring new processes (Kezar, 2001) The advisors, coaches, counselors, and faculty members need to act on the decisions daily. How these groups operationalize the processes and policies is what affects the student experience (Center for Community College Student Engagement, 2012). As a comprehensive case management system, SSP is designed to support the recommended educational practices; encourage and reinforce collaboration and coordination among college departments; and provides easy access to information across multiple dimensions of the college experience in order help achieve the overarching goals of increased student success. In a time where record keeping processes are moving from paper to electronic format, using technology for communication is inevitable, and SSP provides a value beyond a collection and reporting system.

Some may argue that these changes are massive and complex and that, in an age of austerity, providing more comprehensive services may seem unrealistic. It is true that an implementation of a technological innovation of this kind is daunting, it takes work, and numerous moving parts need to be aligned in order for it to be successful. However, it is also clear how this extra support can really benefit some specific groups of students (Engle & Tinto, 2008; Kuh et al., 2010; Lotkowski et al., 2004). In addition, good case management using technology streamlines the work by prompting and facilitating communication among everyone supporting students.

The value of SSP is not just that it was developed by student service professionals and is open source, but that it does not need to be implemented all at once. SSP was designed to provide specific services to groups of students who are identified as needing more structure in order to be successful. The first adopting institution used SSP to provide early alerts, student intakes, and coaching to a small population of students who would benefit from extra structure and support. This is why SSP was designed to easily track different students across and within groups. An institution is able to make operational decisions that meet the needs of their students, provide a service, and then evaluate the effectiveness prior to implementing on a larger scale. Additionally, SSP provides the information needed for department managers to provide constructive coaching and feedback to ensure that the changes are being operationalized in a way that is most effective for students. Allowing for a continuous improvement model and the ability to scale up as needed gives a college the flexibility it needs to better support students in a way that is appropriate for the unique situation of that particular institution.

It is our expectation that a college that successfully implements sound educational practices that focus on engagement, structured pathways, and holistic student support will see more students who successfully complete a college program, certificate or transfer requirement. As a reminder, we argue that a good college education develops academic skills and cultivates each student's ability to "deal intelligently with modern life" (Chickering & Gamson, 1987, p. 3). While some would argue with this definition, the evidence supports the need to address the whole student in order for them to achieve academically. Therefore, a successful college experience should

produce students who have improved their academic skills *and* their ability to successfully navigate their world. These students should also be able to address their own goals and challenges proactively and contribute to their community. To achieve this, it takes the whole college community to support the whole student.

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