

## *Original Paper*

# High-Impact Practices and the Adult Online Learner

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### ***Abstract***

*Institutions of higher education are challenged to get students engaged, especially adult or non-traditional online learners. In this study, the National Survey of Student Engagement (NSSE) 2017 & 2018 data on High-Impact Practices (HIPs) are examined to understand the extent to which adult online learners are engaged in HIPs. This analysis finds that engagement levels for adult learners are lower than those of traditional learners (under the age of 24) for all HIPs surveyed by the NSSE. Moreover, the levels of engagement of the subset of adult learners who took only online courses was even lower than the levels of the broader adult population, and part-time adult online learners had the lowest engagement of all student populations examined. Based on these findings, suggestions for improving the engagement of adult and online learners in HIPs are discussed. Institutions should focus on incorporating opportunities that allow more learners to experience HIPs, as research findings suggest that HIPs increase engagement and could result in significant improvements in student success measures, such as program completion and graduate school attendance (Stoloff, Good, Smith, & Brewster, 2015).*

### ***Keywords***

*adult learners, online learners, student engagement, high-impact practices*

### **1. Introduction**

In the increasingly scrutinized world of higher education, institutions are being held more and more accountable for student success and retention. Adult learners are a special student population that can impact institutional graduation and success rates. For example, Shapiro et al. (2018) state in a National Student Clearinghouse (NSC) annual completing college report that students who are 20 years of age or younger at entrance to higher education have a 62.9% six-year completion rate as opposed to a 43.5% six-year completion rate for students who enter higher education at over 24 years of age (p. 14). To

increase graduation and retention rates, institutions must consider the practices that enhance retention in various student populations and further encourage graduation.

High-Impact Practices (HIPs) are practices that are believed to increase student engagement. In fact, NSSE (2018) shows data from all NSSE participating institutions regarding the “strong relationship between HIPs and indicators of student engagement” (p. 2). The HIPs that are shown to increase student engagement may be very different for adult students and, specifically, for adult online students. Indeed, in their literature analysis considering online adult learners, Kara, Erdoğan, Kokoç, and Cagiltay (2019) suggest that online programs must have “...a sound understanding of the link between adult learners’ characteristics and the appropriateness of the online environments for their online experiences” (p. 6). Additionally, Wuebker (2013) states, “Creating a community of practice among adult online learners is challenging” (p. 42). Therefore, this paper considers HIPs and their successes with nontraditional students as is measured through a review of data from the NSSE the National Survey of Student Engagement (NSSE) Report Builder 2017 & 2018.

Adding to the importance of focusing on adult learners, this population of students may be more likely to be enrolled part-time due to work and various responsibilities. Part-time status is another marker for improvement in graduation rates; Shapiro et al. (2018) states in the NSC’s annual report that full-time students have an 83.6% six-year completion rate as opposed to a 20.7 % six-year completion rate for part-time students (p. 15). Shockingly, of those part-time students who have not yet completed, 71.3% are no longer enrolled. Taken together, adult online learners, and especially part-time students, are an important student population that can have a significant impact on success measures of institutions of higher education making it critical to target institutional HIPs to this at-risk population.

## **2. Background**

### *2.1 High-Impact Practices and Student Engagement*

Specific educational practices have been purported to influence meaningfully student learning and achievement in college. Known as HIPs, these practices are significant in student engagement (NSSE, 2018). Kuh (2009) defines engagement as the amount of “time and effort” that students dedicate to activities that are beneficial to their academic development (p. 683). According to Springer and Hatcher (2017), students’ learning is enriched and they are more prone to finish their undergraduate degree when they are exposed to HIPs. HIPs include “capstone courses and projects, collaborative assignments and projects, common intellectual experiences, diversity/global learning, first-year seminars and experiences, internships, learning communities, service learning and community-based learning, undergraduate research, and writing intensive courses” (Riehle & Weiner, 2013, p. 128). Many other researchers agree with the importance of these HIPs on student engagement (Kezar & Holcombe, 2017; Kilgo & Pascarella, 2015; Kuh & AAC & U, 2008). Most recently in 2017, ePortfolios were added to the list of HIPs, making a total of eleven practices. The Association of American Colleges and Universities (AAC&U) has endorsed this last addition, and Kuh also recommended that portfolios

become part of this initiative to aid students in their academic matriculation (Kuh, O'Donnell, & Schneider, 2017). While these are unique practices, they tend to work together for student success. On average, the more HIPs to which students are exposed, the more likely they are to graduate and earn degrees within six years (Kuh et al., 2017, p.11).

### *2.2 Overview of AAC&U Endorsed High-Impact Practices*

Each of the eleven HIPs endorsed by the Association of American Colleges and Universities previously mentioned are detailed in this section.

**Capstone courses and projects.** Sometimes called “senior capstones”, these projects, assigned to students towards the end of their educational journey, dictate that students complete a major assignment that incorporates what they have learned during their time in college (Kuh et al., 2017, p. 10).

**Collaborative assignments and projects.** Collaborative learning can have a wide range of definitions including informal study groups, team-based class assignments, and long-term research projects (Kuh & AAC & U, 2008). Professors arrange their classes in clusters to work on problems, complete assignments, or produce some type of project.

**Common intellectual experiences.** Common intellectual experiences, sometimes referred to as “core” intellectual experiences, are an arrangement of mandatory “common courses or a vertically organized general education program” (Kuh & AAC&U, 2008, para. 4). These courses frequently join wide-ranging ideas with an assortment of “curricular and cocurricular” choices for students (Kuh & AAC&U, 2008, para. 4).

**Diversity/global learning.** Diversity/global learning, which is sometimes called study abroad, are programs in which students take a course, participate in an activity, or enroll in a program that is away from the school. Students are able to experience populations, societies, and global outlooks that vary from their personal viewpoints (Kuh et al., 2017, p.10).

**First-year seminars and experiences.** First-year seminars and experiences are generally taken during the first semester of college, and students meet with a faculty member at least once a week. During this meeting, students are presented with problem solving skills, collaborative group work, or writing assignments (Kuh& AAC&U, 2008, para. 3).

**Internships.** Internships are a means to give students first-hand learning experience in a setting that is directly related to their field. During their internships, students can gain insights and training from professionals that have prior experience in their particular career paths (Kuh et al., 2017, p.10).

**Learning communities.** In learning communities, students usually enroll in two or more connected courses as a cohort and work collaboratively with their classmates and their professors. Several learning communities investigate a mutual matter and/or mutual interpretations within the scope of diverse subjects (Kuh& AAC&U, 2008, para. 5).

**Service learning and community-based learning.** Service learning and community-based learning is firsthand learning as part of structured practices that meet community needs. Students are challenged with “real-world” difficulties and are requested to acquire answers in the framework of the class topic

(Riehle & Weiner, 2013, p. 131).

**Undergraduate research.** Students are pushed to be involved with research early during their undergraduate experience. During their research, they are introduced to “systematic inquiry approaches that include contested questions, empirical observation, technologies, and the enthusiasm that comes from working to answer questions” (Kuh et al., 2017, p. 10).

**Writing intensive courses.** Writing Across the Curriculum (WAC) programs offer typical, beginning writing classes that reiterate writing and research skills outside an individual course. WACs help mature writing abilities at all levels of the academic experience and across the curriculum (Riehle & Weiner, 2013)

**ePortfolio.** An ePortfolio is a transportable and flexible instrument with which students can continuously update and present their work. ePortfolio strengthens student education because it involves significant “student reflection” and makes their accomplishments observable to others (Kuh et al., 2017, p. 11).

Taken together, these HIPs may aid in student engagement and, consequently, student success. Student engagement may look very different for subpopulations of students. Therefore, student engagement of varying groups, specifically nontraditional students, is becoming important on higher education campuses (Wyatt, 2011, p. 10).

### *2.3 Adult Learners and Non-Traditional Students*

As access to higher education has increased, attendance has also increased for diverse populations. One such population is adult learners, or non-traditional students. Kasworm (2003) stated that, “For more than 30 years, adults age 25 years or older have represented between one third to almost one half of the undergraduate population in American higher education” (p. 81). Indeed, Wyatt (2011) indicated that “Nontraditional students are the fastest growing segment of higher education enrollments in America and are very diverse” (p. 10). There are varying definitions that delineate adult learners and adult education. According to Knowles, Holton, and Swanson (2005), “... adult education is a very diverse discipline with little agreement as to its definition” (p. 143). Even the broad category of adult or “mature” (Pearce, 2017, p. 59; Waller, 2006, p. 115) learners is not homogeneous. Many studies use age-based criteria to define an “adult learner,” but some use responsibility-based criteria. For example, students who entered higher education after taking time away from school and were 22 years of age or older were called “re-entry” students by one research group (Michie, Glachan, & Bray, 2001, p. 456).

No matter the moniker, non-traditional or adult learners have been viewed for many years as having very different needs than traditional students. Knowles introduced the concept of andragogy and differentiated learning for adults and children in the 1970’s (Knowles, Holton, & Swanson, 2005, p. 1). However, many institutions take a singular approach to assisting adult learners’ transitions into higher education that emphasizes study skills and academic self-efficacy (Fowle, 2018). Yet even now, we do not have a strong grasp on how adult learners are successful and learn. Knowles, Holton, and Swanson (2005) state, “Traditionally, we have known more about how animals learn than about how children

learn; and we know much more about how children learn than about how adults learn” (p. 18). Moreover, adult and non-traditional students often have responsibilities outside of the academic environment that can affect their involvement in higher education and, ultimately, their campus engagement; these responsibilities may include family, employment, and living off-campus (Price & Baker, 2012, p. 22). This shift away from the all-encompassing higher education experience for adult learners may translate into differing concepts of engagement. Price and Baker (2012) state, “For adult students, there appears to be a differentiation between participation behavior (involvement/engagement) and a psychological sense of integration” (p. 22). With the various restrictions and competition for the adult learner’s time, a substantial component of the adult’s experience is the classroom (Kasworm, 2003; Price & Baker, 2012). Moreover, Kasworm (2003) suggested that adult learners emphasized classroom knowledge that could impact their real-life experiences (p. 85). Questions then arise: if student engagement is important, but adult learners are differently engaged in the university setting, how can adult students be engaged through HIPs? Are different engagement strategies needed for adult online students to enhance their engagement?

#### *2.4 Online Learners*

Bodily, Graham, and Bush (2017) stress the importance of student engagement in general and point to studies that specifically address the lack of engagement of online learners. One of these studies has shown lack of engagement contributes to lower levels of degree completion by online learners (Kizilcec, Piech, & Schneider, 2013). Another study cited by Bodily et al. (2017) discussed challenges faced by online students, including child care responsibilities, financial ability to pay for school, balancing work schedule (Rovai, 2003). Rovai (2003) also mentions that it is very important for institutions to have outreach programs in place to let online students know about the services and programs that are available and provide the type of support these students need.

### **3. Methodology**

#### *3.1 National Survey of Student Engagement (NSSE)*

Price and Baker (2012) state that the “NSSE is predicated on the assumption that certain student behaviors are indicators of students’ engagement in the learning process” (p. 21). For the purposes of this study, adult or non-traditional student are defined to be 24 years of age and older. This was chosen because the NSSE Report Builder 2017 & 2018 data is grouped by this age boundary. HIPs used in this study are those defined in the NSSE survey.

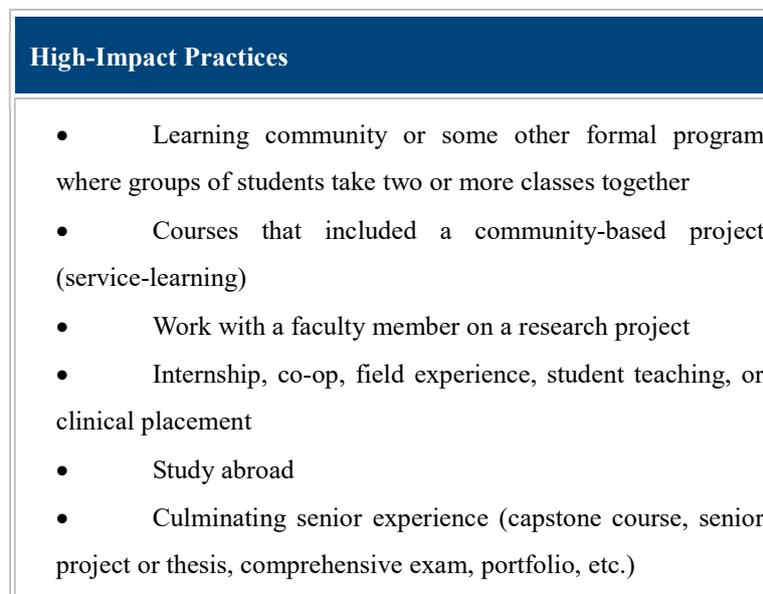
#### *3.2 Limitations*

One limitation of this study is the survey instrument itself. The National Survey of Student Engagement (NSSE) “is a self-selected and voluntary survey” (Rabourn, BrckaLorenz, & Shoup, 2018, p. 29). At the institutional level, each institution chooses to participate; at the participant level, each individual learner chooses to participate (Rabourn et al., 2018, p. 29). As very few completely online institutions participate (Rabourn et al., 2018, p. 29), perhaps differences exist in response rates for various types of

learners (i.e., traditional/ non-traditional students and online/on-ground learners). Further, the survey may have inherent biases in the questions measuring student engagement for adult learners. In their study, Price and Baker (2012), found that “Adult students scored significantly lower than traditional students on 20 of the core survey items which, according to NSSE, suggest that adult students are less engaged academically and socially than their traditional-age counterparts” (p. 28). Yet, the questions may not score other types of engagement by adult learners. Further, this study is limited by the age category provided by the NSSE Report Builder; the NSSE Report Builder only allows the non-traditional age choice of 24 years of age or older. Typically, a non-traditional student is noted as being age 25 years or older. Perhaps students who are exactly 24 years of age may not be representative of the broader population of adult learners (i.e., students age 25 years and older). Additionally, students may incorrectly report their ages (Rabourn et al., 2018, p. 29). Finally, in the NSSE Report Builder, students are only classified as distance learners if all of their coursework is online. However, many students take some, but not all, of their coursework online; these students will not be captured in the data as online learners.

#### 4. Results

The previous discussion has been focused on eleven high-impact practices that are commonly recognized in the literature. The following results of this study highlight the HIPs included in the NSSE survey, which are shown on Figure 1. The data collected and displayed in this section reflects the responses of seniors surveyed, because the HIPs questions are designed such that “seniors’ responses include participation from prior years” (NSSE, n.d., para. 2).



**Figure 1. High-Impact Practices Included in the NSSE (NSSE, n.d.)**

Out of the 499,396 seniors surveyed in the NSSE 2017 & 2018 survey, 35.3% were adult learners (24 and older). The remaining 64.7% of the senior students surveyed will be referred to as traditional learners (under 24 years old). Some of the students were Full-Time (FT) and some were Part-Time (PT). Of the students, 5.5% of traditional learners were part-time, and 36.8% of adult learners were part-time. The data is broken in such a manner that allows for the investigation of distance learner participation in the HIPs, as well. The students categorized as distance learners are those who take all of their coursework online. Thus, they are referred to as online learners in the remainder of this study.

Of the seniors surveyed, only 2.5% of traditional learners were online learners, whereas 29% of adult learners were online learners. Of the adult online learners 51.8% were classified as part-time. The National Student Clearinghouse's 2018 College Completion Report, Shapiro et al. (2018), shows lower 6-year graduation rates for non-traditional students, learners starting college at 24 years or older, than the rates reported for students who started college at 20 years or younger. They also point to much lower graduation rates for part-time students. Thus, it is very important to examine the participation of students in HIPs, looking in detail at traditional versus adult, in-class versus online, and full-time versus part-time. This study drills down to examine data on adult online student engagement in these HIPs to see areas where this engagement could be improved, as improvement may hopefully lead to greater persistence and degree completion for the adult online learners.

Since only the senior's survey responses are displayed, the responses on Tables 1-6 have been grouped to show those who "have not decided to participate or do not plan to" and those who "plan to do or done or in progress". The responses have been grouped further to show differences between traditional and adult learners in general and then more specifically between those that were fully online and those who were not. To show more detailed results for the adult learners, the tabled results also show the percentages for full-time and part-time adult learners that were all online and those who were not. Analyzing the data in this manner shows vast differences in the engagement measures for the adult online learners.

**Table 1. Participate in an Internship, Co-Op, Field Experience, Student Teaching, or Clinical Placement**

	Have Not Decided or Do	Plan To Do or
Traditional General (FT & PT)	17.6	82.4
Adult General (FT & PT)	37.7	62.3
Traditional In-Classroom (FT & PT)	17.4	82.6
Traditional Online (FT & PT)	25.8	74.2
Adult In-Classroom (FT & PT)	30.5	69.5
Adult Online (FT & PT)	55.1	44.9
Adult In-Classroom (FT)	26.6	73.4
Adult In-Classroom (PT)	39.5	60.5

Adult Online (FT)	51.8	48.2
Adult Online (PT)	58.2	41.8

Table 1 shows the percentages of respondents who participated in an internship, co-op, field experience, student teaching, or clinical placement. For the traditional learner, 82.4% plan to, have completed, or are currently participating in these activities, as compared to only 62.3% for the adult learners. For all online learners, traditional online participation was 74.2% while adult online participation was only 44.9%. For the adult online learners who were full-time versus part-time, these measures were 48.2% and 41.8%, respectively. So, participation in these high-impact activities was the highest for traditional in-classroom learners, at 82.6%, and the lowest for the part-time adult online learner, at 41.8%.

**Table 2. Hold a Formal Leadership Role in a Student Organization or Group**

	Have Not Decided or Do	Plan To Do or
Traditional General (FT & PT)	43.3	56.7
Adult General (FT & PT)	73.8	26.2
Traditional In-Classroom (FT & PT)	42.9	57.1
Traditional Online (FT & PT)	58.7	41.3
Adult In-Classroom (FT & PT)	70.1	29.9
Adult Online (FT & PT)	82.7	17.3
Adult In-Classroom (FT)	67.0	33.0
Adult In-Classroom (PT)	77.3	22.7
Adult Online (FT)	80.1	19.9
Adult Online (PT)	85.1	14.9

Holding a leadership role in a student organization is another important high-impact practice. The percentages of students holding a formal leadership role in a student organization or group are displayed on Table 2. The percentages of traditional learners and adult learners in general were 56.7% and 26.2%, respectively, over a 30% difference. For online only learners, the traditional student participation was 41.3% and the adult student participation was 17.3%. The adult online learners who were also part-time measured even lower at 14.9%.

**Table 3. Participate in a Learning Community or Some Other Formal Program Where Groups of Students Take Two or More Classes Together**

	Have Not Decided or Do	Plan To Do or
Traditional General (FT & PT)	62.8	37.2
Adult General (FT & PT)	72.4	27.6
Traditional In-Classroom (FT & PT)	62.7	37.3
Traditional Online (FT & PT)	65.3	34.7

Adult In-Classroom (FT & PT)	68.9	31.1
Adult Online (FT & PT)	81.1	18.9
Adult In-Classroom (FT)	66.5	33.5
Adult In-Classroom (PT)	74.4	25.6
Adult Online (FT)	79.0	21.0
Adult Online (PT)	82.9	17.1

Participation in a learning community is a high-impact practice where groups of students take two or more classes together. The participation measures for this high-impact practice are shown on Table 3. The traditional student participation in learning communities measured 37.2%, while the adult student participation measured 27.6%. The online student measures were 34.7% for traditional versus 18.9% for adult learners. The participation of adult online learners who were also part-time students measured the lowest at 17.1%.

**Table 4. Participate in a Study Abroad Program**

	Have Not Decided or Do	Plan To Do or
Traditional General (FT & PT)	71.3	28.7
Adult General (FT & PT)	87.3	12.7
Traditional In-Classroom (FT & PT)	71.1	28.9
Traditional Online (FT & PT)	78.5	21.5
Adult In-Classroom (FT & PT)	85.1	14.9
Adult Online (FT & PT)	92.8	7.2
Adult In-Classroom (FT)	83.8	16.2
Adult In-Classroom (PT)	88.0	12.0
Adult Online (FT)	92.0	8.0
Adult Online (PT)	93.6	6.4

Participation in study abroad programs is another example of a high-impact practice identified by the NSSE. Study abroad programs broaden student awareness of global concepts and cultural differences. As displayed on Table 4, the participation measures for this high-impact practice were found to be the lowest of all the participation measures when examining the HIPs surveyed by the NSSE. The traditional student participation rate measured 28.7% and adult participation was even lower measuring 12.7%. The traditional online student participation rate was 21.5%, and only 7.2% of the adult online students reported participation or planning to do so. Again, adult online learners who were also part-time students measured the lowest, at 6.4%.

**Table 5. Work with a Faculty Member on a Research Project**

	Have Not Decided or	Plan To Do or
Traditional General (FT & PT)	59.5	40.5
Adult General (FT & PT)	72.6	27.4
Traditional In-Classroom (FT & PT)	59.2	40.8

Traditional Online (FT & PT)	71.5	28.5
Adult In-Classroom (FT & PT)	67.6	32.4
Adult Online (FT & PT)	84.8	15.2
Adult In-Classroom (FT)	65.3	34.7
Adult In-Classroom (PT)	72.9	27.1
Adult Online (FT)	83.8	16.2
Adult Online (PT)	85.8	14.2

In a national study based specifically on psychology majors, working with faculty members on research projects has been found to increase graduate school attendance (Stoloff, Good, Smith, & Brewster, 2015). Thus, it is important to increase student engagement in this high-impact practice, as the measures on Table 5 show that of the seniors surveyed only 40.5% of traditional and 27.4% of adult learners have participated or plan to participate in these student-faculty research projects. The participation of the online students was much lower, whereas 28.5% of traditional online and 15.2% of adult online learners were engaged in research projects with faculty members. The adult online measures were again the lowest, measuring 14.2%.

**Table 6. Complete a Culminating Senior Experience (Capstone Course, Senior Project or Thesis, Comprehensive Exam, Portfolio, Etc.)**

	Have Not Decided or Do	Plan To Do or
Traditional General (FT & PT)	25.7	74.3
Adult General (FT & PT)	34.6	65.4
Traditional In-Classroom (FT & PT)	25.4	74.6
Traditional Online (FT & PT)	36.0	64.0
Adult In-Classroom (FT & PT)	32.7	67.3
Adult Online (FT & PT)	39.4	60.6
Adult In-Classroom (FT)	30.3	69.7
Adult In-Classroom (PT)	38.1	61.9
Adult Online (FT)	37.9	62.1
Adult Online (PT)	40.8	59.2

The completion of a culminating senior experience is a requirement for many of the undergraduate programs offered by institutions of higher education. Therefore, the differences shown on Table 6 for traditional and adult students and even the online learner participation measures were not as noticeable, and the measures for the adult online learner were the highest for this high-impact practice. The participation for traditional learners was 74.3% and for adult learners was 65.4%. The online learner participation was slightly lower at 64% for traditional and 60.6% for adult learners, with the adult online part-time learners measuring the lowest at 59.2%.

**Table 7. About How Many Courses at This Institution Have Included a Community-Based Project?**

	Some, Most or All	None
Traditional General (FT & PT)	65	35
Adult General (FT & PT)	58	42
Traditional In-Classroom (FT & PT)	65	35
Traditional Online (FT & PT)	66	34
Adult In-Classroom (FT & PT)	61	39
Adult Online (FT & PT)	53	47
Adult In-Classroom (FT)	63	37
Adult In-Classroom (PT)	55	45
Adult Online (FT)	55	45
Adult Online (PT)	51	49

The last question in the NSSE under HIPs dealt with community-based projects (service-learning) within courses taken by the seniors at the institution. On Table 7, the students that responded “Some, Most or All” were grouped together because this meant that they have participated in service-learning in at least one of their courses. The participation in service-learning was above 50% for all learner classifications. The traditional student participation was 65%, adult learner participation was 58%. For the online learners, the traditional online learner participation in service-learning was 66%, which was 1% higher than the traditional learners who were not all online. The adult online learner participation rate was 53%, and the adult online part-time learner rate was still the lowest at 51%.

## 5. Discussion

Adult learners in this study, as stated earlier, are classified as students that are 24 years or older. By this age, many students have started a family, have full time jobs, or incur other responsibilities that hinder their engagement and possibly their participation in HIPs. Wyatt (2011) states, “The challenge for institutional leaders is not only student engagement but how to engage the different student populations on campus” (p. 10). Adult learners with their increased family, work, community, and financial responsibilities may not be able to participate in HIPs as they are traditionally envisioned in higher education. According to Cross (1981), three broad types of obstacles exist for adult learners. “Situational barriers” are obstacles that are created by an adult learner’s own life situation (Cross, 1981, p. 98). “Institutional barriers” are institutionally-created policies and procedures that impede adult learners from participation (Cross, 1981, p. 98). Finally, “dispositional barriers” are an adult learner’s self-beliefs that create participation obstructions. (Cross, 1981, p. 98). Modifications may need to be made for adult learners to have access to these practices and activities. For example, an adult learner

supporting a family may not be able to easily study abroad for an entire semester. However, a week-long study abroad program with university-provided financial assistance or hosting a short-term exchange student may be options for an adult learner.

This section provides possible suggestions to aid adult learners in having high-impact practice experiences without having to make major sacrifices given their obligations.

1. **Global/diversity learning**-If traditional study abroad is not possible, programs that would allow the adult learner to host an exchange student for a designated amount of time could be an option. This would allow the adult learner student to still experience a different culture and see the world from another perspective.

2. **Collaborative groups**-Adult learners may also benefit from working collaboratively with other students. If adult learners are only taking online courses, they could still participate in online discussion questions and projects with their classmates. Instead of assigning multiple assignments that require group work, as an on-ground class would, limit the number of group projects. Hence, the adult learner does not get overwhelmed with trying to find time to meet with classmates. Additionally, these meetings do not have to be face-to-face; they could meet virtually.

3. **Service Learning**-Most adult learners are tremendously busy with work and school during the week. Therefore, it is recommended that opportunities for service learning should be offered on the weekend and involve the student's family. This would allow adult learners to spend time with their families while also giving back to the community.

4. **First-year seminars**-Often adult learners believe that first-year seminars are a waste of time as they perceive that they have already had life experiences that helped prepare them for college. Hence, online first-year seminar courses with content geared toward programs and services that specifically support adult online students would be a better option.

5. **Information literacy**-Information literacy programs may be implemented into online courses so that resource librarians could play a role in continuous contact with the students (Adams & Wiley, 2017). Adams and Wiley (2017) found information literacy as a common thread across "five high-impact practices—capstone experiences, learning communities, service learning and community-based learning, undergraduate research, and writing-intensive courses" (p. 227). The researchers indicate how librarians can play a role in engaging online learners in HIPs providing them with the sustained contact that many of them may need to be engaged and successful.

## 6. Conclusion

As higher education comes under increasing scrutiny, greater pressures are being placed on institutions to increase the graduation rates for all student populations. The importance of student engagement in HIPs, as evaluated in the NSSE survey, has been addressed in various studies, including Kezar and Holcombe (2017), Kilgo and Pascarella (2015), Kuh and AAC&U (2008), and Kuh et al. (2017). Indeed, in an ever-changing world, institutions need to provide students diverse ways to become engaged in their

education; this may be especially true of adult learner populations. Rabourn et al. (2018) in an analysis of the 2013 & 2014 NSSE data had shown that adult learners are more likely than traditional learners to take coursework online (p. 22). The results on Tables 1-7 of the current study of the NSSE 2017 & 2018 data supports the findings of Rabourn et al. (2018). Adult learners, having more responsibilities that tend to remove focus from their studies, may benefit from strategies to increase student engagement in HIPS, especially the adult online learners, which were shown to be even less engaged. For example, Gast (2013) states, “Public research universities that seek to increase adult student access must evaluate the effectiveness of their services for older students” (p. 22).

This paper considered Hips engagement measures, with a special focus on the adult online learner. According to the NSSE data, the adult learner’s participation measures were lower than the traditional learner participation measures for all HIPS examined by the 2017 & 2018 NSSE survey, where online learners were designated as students who have taken only online courses. This finding of lower engagement by online learners is in agreement with the literature considered by Bodily et al. (2017) that found online learners were less likely to be engaged. Rovai (2003) considers the challenges that online learners face, and these challenges are likely to explain why a large portion of adult online learners attend part-time. The adult online learners who were part-time students had the lowest participation measures for all of the HIPS examined. This is a very important point, because of the seniors surveyed by NSSE in 2017 & 2018, 35% were adults, and approximately 29% of these adults were taking only online coursework. Additionally, 37% of the adult learners surveyed were part-time, while over 52% of the adult online learners were part-time. Institutions need to find ways to address these dramatic gaps in high-impact practice participation to increase student engagement for all learners, especially the adult online learners. Specifically, to accommodate the adult learner’s other obligations, institutions should find new and different ways to provide student services and experiences that would meet the unique needs of the adult student population (Gast, 2013, p. 22).

Given the findings of many studies, such as Kuh et al. (2017), which are on the importance of high-impact practices, and the results derived from the analysis of the NSSE data in the current study, it is thought that as institutions strive to increase student exposure to HIPS focusing on opportunities that meet the needs of adult learners (on campus or online) may not only increase overall student engagement but also benefit from resultant increases in student success measures, such as overall six-year graduation rates. Stoloff et al. (2015) found that, although undergraduate admission tests are an indicator of student potential, programs including HIPS such as those detailed in this study can lead students to reach higher levels of student success, such as program completion and graduate school attendance. Thus, expanding the high-impact opportunities for all populations of students has the potential for meaningful gains in student success measures for institutions of higher education.

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