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# Post-Secondary Engagement Influences Thriving and Retention

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## Keywords

Retention; graduation; rural education

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One of the greatest challenges for higher education is student retention as college graduation rates are at a low in the United States (Owalabi, 2018). While more selective institutions tend to have higher graduation rates, the National Center for Education Statistics [NCES] public institutions report that only about 60 percent of students complete a four-year degree within six years (Hess, 2019). While post-secondary educational institutions that accommodate student needs report significantly higher graduation rates, college student demographics are changing and that complicates the systems that would be necessary to meet those needs. In 2018, American students under the age of 25 numbered 12.3 million compared to 7.6 million older than 25. Older students who are balancing, work, family, and school may be influencing graduation statistics and instructional needs at institutions.

A part of the value of face-to-face instructional delivery exists through the implementation of high-impact practices that “develop real-world skills through hands-on applied learning” (Anderson, et al., 2019, p.231) in activities that engage students beyond traditional course instruction. Students participate in experiential offerings because they do not have this type of opportunity elsewhere and find them “professionally enriching” (p.242). In addition, students achieve learning outcomes whether or not the experience is a part of a specific class or earns credit. High-impact practices engage students by combining the challenges of real-life with critical thinking and problem-solving and lead to better student outcomes (Brownell & Swaner, 2010). These practices benefit diverse students and Kuh (2008) reports increased rates of retention and student engagement through

the use of these best practices for higher education. The Association of American Colleges & Universities—AAC&U (High-Impact Educational Practices, 2020) – outlines practices that qualify as “high-impact”, a few of which include; learning communities – integrating cross-course learning, collaborative projects – solving problems with students who have different backgrounds, and service-learning/community-based learning – experiential learning using community issues in which they are studying to apply what they are learning. Additionally, Keup (2016) argues peer leadership is an emerging high-impact practice as it increases a sense of belonging and creates bidirectional connections between faculty and peers.

The purpose of this manuscript is to examine student experiences utilizing multiple high-impact practices at a rural institution to compare the perceived experience of students in a peer mentor role versus students in a mentee role within the same educational opportunity. The role of mentor involved additional engagement with faculty and academic content as well as a learning community between mentor-mentee-faculty that allowed for stratified measurement of two participant groups with variants of engagement and delivery of high-impact practices. Measures for the study follow the tenants of Schreiner’s Thriving Model (2010c) which influence undergraduate thriving: positive perspective, social connectedness, diverse citizenship, academic determination, and engaged learning (Schreiner et al., 2013). For the purposes of this study, measures were simplified to identify confidence, competence, and connection. Mentors were further tracked to determine rates of retention and graduation.

### **Review of Literature**

High-impact or engaged learning experiences positively influence student learning. Finley & McNair (2013) identify that underserved students, specifically African American and Hispanic students, who participate in engaged learning experiences show improvement in GPA and first-to-second-year retention rates compared to those of white students. Six types of high-impact practices measured student perceptions of learning engagement: 1) learning communities, 2) service-learning, 3) study abroad, 4) internships, 5) capstone experiences, and 6) research with a faculty member. Using data from more than 25,000 students at 38 institutions, students who participated in service-learning or research with a faculty rated their level of learning engagement 8.1 points higher than students who did not participate in these practices. Participation in a learning community or senior capstone reported perceived gains of 7.7 and 6.1 points (respectively) compared to those not participating. Additionally, participation in more high-impact practices increased perception of learning as students with five to six experiences reported the greatest gains in general education, practical competence, and personal and social development compared to fewer experiences. Furthermore, underserved students participating in five to six impact practices reported learning gains of 26-47 percent over similar peers not participating. At the same time, qualitative responses noted the need for connection between classroom learning and out-of-classroom experiences, “[When you do] something hands-on . . . that’s when you walk away with . . . a meaningful . . . benefit to what you’re learning in the classroom.” (p. 28). High-impact practices often reflect designated time in faculty and peer interactions, integrated learning and real-world applications.

Out-of-school-time or co-curricular experiences that complement classroom learning target enhanced student learning and personal development (Andrews, 2013). By valuing participation in activities, such as volunteering and service-learning, and embedding them within academic programs, higher education engages students in the development of skills that bridge students into professionals. In particular, service-learning activities document the development of critical thinking, teamwork, and problem-solving (Anderson et al., 2019). Experiential learning that mirrors the teamwork and critical thinking skills needed in the work environment enhances employability, can be limited in traditional coursework (Al-Saedi, et al, 2017), but lecture format and online courses are especially challenged to create hands-on, experiential learning experiences.

Service-learning as pedagogy allows students to have real-world experiences that relate to the course curriculum and reflect on that learning (Kuh, 2008). The historical foundations of service-learning stem from experiential education, which frames the service-learning as an application within community contexts (Bennett et al., 2016). Through this authentic learning opportunity, students practice complex thinking skills and teamwork, and connection. This high-impact practice gained favor with the signing of the National Community Service Act in 1990 and increased volunteerism in programs such as AmeriCorps (Anderson et al., 2019). Generally, the experience places students alongside faculty in projects that enhance content understanding and skill efficacy.

### **Framework for Thriving Experiences**

Schreiner's Thriving Model (2010c) uses research in positive psychology and development, and outlines five factors that influence indicators of undergraduate thriving: positive perspective, social connectedness, diverse citizenship, academic determination, and engaged learning (Schreiner et al., 2013). The Thriving Model framework identifies intellectual, social, and emotional engagement predictive of persistence to graduation, higher grades, and promotion of social justice (Schreiner, 2010a).

### **Positive Perspective**

Students respond to feedback depending upon their self-esteem (confidence). Individuals perceive feedback consistently with their level of sense of self, as those with high self-esteem interpret commentary with a positive self-view (Burke & Stets, 2009). Additionally, students with high levels of confidence possess an emotional ballast that allows them to discredit sources of criticism and counteract positively during unsatisfactory circumstances. As students successfully navigate academic challenges, this resilience mindset transfers to performance or competence. In other words, student belief or expectation, known as a self-fulfilling prophecy (Merton, 1948) influences situational outcomes.

Student confidence does not mean that academic competence exists, but can mean that everyday struggles may not be as discouraging. By using a long-term perspective of events, students with the positive perspective factor of thriving approach college with an optimistic outlook and expect positive outcomes (Schreiner, 2013; Schreiner et al., 2013). Students who reframe challenging experiences into learning opportunities recover with an increased sense of confidence. Yosso (2005) supports this optimism using the terminology of aspirational capital, which refers to the

maintenance of hopes and future dreams in light of actual or perceived barriers. This resiliency is seen by Stanton-Salazar & Spina (2000) through the ability to recover or thrive after stressful situations and subsequently function more successfully, thus increasing competence. On the other hand, negative student identity sometimes internalizes those thoughts and results in exclusion from the investment of energy and effort in learning (Smith & Sobel, 2010). What a student believes about themselves influences their approach to new learning and can increase their resilience throughout the experience.

### **Social Connectedness**

Within the challenges of academia, an optimistic attitude armors a student with greater confidence especially when students report feeling supported in college. Strong, trusting relationships matter for undergraduate students (Stephens & Beatty, 2015). A sense of belonging (connection) develops from an individual's perception that opportunities for inclusion exist without exceptions for "gender, ethnicity, social orientation, or disabilities" (Eccles & Gootman, 2002, p. 90). Students see themselves as a member of a community (Tinto, 2017) and that they belong to that group within the institution.

The residential college experience as a social context impacts an individual's sense of connectedness. Creating a sense of self and how that connects to the world around them Erickson (1968) claims is the chief developmental task of adolescence. Identity develops throughout life but can be particularly intense during adolescence to emerging adulthood—up to and around age 25— (Mahoney et al., 2005), which is the age range of traditional college students. Involvement in academics as well as activities can connect students to the social contexts around them as well as develop real-world skills. Structured activities for peer groups can increase positive involvement, and Mahoney et al. (2005) purport voluntary participation fosters one's connection to society through talent and interest skill-building. Brown et al. (1994) suggest that as adolescents form their identity their peers recognize and accept that identity.

College environments that emphasize experiences that integrate service successfully connect students to society. Supportive relationships with teachers relate to greater educational success (Eccles & Gootman, 2002). Trusting relationships are essential in the development of service-learning partnerships (Bennett et al., 2016) and assist individuals in identifying where they belong. Smith and Sobel (2010) report that investigations in 14 schools across the country demonstrate greater success when school welcomes students into a community of reciprocal teacher-to-student support and when the purpose of learning is evident to students. Additionally, teaching practices that work to motivate learners through personally meaningful experiences, or to contribute to group or community efforts, increase skill acquisition, which translates to future employment. In other words, caring and supportive educational environments that foster autonomy and life skills lead to positive learning cultures for students. Deal and Peterson (1999) agree that success flourishes in school cultures where student learning foci include high expectations, caring, and mutual trust, respect, and support between teachers and students.

### **Diverse Citizenship**

Learning is embedded within culture and is a shared activity with participants (Scott, 2008). Translating experience into learning requires sorting new information using what one already knows—one's reality. In daily life, students encounter individuals with different interests, backgrounds, and various social and cultural contexts (Stephens & Beatty, 2015). As cultural experiences and backgrounds intersect, a hybridizing of values and goals from one context may translate to another (Spring, 2010), or dominant cultural norms may be adopted in public contexts while minority cultural norms may still dominate private life. Historically, education's use as a cultural transformation tool dates back to the common and tribal school reform of the early 1800s, through efforts to "civilize" Native Americans by forcefully moving tribes west of the Mississippi and institutionalizing schools with dominant societal norms.

Giroux (1992) advocates for study materials that reflect the cultural community and allows students' voices to create multiple interpretations of history beyond content taught in texts representing the dominant culture. Even before modern bilingual pedagogies, Cherokee and Choctaw schools included Native American instructors and texts in native languages (before the deculturalization efforts of Anglo society). This bilingual approach reportedly built a tribal school system with a higher literacy rate than white populations in the same area (Spring, 2010). This example demonstrates Eccles and Gootman's (2002) ideology that culturally appropriate student support needs to fit with the diverse norms of each student and represent equal opportunities for all involved. Gonzalez, Moll, and Amanti further articulate the value of personal experiences as "funds of knowledge" (2005) that contextualize learning within each individual's cultural perspective.

### **Academic Determination**

Tinto (2017) argues that students do not ask to be retained by postsecondary institutions, rather they seek to persist. Tinto's interactionist theory (1975) suggests that student perceptions of becoming a part of the collegiate community, and collegiate commitment to student success affect student persistence. Student perceptions of the value of instruction depend upon finding a field of study that meets their needs and interests, challenges their abilities, and applies to personal situations.

Mattern and Patterson (2009) demonstrate that higher SAT scores and high school grade point averages (HSGPA) relate to greater student persistence between the freshman and sophomore years, yet, the first-year GPA may be the best predictor of second-year retention (Korbin et al., 2008). When accounting for socioeconomic status, HSGPA most accurately predicts collegiate success. Conversely, Tinto (2008) argues that collaborative learning strategies encourage greater student ownership for learning which improves learning outcomes. For low-income, minority, and first-generation college students' provisions for academic and social support increase persistence rates especially in the form of experiential pedagogies that promote collaboration between students, faculty, and support services.

## Engaged Learning

Student attention and active participation in learning are hallmarks of student engagement (Stephens & Beatty, 2015). Engagement is not the result of meeting the needs of a single domain, rather it is a multi-directional relationship that encompasses the whole of learning and often focuses upon the process rather than the product of instruction (Scott, 2008). Holistic views of engagement combine three domains, 1) affective—enthusiasm, interest, and belonging, 2) cognitive—learning and self-regulation, and 3) behavioral—time and effort, interaction, and participation (Kahu, 2013). Educationally purposeful activities attract students, who then choose to put in time and effort (Kuh, 2009). Student willingness to engage is also influenced by the inclusive actions of institutions. Some institutions believe that teaching responsibility exists within the master teacher imparting students with learning. However, discovery-based instruction emphasizes the interplay between a learner’s existing knowledge and the framing of new learning within their personal experiences (Stenhouse, 1975, Vygotsky, 1987). Learning environments in which the educator has stepped back from positional power encourages student participation, collaboration, and engagement (Misawa & McClain, 2019).

## Research Questions

The authors argue a successful college experience for students extends beyond the attendance and mastery of various classes to a level of personal growth that provides students with the social competencies to succeed as working adults, i.e. confidence, competence, and connection. The authors hold that student engagement does matter, that increased engagement increases confidence, competence, and connection. The authors hypothesized:

H1: Greater engagement in learning activities increases feelings of confidence.

H2: Greater engagement in learning activities increases feelings of competence.

H3: Greater engagement in learning activities increases feelings of connectedness.

## Methods

To measure the change in traits of social competency, the variables of confidence, competence, and connectedness were selected based on Schreiner’s Thriving Model (2010c). After completion of each event, participants completed a retrospective post / pre-survey approved by the Institutional Review Board. Survey responses were collected using the Socrative application (Socrative.com). The 143 survey responses were exported to Microsoft Excel for tabulation and analysis. The survey responses were tabulated and percent change was calculated for each question. A weighted percent change was calculated for the group of participants and the group of mentors to determine the change between the groups. Additionally, longitudinal persistence tracking of mentors determined retention and graduation rates.

## Study Site

Rural University, (a pseudonym) is a regional, residential university located in Pontotoc County in Oklahoma. The population of the local community is under 20,000 residents. Census data (2020) reveals that nearly 10 percent of residents identify as American Indians compared to only 1.3 percent in the rest of the United States, and median household income is less than \$39,000 compared to \$60,000 nationwide. Thus, nearly twice as many individuals live in poverty compared

to the rest of the nation, 20.9 to 11.8 percent respectively. Additionally, an emphasis on a face-to-face instructional structure can be supported because only 66.4% of the local population subscribe to broadband internet compared to a national average of 80.4 percent.

The average student enrollment of the university for the last 5 years (S 2016-S2020) is 3,608. The Race and Ethnic Classification of the Spring 2020 enrollment was predominantly white, 57.4 percent; followed by Native American 14.7 percent Black, 6.1 percent; Hispanic 5.3 percent; Asian, 7.6 percent; and Native Hawaiian/Pacific Islander, multi-racial, and unknown race/ethnicity accounting for about 9% of the 2020 student population (SP20QuickFacts).

### **Project Events**

Two workshops were designed to employ high-impact educational practices of collaborative and experiential learning with community partners in a service-learning experience. Collaborative and service-learning have been shown to have a positive relationship with personal gains and effective educational practices (Kuh and O'Donnell 2013). The collaborative learning incorporated peer-mentoring as well as a faculty-student collaboration in recruiting, implementation, and assessment. Student mentors were recruited from a Food Science: Service, Safety & Sanitation course, two Introductory Sociology (general education) courses, and student organizations.

The events were held in consecutive semesters. The first event, "Learning Lunch," was conducted in Spring 2018, and the second, "Spirit of Sharing", in Fall 2019. The projects were course content for one class and voluntary activity in the other two classes—an extra credit opportunity for the first experience and an alternative final for the second.

During the Spring 2018 semester, two "Learning Lunch" events were held. Teams of students within the Food Science class researched food-related illnesses (celiac disease, hypertension, obesity) and planned a meal to meet the needs of persons suffering from those illnesses. Students collaboratively created a menu, designed lesson plans, researched food science techniques, and terms, organized tasks, assembled supply lists, and prepared to conduct the service-learning experience with participants. The Food Science class hosted the first Learning Lunch event on April 26 and the second on May 3, 2018. During the co-curricular activities, student teams functioned as peer instructors as each student in the Food Science class was paired with two participants and were tasked to teach food safety, food science, nutrition, and culinary skills necessary for the preparation of their tasked food item(s). Students then ate the meal together, family-style, and debriefed the specialized dietary plan, nutritional value of the menu items and how each was prepared. During the meal, students also completed a retrospective post/pre-survey on their mobile devices using Socrative.com to measure potential gains towards retention objectives.

The "Spirit of Sharing" event included peer mentoring, faculty-student collaboration in workshop recruiting, implementation and assessment, and partnered with community organizations for this service-learning experience to share the food items prepared in the event. Student mentors were again recruited from food science and sociology classes, as well as from student organizations. Again, the project was course content for the foods class, the project was an alternative final in the sociology classes, and a volunteer experience for participants from student organizations.

Student mentors in The Spirit of Sharing service-learning experience taught baking and food safety skills to student participants. The resulting product was an assortment of cookies baked and assembled into packages to be distributed among low-income organizations in the local community.

After both events, the student mentors and the student participants completed the retrospective post/pre-survey on their mobile devices using the Socrative app (Socrative.com) to measure potential gains towards retention objectives. All student participation was voluntary; however, both events were incentivized by course instructors through additional class points or bonus points. Survey responses were exported to Microsoft Excel for descriptive analysis and calculation of percent change for each question. A weighted percent change was determined for the group of participants and the group of mentors to determine the change between the groups.

### Results

Data collected at the two events came from 143 student participants of the two service-learning events. The 143 participants represent about four percent of the student enrollment. The ethnic categorizations of participating students were Native American (17%), white (16%) Latinx (9%). [See Table 1.] A comparison of racial and ethnic categorization of the participants with the Spring 2020 student population indicates the participants comprised an equitable representation of Rural University's (a pseudonym) diverse student population. While the comparison shows an underrepresentation of white students, this may be attributable to the large number of students who did not respond to the question. Participating students represented 31 majors across all schools of the university, with the majority of students (55%) coming from nursing (18%), FCS (10%), Biology (10%), Education (10%), Criminal Justice (6%). Similarly, the broad range of majors identified by participants demonstrates that the broad range of interests and the overall diversity of the student population was represented by the student participants. Of students answering the question, most were first and second-year students (freshman and sophomore) 12% and 10% respectively. Third and fourth-year students (junior and senior) each composed 3% of the participants.

**Table 1. Comparison of Racial/Ethnic Categorization of Rural University Student Enrollment**

|                  | Rural University Student Enrollment |         | Event Participants |         |
|------------------|-------------------------------------|---------|--------------------|---------|
|                  | Total                               | Percent | Total              | Percent |
| White            | 1959                                | 57.4%   | 23                 | 16%     |
| Native American  | 503                                 | 14.7%   | 25                 | 17%     |
| Black            | 209                                 | 6.1%    | 12                 | 8%      |
| Hispanic         | 180                                 | 5.3%    | 13                 | 9%      |
| Asian            | 261                                 | 7.6%    | 0                  | 0%      |
| NH/PI            | 9                                   | 0.3%    | 0                  | 0%      |
| Multiple Races** | 232                                 | 6.8%    | 12                 | 9%      |
| Unknown/Other    | 61                                  | 1.8%    | 58                 | 41%     |
| Total            | 3414                                | 100.0%  | 143                | 100%    |



The primary reason students (41%) gave for participating in the workshop events was that they were enrolled in the class. Those participating to earn points accounted for 38 percent of the volunteers (25% participated to receive the regular class points and 13% participated to receive the bonus points). Another 20 percent gave no reason and one percent said they were influenced by friends to volunteer. [See Table 2.]

**Table 2. Reason for student participation in workshop events.**

|                       | n   | Percent |
|-----------------------|-----|---------|
| Enrolled in the class | 59  | 41%     |
| Class points          | 37  | 25%     |
| Bonus points          | 18  | 13%     |
| Other / no answer     | 28  | 20%     |
| Friends               | 1   | 1%      |
| Total                 | 143 | 100%    |

The survey data were analyzed to determine the amount of change in the variables of confidence, competence, and connectedness. [See Table 3.] The Peer group showed a positive change in the measures of confidence and competence in one of two survey questions for both variables. The Mentor group showed positive change for all three variables: confidence, positive change in one of two survey questions; and positive change in both survey questions for the variables of competence and connection. [See Table 3.]

**Table 3. Weighted Percent Change in the variables of confidence, competence, and connection.**

| Participants | Confidence                  |                | Competence        |                | Connection                                     |   |
|--------------|-----------------------------|----------------|-------------------|----------------|--|---|
|              | I can learn almost anything | I am confident | I keep priorities | I feel capable | I feel connected to people at Rural University | I am comfortable participating in groups. |
| Peers        | +139%                       | -58%           | +208%             | -58%           | -58%   | -58%                                      |
| Mentors      | -500%                       | +50%           | +300%             | +162%          | +140%  | +200%                                     |

Longitudinal persistence tracing for the smaller mentor group over three years showed 15 of 18 mentors persisting at Rural University for the semester following the event. One year after the event, one mentor who previously transferred to another institution, re-enrolled in Rural University and persisted until graduation. Therefore, 16 of 18 mentors persisted to graduation at Rural University. [See Table 4.]

**Table 4. Mentor Retention and Graduation Rates (n=18)**

| Semester following event |         | One year after event |         | Graduated by 2021 |         |
|--------------------------|---------|----------------------|---------|-------------------|---------|
| Number                   | Percent | Number               | Percent | Number            | Percent |
| 15/18                    | 82%     | 16/18                | 89%     | 16/18             | 89%     |

## Discussion

The difference in positive gain between the mentor and peer groups of students supports the author's three hypotheses that greater engagement in learning activities increases student feelings of confidence, competence, and connectedness. These findings follow Keup's (2016) peer-leadership research that found a greater sense of belonging (connectedness) and positive gains in competency skills (competence) such as organization, time management, and presenting to others. Interestingly, mentor retention of 89 percent after one year is similar to the National Center for Education Statistics (2019) undergraduate student retention rate of 81 percent in public institutions. Conversely, national six-year graduation rates hover around 62 percent while the mentor graduation rate in this study demonstrated a significantly higher 89 percent. Mentee participant persistence and retention rates were not tracked.

Although participation in the events was incentivized, the additional course points were not the predominant driver of participation, which concurs with Kuh's (2009) ideology that students put in time and effort when educationally purposeful experiences are offered. That the majority (62%) of students volunteered for reasons other than the incentive points solidifies the educational gains of high-impact learning experiences for underserved students created from the co-curricular experience. Just as participation was not driven by incentives, learning was achieved independently of the incentives offered.

This study's findings of greater gains during the mentor experience support Keup's (2016) findings that peer leaders often gain more value from experiences than other student participants. Thus, the use of peer leadership/mentorship as one of multiple high-impact practices within course structures demonstrates gains over the experiences of mentee participants within the same experience. The integration of multiple high-impact educational practices, including collaborative projects, service-learning/community-based learning, and the inclusion of peer mentors (a learning community), demonstrates positive gains towards Schreiner's Thriving Model (2010c). Mentor gains in social connectedness (connection) and positive perspective (competence, and confidence) may be results of increased levels of engaged learning. That the mentor group showed greater gains in social competencies than did the peer group supports the argument that the mentors experienced greater gains in Schreiner's Thriving factors of social connectedness. As measured by the statements, "I feel connected to people at [Rural University]", and "I am comfortable participating in groups. The six hours of weekly contact in the laboratory type Food Science class experienced by the mentors but not the peers may have increased their sense of belonging (measured by the statement, "I feel connected to people at [Rural University]"). Additionally, their previous classroom experiences may have helped with their perceptions of competence ("I feel capable", "I keep priorities").

## Limitations

Using co-curricular events outside of class time in a rural setting limited the number of mentee participants as well as the number of peer mentors studied. Incorporating similar high-impact practices within the structure of classroom instruction at additional rural institutions would allow for broader implementation. Furthermore, the number of mentors in a sub-group tends to be a small population as a single mentor often works with several mentees. While in this study,

mentors retained and graduated at rates above institutional averages, it is unclear if involvement outside of the co-curricular events influenced those results.

### Future Research

Continued research on student engagement and specifically peer mentoring could be of benefit as an instructional strategy in higher education. Studies that measure multiple student leadership and mentoring experiences during undergraduate study may further stratify influences to confidence, competence, and connection as well as student retention and graduation. With many universities utilizing online instruction, research in online peer mentoring could pair this high-impact educational practice into wider delivery as students within online courses tend to be lower and students withdraw more often compared to traditional face-to-face classrooms (Glazier, 2016). While it may be challenging to create hands-on learning experiences in online delivery, benefits surround the integration of these high-impact practices in higher education.

### Conclusion

Highly engaged students at rural institutions experience higher educational gains than less involved students. Peer leadership/mentorship offers students opportunities to thrive within educational structures. With current usage of online educational pedagogies, it can be difficult to embed collaborative projects, service-learning/community-based learning along with peer mentor structures. With demonstrated gains for peer leaders through face-to-face classroom-based strategies, the challenge exists to create similar opportunities for growth within online learning management systems. Engaged learning exists within online courses, but to what extent the field of education will shift to integrating multiple high-impact practices remains to be seen. More work is needed to study the effective intersectionality of high-impact practices and peer mentoring delivery strategies, whether they be online or in face-to-face contexts.

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