Flexible Attendance Self-Efficacy and Self-Regulation Identifier (FASSI): Supporting Non-traditional Students In Flexible Attendance Environments

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Distance education no longer means remote education. It has evolved to encompass modes of instruction that take advantage of the best practices of distance, traditional, and asynchronous education. Flexible attendance (FA) instruction allows students, especially non-traditional students, the opportunity to use technology-supported interaction to attend courses based on each student's life demands. Students can choose between in-person in a classroom, at home synchronously online and present, or on their own asynchronous schedule. The Flexible Attendance Self-efficacy and Self-regulation Identifier (FASSI) provides data needed to support and design for non-traditional students' success in FA. The FASSI instrument examines the Self-efficacy and Self-regulation skills required to thrive in an FA environment, regardless of the student's mode of instruction. The FASSI study was conducted at a community college in the American Pacific Northwest.

Flexible attendance in the distance education world

Distance education has evolved significantly since its inception. Initially, it catered to students unable to attend on-campus classes, often due to geographical distance or other constraints. Over time, advancements in instructional technology have enabled the provision of synchronous instruction, seamlessly integrating traditional in-person students with their online counterparts, thus expanding access to education (Martin et al., 2011; O'Reilly, 2005). Non-traditional students tend to be older and have more life responsibilities, such as work and families, that prohibit in-person instruction. Flexible attendance (FA) allows instructors to bring non-traditional and traditional students together in a single class. FA enables students to move between three modes of attendance: in-person, remote synchronous, and completely asynchronous to balance life responsibilities with educational requirements. As institutions adopt FA courses and techniques, it has become evident that the traditional ways of examining the skills required to succeed in this academic environment must change. Rather than measuring each mode individually, a more straightforward single measurement was needed to provide instructors and institutions with actionable student data.

Instrument development

The Flexible Attendance Self-efficacy and Self-regulation Identifier (FASSI) was developed to provide reliable, usable student data. It was intended to study students' self-efficacy and self-regulation skills in an FA environment, serve as an instructional design data point for instructors, and allow institutions to make data-driven instructional decisions.

The FASSI research was a quantitative study designed to examine the self-efficacy (SE) and self-regulation (SR) skills needed to thrive in an FA environment. Before the FASSI study, most research investigating distance education compared one mode of instruction to another; ex., a course taught in a traditional face-to-face classroom would be compared to a similar class taught using online methodologies (Bradley et al., 2017; Johnson et al., 2000; Simonson, 1999). The FASSI took a different approach by looking at the common skills needed between modes of attendance and measuring those skills central to FA as a whole rather than something unique to each mode. SE and SR were chosen as the theoretical constructs used in the study because of their prior use in distance education research. The study of FA is a new area of research that examines SE and SR data through the lens of needing data to support the larger demographic represented by FA courses. The reason for treating SE and SR skills as equal across modes of attendance was that the core methods of distance education are used across the three modes. With the FASSI instrument, there was no differentiation in the skills expected of traditional students and those utilizing alternative attendance methods. Skills once exclusive to distance education, such as electronic communication and the ability to utilize Learning Management Systems (LMS) such as Canvas, were now commonplace across all forms of learning and should be acknowledged accordingly within the educational framework.

FA courses combine traditional students who attend class in traditional classrooms with students who attend synchronously online and students who cannot attend at all and complete the work asynchronously (Beatty, 2019; Miller et al., 2013). This combination of traditional and non-traditional attendance in a single course presents challenges to instructors that the FASSI was designed to address. The FASSI breaks down the skills needed to succeed in a flexible attendance course and measures students' perceptions of their abilities: all three modes of instruction and the perceptions of SE and SR skills by the participating students were treated as equal by the FASSI instrument. The need to accurately gauge incoming students' SE and SR abilities is an essential tool that allows instructors to make instructional design decisions that can consider the actual skills and abilities of students enrolled in their courses. The data the FASSI instrument provides can guide the scaffolding and instructional supports that instructors utilize to promote student success across modes of instruction.

Methodology

The FASSI study occurred during the fall session of 2023 at a rural community college in the Pacific Northwest United States. This community college was chosen because of its long history of embracing distance education, starting with early iterations of online courses in the 1990s and continuing through today's FA coursework. The instructors teaching these courses were often early adopters of distance education or adjunct instructors. While many classes were offered utilizing distance methods, the campus was still primarily a traditional institution offering a conventional classroom experience.

When the 2020 COVID-19 pandemic forced institutions of higher learning to pivot to online methods of instruction immediately, this community college chose to adopt HyFlex instruction as the formal methodology for instruction, course design, and scheduling (Beatty, 2007, 2019). HyFlex was chosen because it provided a structure that could be applied to courses and scheduling both immediately and post-pandemic. While adopting HyFlex helped solve the immediate issues of continuing to provide education, the community college also, at the time of this research study, needed data to evaluate the rollout of the HyFlex initiative. The data was needed to make training decisions for the instructors teaching HyFlex FA courses and to assess the skills of students taking these courses.

The participating community college offered a wide variety of programming. Still, it primarily comprised workforce certification-seeking students in Career and Technical Education (CTE) programs and degree-seeking academic transfer students in associate or bachelor’s degree paths. Both program types employed HyFlex FA course requirements for graduation at the time of the FASSI study. The FASSI study was designed to measure the SE and SR skills students believe they possess when taking an FA course. Because the introduction of HyFlex affected all students, collecting data regarding students' abilities became a priority for the institution. Data collection began during the third week of the term and ran for 30 days. The FASSI instrument was distributed via electronic channels provided by the institution, including links to the survey posted

through Canvas, text, and email. Additional requests on institutional-sponsored social media channels were posted as reminders.

Findings

The FASSI sampled all students enrolled in either CTE training or degree-seeking paths, n=1,954. After the FASSI survey data was cleaned and incomplete responses were removed, a response rate of 19.75% was achieved. As part of the statistical analysis, non-response was examined through a two-tailed t-test that compared early and late responders, and no statistical differences were found. The FASSI displayed a Cronbach's Alpha of .857.

Statistical analysis of the FASSI data revealed that non-traditional students who tended to be older, taking more part-time classes, and were more likely to be enrolled in a CTE workforce certification program also tended to have higher SE and SR scores. The FASSI research demonstrates that non-traditional students may have other factors providing transferable SE and SR skills in the FA classroom. Conversely, younger, full-time, traditional students who demonstrated lower overall SE and SR skills may need targeted training and support to provide the required SE and SR skill training to thrive in an FA environment. FA courses, while giving students, especially non-traditional students, options for participating in their education, are no panacea. The skills fostered through distance education, which FA incorporates into its instructional approach, provide students with the flexibility necessary for success. However, the FASSI highlights disparities in the distribution of skills essential for thriving in FA environments. Both institutions and instructors must utilize data from tools like the FASSI to improve their preparation and support for students.

Discussion

Developed as a diagnostic instrument, FASSI measured the SE and SR skills needed to thrive in an FA environment. It demonstrated reliability by measuring these skills across a community college's different educational paths. The FASSI also demonstrated the finesse needed to differentiate students by demographics accurately, identifying non-traditional students and providing insight into how to support best and develop student skills. The FASSI study indicated that while a common set of skills may be required to thrive in an FA course, the students enrolled in FA courses may need more unique and tailored support from institutions and instructors. It is crucial for institutions to acknowledge that different groups and populations of students have different levels of SE and SR skills as they enter FA courses. Research, like FASSI, continues to provide data intended to inform decision-making in instructional design by instructors and in programming by institutions.

Education demographics are changing (National Center for Education Statistics, 2024; Washington State Board for Community and Technical Colleges, 2023). Students in CTE, wildly, are trending older and must contend with far greater life demands. Understanding the incoming skill set these students bring to their classes will allow instructors and institutions to make better, more effective, and targeted support decisions.

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