Post-Production Workday Opportunities: Operational and Communication Strategies

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Abstract

This MQP addresses communication issues, current operational obstacles, and opportunities for improvement for the ongoing implementation of Workday Student. Data was collected through focus groups to gain feedback about advising and registration through Workday Student. An analysis of this data as well as help desk tickets revealed the belief that "Workday does not work". In response, student registration announcements were communicated on the Canvas platform and students reported that these messages were highly effective. A custom Workday template of a 4-year plan for an example Computer Science student was also created to demonstrate opportunities to support advising. Implementing the Canvas announcements for every registration period as well as designing 4-years templates for each major is recommended.

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I also want to thank all of the participants within focus groups, interviews, as well as survey respondents who helped to identify the direction of this project and make the issues and opportunities clear.

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1. Introduction

The Workday Student platform is a new system at WPI specifically designed for students to manage their grades, academic progress reports, transcripts, and registration appointments. Workday replaced the previous platform known as Bannerweb, a platform in place for many years prior to Workday's implementation. The switch between platforms was not well accepted within the WPI community since there were many flaws associated with using the new platform. Many students and faculty members who have negatively responded to the Workday environment have claimed that incorporating changes, alterations, and improvements could have a positive effect on the platform and user experience for all WPI community members. At WPI, students and faculty use Workday Student and Workday in general on a daily basis for important tasks. For faculty, these would include tasks such as grade inputs, and recommendations. For students, other tasks would include degree audits, finances, course registrations, and other associated tasks.

This MQP project addressed communication and operations opportunities and issues arising from the implementation of Workday Student for WPI users. The primary focus for this project was on addressing academic advising and registration issues associated with the Workday Student platform. Members of the community at WPI have expressed that the Workday interface and features have not lived up to the expectations of most of the community. There have been a variety of concerns voiced by the WPI community about their frustrations with using Workday Student.

The goal of this project was to receive feedback from the WPI community and create solutions to the issues voiced by students, faculty, and staff. The ideal situation for this project would be for ideas and suggestions to be implemented into Workday right away or as quickly as

possible. However, this may not be an achievable goal since the Workday platform was undergoing many changes during the academic year 2021-2022, whilst this project in progress. Some issues with the platform may not be able to be addressed right away due to other aspects too which include the amount of control that WPI as a community has compared to Workday developers with Workday Student. Also, some recommendations to improve operational issues will not be able to be implemented at all because of the control Workday has over the platform. The findings of this project will be shared with the WPI IT Team and Workday for further improvements in Workday. A measure of success for this project was thus the implementation and testing of ideas to improve registration and advising within the WPI community and not only within Workday. Some ideas cannot be implemented, so another measure of success is identifying concrete recommendations and improvements that can be shared with the WPI IT team and Workday.

This project aimed to find solutions to these various issues associated with the WPI Workday Student platform by collecting data, observing the platform, and analyzing how to improve the operational and communicational aspects of Workday to better implement this service for everyone at WPI. Key steps that I took involved speaking to the community about the main issues surrounding Workday Student from the perspective of students as well as key stakeholders including faculty. After collecting this feedback and analyzing it along with registration data on help desk tickets, I then proceeded to create solutions to the various issues identified in my findings. This report documents my research design and my findings. I end this report with a set of recommendations for improving Workday at WPI.

2. Background and Literature Review

In this chapter I explain Enterprise Resource Planning as a system as well as student information systems used here at WPI. I also explain the registration and advising processes that occur at WPI. I also mention how students and faculty agree that Workday Student as a system is primarily flawed and lacking user-friendliness making the platform difficult to use in general. A comment that has been expressed by many students and faculty exclusively was that "Workday does not work".

2.1 Workday and Workday Student

An Enterprise Resource Planning system is "an application to efficiently analyze interpret and execute the daily core activities of various departments of your business." (Software Testing Help Team, 2022). If we consider the similarities to a business and a university, we can determine that an ERP is useful for both systems since it is a type of software that is needed to manage a certain type of technical job. In the case of WPI, Workday was chosen because it has the capacity to complete the tasks needed for students, faculty, staff, key stakeholders, and departments too. Many tasks that Workday as an ERP handles include the financial documents for students, faculty, and staff, as well as registration management for students specifically. Students can also access their grades, academic progress reports, and other related documents.

Workday as a platform serves markets other than higher education such as Human Resources as an HR system, as well as enterprise management, payroll and workforce management, analytics and reporting, along with many other business specific Workday systems. Workday Student was a custom part of the Workday platform specifically created for students to use in

their higher education. Though higher education products include student information system, finance, and more as an ERP system (Workday, 2022).

Some of the factors that allow for the acceptance of ERP's is based upon the integration at higher education institutions for the "Business processes, functions, and data to improve their overall productivity and effectiveness." (Bamufleh et al., 2021). Since ERP's are intended to provide a better working environment this contributes to the main reason why universities choose to switch from a previous platform to another. This can explain why Workday was the system implemented to replace the previous platform Bannerweb at WPI. WPI incorporated an ERP system on campus with the intention of providing a system that can increase the productivity of their information systems, in part by linking the various functions in a single system.

2.2 Student Information Systems at WPI

Workday Student is a new system that is still in its early implementation on WPI's campus. According to Veronica Brandstrader, the IT Change Management and Training Manager at WPI, "Workday went live at the end of February 2021 -- meaning, curriculum data for AY2021-22 was in Workday. Students first used Workday in Spring 2021 to prepare for registering in April 2021 for Fall 2021" (personal communication). As a student information system software, other universities such as Brandeis University, including WPI, have been making the transition to Workday Student.

The previous system was known as Bannerweb. Students, faculty, and staff who used Bannerweb before the implementation of Workday have noticed differences between the two platforms as well as identified flaws connected to the Workday Student platform according to the

data received from focus groups. They have also been impacted the most since the change from Bannerweb to Workday Student was, for many users, a difficult transition to make. A frequent comment in the WPI community was that it's generally regarded that Workday does not work. On the other hand, students, faculty, and staff who had not used Bannerweb at WPI have not struggled so severely with the change to Workday Student. Many of these community members were not familiar with the old platform and older technology. Since Workday student is still in the early stages of development, improvement, and alterations, its functionalities and interfaces can make use of more modern technology. To meet the project goal, I developed the following project objectives:

1. To gain an understanding of first year registration in Spring 2022 through Workday
2. To learn about the experiences of faculty members and students who have only every used Workday
3. To understand how double majors or BS/MS students optimize their scheduling and registration

2.3 The Registration and Advising Processes at WPI: Problems and Concerns

Students who had used Bannerweb for registration reported that they struggle with Workday Student. The registration process for a student begins by locating courses and creating a saved schedule that students can refer back to when the registration process beings. Once the registration day arrives, students need to log into Workday Student, locate their saved schedules, and register during the registration time that is provided to them before the registration period

begins. Registration times are different for every undergraduate level. For example, registration times for seniors occur days before sophomore registration times are assigned.

Advising at WPI usually involves students scheduling academic advising appointments with their advisors. This is especially frequent among most freshmen since the process of registration and scheduling classes is difficult to understand for most students. When advisors meet with students, they inform students about resources like the WPI catalogue which contains specific information about every major and class requirement for them. Advisors can also organize tracking sheets for a student's specific major. An example of a Computer Science tracking sheet can be seen in Appendix G. Advisors work with students to input classes into their tracking sheet to also track the progress of completion for degree requirements for students.

Students who had used Banneweb for registration reported that they struggle with Workday Students. Though there is room for improvement in the Workday Student system, the platform is still in early the early stages of its implementation and development. It will ultimately take time for these new changes to be implemented into Workday. Workday is currently working on making changes to the platform as this project is ongoing, so the platform will be changing alongside this project. This is opens up some great opportunities to make realistic and approved implementations to improve the operation and communication of Workday Student while receiving feedback about these implementations before the conclusion of this project.

3. Methodology

The main goal of this project is to address the communication issues, current operational obstacles, and opportunities for improvement for the ongoing implementation of Workday Student. The main focus is to investigate how WPI students, staff, and faculty members use Workday Student for registration and advising specifically. The WPI first year class who registered for classes during the 2022 spring registration through Workday provide an interesting perspective because they do not have experience with the previous system. Also, learning about the experiences of faculty members helped to determine how Workday affects the advising of different types of students with various types of majors. Getting the perspectives of students who are also double majoring, or are involved in a BS/MS program, helped to determine how Workday Student could optimize scheduling and registration features for students planning different types of schedules for an academic year plan.

The research results and findings are expected to reveal new ways of configuring Workday Student, as well as to establish more effective communication strategies and recommended improvements to the platform. Throughout this project, I applied the DMAIC six-sigma problem-solving method (Terry, 2020). These steps include:

1. **Define** – Goal of the project
2. **Measure and Analyze -** Data collection and analysis
3. **Improve** – Suggestions for improvement
4. **Control** – Testing solutions and recommendations

3.1 Measure and Analyze to Find Root Causes

After defining the project goal, the next step was to investigate the problem by collecting and analyzing data. I collected data through focus groups, interviews with key stakeholders, and analysis of registration data.

Focus Groups

To learn about how students and faculty use Workday, focus groups was primary method for collecting data. I gathered qualitative data and in-depth insights through these focus groups and their responses. The main purpose of these focus groups was to gain feedback on the Workday Student platform that has currently been developed. There was a diversity among the majors within these focus groups, including Computer Science, Mechanical Engineers, and Biochemical Engineers to name a few.

These focus groups were held through Zoom for approximately 30 minutes. There were 3 to 4 volunteers that participated in each focus group. Participation in each focus group was completely voluntary and the participant could withdraw at any time. Also, these focus group Zoom meetings were recorded so that I could take notes afterwards and record the feedback found. They were saved to my personal computer and not to the Zoom cloud storage. The recording were deleted at the end of each Zoom session.

I conducted focus groups for WPI undergraduates (freshmen, sophomores, juniors, and seniors) as well as faculty members and staff at WPI. With the help of my sponsor and advisors, I targeted student organizations, like the SGA (Student Government Association) on campus, for example. Also, I reached out to advisors and students to recruit people who might be interested in participating focus groups. In order to inform people about the meetings, I sent out an email

invitation explaining the focus group and the details of how the meeting would go. For a specific look at the invitations sent to students, refer to Appendix B. I included various dates and times when the focus groups would be conducted, and I invited people to a specific date and time block. An alternative was to seek their interest and then schedule a time for them to join a focus group separately. They would then respond to my email address to RSVP for the focus group. I then sent them a Zoom link to join the focus group before the session was held. It was considered implied consent when a person replied to the email invitation confirming that they would like to participate in a given focus group.

While the participant input was sought to develop improvements to better support registration and advising, there was no direct benefit to the participant from the involvement of this project. There was minimal risk for the participant, for example, there could have been feelings of discomfort in discussing responses during the focus group. Participant answers would remain anonymous and no names or identifying information would appear in any of the project reports or publications released.

Interviews with Key Stakeholders

During the focus group data collection period, I also conducted various interviews with faculty, registrar, as well as academic advising. Some of these interviewees included George Heineman (Computer Science Associate Professor), Paul Riley (Assistant Dean, Student Success), Sarah Miles (University Registrar), Laurie Stokes (Assistant Director of Business Programs), Jill Desmarais (Technical Project Manager), Kate Beverage (Director of Tech for Teach & Learn), and Wes Boucher (Assistant Director of Academic Advising). I received a variety of inputs about their challenges with communication, registration, advising, and the overall dilemma with Workday and its implementation on campus.

Analysis of Registration Data

In order to compare the previous data with statistical data, my sponsor provided me with various documents that contained registration data consisting of Help Desk ticketing data as well as the number of students who registered per registration period. Help Desk ticketing data listed information about student tickets sent to the registrar to request assistance with any issue they might have. There were many tickets issued about registration as well as many duplicated tickets that contributed to the delay in receiving a solution to a specific ticket.

Focus Group Data Analysis

After collecting data from focus groups and organizing this data, I analyzed ideas, opinions, comments, and suggestions about the Workday platform. Much of this data contained repeated information and responses, so in order to account for this I organized the data into categories. By categorizing responses, this created a sorted view of any feedback that might have been repeated in order to determine what students, faculty, and staff were most concerned about when discussing Workday Student. One example of a category was to sort what people liked about Workday and another category was to sort responses regarding what people did not like about Workday. Seeing multiple of the same responses helped organize the data and notice trends about Workday. We also saw the state of Workday Student using these categories. This feedback was used to find opportunities to focus on a main issue that could be resolved within Workday.

3.2 Improve and Control: Developing and Testing Solutions

After the data was organized and analyzed, I began to propose improvements and recommendations for both the Workday system and for WPI itself. The reason why

recommendations would be proposed to WPI is because there were aspects to the communication between students and faculty, for example, which could be improved by addressing the challenges within the processes in Workday. Analyzing these process challenges would lead to proposing improvements for Workday to try to create a solution that would bring change to the platform.

Based on the data, many students felt that there was not enough effective communication between advisors and students and so this was negatively affecting their registration experiences. This is when I brainstormed the idea to use the Canvas platform to release announcements about registration for all students. I figured that this would help students to plan ahead to be ready for registration and speak to their advisors to determine if there is anything that needs to be done before their registration date. Also, releasing messages on the days before a specific registration time I thought would also help students to remember their specific time just in case these dates were forgotten. The reason why I used Canvas was because most students use this platform every day to check assignments and grades. So, this was a way for communication to be improved by reaching out to students on a platform that could reach as many as possible.

Another solution that was created was the improvement of the Academic Plan feature that exists within Workday. This was supposed to be a feature similar to a student's tracking sheet, that would allow students to sort their classes into a 4-year plan type of layout. These Academic Plans could also link to a student's saved schedules which is crucially important to their registration process since classes are usually pre-selected before registration arrives. To improve the Academic Plan, I decided to create a template for a model student that could display recommended class layouts that a student can chose to follow. Many students I know are involved in the Computer Science major and are required to take many classes in order to satisfy

their degree requirements. So, I created a single 4-year plan template for a model Computer Science major student. In includes specific classes that are laid out over the course of four years to give students an idea of what to expect when pursuing this major. This could intern improve the operational aspect of the Academic Plan feature.

4. Results

In this chapter, I explain my focus group findings as well registration data analysis. The development of the Canvas messages, including the design and implementation, along with the Computer Science 4-Year Plan template is also discussed here.

4.1 Focus Group Findings

During the phase of data collection, the main content that received was from the student responses and feedback taken from various several focus groups, as listed below in Table 1:

Table 1 – Focus Groups

Focus Group #	Focus Group Students – Class	# of Students in Focus Group
Focus Group #1	1 Junior, 2 Seniors	3
Focus Group #2	1 Sophomore, 1 Junior, 1 Senior	3
Focus Group #3	3 First-Years	3

For each student focus group there were 6 main categories that were used to separate information: What was Liked, What was Not Liked, Registration Process, Bannerweb, Recommendations, and Questions Asked. Table 2 summarizes what students in focus groups liked about Workday.

Table 2 – Focus Group Data – What was Liked?

Focus Group #	What Was Liked
Focus Group #1 – Junior, Seniors	• Aesthetically pleasing design • Easily display grades • Sort classes based on date and time
Focus Group #2 – Sophomore, Junior, Senior	• Aesthetically pleasing design • Straightforward display of grades • Sort classes based on date and time
Focus Group #3 – First Year Students	• Aesthetically pleasing design • Easily display grades • Sort classes based on date and time • Adjustment to Workday was easier • Did not experience the switch from Workday to Bannerweb

Beginning with the feedback gathered from the student focus groups, there were many similarities in what was being said between all undergraduate focus groups. The first focus group, which consisted of both junior and senior students, expressed how the design of Workday was more aesthetically pleasing compared to the previous look of Bannerweb which most students within this focus group disliked the appearance of. These students also expressed how they appreciated the fact that they could see their grades displayed easily as well as sort their classed based on date, time, lab, and lecture during and before registration day.

The second focus group, which consisted of sophomore, junior, and senior students, mimicked much of what the first focus group stated in terms of design of Workday Student being better to look at, the display of grades was straightforward, as well as the ability to sort classes before registration day unlike Bannerweb.

The third student focus group consisted of only first-year students who agreed with what was said by the other focus groups but expressed how the adjustment to Workday Student was

actually easier since all of them did not experience the switch from Bannerweb to Workday Student. They could not compare the two platforms since they did not have any previous experience using Bannerweb. Table 3 summarizes data from the focus groups about what was not liked about the system.

Table 3 – Focus Group Data – What was Not Liked?

Focus Group #	What Was Not Liked
Focus Group #1 – Junior, Seniors	• Very clunky • Unintuitive • Little instruction, help, or guidance • Slow waiting times • Not user-friendly • Unnecessary buttons
Focus Group #2 – Sophomore, Junior, Senior	• Unintuitive • Slow waiting times • Not user-friendly • Unnecessary buttons • Video tutorials do not help "Workday was better yet somehow worse than Bannerweb because of what it was missing"
Focus Group #3 – First Year Students	• Unintuitive • Slow waiting times • Not user-friendly • Unnecessary buttons • Difficulty registering • Waitlisting issue

Beginning with the feedback gathered from the first student focus group they expressed some collective concerns that other students in other focus groups also commented on in terms of what was generally disliked about Workday Student. Students agreed that it was "very clunky" to use. The website itself was also unintuitive to navigate and they all agreed amongst themselves that there was little instruction regarding how to navigate to specific places. A senior

student in this group provided the example of struggling to find the specific courses they wished to register for before registration day began. Besides the difficult navigation and unawareness of what to do on the website, they mentioned the awfully slow waiting and loading times it took to get from each open tab to tab. The senior computer science student within this focus group recommended that Workday could create an automatic update system that could activate during a time when there are limited users on the platform. For example, any updates or changes that need to be made to the platform could happened are 12am or later to prevent any students and faculty alike form experience interruptions while using Workday Student. Other students explained how there were unnecessary buttons included in the design of Workday Student. One specific student was frustrated by the fact that a Workday member told this student to ignore the button on Workday Student called, "add courses" when registering for classes. They expressed how it was counterintuitive to include a button like that for students and yet make it unusable. So, these were a majority of concerns that appeared for this focus group and these comments are echoed in the feedback received from other focus groups as well.

The second focus group mentioned much of the same concepts brought up during the first focus group. They agreed that Workday Student was not made in a user-friendly way. Similarities between the two groups included, unintuitive and confusing navigation of the website, the unnecessary buttons that showed up on the platform, and the loading times being too slow when moving between pages. This group also mentioned that videos and guides about how to use Workday do not help much. Most students said they would rather figure it out on their own since it was too time consuming to watch long help videos. This was especially prevalent during registration when they expressed how time matters most to them. The previous focus group mentioned the phrase, "Workday was better yet somehow worse than Bannerweb because

of what was missing." Upon hearing this phrase, this focus group agreed with the statement because they have acknowledged that Workday has many flaws, but Bannerweb was only appealing to most since it was older technology, and the WPI community felt comfortable using it. Students expressed that this comes down to the premise about how people dislike change, so this could be reflected in the reason is why Workday Student is off-putting.

The third focus group containing all first-year students echoed what was being said within both of these focus groups before them. They expressed how there were too many unnecessary clicks. An example they were able to provide was, when trying to register or look for classes, they needed to click "find courses," then scroll or search for their classes, and finally add it to their schedule. A prompt would appear, asking them to select which class year they currently were, which semester schedule they wanted to add it too, and which specific term (A or B) they wanted to include in their saved schedule. One of these students was a chemical engineering student who expressed that when trying to add classes to their saved schedules, they incorrectly added their classes to the wrong term schedule and so they needed to fix this problem during registration. Another student who was an aerospace major explained how they actually had a hold on their account that was not brought to their attention until a few days before registration. They also forgot to check their financial aid letters required in Workday. This student expressed how even though they receive email updates, it was still very confusing to them to know where to go, what to do, and where to actually find the financial forms. Table 4 summarizes data from the focus groups about the registration process through the Workday Student system.

Table 4 – Focus Group Data – Registration Process

Focus Group #	Registration Process
Focus Group #1 – Junior, Seniors	• Slow waiting times • Wished for a better College Scheduler platform • Advised to create a system to automatically register all classes at once
Focus Group #2 – Sophomore, Junior, Senior	• Saved schedules did not work properly • Confusion around overloading in Workday Student • Wished to display full waitlisted courses in real time
Focus Group #3 – First Year Students	• Slow waiting times • Needed to rely on help videos • Could not attend Workday help sessions due to not having time • Needed to reach out to academic advisors for registration assistance

Before going into detail about the focus group data it is important to be aware of how registration occurs from the student point of view. As mentioned earlier in this report, students log into Workday Student, navigate to their saved schedules with their courses already selected and chosen, and click the register button when the registration period begins at 7am. This means that all student who are, for example, seniors are all registering for classes at the exact same time as every other student in that class year. This creates high lag times and delays on the Workday Student website since so many students are all registering at once.

Connecting this point back to the feedback gathered from the first student focus group, it connects directly back to what these students did not like about Workday Student's registration process. As previously mentioned, they were all frustrated with the slow and long waiting times when registering for courses on registration day. Two seniors involved in this focus group

actually needed to register for classes separately and one at a time. This meant that their saved schedules did not work and were creating conflicts with their other courses, so it was more efficient to register for those classes separately. The junior student even explain how they were no able to obtain a class they wanted due to the available spots for that class filling up after they refreshed the page to try to eliminate the long waiting times to register. All of these students wished there was a more efficient college scheduler available for them to use. The other members also agreed with the computer science senior student, who advised that Workday should create a system to automatically register for classes at the same time to eliminate the online traffic that negatively impacts student registration experiences.

The second focus group expressed how their saved schedules did not work properly either when compared to the first focus group and they all needed to register for classes individually without that schedule. All students were also confused about how to overload through Workday Student. They stated that they all ultimately go to academic advising and work with their advisors to input the class or classes they need to overload into their schedule. Also, they wished there was a way to display which courses were already waitlisted along with a real time record of how many classes were filling up or were already full. This would help to determine when certain classes were available to register while registration is actually happening at the same time.

Since the third group was made up of only freshmen, their experience with registration was brand new. They echoed the frustrations of previous groups about long wait times. Though they had very specific experiences that negatively affected their experience. A mechanical engineering major student explained how a peer they knew saved too many classes to one saved schedule and was unable to register for them all. It turns out that they overestimated the number

of classes they needed to take and thought the required amount was four classes total instead of three. This peer student was only able to register for two classes for one term and was waitlisted for their other required class. Two other students in this focus group had to rely on the help videos in order to understand the process of how to register for classes. They all agreed that they did not attend any Workday help sessions since they did not have time. There was even a story about the aerospace engineering student participating, who expressed how after registration they wanted to switch their major and heard about a new feature that was implemented into Workday. They were confused on how to do this and instead went to their academic advisor in order to switch their major and classes officially. It was actually revealed that all of the freshmen students needed to reach out to their academic advisors in order to specify which classes they would need for their major at the time of registration. Table 5 summarizes data from the focus groups regarding the Bannerweb system

Table 5 - Focus Group Data - Bannerweb

Focus Group #	Bannerweb
Focus Group #1 – Junior, Seniors	• Preferred previous way to display grades • Easier to print grades in Bannerweb • Liked College Planner & College Scheduler third party platforms • Adjusted easier to Bannerweb • Bannerweb was an accepted platform
Focus Group #2 – Sophomore, Junior, Senior	• Preferred previous way to display grades • Adjusted easier to Bannerweb • Liked day-to-day scheduler • Liked degree evaluation system • Viewing advisors on Bannerweb was clear • Liked ed-financial portal over Nelnet
Focus Group #3 – First Year Students	• Never experienced using Banneweb • Did not express much interest

The first student focus group mentioned how they actually preferred the way that grades were displayed by each term even though Workday Student's system is likable. A student explained how it was actually easier to print out their grades onto paper by using Banneweb instead of Workday Student. This is due to the fact that they expressed how Workday Student places terms together in semesters instead of separately. An example of this would be how Workday Student combines schedule times for A and B term, and Bannerweb was able to separate the two terms and their individual schedules day-by-day. Student here also appreciated how college planner and college scheduler third party platforms were linked to Bannerweb allowing them to sort their schedule easier compared to Workday Student. Since these students were upper class students, they all agreed about being adjusted to the Bannerweb platform even with all of its own flaws included. The WPI community seemed to accept it more than they have accepted Workday Student, though this is the opinion of solely the majority of students here at WPI.

The second focus group also preferred the way grades were displayed for each term/semester and how they valued the day-to-day scheduler similar to the responses in the first focus group. All of these particular focus group students also liked how Bannerweb included a degree evaluation in the system. Students expressed that they could see their advisors clearly and also liked the ed-financial portal much more than the current Nelnet financial third-party service that Workday Student uses instead. They also related to the other group that expressed how they were adjusted to the Bannerweb platform too.

First year students in the third focus group did not know about the previous platform Bannerweb. Though the mechanical engineering student here expressed how they were able to log back into the Banneweb platform (for a period of time) but there was very limited access to

old features. They could not see any financial information or grades for semesters like the other upper-class students in the other focus groups. Overall, they did not express much interest in Bannerweb since they were inexperienced with it. Table 6 summarizes data from the focus groups about their recommendations for Workday Student.

Table 6 - Focus Group Data - Recommendations

Focus Group #	Recommendations
Focus Group #1 – Junior, Seniors	• Model Workday after the best parts of Bannerweb • Include e-financial portal • Include day-to-day schedule: Display class times and locations for each week • Add system to automatically register classes for students on registration day • Eliminate lag when registering
Focus Group #2 – Sophomore, Junior, Senior	• Simplify the Workday platform • Eliminate unnecessary tabs or headings • Add small description of contents within tabs or links (Bannerweb feature) • Make navigation easier
Focus Group #3 – First Year Students	• Discuss classes with academic advisors and they input classes into Workday • Have more assistance about how to register from academic advisors

Some recommendations the first student focus group provided included modeling Workday after the best parts of Bannerweb. In further explanations of this, students offered to include features like the original ed-financial portal into Workday Student to better manage financials. They also recommended the implementation of a day-to-day schedule that would display class times and locations for each term separately. For example, A and B term schedules would not be combined like they are in Workday Student and instead separated to have a more

specific schedule. Referencing a point that was brought up earlier in this report, the senior computer science student recommended to add an automated system that will automatically register students for their classes on the day of registration. They expressed how this would eliminate the lag that occurs when students register all together at once during their own registration periods.

The second focus group mainly agreed that Workday developers could benefit from simplifying a portion of their platform. For example, unnecessary tabs or headings could be eliminated as to not be displayed as a distraction or navigation hinderance. A very interesting suggestion made in this group related back to a strategy Bannerweb had done. Workday could add a small description of what is contained within certain tabs or links. For example, a student explained, how Bannerweb would show a tab "Unofficial transcript" and a small description underneath read "show grades for semesters/years." Along those lines, they wanted this to be a part of Workday Student to make navigation easier when searching for information.

The third focus group, consisting of first-year students, thought it would be beneficial for freshmen specifically to go to academic advisors, discuss their classes with them, and have the advisors input classes into each student's Workday Student schedule. They said this would avoid the confusion of missing registration or having issues occurring during registration. They also expressed, since they were new incoming students this school, that they should be allowed to have more assistance and communication from academic advising about how to register successfully within Workday Student. Table 7 summarizes data from the focus groups regarding their questions about Workday Student.

Table 7 - Focus Group Data - Questions

Focus Group #	Questions Asked
Focus Group #1 – Junior, Seniors	• Why did WPI make the change to Workday Student? • Felt change was unnecessary
Focus Group #2 – Sophomore, Junior, Senior	• Why did WPI make the change to Workday Student? • Why couldn't WPI students make their own platform instead of using Workday?
Focus Group #3 – First Year Students	• Why did WPI make the change to Workday Student?

The first focus group brought up two main questions that the second and third focus group also inquired about. They wondered why WPI made the change to Workday Student in the first place since in their eyes, they thought that Bannerweb was already working for the WPI community well enough. They ultimately felt the change was unnecessary. This question and responses received here were extremely similar to the second focus group where they also felt the change was not needed. The first focus group also asked, why couldn't WPI students make their own platform instead of Workday developers? Students within this group debated back and forth about how a platform was actually already developed by other computer science majors, but Workday Student was actually preferred more than what was created by the students.

4.2 Analysis of Registration Messages

As with the focus groups, the analysis approach for the registration data involved organizing the information in tickets into separate categories. The data was categorized and organized by the frequency of ticketing incidents related to a specific problem. This process

would ultimately help to visually observe the frequency of how many tickets were issued related to a specific problem. The data was sorted into 11 main categories, as shown:

- Registration
- Class Registration
- Overloading
- Saved Schedule
- Workday Log-in Issues
- Duplicate
- Waitlisting
- Add/Drop
- Holds
- Workday Third Party
- Unofficial Transcript

Registration

The Registration category included any incidents having to do with course registration, questions about it, scheduling for terms, eligibility, and issues adding classes to course registrations. Some of these descriptions included:

- Fall 2021 scheduling
- Assembling schedule for registration April 27th
- Course registration planning not available
- Workday questions
- Questions about course registration
- Issue adding class marked as online to schedule
- Error confirming waitlist advancement
- Registering for E-block and Fall 2021 A & B
- Course listed as "registered" in workday before course registration day

This category has the highest frequency of tickets issued since because this data primarily focused registration data statistics and questions posed for student registration.

Class Registration

The next most frequent category was tickets classified as Class Registration, which involved tickets related to specific classes students asked about (examples are BME 3811, MA 510 and MA 517). Tickets included here had titles such as:

- ID 2050 Registration
- Adding MA 501 and MA 511 to the same schedule
- Math classes B term
- MA 510 and 517
- BME 3811 - Course not available for A term but supposed to be
- Problem with narrowing search in Find Course Sections
- ME 5220 - Workday Scheduling Missing Class
- Workday CS graduate course eligibility error
- CHE 4402
- HU 3900 Registration Form on Workday
- MA 4603 Listed in Course Offerings Sheet but Not in Workday

These are only a few repeated tickets issued related to specific registration for specific classes. These would often appear during dates that were close to registration.

Overloading

The next category, defined as Overloading, describes tickets issued that involve the process of students overloading on their current course. The process of overloading happens when students wish to exceed the standard course load (defined as 18 credits per semester). Full-time students are expected to take three classes every term; overloading happens when student chooses to take more than three courses in a single term. Some of general topics included questions students would ask about overloading, how to get advisor approval, or filling out overload forms from the hub. Some specific descriptions in the spreadsheet included:

- Overload (form in the hub) (4/22/2021 13:56 - 4/29/2021 8:00)
- Class Registration – Overloading, and How to approve an advisee's overload, when it comes from a waitlist opening?

There were fewer tickets issued for this particular issue since a majority of students are familiar with the process of overloading.

Saved Schedule

The Saved Schedule category tickets that were issued related to the issues of not being able to add courses into a student's saved schedule, and also general questions about the saved schedule feature in Workday Student. Saved schedules in Workday Student are very important to student registration since students plan and organize their courses in advanced using these saved schedules. A few specific descriptions in the data include:

- Fall Semester Course Registration - Saved Schedule
- Workday not allowing schedule building, BB 3513 - cannot add to schedule
- BB 3512 - Can't Add to Saved Schedule
- BME 3811 - Can't add to saved schedule
- CH 3410 - can't add to saved schedule
- CHE 2011 in A Term cannot be added to schedule
- BME 3811 can't be added to schedule, and Saved Schedules in Workday

This category represented one of the highest frequency of tickets issued to the registrar in the data provided.

Workday Log-in Issues

This category of Workday Log-in Issues consisted of tickets issued that related to errors signing into the Workday Student Platform itself. Some specific descriptions included:

- Workday Account (2/17-2/24)
- Workday Login
- Workday Login Error
- Workday Sign-in Error
- Issues signing into Workday
- Trouble logging in to workday

This category was less adamant in the number of tickets issued but still presented a registration issue to many students.

Duplicate

The Duplicate category actually had one of the most frequent issuing of tickets, where problems were reported at least twice including workday reports for MQP's, adding classes to schedules, not being able to find students, student onboarding, graduation requirements, and a variety of other different tickets that were simply issued twice or more than necessary. Some duplicated ticket descriptions included:

- Workday not allowing schedule building (Duplicate of 503524)
- RE: Time sensitive issue.... (Duplicate of ticket # 530546)
- FW: Workday student view/access (sensitive information) - duplicate of ticket 536312
- Help: Can't Add a Course to My Schedule (duplicate of 537029)
- Re: Problem in Workday (surprise) (duplicate of ticket #556818)
- About Case 35171: Fwd: Re: Workday Inbox - Your Daily Digest

Waitlisting

The next category, Waitlisting included tickets that explained the main waitlisting error that students expressed in focus groups. There was a specific incident that was mentioned in the spreadsheet where a certain course, BME 3506, was unable to be added as a lab and yet was accepted as a lecture which creates a conflict. This specific description included:

- BME 3506 - Unable to Add Lab - Lab/Lecture Error
- Error confirming waitlist advancement
- Wait list
- Adding a course while being waitlisted

Even though the frequency of this category was not as high as others, it was an important ticketing issue and major concern for all types of WPI students registering for courses.

Add/Drop

The category, Add/Drop, contains tickets that were issued to the registrar to address questions concerning add/drop forms, drop-in appointments, or how to drop a class in Workday Student. Some descriptions from the spreadsheet include:

- In drop-in waiting room
- Add/Drop form
- Drop a Class in Workday

This category occurred with much less frequency than others, likely because the add and drop process has been communicated well to students.

Holds

The Holds category included tickets relate to academic holds placed on a student account. This can prevent students from registering in Workday, so this category included tickets relating to the student financial agreement – promise to pay PDF that needs to be signed and filled out. Some of these descriptions include:

- Unable to Access "Student Financial Agreement - Promise to Pay" PDF in Workday
- Unable to view 'Student Financial Agreement
- Student Financial Agreement - Promise to pay Document
- [EXT] Remove Hold

Workday Third Party

The Workday Third Party category includes tickets issued in regard to the third-party platforms, for example Nelnet, that handles access with log-in issues, parent access, setup help, proxy login issues, and enrollment too. Accessing third party platforms is very important for a WPI student since these platforms include, course scheduler, course offerings, schedule planner,

and the financial service Nelnet which manages student loans and tuition. Some descriptions of the tickets included in this category were:

- Workday: Third party access
- Can't get into Workday
- Fw: Enrolling in Special Topics courses
- Email with Password for Parent Portal
- Third-party proxy login issues
- [EXT] Help with Setup
- Adding Family and Friends to Workday
- 3rd Party Access
- Parent Workday Access

This ticketing category actually had the second highest frequency compared to the Registration category.

Unofficial Transcript

The Unofficial Transcript category included tickets issued related to errors downloading the unofficial transcript document, requests for the transcript itself, and general questions about the transcript information. Some descriptions include: Unofficial transcript downloads as blank page, Unable to generate Unofficial Transcript, Requesting an Unofficial Transcript, and Unofficial Transcript. This category was also among the categories with the least frequency compared to other categories like Registration, Workday Third Party, and Saved Schedule.

4.3 Canvas Message Design and Implementation

To address the data found in the focus groups and registration tickets to improve communication, it required brainstorming on how to create more awareness behind registration dates and the registration process within Workday. I presented the idea to create specific message announcements for students that could be released through the platform Canvas to my

advisors and sponsor. This platform is widely used by all students at WPI, so I brainstormed that this would be an excellent platform in order for as many students to see these messages as possible. To determine whether this process would be likely to successfully notify students about registration, required testing and implementation. Fortunately, Canvas messages could be tested as part of this project, during the Fall 2022 and Spring 2023 registration periods towards the end of March and beginning of April 2022.

Before the implementation of these messages onto Canvas, I drafted the specific content and wording of each message, as well as determined release dates for when these messages should appear on Canvas to grab the attention of students in the most effective way. The first specific messages were set to release one week before registration. In order to collect feedback on whether this test was successful, an anonymous MQP Workday Student Survey was created for any student to provide their thoughts and opinions about the Canvas messages. This link, also with a summary description of this MQP project, was included within the Canvas announcement after the crucial student information was displayed. Further details about each of the specific Canvas announcement messages, can be found in Appendix E. The anonymous MQP Student Survey can be found in Appendix F. Based on comments from students and faculty, many would agree that Workday Student as a system is primarily flawed and lacking user-friendliness making the platform difficult to use in general. During the Spring Registration of 2022 that already occurred, some students have discussed amongst themselves that implementing a system where Workday Student can automatically register students for classes on the day of registration all at the same time would be a great inclusion for Workday Student. Although, to fill in the missing gaps, there are always flaws with any new idea or recommendation which will take time to implement this correctly.

Viewing Workday through the perspective of faculty members, who have experienced Bannerweb first, have also expressed struggles with using the new Workday platform. Focusing on the advisors and how they use the Workday platform to assist students, there is a consensus among many about communication issues within Workday and Workday Student that make it more difficult to connect with students. For example, a recommendation that was brought forward was about creating a process within the Workday Student system that would be able to track notes and documents between multiple advisors, both academic and faculty advisors, assigned to a single student. Tracking sheets could also be an important document to include into Workday Student. They would need to be shared between all other advisors involved with aiding a student, especially if a student is double majoring and handles two tracking sheets for each major. This idea could improve the communication between advisors by using the Workday Student system to improve this.

Canvas Message Design

The first message to be released onto Canvas included the specific registration dates and times for rising seniors, juniors, and sophomores. A link to the MQP Student Survey was included within each Canvas message and so also appears within this first message's announcement. This message was launched on Monday, March 21st (one week before Fall 2022

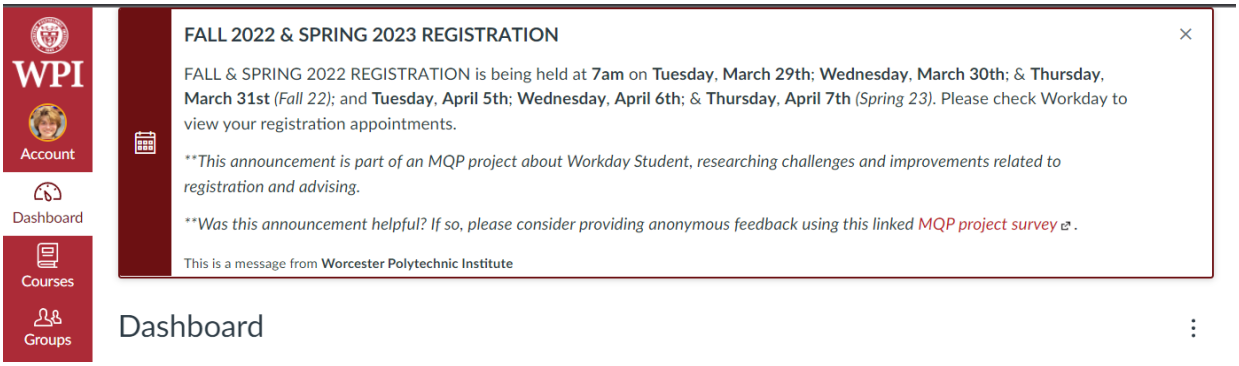


Figure 1 - First Canvas Message Student Dashboard View

registration begins). The Canvas message can be seen in Figure 1 as it was displayed on Canvas with the perspective of a student.

The second message to be released onto Canvas included an announcement about any holds that rising, seniors, juniors, and sophomores might have on their Workday account. It was posted on Wednesday, March 23rd. The message directed students to check Workday to confirm that they did not have any holds on their account. This is an important announcement because if a student has any holds on their account, it will prevent them from registering during their registration appointment date and time. The same link to the MQP Student Survey was also included within this Canvas message to receive feedback about this specific announcement. An example of the announcement's contents can be seen in Figure 2.

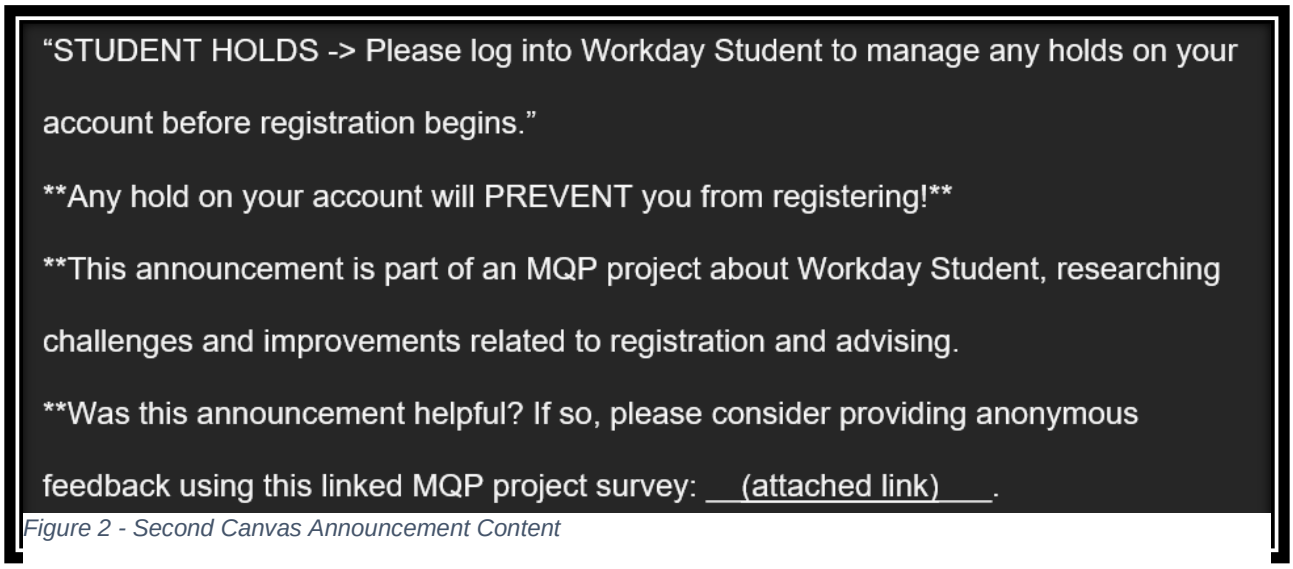


Figure 2 - Second Canvas Announcement Content

The third & fourth collection of messages to be released onto Canvas included multiple back-to-back announcements that were directed to specific class years before each Fall 2022 March, and Spring 2023 April, registration day. Fall 2022 messages were posted on Monday, March 28th; Tuesday, March 29th; and Wednesday, March 30th. Spring 2023 messages were

posted on Monday, April 4th; Tuesday, April 5th; and Wednesday, April 6th. For example, the announcement reminder for rising seniors & graduates appeared the day before their registration appointment since they were registering at 7am and needed to be ready before that time. This process was repeated for the messages for the rising juniors, and sophomores. The same link to the MQP Student Survey was also included within these Canvas messages to receive feedback about these announcements. The Canvas messages can be seen in Figures 3-8 as they are displayed on Canvas in student view.

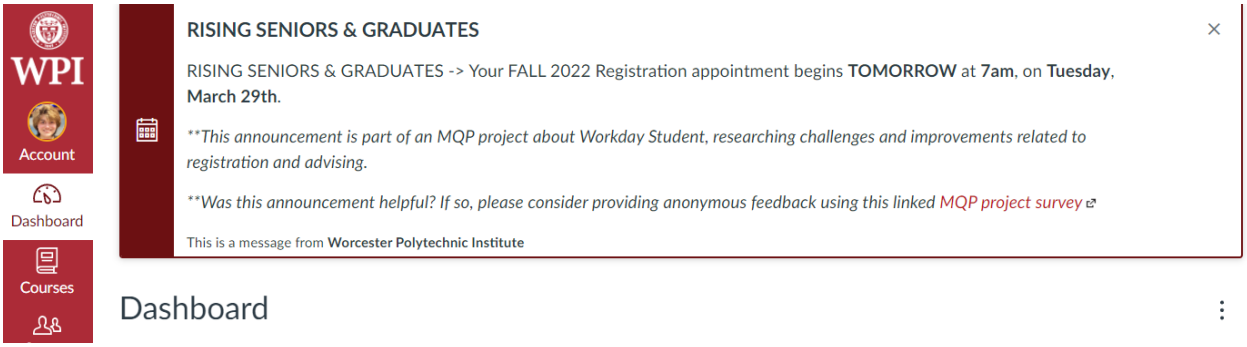


Figure 3 - Rising Seniors & Graduates Fall 2022 Canvas Announcement

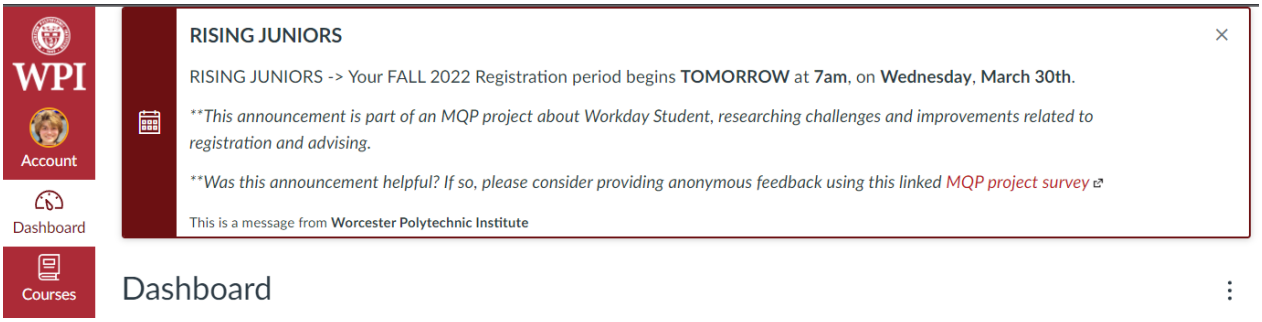


Figure 4 - Rising Juniors Canvas Fall 2022 Announcement

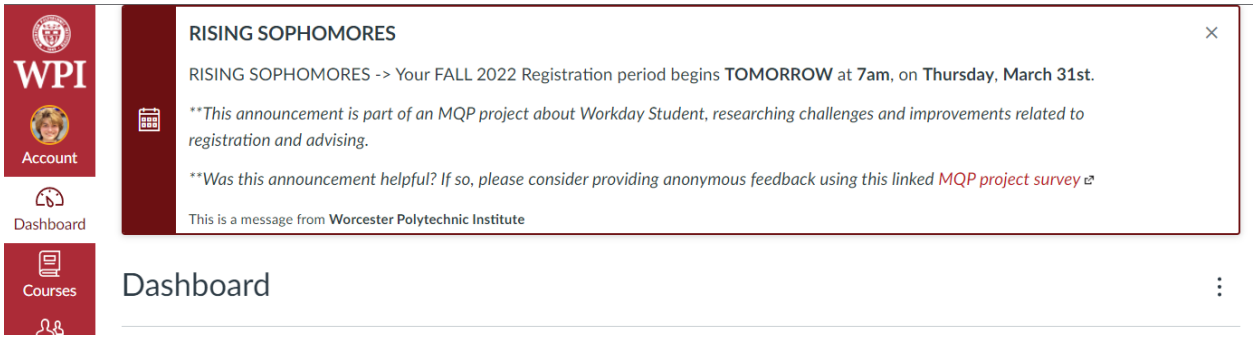


Figure 5 - Rising Sophomores Canvas Fall 2022 Announcement

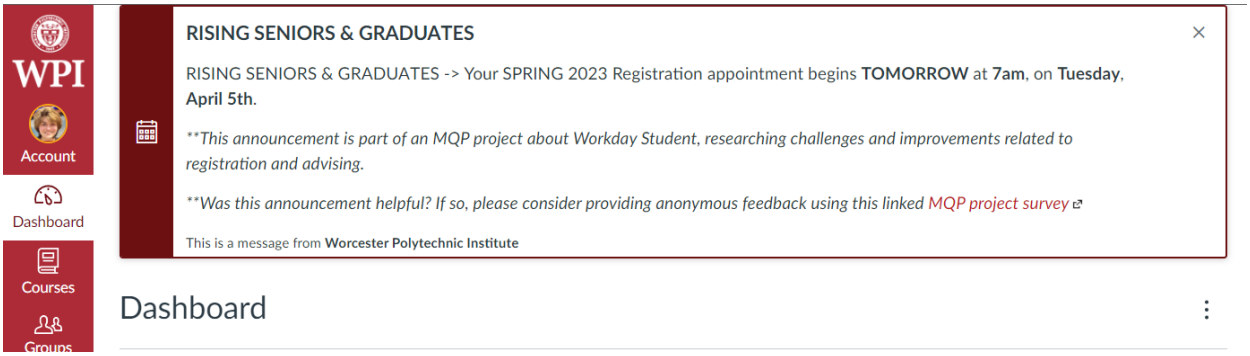


Figure 6 - Rising Seniors & Graduates Spring 2023 Canvas Announcement

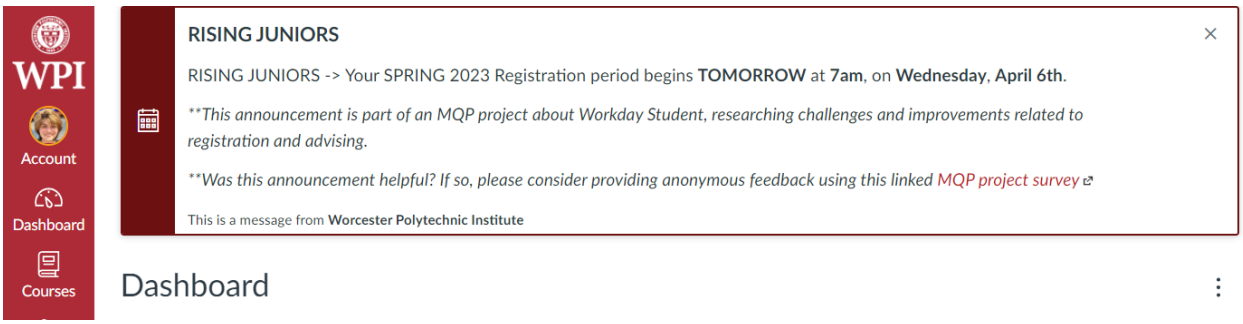


Figure 7 - Rising Juniors Spring 2023 Canvas Announcement

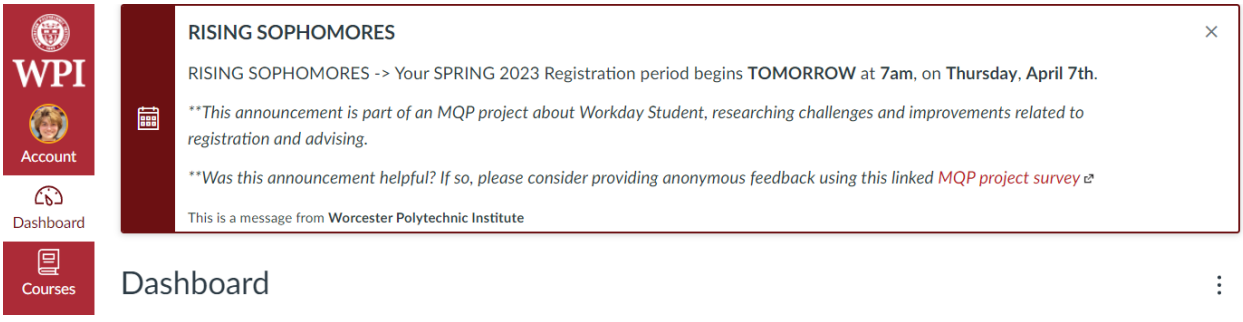


Figure 8 - Rising Sophomores Spring 2023 Canvas Announcement

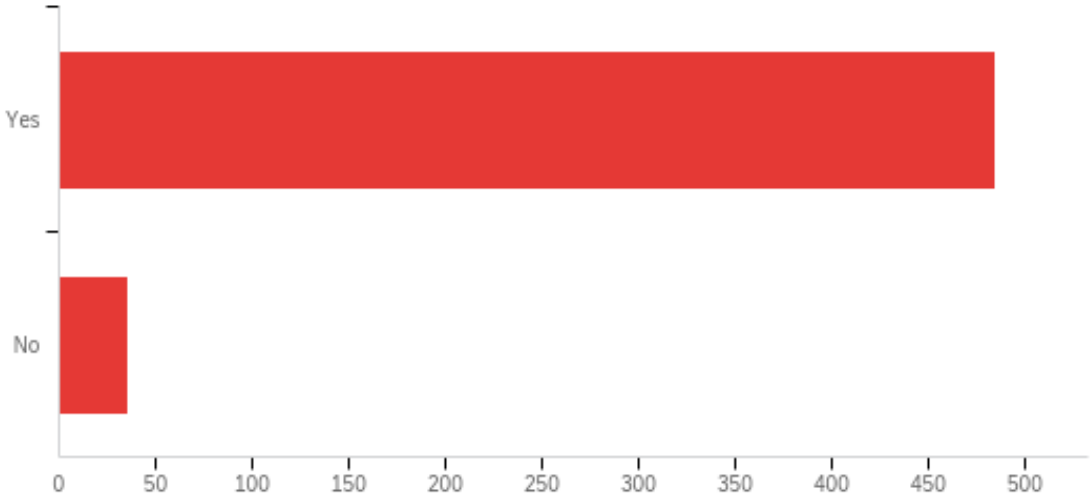
Canvas Messages Implementation and Feedback

After student registration concluded for Fall 2022 and Spring 2023, I collected the feedback I received over the course of this implementation using the survey in Appendix F. In short, the implementation of these Canvas announcements and messages was very successful with the majority of survey responses being positive. The survey collected a total of 523 anonymous responses from the WPI student and faculty community. The survey itself asked four simple questions about the usefulness of these messages for each student and whether they were aware of registration or holds on their account before this announcement. The responses are discussed below.

Figure 9 shows the report generated in Qualtrics survey displaying the response data and statistics for question 1. The response was overwhelmingly positive with 93.27% of responses (a total of 485 responders) who answered yes when asked about the usefulness of this announcement. About 6.73% (or 35 responders) answered "No" when presented with this question. The reason behind this could vary, although other data suggests that students may have already been aware of registration or they found the message to be unnecessary. Basically, the response to these announcements was very positive and had a large impact on the community.

The response to question 2 is shown in Figure 10 and was divided, with about 59% (total of 312 respondents) answering "Yes" to this question compared to about 40% (aka 209) of respondents answering "No" to this question. So, slightly more students seemed to be already aware of registration before this announcement was displayed to them. But there were over 100 respondents who were not aware of registration dates before this announcement, so it seems like the message provided them with important information.

Question 1: Was this Canvas registration announcement helpful to you?

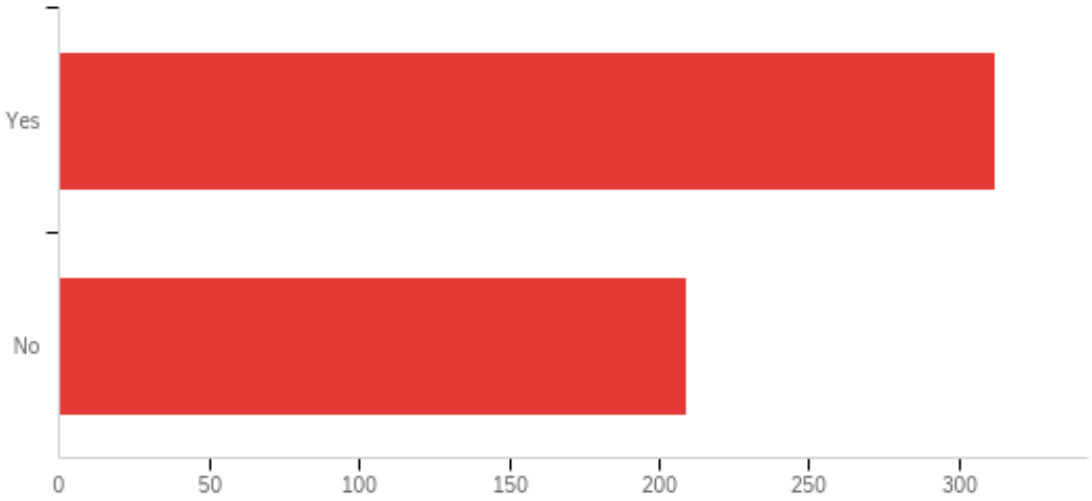


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Question 1: Was this Canvas registration announcement helpful to you?	1.00	2.00	1.07	0.25	0.06	520

#	Answer	%	Count
1	Yes	93.27%	485
2	No	6.73%	35
	Total	100%	520

Figure 9 - Question 1: Was this Canvas registration announcement helpful to you?

Question 2: Were you aware of your registration dates before you saw this Canvas announcement?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Question 2: Were you aware of your registration dates before you saw this Canvas announcement?	1.00	2.00	1.40	0.49	0.24	521

#	Answer	%	Count
1	Yes	59.88%	312
2	No	40.12%	209
	Total	100%	521

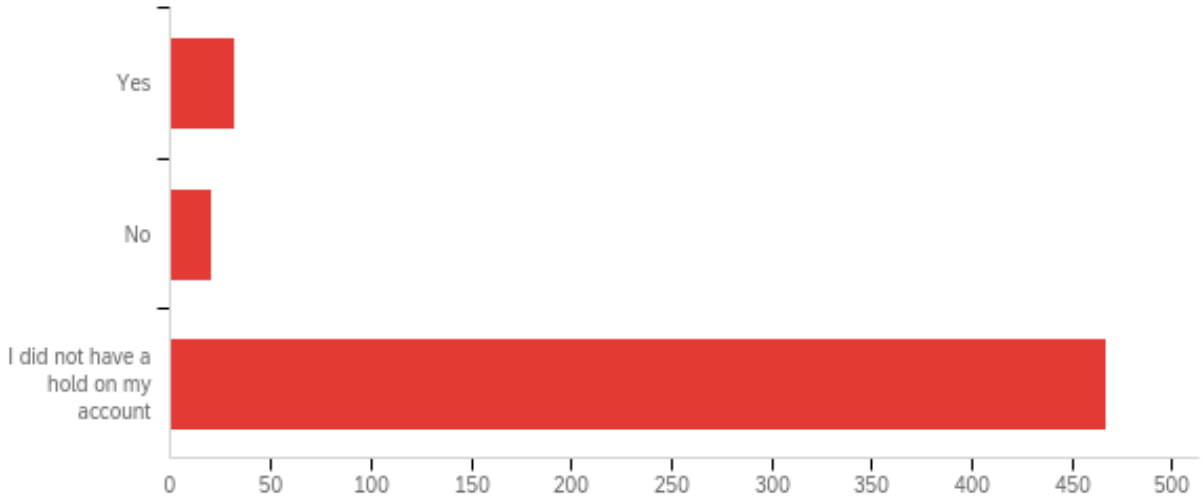
Figure 10 - Question 2: Were you aware of your registration dates before you saw this Canvas announcement?

The majority of respondents (about 90% or 467 respondents) to this question answered that they did not have a hold on their own account when checking Workday. So, from these responses, it seems that many students did not have any holds on their account to prevent them from registering. This statistic is very positive, since holds can restrict any student from registering and hinder their overall registration experience. Students unaware of holds may miss registering for classes they want or need to take, which can be critical in many circumstances; for example, for those who have very strict 4-year plans or are completing double majors or a BS/MS program. Based on the survey data, there were about 6% (32 respondents) of students who were able to resolve their holds before registration due to these announcements grabbing their attention. Unfortunately, though, about 3.85% (aka 20) of respondents who were unable to resolve their holds before registration, even with the release of these announcements. Even though this specific announcement may have been unnecessary to most, it is crucially important to others. In part because of this announcement, at least 32 students were able to log into Workday, check for any hold they might have, and successfully deal with the hold before it affected their ability to register. Refer to Figure 11.

The final question was open response where respondents could provide their honest feedback, recommendations, or opinions about anything regarding the Canvas messages they had seen. Many respondents expressed that they were very thankful for these Canvas announcements and thought that it was a great idea for the student community. One specific student specifically explained, “that was super helpful!!! made me realize I gotta make an appt with academic advising to plan out my schedule cuz i have not done that yet.” So, this message helped them navigate the process for registration and encouraged them to reach out for assistance with

scheduling classes. This is a great outcome, because it is likely that there are other students who would feel the same way about these reminders.

Question 3: If you had a hold on your account, did this message help to resolve that hold before your registration appointment?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Question 3: If you had a hold on your account, did this message help to resolve that hold before your registration appointment?	1.00	3.00	2.84	0.51	0.26	519

#	Answer	%	Count
1	Yes	6.17%	32
2	No	3.85%	20
3	I did not have a hold on my account	89.98%	467
	Total	100%	519

Figure 11 - Question 3: If you had a hold on your account, did this message help to resolve that hold before your registration appointment?

Another student stated, “I can't even find an email from WPI about the registration dates, so the announcement on canvas solely saved me from missing the dates. WPI has a major problem with communication, and Workday is a hated platform throughout the student body. I think announcements through canvas is one of the most efficient ways to alert students, as everyone checks it.” To give further context to this response, the first Canvas message was released a few hours before the official registration email was sent out from the registrar containing important information about registration. With this in mind, many other responses that acknowledged the fact that there was no official place where they could find crucial registration information despite registration being so close.

A senior student also explained their experience, “This was a wonderful idea! WPI sends out far, far too many emails, not to mention often borderline unmanageable workloads, so it's easy to lose track of important ones like registration announcements. While I'm a senior graduating and thus don't need to register, seeing that on the top of Canvas was a much more impactful way of letting me know when registration begins and would be more likely to get me to do something about it.” There seems to be a repeated theme about emails and how students are flooded with an overwhelming amount of information through their email inboxes. It is highly likely that many students would agree that important messages are often glanced over and forgotten. Many students expressed that these Canvas announcements stood out to them and grabbed their attention allowing them to take action sooner rather than later. Respondents also vouched for these Canvas announcements to remain and be repeated every time registration occurs, since a majority of the responses were very positive.

Many respondents offered very interesting recommendations that could help to improve these announcements, should the implementation of these announcements remain on Canvas.

One student even mentioned integrating these messages into the Canvas calendar feature, which many students check frequently. With this feature, many events could be displayed on the calendar over a single month or even multiple months in the future for students to be aware of. The student explained this idea as such, “The notification is a good start, but what this school needs is a streamlined, intuitive, easily-filterable calendar that looks like an actual calendar and can be trusted to have EVERYTHING on it as far as appointments and deadlines go.”

Another criticism of these messages was that the MQP description included within these messages made it quite cluttered. This was an expected response since there is a lot of information within one singular announcement. If these Canvas announcements are officially implemented by WPI, then the MQP project description and link to the survey will obviously be eliminated and cause the message to be much less overwhelming. Since these messages are mainly short and not particularly disruptive to most students, it is easy to dismiss these messages.

From observing the data, I found that these messages were necessary especially since students were very direct about the fact that the implementation of these messages would be necessary for them to remember crucial dates to make their registration process easier at WPI, therefore improving the communication to students. These announcements will continue to provide registration announcements going forward.

4.4 Computer Science 4-Year Plan Student Example Template

This project’s main goal has been fulfilled by implementing various registration announcement messages onto the Canvas platform for students, as well as addressing both the registration and advising processes, to improve and better support the operations of advising. To work alongside the communication aspect of this project it was time to brainstorm an idea that

could be implemented into the Workday Student platform to further assist student in organizing their schedules for registration. The idea began by analyzing a feature within Workday Student called the Academic Plan. Its main goal is to serve as a page for students to sort and organize their schedules containing classes that they need to register for. The Academic Plan is a fairly new feature added to Workday Students and currently is not used at WPI because it does not work as intended. Further development of this feature is needed for it to be used widely with students.

Knowing that this project cannot make any large-scale changes to the Workday platform programming, design, or organization, another idea was brainstormed instead. As a student here at WPI, the use of a tracking sheet has been a huge factor for many students and academic advisor in helping to organize of classes. The tracking sheet can be used to track a student's progress with their completion of degree requirements in a certain plan. Not all students use this tracking sheet to organize their classes and instead use their own forms or need assistance from faculty or academic advisors. This is especially true for new students who are unfamiliar with a tracking sheet at all. This concern even showed up within the survey comments taken from the Canvas announcement messages released for student registration. Some students heavily rely on academic advisors to assist them in the course-selection process to figure out a plan.

Tracking sheets can be confusing, especially, if a student is a double major, for example. Usually, double majors are required to manage two separate tracking sheets and complete requirements for both, in the regular span of four years. As a student who is double majoring, and has experience with using two tracking sheets, managing two majors this way is often very time consuming, confusing, and frustrating at times.

With this in mind, the idea was then brainstormed to create a very simple, flow-chart like, custom Workday template of a 4-year plan for an example Computer Science student. I wanted to integrate parts of the tracking sheet (Appendix G) that were the easiest to understand, as well as the simplicity of the flow charts that have previously appeared within the WPI catalogue (Appendix H). By merging the two designs together, the design of the template was developed. By using an example Computer Science student, this template could serve as a recommendation for any students who wish to see a 4-year plan set out that includes required classes they must take, along with an appropriate timeline to determine which classes should be taken when. It is also valuable to have a tool that supports multiple year planning, especially if students chose to complete their IQP's off campus with the dilemma of certain courses only being offered once a year.

This template only serves as an example and recommendation, so students are free to organize this template and schedule however they see fit. This template also gives a student the freedom to choose their own Free Electives, Depth, and Breadth classes over the course of their 4-year schedule. Also, this schedule was originally created within Microsoft Excel to allow for easy access to the template, should a student wish to download it from Workday Student and integrate their own schedule using the example model. It can also be downloaded in other forms such as a PDF if students would prefer to edit information in this way. Figure 14, shown below, is the final design of the Computer Science Major 4-year example student template. Figure 15 is the alternative design of the Computer Science Major 4-year example student template, if a student chooses to complete 1 unit (3/3rds) project that is spread over 3 terms a 4/3rds MQP project.

Since there is a high value for such a template plan being created, a crucial solution would be to expand and create more templates for each major at WPI. By doing this, it would offer major support to advising as a whole, therefore improving the operational flow of the advising process for the better. This template can also eventually be incorporated into the Workday platform as a template document available for download for students to have a filled in 4-year planned schedule as shown in Figures 12 and 13.

COMPUTER SCIENCE MAJOR: 4-YEAR PLAN EXAMPLE TEMPLATE

NAME: _____ **CLASS YEAR:** _____
ADVISOR: _____ **2nd MAJOR:** _____

	FRESHMAN YEAR	SOPHOMORE YEAR	JUNIOR YEAR	SENIOR YEAR
A TERM	CS 1101 - INTRO TO PROGRAM DESIGN BB 1025 - HUMAN BIOLOGY MA 1021 - CALCULUS I	CS 3013 - OPERATING SYSTEMS CH 1020 - CHEMICAL REACTIONS MA 2611 - APPLIED STATISTICS I	CS 3733 - SOFTWARE ENGINEERING HU 3900 - INQUIRY SEMINAR (INSERT DEPTH COURSE HERE)	CS 4241 - WEBWARE: COMP. TECH. FOR NET. INFO. SYST. CS 4341 - INTRO TO ARTIFICIAL INTELLIGENCE (INSERT FREE ELECTIVE HERE)
B TERM	CS 2102 - OBJ.-ORIEN. DESIGN CONCEPTS PH 1110 - GENERAL PHYSICS-MECHANICS MA 1022 - CALCULUS II	CS 3041 - HUMAN-COMPUTER INT. MA 2612 - APPLIED STATISTICS II (INSERT DEPTH COURSE HERE)	CS 4120 - ANALYSIS OF ALGORITHMS ID 2050 - SOC. SCI. RESEARCH FOR IQP (INSERT BREADTH COURSE HERE)	CS 4401 - SOFTWARE SECURITY ENGINEERING (INSERT FREE ELECTIVE HERE) (INSERT SOCIAL SCIENCE COURSE HERE)
C TERM	CS 2302 - SYSTEMS PROG. CONCEPTS PH 1120 - GENERAL PHYSICS-ELECTRICITY MA 1023 - CALCULUS III	CS 3043 - SOC. IMP. OF INFO. PROC. MA 2621 - PROBABILITY FOR APPS. (INSERT DEPTH COURSE HERE)	**IQP**	**MQP**
D TERM	CS 2223 - ALGORITHMS CH 1010 - CHEM. PROP. BOND. & FORCES PE 1006 - WALKING FOR FITNESS	CS 3133 - FOUNDATIONS OF CS MA 2631 - PROBABILITY THEORY PE 1009 - WALKING FOR FITNESS	CS 4233 - OBJ.-ORIEN. ANALYSIS & DESIGN (INSERT HUMANITIES ELECTIVE HERE) PE 1070 - LEISURE ED.: RED. SOC. NORMS	CS 4445 - DATA MIN. & KNOWLEDGE DISC. IN DATABASES (INSERT FREE ELECTIVE HERE) PE 1099 - HEALTHY ALTERNATIVES PE COURSES

Figure 12 - Computer Science Major: 4-Year Plan Example Template

COMPUTER SCIENCE MAJOR: 4-YEAR PLAN EXAMPLE TEMPLATE

NAME: _____ **CLASS YEAR:** _____
ADVISOR: _____ **2nd MAJOR:** _____

	FRESHMAN YEAR	SOPHOMORE YEAR	JUNIOR YEAR	SENIOR YEAR
A TERM	CS 1101 - INTRO TO PROGRAM DESIGN BB 1025 - HUMAN BIOLOGY MA 1021 - CALCULUS I	CS 3013 - OPERATING SYSTEMS CH 1020 - CHEMICAL REACTIONS MA 2611 - APPLIED STATISTICS I	CS 3733 - SOFTWARE ENGINEERING HU 3900 - INQUIRY SEMINAR (INSERT DEPTH COURSE HERE)	CS 4241 - WEBWARE: COMP. TECH. FOR NET. INFO. SYST. CS 4341 - INTRO TO ARTIFICIAL INTELLIGENCE **4/3rds MQP**
B TERM	CS 2102 - OBJ.-ORIEN. DESIGN CONCEPTS PH 1110 - GENERAL PHYSICS-MECHANICS MA 1022 - CALCULUS II	CS 3041 - HUMAN-COMPUTER INT. MA 2612 - APPLIED STATISTICS II (INSERT DEPTH COURSE HERE)	CS 4120 - ANALYSIS OF ALGORITHMS ID 2050 - SOC. SCI. RESEARCH FOR IQP (INSERT BREADTH COURSE HERE)	CS 4401 - SOFTWARE SECURITY ENGINEERING (INSERT SOCIAL SCIENCE COURSE HERE) **4/3rds MQP**
C TERM	CS 2302 - SYSTEMS PROG. CONCEPTS PH 1120 - GENERAL PHYSICS-ELECTRICITY MA 1023 - CALCULUS III	CS 3043 - SOC. IMP. OF INFO. PROC. MA 2621 - PROBABILITY FOR APPS. (INSERT DEPTH COURSE HERE)	**IQP**	CS 4445 - DATA MIN. & KNOWLEDGE DISC. IN DATABASES (INSERT FREE ELECTIVE HERE) **4/3rds MQP**
D TERM	CS 2223 - ALGORITHMS CH 1010 - CHEM. PROP. BOND. & FORCES PE 1006 - WALKING FOR FITNESS	CS 3133 - FOUNDATIONS OF CS MA 2631 - PROBABILITY THEORY PE 1009 - WALKING FOR FITNESS	CS 4233 - OBJ.-ORIEN. ANALYSIS & DESIGN (INSERT HUMANITIES ELECTIVE HERE) PE 1070 - LEISURE ED.: RED. SOC. NORMS	(INSERT FREE ELECTIVE HERE) (INSERT FREE ELECTIVE HERE) PE 1099 - HEALTHY ALTERNATIVES PE COURSES

Figure 13 - Computer Science Major: 4-Year Plan Example Temple Alternative

5. Conclusions and Recommendations

The goal of this project was to collect feedback from the WPI community about the newly implemented Workday Student, and to explore potential communication and operational improvements. It was found that there were gaps in information about Workday and the state that it was in during the beginning terms of this project. The implementation of Workday Student at WPI is still in the early developmental stages. As this project progressed, new features, designs, ideas, and changes were added and are still being incorporated into the platform to increase user ability and user-friendliness. There is much that could still be changed or altered whilst these implementations are occurring, and this project aimed to help the WPI community adjust to the Workday Student platform and to provide ideas for improving the platform. The reality of the situation is that this implementation process and improvements to be incorporated into Workday Student will take time.

A few highlights from focus group feedback included that the Workday platform was unintuitive, difficult to use for registration, not user-friendly, as well as had slow waiting times during registration. Focus group feedback was analyzed in conjunction with help desk registration tickets involving multiple requests related to registration issues, especially looking at tickets involving duplicates and registration issues. In response, several solutions were designed and tested. The first solution was the implementation and testing of registration announcements that were released through the Canvas platform to inform students about registration. A second solution that I created was a Computer Science example student 4-year plan template to help guide students on what a class layout actually looks like and what to expect if pursuing this major.

5.1 Recommendations

In terms of continued future implementation, there are three main recommendations that could improve the communication and operation processes at WPI with respect to Workday Student, as described below.

A. Integrate registration messages into the Canvas calendar feature, which many students check repeatedly on a daily basis. This would help students to see upcoming events and prepare in advance for any event that is of high importance to them, therefore improving the communication provided to students.

B. Integrate the Academic Plan feature within Workday Students to work in tandem with student Saved Schedules. These are both crucial to registration and, with further development, could aid students in organizing their schedules both for registration periods and fully planned out 4-year plans. This is where the example template for a model computer science student can come into play. If other templates are created for all majors, and improvements are made to the Academic Plan feature, then students can not only use these two features to plan their future schedules in Workday but also transfer those saved classes onto the Saved Schedules feature to pre-register classes far in advance. This would help to eliminate the confusion and pressure to register the right classes at the right times. So, by using these features together to help plan student schedules in advanced, there is an improvement in the communication and operational flow of the registration process.

C. Create a shared place for advisors to view student documents collectively yet privately to review student documents and help them to work collaboratively in an easier way. Plus, including a simple note taking system that can record notes on student documents that other

advisors and students can see together would help to greatly improve the communication amongst both students and advisors.

5.2 Reflections

The following reflections are included as part of the requirements for completing an industrial engineering senior design project.

Discussion of design

Engineering design is defined as process of devising a system, component, or process to meet desired needs and specifications within constraints. In terms of the engineering design used within this project, I applied the DMAIC Six Sigma problem solving strategy to organize my project in terms of defining the project goals, analyzing data collection and feedback, as well as creating and testing solutions to implement improvements to improve Workday Student alongside registration and advising. The highlights of these designs were the messages implemented in Canvas and 4-year templates that can support advising. Since my project also addressed a complex problem, it involved diverse groups of stakeholders from multiple disciplines as well as a variety of WPI students, faculty, and staff. There was also no obvious solution to this problem and the project involved conflicting technical issues as well.

Discussion of constraints considered in the design and broader impact

The main constraint that I experienced during this project was that WPI has little control over making significant changes to the Workday platform. This constraint limited the implementation of both the Canvas registration announcements as well as the CS 4-year plan

example template. Instead, this project focused on recommending solutions to improve communication within the WPI community as well as improving the Workday Student operational flow of scheduling for academic advising and students. This project has the potential to push further improvements that WPI and Workday can make together to improve both communication between students and advisors, as well as optimizing the operational processes behind registration and advising too.

Discussion of experience acquiring and applying new knowledge

I learned a lot about how to effectively communicate the concerns of many people with varying opinions. For example, in this project, many community members that I spoke to had many different opinions about Workday Student. This project taught me how to look for consistent data among groups and condense that information into feedback that speaks for a majority consensus. The majority of students, faculty, and staff disliked Workday, so noticing repeated concerns is crucial for problem solving and identifying the core of an issue.

Discussion of teamwork in this project

I completed this project individually, so my experience was different than the perspective of working with team members, as I have did during my IQP. However, I did receive a great deal of guidance form my advisors and sponsors about how to approach this project and advice about moving forward with ideas. Working individually allowed me to meet my objectives and establish my goals by planning in advanced crucial steps that I needed to take to collect data, meet personal deadlines, and overall scheduling. Also taking the initiative to reach out to community members, has helped me understand the interview process and how to communicate with members of a community to convey the meaning behind a project. Overall, this project was

a great experience to help me understand the perspective of working on a large-scale project individually and applying my personal skills to it. I will apply what I have learned in this project to my professional work experiences in the near future and contribute my skills both to team projects as well as individual projects.

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Appendix A - Workday Focus Group Email Invitation for Students, Faculty, and Staff

Email Invitation:

My name is Bridgette Paredes, and I am a double major in Management Engineering and Professional Writing completing my MQP. In this MQP project, we are addressing communication, current obstacles, and opportunities for improvement for the ongoing implementation of Workday, with a main focus on support for registration and advising for WPI users. This research will be used to help find new ways of configuring Workday, as well as to establish more effective communication strategies and overall recommended Workday improvements.

I would like to invite you to join a focus group that is being held for the purpose of gaining feedback on the Workday platform that has currently been developed. I will include various dates and times when the focus groups will be conducted, and you may choose a specific date and time block. An alternative would be to seek your interest and then schedule a time for you to join a focus group separately.

The focus group will be held via Zoom for about 30 minutes. There will be 3 or 4 people (including yourself) participating in this focus group. If you would like to participate in the focus group, please send an email to my email address (bkpardes@wpi.edu) in order to RSVP for the focus group. I will then send you the Zoom link to join the focus group before the session is held.

Your participation in this focus group is completely voluntary and you may withdraw at any time. While your input is sought to develop improvements to better support registration and advising, there is no direct benefit to you from the participation in this project. The risk to you is minimal; you might experience discomfort in discussing responses during the focus group. Please remember that your answers will remain anonymous. No names or identifying information in any of the project reports or publications. It is considered implied consent when a person replies to the email invitation confirming that it would work for them to participate in the focus group. Also, these focus group Zoom meetings will be recorded so that I may take notes afterwards. They will be saved to my personal computer and not to the Zoom cloud storage. The recording will be deleted at the end of the project.

Your participation is greatly appreciated. If interested, we can share a copy of our results with you at the end of the project.

For more information about this research please contact me (bkpardes@wpi.edu) or my project advisor Professor Sharon Johnson (sharon@wpi.edu) with any questions or concerns you may have. Thank you for your feedback.

Appendix B – Workday Spring 2022 Registration Freshmen, Sophomores, Juniors, and Seniors Focus Group

Email Invitation:

My name is Bridgette Paredes, and I am a double major in Management Engineering and Professional Writing completing my MQP. In this MQP project, we are addressing communication, current obstacles, and opportunities for improvement for the ongoing implementation of Workday, with a main focus on support for registration and advising for WPI users. This research will be used to help find new ways of configuring Workday, as well as to establish more effective communication strategies and overall recommended Workday improvements.

I would like to invite you to join a focus group that is being held for the purpose of gaining feedback on the Workday platform that has currently been developed. I will include various dates and times when the focus groups will be conducted, and you may choose a specific date and time block. An alternative would be to seek your interest and then schedule a time for you to join a focus group separately.

The focus group will be held via Zoom for about 30 minutes. There will be 3 or 4 people (including yourself) participating in this focus group. If you would like to participate in the focus group, please send an email to my email address (bkpardes@wpi.edu) in order to RSVP for the focus group. I will then send you the Zoom link to join the focus group before the session is held.

Your participation in this focus group is completely voluntary and you may withdraw at any time. While your input is sought to develop improvements to better support registration and advising, there is no direct benefit to you from the participation in this project. The risk to you is minimal; you might experience discomfort in discussing responses during the focus group. Please remember that your answers will remain anonymous. No names or identifying information in any of the project reports or publications. It is considered implied consent when a person replies to the email invitation confirming that it would work for them to participate in the focus group. Also, these focus group Zoom meetings will be recorded so that I may take notes afterwards. They will be saved to my personal computer and not to the Zoom cloud storage. The recording will be deleted at the end of the project.

Your participation is greatly appreciated. If interested, we can share a copy of our results with you at the end of the project.

For more information about this research please contact me (bkpardes@wpi.edu) or my project advisor Professor Sharon Johnson (sharon@wpi.edu) with any questions or concerns you may have. Thank you for your feedback.

Focus Group Questions:

1. First, please explain the process behind how to register for classes. This is to test the simplicity of the using Workday, not your abilities, so do not worry if you are unable to accurately recall how to register the first try.

2. What, if anything, was confusing or frustrating about your registration process? Is there anything in particular you would like to alter about the process?

3. What, if anything, did you like about using Workday to register for Spring 2022 classes? Are there any features you found particularly user friendly?

4. Were you able to register for classes successfully? If so, did you experience any lag in the process? If not, what were some of the main issues restricting you from successfully registering?

5. How does Workday compare to the previous registration platform Bannerweb? Which platform was more difficult to use? Why?

6. If you prefer the Bannerweb platform over Workday, could you explain, in your opinion, what worked and what did not work?

7. In your opinion, how is the communication in Workday? Are you able to find what you are looking for?

8. How can Workday improve the communication between you and your advisors, both academic and faculty?

9. Finally, are there any changes you would like to recommend for Workday that would make it easier for you to use? Bear in mind that not all suggestions will be able to be implemented right away. Also, some suggestions will not be able to be implemented at all because they are controlled by Workday. These suggestions will be shared with the WPI IT Team and Workday.

10. Is there anything else you would like to share about your experience with Spring 2022 registration today?

Appendix C – Workday Faculty Experience Focus Group

Email Invitation:

My name is Bridgette Paredes, and I am a double major in Management Engineering and Professional Writing completing my MQP. In this MQP project, we are addressing communication, current obstacles, and opportunities for improvement for the ongoing implementation of Workday, with a main focus on support for registration and advising for WPI users. This research will be used to help find new ways of configuring Workday, as well as to establish more effective communication strategies and overall recommended Workday improvements.

I would like to invite you to join a focus group that is being held for the purpose of gaining feedback on the Workday platform that has currently been developed. I will include various dates and times when the focus groups will be conducted, and you may choose a specific date and time block. An alternative would be to seek your interest and then schedule a time for you to join a focus group separately.

The focus group will be held via Zoom for about 30 minutes. There will be 3 or 4 people (including yourself) participating in this focus group. If you would like to participate in the focus group, please send an email to my email address (bkpardes@wpi.edu) in order to RSVP for the focus group. I will then send you the Zoom link to join the focus group before the session is held.

Your participation in this focus group is completely voluntary and you may withdraw at any time. While your input is sought to develop improvements to better support registration and advising, there is no direct benefit to you from the participation in this project. The risk to you is minimal; you might experience discomfort in discussing responses during the focus group. Please remember that your answers will remain anonymous. No names or identifying information in any of the project reports or publications. It is considered implied consent when a person replies to the email invitation confirming that it would work for them to participate in the focus group. Also, these focus group Zoom meetings will be recorded so that I may take notes afterwards. They will be saved to my personal computer and not to the Zoom cloud storage. The recording will be deleted at the end of the project.

Your participation is greatly appreciated. If interested, we can share a copy of our results with you at the end of the project.

For more information about this research please contact me (bkpardes@wpi.edu) or my project advisor Professor Sharon Johnson (sharon@wpi.edu) with any questions or concerns you may have. Thank you for your feedback.

1. First, please explain you experience with Workday ever since its integration on campus.

2. What, if anything, is confusing or frustrating about your experience with Workday Student? Is there anything in particular you would like to alter about Workday?

3. What is your experience like using Workday functionalities like grant management for example or the payroll function?

4. Could you provide any examples of how you might have used Workday student for every day tasks?

5. If your experience was mostly negative, what was the most difficult part about using Workday?

6. What, if anything, do you like about using Workday? Are there any features you found particularly useful and/or user friendly?

7. Are you able to find what you are looking for when using Workday? For example, if you are a professor, are you able to find or view degree audits easily?

8. How does Workday compare to the previous platform, Bannerweb? Which platform was easier to use, in your opinion?

9. If you prefer the Bannerweb platform over Workday, could you explain, in your opinion, what worked better and what did not work as well?

10. Finally, are there any changes you would like to recommend for Workday that would make it easier for you to use or that could enhance your ability to advise students? Bear in mind that not all suggestions will be able to be implemented right away. Also, some suggestions will not be able to be implemented at all because they are controlled by Workday. These suggestions will be shared with the WPI IT Team and Workday.

11. Could you please explain the advising process more broadly? How can a system like Workday support the advising process?

12. How have you been able to learn about the Workday platform? Is the communication about how to operate and navigate Workday clear to you?

13. Is there anything else you would like to share about your experience with Workday today?

Appendix D – Workday Staff Experience Focus Group

Email Invitation:

My name is Bridgette Paredes, and I am a double major in Management Engineering and Professional Writing completing my MQP. In this MQP project, we are addressing communication, current obstacles, and opportunities for improvement for the ongoing implementation of Workday, with a main focus on support for registration and advising for WPI users. This research will be used to help find new ways of configuring Workday, as well as to establish more effective communication strategies and overall recommended Workday improvements.

I would like to invite you to join a focus group that is being held for the purpose of gaining feedback on the Workday platform that has currently been developed. I will include various dates and times when the focus groups will be conducted, and you may choose a specific date and time block. An alternative would be to seek your interest and then schedule a time for you to join a focus group separately.

The focus group will be held via Zoom for about 30 minutes. There will be 3 or 4 people (including yourself) participating in this focus group. If you would like to participate in the focus group, please send an email to my email address (bkpardes@wpi.edu) in order to RSVP for the focus group. I will then send you the Zoom link to join the focus group before the session is held.

Your participation in this focus group is completely voluntary and you may withdraw at any time. While your input is sought to develop improvements to better support registration and advising, there is no direct benefit to you from the participation in this project. The risk to you is minimal; you might experience discomfort in discussing responses during the focus group. Please remember that your answers will remain anonymous. No names or identifying information in any of the project reports or publications. It is considered implied consent when a person replies to the email invitation confirming that it would work for them to participate in the focus group. Also, these focus group Zoom meetings will be recorded so that I may take notes afterwards. They will be saved to my personal computer and not to the Zoom cloud storage. The recording will be deleted at the end of the project.

Your participation is greatly appreciated. If interested, we can share a copy of our results with you at the end of the project.

For more information about this research please contact me (bkpardes@wpi.edu) or my project advisor Professor Sharon Johnson (sharon@wpi.edu) with any questions or concerns you may have. Thank you for your feedback.

1. First, please explain you experience with Workday ever since its integration on campus.

2. What, if anything, is confusing or frustrating about your experience with Workday? Is there anything in particular you would like to alter about Workday?

3. If your experience was mostly negative, what was the most difficult part about using Workday?

4. What, if anything, do you like about using Workday? Are there any features you found particularly user friendly?

5. Are you able to find what you are looking for when using Workday? Are you able to easily navigate through the website to locate what you need right away?

6. How does Workday compare to the previous platform, Bannerweb? Which platform was more difficult to use, in your opinion?

7. If you prefer the Bannerweb platform over Workday, could you explain, in your opinion, what worked and what did not work?

8. Finally, are there any changes you would like to recommend for Workday that would make it easier for you to use? Bear in mind that not all suggestions will be able to be

implemented right away. Also, some suggestions will not be able to be implemented at all because they are controlled by Workday. These suggestions will be shared with the WPI IT Team and Workday.

9. Is there anything else you would like to share about your experience with Workday today?

Appendix E - MQP Workday Student Formatted Canvas Messages

First Message to be released for Fall 22 and Spring 23:

"FALL 2022 & SPRING 2023 REGISTRATION is being held at 7am on Tuesday, March 29th; Wednesday, March 30th; & Thursday, March 31st (Fall 22); and Tuesday, April 5th; Wednesday, April 6th; & Thursday, April 7th (Spring 23)." Please check Workday to view your registration appointments.

**This announcement is part of an MQP project about Workday Student, researching challenges and improvements related to registration and advising.

**Was this announcement helpful? If so, please consider providing anonymous feedback using this linked MQP project survey: __(attached link)___.

(Launch date for above message: Monday, March 21st or 22nd (One week before registration)

Second Message to be released for Fall 22 and Spring 23:

"STUDENT HOLDS -> Please log into Workday Student to manage any holds on your account before registration begins."

Any hold on your account will PREVENT you from registering!

**This announcement is part of an MQP project about Workday Student, researching challenges and improvements related to registration and advising.

**Was this announcement helpful? If so, please consider providing anonymous feedback using this linked MQP project survey: __(attached link)___.

(Launch date for above message: Wednesday, March 23rd (One week before registration))

Third Collection of Messages to be released for FALL 2022:

“RISING SENIORS & GRADUATES -> Your FALL 2022 Registration appointment begins TOMORROW at 7am, on Tuesday, March 29th.”

**This announcement is part of an MQP project about Workday Student, researching challenges and improvements related to registration and advising.

**Was this announcement helpful? If so, please consider providing anonymous feedback using this linked MQP project survey: __(attached link)___.

(Launch date for above message: Monday, March 28th (One day before registration date))

“RISING JUNIORS -> Your FALL 2022 Registration period begins TOMORROW at 7am, on Wednesday, March 30th.”

**This announcement is part of an MQP project about Workday Student, researching challenges and improvements related to registration and advising.

**Was this announcement helpful? If so, please consider providing anonymous feedback using this linked MQP project survey: __(attached link)___.

(Launch date for above message: Tuesday, March 29th (One day before registration))

“RISING SOPHOMORES -> Your FALL 2022 Registration period begins TOMORROW at 7am, on Thursday, March 31st.”

**This announcement is part of an MQP project about Workday Student, researching challenges and improvements related to registration and advising.

**Was this announcement helpful? If so, please consider providing anonymous feedback using this linked MQP project survey: __(attached link)___.

(Launch date for above message: Wednesday, March 30th (One day before registration))

Fourth Collection of Messages to be released for SPRING 2023:

"RISING SENIORS & GRADUATES -> Your SPRING 2023 Registration appointment begins TOMORROW at 7am, on Tuesday, April 5th."

**This announcement is part of an MQP project about Workday Student, researching challenges and improvements related to registration and advising.

**Was this announcement helpful? If so, please consider providing anonymous feedback using this linked MQP project survey: __(attached link)___.

(Launch date for above message: Monday, April 4th (One day before registration date))

"RISING JUNIORS -> Your SPRING 2023 Registration period begins TOMORROW at 7am, on Wednesday, April 6th."

**This announcement is part of an MQP project about Workday Student, researching challenges and improvements related to registration and advising.

**Was this announcement helpful? If so, please consider providing anonymous feedback using this linked MQP project survey: __(attached link)___.

(Launch date for above message: Tuesday, April 5th (One day before registration))

"RISING SOPHOMORES -> Your SPRING 2023 Registration period begins TOMORROW at 7am, on Thursday, April 7th."

**This announcement is part of an MQP project about Workday Student, researching challenges and improvements related to registration and advising.

**Was this announcement helpful? If so, please consider providing anonymous feedback using this linked MQP project survey: __(attached link)___.

(Launch date for above message: Wednesday, April 6th (One day before registration))

Appendix F - MQP Workday Student Survey Questions

Welcome to this MQP Workday Student survey!

My name is Bridgette Paredes, I am a senior at WPI working on an MQP project about Workday Student, researching challenges and improvements related to registration and advising.

I am analyzing the Workday Student platform in order to improve communication and the process of using Workday Student for both students and faculty.

- This survey is open to all students registering this year who wish to provide feedback regarding these new registration announcements in Canvas.
- This survey is anonymous.
- The data gathered here will be used and referenced in the writings for this MQP Workday project.
- Note: ALL students will be able to see each of the timed class year registration announcements. Canvas is not able to separate by class year or undergraduate/graduate status. Please be aware that this may impact your survey feedback, if you are responding to a message that was not intended for your class year registration announcement.

If you would like to reach me and discuss more about Workday, the best way to contact me is through my email: bkparedes@wpi.edu.

Thank you, I greatly appreciate your feedback!

1. Was this Canvas registration announcement helpful to you?
    a. Answer Options: Yes or No
2. Were you aware of your registration dates before you saw this Canvas announcement?
    a. Answer Options: Yes or No

3. If you had a hold on your account, did this message help to resolve that hold before your registration appointment?
    a. Answer Options: Yes or No
    b. Other Answer Option: I did not have a hold on my account
4. Please add any final thoughts, recommendations, or ideas to improve the communication surrounding registration appointments.
    a. Answer Options (response is optional): Short/Long test answer

Appendix G - Computer Science Major Tracking Sheet 2022

COMPUTER SCIENCE MAJOR
Program Tracking Sheet Based on AY 2018-19 Degree Requirements and Course Offerings

Name:	Class Year:
Advisor:	2nd Major:

NOTES: Minimum total academic credit = 15 units
Residency Req.: Min. of 8 units must be completed at WPI

HUMANITIES AND ARTS REQUIREMENT (2 units)
All 5 HUA courses must be completed before beginning the Inquiry Seminar or Practicum.

Depth Component
Students must complete at least three thematically-related courses prior to the culminating Inquiry Seminar or Practicum in the same thematic area. At least one of the three courses should be at the 2000-level or above.

	Course	Term	Grade	Units
1				1/3
2				1/3
3				1/3
4	HU 3900 or HU 3910			1/3

Breadth Component
Students must take at least one course outside the grouping in which they complete their depth component. To identify breadth, courses are grouped in the following manner.
i. art/art history, drama/theatre, and music (AR, EN/TH, MU);
ii. foreign languages (AB, CN, EN, GN, SP);
iii. literature and writing rhetoric (EN, WR, RH);
iv. history and international studies (HI, HU, INTL);
v. philosophy and religion (PY, RE).
Exception: May take all six courses in a foreign language

5				1/3
Humanities Elective				
6				1/3

PHYSICAL EDUCATION (4 PE classes = 1/3 unit)

7				1/12
				1/12
				1/12
				1/12

SOCIAL SCIENCE (2/3 unit) ECON, ENV, GOV, PSY, SD, SOC, SS, STS, DEV and ID2050

8				1/3
9				1/3

THE INTERACTIVE QUALIFYING PROJECT (1 unit)

10				1/3
11				1/3
12				1/3

FREE ELECTIVES (1 unit)

13				1/3
14				1/3
15				1/3

COMPUTER SCIENCE (6 units) (Notes 1, 2) Includes 1 unit of MQP.

16				1/3
17				1/3
18				1/3
19				1/3
20				1/3
21				1/3
22				1/3
23				1/3
24				1/3
25				1/3
26				1/3
27				1/3
28				1/3
29				1/3
30				1/3
31				1/3
32				1/3
33				1/3

MATHEMATICS (7/3 units) (Notes 2, 3, 5)

34				1/3
35				1/3
36				1/3
37				1/3
38				1/3
39				1/3
40				1/3

BASIC SCIENCE and/or ENGINEERING SCIENCE (5/3 units) (Notes 2,4)

41				1/3
42				1/3
43				1/3
44				1/3
45				1/3

Note 1:
a. Only CS 1101, CS 1102 and computer science courses at the 2000-level or higher will count towards the computer science requirement. CS 2119 will not count towards the computer science requirement Must
b. include at least 1/3 unit from each of the following areas: Systems (CS 3013, CS 4513, CS 4515, CS 4516), Theory and Languages (CS 3133, CS 4120, CS 4123, CS 4533, CS 4536), Design (CS 3041, CS 3431, CS 3733, CS 4233), and Social Implications of Computing (CS 3043, GOV/ID 2314, GOV 2315, IMGD 2000, IMGD 2001, STS 2208). (If GOV/ID 2314, GOV 2315, STS 2208, IMGD 2000, or IMGD 2001 is used to satisfy this requirement, it does not count as part of the 6 units of CS).
c. At least 5/3 units of the Computer Science requirement must consist of 4000-level or graduate CS courses, except for CS 5007.
Only one of CS 1101 and CS 1102 may count towards the computer
d. science requirement . Only one of CS 2301 and CS 2303 may count towards the computer science requirement. Only one of CS 2102, CS 210X, and 2103 may count towards the computer science requirement.

Note 2: A cross-listed course may be counted toward only one of areas Computer Science, Mathematics, Basic Science and/or Engineering, above.
Note 3: Must include at least 1/3 unit from each of the following areas: Probability (MA 2621, MA 2631) and Statistics (MA 2611, MA 2612).
Note 4: Courses satisfying the science requirement must come from the BB, BME, CE, CH, CHE, ECE, ES, GE, ME, PH, RBE disciplines . At least three courses must come from BB, CH, GE, PH, where at least two courses are from one of these disciplines.
Note 5: At most four 1000-level Mathematics courses may be counted towards this requirement.

Appendix H - Computer Science Major Catalogue Flow Chart

COMPUTER SCIENCE COURSES FOR MAJORS FLOW CHART