

Let's Get STARTed!

Creating an Online Technology Orientation

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ABSTRACT

The Student Technology Access Readiness Training (START) orientation provides a standardized technology overview for all new, transfer and existing students at Arizona State University, West. Using a database-backed system that tracks individual student progress, the online orientation delivers step-by-step instructions that guide students through the process of activating their computer accounts and subscribing to technology services. After a student completes the process, START automatically sends individual reports to units or departments, allowing ASU West staff and faculty to verify that students have successfully established access to necessary resources.

After students complete the required components, the application offers tutorials on technology services such as the ASU course management system (Blackboard). These additional modules are optional, but faculty can instruct students to take the tutorials and send an automated e-mail verifying their completion.

By providing a single point of access to technology resources and just-in-time tutorials, the START orientation benefits all ASU West students, faculty and staff and has significantly reduced the amount of time and resources spent providing face-to-face assistance over the course of the academic year.

Categories and Subject Descriptors

D.2.2 [Software Engineering]: Design Tools and Techniques – *modules and interfaces, user interfaces.*

H.1.2 [Models and Principles]: User/Machine Systems – *human factors, human information processing.*

H.5.2 [Information Interfaces and Presentation]: User Interfaces – *interaction styles, screen design, standardization, training, help and documentation, user-centered design.*

General Terms

Documentation, Design, Human Factors, Standardization.

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Keywords

Technology orientation, online orientation, account setup, student access, tutorials.

1. INTRODUCTION

For several years, the ASU West College of Education (COE) held mandatory face-to-face student technology orientation sessions for all incoming education students. During the technology orientation, students received help to:

1. Find/Establish their West and Main campus ASURITE Ids.
2. Synchronize their passwords to facilitate their use of technology services.
3. Set their e-mail destination addresses.
4. Complete an initial orientation to the myASU university portal and Blackboard online class structure.

After completing these steps, students had access to necessary technology services and were ready to utilize the services in their classes.

While the technology orientation sessions were reported to be beneficial to the students, the sessions required a substantial time commitment from the COE technical support staff and other ASU West faculty and staff members. In addition, faculty members in other colleges at ASU West offered in-class training sessions during the first few weeks of the semester. However, this option resulted in the loss of instruction time and the duplication of attendance by students who had already participated in other classes.

As defined in the ASU West campus-wide categories of learning outcomes, ASU West graduates should be able to “apply the technological knowledge, skills, attitudes, and flexibility needed to succeed in a rapidly changing environment.” With this in mind, we set out to develop a technology orientation program that enrolls and subscribes students to available services and helps students start developing familiarity with campus resources, e-mail, and the campus-wide course management system.

2. PURPOSE OF THE PROJECT

The online student technology program provides a standardized technology orientation for all new, transfer and existing students at ASU West. The training ensures that all incoming students receive an overview, access to and basic training for the technology resources available to them at ASU West. The training

also reduces the amount of time and resources spent by faculty and staff providing face-to-face or one-on-one instruction.

2.1 Facilitate Entry to Campus Community

As new members of the West campus community, all incoming students need access to technology resources, regardless of location or status (first-year, transfer, distance students, graduate, full-time, returning students, readmitted students, etc.). Also, students on non-traditional schedules (night, weekend, etc.) need access to the same orientation as traditional students.

2.2 Reduce Demand on Faculty, Staff and Student Time

At the time, ASU West did not offer a comprehensive student technology orientation. If requested by a faculty member, College and/or IT support staff conducted in-class or campus-wide training sessions and new student orientations. This process resulted in the loss of staff resource time, instruction time and the duplication of attendance by students who had already participated in other classes.

2.3 Accommodate Campus Growth

The growing number of students entering ASU West requires support staff to continuously expand the in-class and campus-wide orientation programs to include more sessions. Unless an alternate solution was developed, current staff resources would not be sufficient enough to conduct the face-to-face orientations and also fulfill their regular responsibilities.

2.4 Provide Comprehensive Orientation

A major goal of the project was to provide all campus community members with a fundamental awareness and access to the critical resources that enable them to be successful. In most cases, users need access to a standard set of services; others may require access to particular resources that can be addressed separately.

3. WORKING WITH CONSTRAINTS

The student orientation was initiated and developed despite constraints such as limited time, personnel, resources and skill sets. Ideally, we would have liked to improve the overall process required to activate a user IDs and subscribe to e-mail service. However, many of the systems related to the student technology orientation process are controlled by another campus and IT department, which limited what we could do. Constraints that we worked under include:

- Could not require new hardware or software.
- Needed to work with existing applications/systems.
- Could not require extra funding.
- Work was on a time-available basis for some members.
- Had to use only supported software, hardware, and tools.
- Team members had limited development experience and skill sets.

However, with a motivated team, good project planning and the willingness to build new skills sets, we found it possible to develop an application that meets our requirements and serves as a catalyst for future improvements.

4. OUR SOLUTION

The START (Student Technology and Resources Training) orientation website guides students through the orientation process while a SQL database tracks each student's progress. This means that if a student exits the process before completing all six steps, they can return at a later time and continue where they left off. After a student completes the process, the orientation system sends the student a report that contains a summary of their personal technology information. Students can also send additional copies of the report to campus advising departments or instructors.

Required components of the orientation explain to students how they:

- Activate their user ID
- Sign up for ASU West campus services
- Subscribe to student e-mail services
- Specify the address where they want to send their ASU e-mail
- Verify that they can receive e-mail from ASU

In addition to the required components of the orientation, the system also includes tutorials for other campus technology services. These additional modules are optional for the students and can be assigned by faculty members on an as-needed basis. The most commonly accessed tutorial is an interactive orientation to the university's course management system, Blackboard.

5. EVALUATION PROCESS

5.1 Alpha Tests

To get feedback on the initial application design, we conducted an alpha test phase in Summer 2003. Team members watched over shoulders as two groups of new students completed the online orientation process during in-class sessions. By observing students use the application we were able to identify a number of key problems, such as including too much text on the screens, using technical and academic terms unfamiliar to new students, and assuming students would have a certain level of familiarity with computers and the Internet. Although it was disheartening to realize how many modifications we needed to make, we also recognized that the valuable input we'd received would greatly improve the application in the long run.

5.2 Beta Tests

After making a large number of revisions to our fundamental design, we conducted a series of beta tests with another group of new students. The feedback and input gathered during these observations resulted in a lengthy, yet reasonable list of modifications. This series of changes focused on fine-tuning the error messages displayed to students, reducing and clarifying the text and step-by-step instructions, implementing a more logical order for the major steps, and improving the general usability of the orientation.

5.3 Ongoing Evaluation

Since ASU West encourages all incoming students to complete the online orientation and many students do this at home on their own time, we have set up an online survey that gathers feedback from students who complete the START process. In order to capture information about students who close the web browser

before completing the process, however, we have plans to add an optional survey that asks students why they are exiting START (for example, are they frustrated, are they out of time, do they need additional information, etc.). To gather general feedback and provide additional assistance, we have also made an online form available on each page, which students use to send e-mail to the team members.

6. LESSONS LEARNED

By conducting numerous user tests, interviewing students who use the online orientation, and reviewing the surveys and emails we receive, we've learned a number of different lessons about designing and developing applications.

- Students (and people in general) don't read instructions. The text for any application should be kept to one page and not require the user to scroll down the page.
- Good error messages are critical. They should be kept short and avoid technical jargon, but should still explain why there's a problem and what the user can do to fix it.
- Be as proactive as possible in predicting user input and expectations. For example, if you ask users to enter information that you can compare against an expected response, do so and provide feedback on whether or not the input is correct.
- We are not our users. Avoid or explain university or technology-specific jargon. Provide basic information on how to navigate pages.
- Although it's difficult, try to document as much as possible. If nothing else, take meeting notes to remember why certain decisions were made and keep a running list of things to do and tasks accomplished.

7. FUTURE DEVELOPMENT

Although the START online orientation has come a long way in the past year, we still have a number of improvements we'd like to

make and are currently engaged in a requirements-gathering process for version 2. Additional modifications we're considering include:

- Rework the underlying architecture to be more modular and flexible to accommodate change.
- Create a version of the orientation that's accessible to non-ASU affiliates (for demonstration and review by outside parties).
- Provide better reports of student progress and mechanisms to follow up on students who did not complete the orientation.
- Write more comprehensive, optional tutorials for other services provided by ASU West.
- Expand the orientation to also serve the high volume of new faculty, staff and student employee hires at the beginning of each semester.

Given the dedication and collaborative effort of our team throughout this process, we feel confident that we'll continue to improve the START online orientation and meet the evolving needs of our campus.

8. ACKNOWLEDGMENTS

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