

## Does the ePortfolio Platform Matter? A Focus on Student Choice, Preference, Motivation, and Learning Alliance at a Hispanic Serving Institution

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Many universities are integrating ePortfolios into their curriculum. There is little guidance on how to select an effective platform. Some schools are utilizing their Learning Management System (LMS) or purchasing licenses for programs specific to ePortfolio, while others are recommending free, online website publication sites. With the free options, a new question arises: should instructors (or institutions) allow students to choose their platforms or assign a specific one? Based on a case study chronicling implementation challenges, Fallowfield et al. (2019) recommended allowing students to choose their platform. We engaged in a year-long quasi-experimental study to examine how important the specific platform was to students' learning alliance with the instructor and intrinsic motivation. Additionally, the effect of student choice in platform selection was analyzed. Contrary to Fallowfield et al. (2019), students indicated a preference for the ePortfolio platform choice to be made for them as opposed to making the choice themselves. No difference was found in the learning alliance or intrinsic motivation based upon whether students had a choice in platform, and learning alliance was above average for all student demographics.

ePortfolio continues to demonstrate its relevance and significance as an effective tool and practice for enhancing student learning in higher education (Eynon & Gambino, 2018; Eynon et al., 2014; Jensen & Treuer, 2014; Kuh et al., 2018; Lewis, 2017). Although not identified as one of the original high-impact practices (HIPs), as defined by the AAC&U (Kuh, 2008), ePortfolio was added in 2016 (Watson et al., 2016) and has been shown to enhance the student success of other HIPs, earning it the label of meta-HIP (Eynon & Gambino, 2018; Hubert et al., 2015). ePortfolio has been incorporated into individual courses, across programs, and in some cases, institution-wide (Eynon & Gambino, 2018; Jensen & Treuer, 2014; Lewis, 2017; Yancey, 2019).

More than a repository of information and artifacts, the ePortfolio is a means for students to make connections between concepts, different courses, and experiences in and out of the classroom (Egan et al., 2018; Kuh et al., 2018; Lorenzo & Ittelson, 2005). Since the ePortfolio is not bound by any single course, let alone an institution, it functions as a constant space within which students are able to draw connections as well as observe the evolution of their learning over time across all aspects of their life. This inherent transcendent ability is what gives the ePortfolio its power as a HIP (Eynon & Gambino, 2018). In a prophetic 2012 article considering the trend of ePortfolio adoption, Trent Baston, former President of the Association of Authentic Experiential, and Evidence-Based Learning (AAEEBL), encouraged institutions to strategize how they will adapt to this "disruptive technology" that is likely to influence a shift in the learning paradigm. Indeed, as institutions have continued to implement, learn, rethink, and leverage its

unique abilities as a tool for learning, the ePortfolio's presence and influence continues to grow.

Because of the efforts of the Association of American Colleges and Universities (AAC&U), many institutions of higher education are adopting this HIP as they embark on revisions of undergraduate curriculum with an eye to attracting and retaining 21st century learners in a competitive higher education landscape. At our home institution, Adams State University, the faculty voted in 2017 to implement ePortfolios as a graduation requirement as part of a robust institution-wide curricular revitalization initiative that was planned and implemented over the course of four years. The desire to integrate ePortfolios across departments and programs necessitated that a team of faculty and staff clarify how ePortfolio could be successfully implemented. The team wrestled with best practices for such wide-scale implementation motivated by the potential power for increasing student ownership of their learning, supporting deeper processing through reflection, and promoting life-long learning. A key question surfaced during this work that all institutions or departments must answer: What digital solution for an ePortfolio platform should be selected that would meet the curricular objectives as well as the diverse nuances of academic departments and programs?

### High-Impact Practice ePortfolio Platform Requirements

Selecting an ePortfolio platform is a critical task that should consider an array of factors and assumptions regarding its purpose. One primary consideration is that developing self-directed metacognitive engagement

with one's own identity as a learner is central to quality ePortfolio pedagogy (Kuh et al., 2018; Schrand et al., 2018). Reflection on one's development and learning is a central tenet of high-impact ePortfolio practice. This reflective practice prompts students to "think more deeply" about course content and experiences, "make connections between ideas," and "become more aware of their growth and development as learners" (Eynon & Gambino, 2018, p. 17; Schrand et al., 2018). Higher education's information transfer model with its fixed schedules, tendency towards lecture, examinations, and credit hours fragments learning into discrete chunks with connections between courses and disciplines likely unclear to the student. By and large, the student is left to decipher on their own what, if any, content is worth their time to retain beyond examination or course completion. It is reasonable to think that such a context leaves a lot of room for students to conclude that college, in general, is just a process of jumping through various hoops to get a degree. Within this rigid structure, the ePortfolio can provide an intentional space students can leverage to practice reflection and integration of diverse experiences, classes, concepts, thoughts, and actions that occur throughout college and influence their identity development. Therein lies the essential purpose of implementing ePortfolio as an experiential tool to enhance learning; to place the spiraled process of learning through experience, reflecting, thinking, and taking action at center stage in the life of students (Kolb, 2015).

According to Kolb (2015), "space needs to be created in curricula for students to pursue such deep experiential learning in order to develop expertise related to their life purpose" (p. 289). It follows, then, that if high-impact ePortfolio practice means students examine their own identities in their development as learners, then ePortfolio should in principle be a process that can (and perhaps should) start before a student enters college. By the same token, ownership over the process of developing as a learner also means that a student can contextualize the curated ePortfolio content as part of a process of ongoing learning and development that continues after college ends. Since ePortfolio development is ultimately a process of what can be accurately described as identity-making (Kahn, 2019), this process cannot be conceived as ending with a degree in hand. As students evolve, it is likely that their interactions with and within the learning space of the ePortfolio will evolve too. Thus, an ePortfolio platform must also be compatible with student development during college and as they anticipate growth after graduation. This inevitability underscores the relevance of an ePortfolio's portability as students recognize that their ePortfolio can have benefits beyond college.

Another consideration for high-impact ePortfolio practices is that when a student develops an ePortfolio,

they do so with an audience in mind. Lower-impact ePortfolio practice would presumably consist of students developing ePortfolios with only their instructor in mind: what they envision needing to include based on the content of the assignment, what they think they need to do to satisfy the demands of the assignment and course, etc. But when a student develops an ePortfolio for an authentic audience, they do so in the first place with anyone "other than the instructor" in mind (Bass, 2017, p. 66). An ePortfolio done well does not just contain a representation of content that the student intends just the instructor to see; instead, its content is curated also for people external to the classroom whose reactions the student genuinely cares about. Thus, an ePortfolio developed for an authentic audience gives students a sense of ownership over its content as well as a tacit accountability to their intended audience.

On our campus, the presumptive initial perspective was that the ePortfolio would be situated in the current campus learning management system (LMS), Blackboard, as licensed software specifically designed for ePortfolio was determined to be cost prohibitive. Blackboard continued to be the platform of choice for many campus stakeholders because it was familiar and there were resources already dedicated to it for supporting its other curricular applications; therefore, dedicating additional support to an ePortfolio component would be easily accommodated. However, through a focused investigation by a team of faculty and staff into best practices and engaging in conversations with several different institutions regarding their own experiences with platform adoption, it quickly became clear that Blackboard's ePortfolio solution was ill-suited for a successful campus-wide ePortfolio initiative. This information along with Blackboard's lack of portability, design constraints, and other limitations convinced our team that the institution needed to pivot away from the LMS to explore the option of web-based platforms for the ePortfolio. Website publishing platforms offer a high degree of design flexibility, intuitive functionality, and would address the inherent functional needs of the ePortfolio plus offer portability beyond graduation and the ability to reach an authentic audience.

There are several website publishing platforms to choose from that offer an entry level version of their services at no cost with the creation of an account and agreement to the provider's terms and conditions. Some examples include Weebly, Wix, Google Sites, and WordPress. These platforms have similar functionalities such as design templates, drag and drop, and the ability to cache images, videos, and documents on their own servers. The choice to move forward with the website publishing software platform option raised important questions: Which of the platforms should students use?

What are the advantages and disadvantages of a given platform? Lastly, should students be given the ability to choose the platform they use?

Recently, Thibodeaux et al. (2017) and Fallowfield et al. (2019) emphasized the importance of student choice over the ePortfolio platform. They explicitly recommended student choice as part of the adoption process, stressing that giving students this choice will have causal salience in student buy-in (Fallowfield et al., 2019) and encourage continued use of the ePortfolio (Thibodeaux et al., 2017). While allowing students voice and choice in platform selection is an inherently appealing conclusion, thus far, this has not been directly examined empirically. Convinced of the important role of student autonomy and in agreement with Thibodeaux et al. (2017) and Fallowfield et al. (2019) that student voice and choice is a factor for the successful launch of an ePortfolio initiative, we sought to test this empirically.

### **Institutional Context**

Adams State University is a small, rural, Hispanic-Serving Institution (HSI). HSIs are federally designated when a university's undergraduate enrollment is composed of 25% or more Latinx students and greater than 50% of students reporting financial need (Hispanic Association of Colleges and Universities, 2021). In the fall of 2020, Adams State University's undergraduate student body was 36% Latinx, 43% White, and 7% Black (IPEDS, 2020). In recent years, the campus has made an intentional effort to become more serving of our Latinx student population by embarking on a variety of best practices, including updating the university's mission/vision, examining policies and practices of biases, taking a critical look at hiring and retaining diverse faculty, decolonizing the curriculum, and examining disaggregated student data (Bensimon & Malcolm-Piqueux, 2014; Garcia, 2019; Núñez et al., 2015).

### **Theoretical Underpinnings**

A focus on inclusive excellence (AAC&U, n.d.) was a central tenant while developing our curricular reform, which included the addition of several HIPs to the undergraduate curriculum. As exposure to HIPs by underrepresented students has been shown to decrease achievement gaps (Finley & McNair, 2013), critical to the curricular reform resolution was the integration of four HIPs into the curriculum: ePortfolio, first-year seminar (FYS), writing intensive courses (WICs), and capstones. FYS with ePortfolio was piloted and implemented first, with WICs and capstone to follow in subsequent years. In all assessments of these new programs, examining data by ethnicity is crucial to ensure that new pedagogies are effective for our diverse student population.

Beyond a dedication to inclusive excellence and understanding platform adoption as it relates to our context, we were interested in other educationally relevant variables including intrinsic motivation and the student-faculty learning alliance. Regarding intrinsic motivation, it is important to note that a critical ingredient for ePortfolio success is student investment in the tool (Ciesielkiewicz, 2019). Fallowfield et al. (2019) identified a lack of student investment (i.e., voice and choice) in the adoption of the platform as a barrier to the success of their case study. Indeed, decades of educational psychology research has emphasized the importance of intrinsic motivation, doing something "because it is inherently interesting" (Ryan & Deci, 2000a, p. 55), for student engagement and learning (e.g., Deci & Ryan, 1985; Heyman & Dweck, 1992; Pintrich & Schunk, 2002; Ryan & Deci, 2000b; Sansone & Harackiewicz, 2000). Recent research examining student perceptions of the utility of ePortfolios concludes with an explicit recommendation to "include strategies that support intrinsic motivation" (Ciesielkiewicz, 2019, p. 660), and emphasizes the role of motivation in successful adoption. Thus, one of the educational variables of interest in the current study is students' self-reported intrinsic motivation.

We also believed measuring the working relationship between the student and the instructor to be worth investigating. After all, supportive relationships and connecting to faculty in the classroom are important for the learning of all students (Kuh et al., 2010) and are critically important to Latinx student success (Chávez & Longerbeam, 2016; Kuh et al., 2004; Rendón, 1994; Umbach & Wawrzynski, 2005). We were interested in seeing how ePortfolio creation affected relationships between faculty and students across the different platform options.

### **Current Study**

Two website publishing platforms (Wix and Google Sites) were assigned to be piloted across three conditions, including one condition that allowed free choice of platform, in FYS courses during the 2019-2020 academic year. For the purposes of our investigation, we called a platform choice *imposed* when a student or faculty member was assigned the platform they use to build their ePortfolio (either Wix or Google Sites). Conversely, *induced* choice occurred when, independently, the student made their own choice of platform for developing their ePortfolio.

The primary focus of this study was to learn about student perceptions of ePortfolio platforms to guide our university-wide adoption of a platform. Moreover, because it has been recommended in the literature that students ought to choose their platform, we felt it was important to contribute to the literature in this area.

Recognizing student autonomy in selecting a platform of their choice appeared to us to be intuitively integral to ePortfolio as a HIP; however, this aspect of high-impact ePortfolio practice is lacking empirical support. Lastly, as we are embracing best practices at an HSI, we were interested in understanding if there are any differences in learning alliance and intrinsic motivation between Latinx and non-Latinx students, though this was not one of our primary research questions.

We posited the following primary research questions:

1. Do students want to choose the platform they use to build their ePortfolio?
2. Do students have a preference for a particular platform?
3. Does students' motivation (e.g., interest and enjoyment, perceived choice) and perceptions of learning alliance (e.g., collaborative bond, teacher competency, student investment) vary based on the use of different ePortfolio platforms (e.g., Wix, Google)?
4. Is there a difference between imposed vs. induced platforms in students' motivation and perceptions of learning alliance?

### Method

We conducted a quasi-experimental study aimed at understanding differences in student perceptions of the platform and whether intrinsic motivation and learning alliance varied by group. There were three groups of FYS courses: (a) an induced group comprised of seven courses in which students were allowed to choose any

platform for their ePortfolio; (b) an imposed Wix group comprised of five courses, in which students were assigned to use the free, online platform, Wix; and (c) an imposed Google Sites group comprised of five courses, in which students were assigned to use another free, online platform, Google Sites. There were 17 sections of FYS included in the study, all taught in-person in the fall of 2019. These sections were taught by 15 faculty and included 374 students. Of these sections, 10 were taught by tenured or tenure-track faculty, four taught by full-time instructors, and three taught by adjunct instructors.

### Participants

All students enrolled in the courses were invited to participate in a survey to learn more about their experience. Over the course of one semester, 121 students volunteered to participate in this study (32% of all FYS students). Of this sample, 49 (41.5%) were of Hispanic origin and 69 (58.5%) were of non-Hispanic origin. There were 25 (26.3%) students in the induced condition and 70 (73.7%) in the imposed condition. Of this sample, 30 Hispanic and 38 non-Hispanic students were in the imposed condition, and seven Hispanic and 17 non-Hispanic students in the induced condition. Students in this sample, on average, had completed 31.8 college credits, with a mean age of 19.4. They had an average high school GPA of 3.33, average college GPA of 3.01, and average ACT composite score of 17.74. See Table 1 for gender and ethnicity participant demographic data and Table 2 for age and GPA data.

Table 1  
*Demographic Frequency Data of Sample*

|                           | Characteristic         | Counts | % of Total | Cumulative % |
|---------------------------|------------------------|--------|------------|--------------|
| Gender identity           | Male                   | 37     | 30.6       | 30.6         |
|                           | Female                 | 81     | 66.9       | 97.5         |
|                           | Transgender female     | 1      | 0.8        | 98.3         |
|                           | Other                  | 2      | 1.7        | 100.0        |
| Self-identified ethnicity | Asian/Pacific Islander | 4      | 3.3        | 3.3          |
|                           | African American/Black | 6      | 5.0        | 8.3          |
|                           | Caucasian/White        | 57     | 47.5       | 55.8         |
|                           | Hispanic               | 46     | 38.3       | 94.2         |
|                           | Latino/x               | 3      | 2.5        | 96.7         |
|                           | Other                  | 3      | 2.5        | 99.2         |
|                           | Prefer not to answer   | 1      | 0.8        | 100.0        |
| Latinx                    | Hispanic               | 49     | 41.5       | 46.3         |
|                           | Non-Hispanic           | 69     | 58.5       | 100.0        |

*Note.* Participants were recorded as Hispanic or non-Hispanic to examine whether differences exist between these groups as the study was conducted at a Hispanic-Serving Institution (HSI).

Table 2  
*Demographic Descriptive Data*

|                 | <i>N</i> | Missing | <i>M</i> | <i>SE</i> | <i>Mdn</i> | <i>SD</i> |
|-----------------|----------|---------|----------|-----------|------------|-----------|
| Age             | 120      | 1       | 19.40    | 0.3910    | 18.00      | 4.280     |
| High school GPA | 118      | 3       | 3.31     | 0.0639    | 3.47       | 0.694     |
| College GPA     | 97       | 24      | 2.98     | 0.0858    | 3.05       | 0.845     |
| Composite ACT   | 69       | 52      | 17.70    | 0.9900    | 19.00      | 8.220     |
| SAT             | 77       | 44      | 53.80    | 4.2100    | 67.00      | 36.900    |

## Measures

Beyond demographic data, we also collected information on the ePortfolio platform participants used (e.g., whether assigned or chosen Wix or Google Sites, or another chosen platform), their preferred ePortfolio platform, and whether participants wanted to choose their ePortfolio platform. Additionally, because there are several individual difference variables which predict and contribute to college performance, and we did not have random assignment, it was important to statistically control for academic performance variables. Thus, we decided to collect data on high school GPA and ACT/SAT scores. High school GPA was included in the analysis because much of the research suggests high school GPA is a predictor of academic success in higher education. Academic success variables including the ACT Composite, or the Scholastic Assessment Test (SAT) scores were collected to control for prior academic performance. Both the ACT Composite and SAT are nationally recognized standardized college entrance examinations that purport to measure academic achievement. Exerting statistical control over these variables diminishes the likelihood that group differences are attributable to pre-existing academic performance.

### *Learning Alliance*

The Learning Alliance Inventory (LAI) by Rogers (2012) is designed to measure the working relationship between the student and the instructor. Specifically, the LAI measures the degree of collaborative bond between student and instructor, how competent the student sees the instructor, and how invested the student is in the course. There are a total of 18 questions on a 7-point Likert scale (1 = *not at all*, 7 = *very much*). Higher scores indicate a higher alliance between student and instructor. Overall, we observed strong reliability of the overall LAI ( $\alpha = .96$ ) and by subscale: LAI Collaborative Bond ( $\alpha = .96$ ), LAI Teacher Competency ( $\alpha = .91$ ), and LAI Student Investment ( $\alpha = .97$ ).

### *Intrinsic Motivation*

The Intrinsic Motivation Inventory (IMI) is a multidimensional measurement device intended to

assess participants' subjective experience related to an activity. It has been used in several experiments related to intrinsic motivation and self-regulation (e.g., Deci et al., 1994; Plant & Ryan, 1985; Ryan, 1982; Ryan et al., 1990; Ryan et al., 1991; Ryan et al., 1983) and has high reliability. The instrument assesses participants' interest/enjoyment, perceived competence, effort, value/usefulness, felt pressure and tension, and perceived choice while performing a given activity, thus yielding six subscale scores. The IMI is 45 questions long on a 7-point Likert scale (1 = *not at all true* to 7 = *very true*); however, we only used 40 questions. Higher scores indicate greater motivation and interest. Overall, we observed strong reliability of the overall IMI ( $\alpha = .92$ ) and the subscales: Value and Usefulness ( $\alpha = .97$ ), Perceived Choice ( $\alpha = .83$ ), Pressure and Tensions ( $\alpha = .80$ ), and Interest and Enjoyment ( $\alpha = .89$ ).

## Procedure

Data were collected at the end of the semester by FYS instructors who had the option of providing the survey during class time or providing the link for students to do on their own time. All data were collected online via Qualtrics. The survey was designed to take about 30-45 minutes to complete. The demographic survey, including items about ePortfolio use and preference, was presented first, followed by a random order of the LAI and IMI items.

## Results

### Student Preference for Choice: Research Questions 1 and 2

To assess research questions 1 (Do students want to choose the platform they use?) and 2 (Do students have a preference for a particular platform?), we ran frequency analyses. Most students used Wix ( $n = 61$ , 50.4%), followed closely by Google Sites ( $n = 56$ , 46.3%), with a few students using Weebly ( $n = 4$ , 3.3%). Interestingly, a majority of students reported that they did not want to choose the platform ( $n = 60$ , 50.0%) as opposed to choosing ( $n = 24$ , 20.0%) or "ok either way" ( $n = 36$ , 30.0%). Furthermore, students had a slight preference for

Table 3  
*Platform Preference by Platform Use*

|                     |                        | Google Sites | Wix | Weebly |
|---------------------|------------------------|--------------|-----|--------|
| Platform Choice     | I want a choice        | 19           | 1   | 4      |
|                     | I do not want a choice | 2            | 58  | 0      |
|                     | I'm ok either way      | 35           | 1   | 0      |
| Platform Preference | Google Sites           | 45           | 11  | 0      |
|                     | Wix                    | 3            | 44  | 1      |
|                     | Weebly                 | 3            | 2   | 3      |

Table 4  
*Differences in Learning Alliance and Intrinsic Motivation by ePortfolio Platform Type*

| Variable                   | Google Sites           | Wix                    | <i>F</i> | <i>df</i> | <i>p</i> | $\eta_p^2$ |
|----------------------------|------------------------|------------------------|----------|-----------|----------|------------|
|                            | <i>M</i> ( <i>SE</i> ) | <i>M</i> ( <i>SE</i> ) |          |           |          |            |
| LAI collaborative bond     | 4.34(0.22)             | 5.05(0.21)             | 5.53     | 1, 100    | .021     | .050       |
| LAI teacher competency     | 5.58(0.15)             | 6.29(0.14)             | 4.02     | 1, 103    | .048     | .040       |
| LAI student investment     | 4.28(0.28)             | 4.50(0.26)             | 1.24     | 1, 103    | .569     | .003       |
| IMI value and usefulness   | 4.29(0.25)             | 4.01(0.23)             | 0.64     | 1, 93     | .637     | .007       |
| IMI perceived choice       | 4.33(0.18)             | 4.00(0.18)             | 1.65     | 1, 100    | .202     | .016       |
| IMI pressure tensions      | 3.58(0.20)             | 3.64(0.19)             | 0.50     | 1, 102    | .824     | <.001      |
| IMI interest and enjoyment | 3.59(0.21)             | 3.61(0.19)             | 0.01     | 1, 99     | .830     | <.001      |

Google Sites ( $n = 56, 50.0\%$ ) over Wix ( $n = 48, 42.9\%$ ), and both Wix and Google Sites were far preferred over Weebly ( $n = 8, 7.1\%$ ). To unpack these results, we thought it was important to determine if the ePortfolio platform used changed their preferences. As illustrated in Table 3, it appears that of the students who used Google Sites, they wanted a choice more often; however, of those that used Wix, they did not want choice as often. Moreover, the ePortfolio platform they used was what they preferred to use.

### Differences in Learning Alliance and Motivation: Research Question 3

To assess whether there were variances in participants' perceptions of learning alliance and intrinsic motivations between the different ePortfolio platforms (Wix vs. Google Sites), we conducted seven ANCOVAs on the subfactors of the LAI and IMI while controlling for high school GPA and age. We conducted an ANCOVA because we wanted to reduce potential bias of preexisting knowledge, academic performance, and the possibility of age effects which may unduly influence the impact of the independent variable. Often in scholarship of teaching and learning research, the designs are less controlled, thus using covariates such as age and high school GPA allows us to better understand how the independent variable specifically influences the

dependent variable while improving both internal and external validity (Bartsch, 2013).

See Table 4 for descriptive and inferential data for all analyses. As illustrated in Table 4, students in the Wix platform rated their instructor higher in collaborative bonds and teacher competency when compared to instructors using Google Sites after controlling for age and high school GPA. Effect sizes for these two significant results were small to medium (Cohen, 1988). No other learning alliance differences were found. Also, as illustrated in Table 4, there were no observed differences in students' motivation in the course (i.e., perceived choice, pressure and tensions, and interest and enjoyments) between students using the Google Sites and Wix ePortfolio platforms. As seen in Table 4, generally all participants, regardless of ePortfolio platform type, averaged above 4 (the midpoint of the IMI scale), with the exception if IMI pressure tensions and interest and enjoyment factors, indicating that, for the most part, they were motivated and had a learning alliance with the instructor.

### Induced vs. Imposed Choice: Research Question 4

To assess whether there were differences between imposed and induced groups, we conducted seven ANCOVAs on the LAI and IMI respectively. See Table 5 for descriptive and inferential results. Results

Table 5  
*Differences in Learning Alliance and Intrinsic Motivation by Imposed vs. Induced Conditions*

| Variable                   | Imposed                | Induced                | <i>F</i> | <i>df</i> | <i>p</i> | $\eta_p^2$ |
|----------------------------|------------------------|------------------------|----------|-----------|----------|------------|
|                            | <i>M</i> ( <i>SE</i> ) | <i>M</i> ( <i>SE</i> ) |          |           |          |            |
| LAI collaborative bond     | 4.84(0.19)             | 4.72(0.33)             | 0.09     | 1, 84     | .762     | .001       |
| LAI teacher competency     | 6.20(0.12)             | 6.44(0.12)             | 1.06     | 1, 86     | .305     | .047       |
| LAI student investment     | 4.56(0.23)             | 4.48(0.39)             | 0.02     | 1, 87     | .873     | .003       |
| IMI value and usefulness   | 4.15(0.22)             | 3.99(0.36)             | 0.14     | 1, 79     | .231     | .007       |
| IMI perceived choice       | 4.17(0.16)             | 3.94(0.27)             | 0.53     | 1, 84     | .469     | .006       |
| IMI pressure tensions      | 3.61(0.17)             | 3.76(0.27)             | 0.22     | 1, 86     | .641     | .003       |
| IMI interest and enjoyment | 3.51(0.18)             | 3.71(0.30)             | 0.31     | 1, 84     | .573     | .004       |

indicate that, for the subfactors of the LAI and IMI, either imposing a specific ePortfolio platform or letting students choose the platform did not differentially affect the ways students perceived their instructors' learning alliance or change their motivation. No statistically significant differences were found. It should also be noted that for both the induced and the imposed groups, students rated on average above 4 (the midpoint of the IMI scale), with the exception if IMI pressure tensions and interest and enjoyment factors, indicating that, again, they were generally motivated and had a learning alliance with the instructor.

Lastly, because HSI experts recommend disaggregating data based on student demographics (e.g., Bensimon & Malcolm-Piqueux, 2014; Garcia, 2019; Núñez et al., 2014), we examined whether differences in learning alliance and intrinsic motivation existed between Latinx and non-Latinx students. No statistically significant differences were found, indicating that Latinx students were not experiencing any differences in the quality of relationships with their faculty, nor their motivation toward the ePortfolio assignments. This helps us feel confident that we are not perpetuating structural achievement gaps through this change to the curriculum.

### Discussion

This was the first study we are aware of to directly and empirically investigate whether students want to choose their ePortfolio platform, and whether an induced or imposed platform affected student motivation and the alliance between students and their instructors. Thus, our findings have some potential impacts for course design and use of ePortfolio platforms. To summarize, our results indicate that students had a slight preference for Google Sites over that of Wix, and both Google Sites and Wix were far preferred over that of Weebly, the only additional platform chosen by students in the induced group. Overall, students preferred the platform they used in their course; however, the most surprising aspect of the

descriptive data is that the majority of students wanted to be told which ePortfolio platform to use rather than having to choose one themselves.

For the most part, using Wix or Google Sites did not affect the learning alliance between teachers and students and did not increase or decrease student motivation. However, when students used Wix, they did demonstrate stronger collaborative bonds with their teachers and viewed them as more competent when compared to students who used Google Sites. In addition, assigning students an ePortfolio platform to use did not change their perceptions of the learning alliance with their teacher, nor did it change their motivation in the course when compared to students who chose their own platform. Finally, it should be noted that, regardless of platform type or giving students a choice in their platform, overall, students had a strong learning alliance with their teachers and were motivated to participate in ePortfolio activities.

Despite the intuitive prospect that choice over platform will contribute to students taking ownership over their learning in an ePortfolio project, students in our sample did not seem to want or need the latitude to survey existing platforms and to make an autonomous determination about which one would be individually the most suitable for their purposes. Interestingly, while we found a slight preference for Google Sites, students that used it were more likely to say they preferred a choice or had no preference compared to students that used Wix (see Table 3). While this finding seems counterintuitive, it is reasonable to infer that their experience in using the Wix platform adequately satisfied the students' needs and desires for ePortfolio tasks.

A more general potential explanation for students actively desiring not to have a choice in platform is that they anticipate the requirements in higher education operating similarly to the requirements in K-12 school. Students are used to being told what to do and how to procedurally accomplish tasks. As the participants in this study were mainly first year students, they were already navigating the new landscape of higher education and picking a platform for an unknown (to

them) activity may have been met with a degree of indifference or may have caused additional and unneeded stress (Amirkhan et al., 2019; Amirkhan & Kofman, 2018). Thus, for campus-wide implementation, our data supported adopting Wix as the ePortfolio platform. Based on our findings, we offer the following considerations for engaging an ePortfolio adoption initiative.

### **Implications for Implementing a Campus-Wide ePortfolio Initiative**

As noted, ePortfolio adoption as a high-impact educational practice is being implemented at universities across the United States and abroad. A critical decision point in this process is choosing the ePortfolio platform. Many viewpoints (student, faculty, IT, administration) ideally inform the decision, but as we encountered at our own institution, those viewpoints tend to skew in the trajectory of whatever gives the least resistance to a course of practical decision-making. The points of view involved in the decision-making process may be differentially influenced by high-impact practices or the experiences of other institutions relevant to ePortfolio usage. For this reason, many institutions may end up with low-impact ePortfolio practice in settling for an already-supported LMS platform.

Our data suggest that, from the student's point of view, it does not matter which platform is used to create an ePortfolio. However, we would qualify this conclusion with the caveat that the quality of the platform still matters a great deal (Lorenzo & Ittelson, 2005). Our data also suggest that tasking students with the responsibility to make a choice about the platform they build their ePortfolio on is to misunderstand the needs of our institution's student population. So long as the platform in question does not lend itself to low-impact ePortfolio practice, as may be the case with an LMS ePortfolio, is likely the case that imposing a platform for ePortfolio development will not detract from a student developing ownership over the process and the ePortfolio itself.

Student choice in platform adoption has been recommended in the literature, yet not been directly tested empirically. While Thibodeaux et al. (2017) and Fallowfield et al. (2019) suggested that students should have choice in their platform, along with several other practical recommendations stemming from Fallowfield's (2019) case study, we did not find evidence to support a desire on the part of students to choose the platform in the population we examined. However, we are unable to generalize from our study to the needs of all students developing an ePortfolio—our sample is small, and the needs of our students may differ because of our institution's unique demographic.

From a practical standpoint, there are compelling reasons for an institution to adopt a single platform, provided it can meet the needs of high-impact ePortfolio development. Having a uniform platform simplifies the experience for faculty and staff. There is only one platform for faculty to learn, teach, and assess. Anecdotally, at the outset of our pilot, some faculty voiced concerns over a multitude of platforms with different layouts, interfaces, and capabilities. A single platform streamlines the ability to provide robust technological support. Additionally, privacy settings vary by platform and by adopting one platform, these settings are widely known and understood across campus. We believed it was important for students to understand the public nature of their data, to give them alternatives to making the data public, and to promote general digital literacy at the same time.

For other institutions embarking on a campus-wide ePortfolio adoption initiative, we acknowledge that there is likely no single ePortfolio platform that will meet every university's unique needs. Though time consuming, we recommend that schools engage in a similar process of pilot testing platforms for adoption and integrating all stakeholders, including students, in determining the platform best suited to the campus culture. We recognize that each institution will have its own administrative process for adopting new technologies and differ in the resources available to invest in ePortfolio initiatives. While we do not recommend the choice be left to the individual students, we do recommend student voice as part of a thoughtful, iterative process to ePortfolio platform adoption. If other institutions with diverse student populations engage in research that generates similar results, then there might be generalizable guidelines for implementing campus-wide ePortfolio. Though there is evidence to suggest imposing a particular platform for our context, there are limitations to the current study.

### **Limitations and Future Research**

As a quasi-experimental design, students were not randomly assigned to the conditions; instead, faculty had the option to choose the platform with which they were most comfortable. Some faculty had prior acquaintance (and in some cases expertise) with the platform group they volunteered for, and some had no experience with the platform they were assigned if they did not volunteer. So, we could not control for how well a given instructor knew the platform and how students perceived the ePortfolio assignment. This kind of discrepancy, however, usually does not bear on the decision-making apparatus of platform adoption at the campus-wide level.

In addition, we could not control for students' experience with website development in general.



Anecdotally, we know of students who were either especially pleased to be in the imposed Google Sites or Wix groups because of having had experience outside higher education developing websites on those platforms. We can imagine a student with a background in either platform having a desire to have that specific platform imposed, presumably not because they lack a general desire for a choice in the matter, but because they perceive themselves benefiting from an assignment whose requirements play into strengths they have already developed. Moreover, students were not involved in the selection process for the two ePortfolio systems that were tested, so no student input was included prior to the survey.

Another limitation was variation in the structure and content of the ePortfolio assignment in any given FYS course. FYS instructors worked closely with the ePortfolio and FYS coordinators overseeing the project, but there were some individual differences among faculty approaches to the assignment. Yet, these faculty followed a standard protocol developed by the ePortfolio coordinator and FYS coordinator. We want to stress that these data do nothing to suggest which particular platform should be adopted for ePortfolio practice at a given institution. If anything, we have shown that it is likely the case that student needs differ based on the demographic composition of the student body, as well as the involvement (or lack thereof) of stakeholders who give shape and clarity in how to best address student needs.

One intriguing area for future research to explore potential explanations for why first-year students may prefer not to have autonomy over platform choice. As mentioned previously, the participants in this study were mainly first-year students, and they were busy navigating the new landscape of higher education. Being tasked to pick a platform (among the many other new choices students are confronted with in the first year of college), students may have met this task with a degree of indifference, or it may have caused additional and unneeded stress. Emerging research on the impacts of stress on academic performance especially in first-year students is relevant to this topic of supporting student choice and should be investigated further (Amirkhan et al., 2019; Amirkhan & Kofman, 2018). In addition, more information relevant to explaining the lack of desire for autonomy over platform choice could be found by surveying students who have cultivated higher degrees of ePortfolio literacy than novice first year students. Those students might develop a stronger desire for autonomy over platform choice as their ability to curate and develop ePortfolio content strengthens over time.

### Conclusion

Choosing a digital platform is a major step in implementing ePortfolio. Institutions will ultimately

choose to adopt a technology solution that is, in their opinion, the right tool for the job based on their needs and beliefs. Because of the nature of the student-centered, reflective, process-oriented ePortfolio pedagogy, it stands to reason that this essential choice will impact how students and faculty engage with and perceive the utility and value of the ePortfolio. We set out to help clarify a key element involved in this choice. We sought to understand if students preferred to have a choice in the platform they used and if the use of one particular platform had any impact on intrinsic motivation or learning alliance. This investigation was guided by the assumption that if students start their ePortfolio off with this choice, it may support their motivation to continue to engage in the ePortfolio. While we still believe that autonomy is an essential component of learning and in ePortfolio, our data failed to support the claim that students prefer to have a choice in the ePortfolio platform. In addition, the data did not reveal that intrinsic motivation differed depending on platform. The good news is that on average, regardless of ethnicity, students felt a strong collaborative bond with their instructor, they felt that their instructor was competent, and students felt invested in the course as measured by the LAI (Rogers, 2012).

We still support student autonomy. Intuition, certain accounts of human nature, and the literature all champion the vital role of autonomy. When autonomy is stifled, and quite often this is the case in education, intrinsic motivating factors such as interest, curiosity, playfulness, and persistence suffer. HIPs done well support autonomy. However, it is clear in this case that tasking students with the responsibility to choose what platform they build their ePortfolio on, given the needs of our student body, adds a redundant dimension of freedom into the development of the ePortfolio. More research is needed, however, to understand why.

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