

RECOMMENDATION REPORT

Overview

In trying to make the Late/Add drop form more usable and trying to improve its various design aspects we made various changes to the original form and presented them as prototype to the user. In our very first iteration, we worked upon making the Instructions page *concise and clear*. The Heuristic Test of Talk Aloud method in our very first iteration suggested that most of the users (the human subjects) did not read the instructions thoroughly, or in some cases did not even take a look at the page with instructions. When prompted to speak about their decision of not reading the instructions, most of them stated that it is long and verbose. This brought us to the idea of creating a prototype with a column of concise instructions that is comprehensive enough so that it guides them through every step yet it is concise and clear so that it catches their attention. In our second iteration, we focused on making the content in the form more usable. It utilized design principles such as: similarity, contrast, alignment, proximity, order, and enclosure. These were applied to make sure there is proper distinction between each section, and there is an improvement in the overall clarity of the content. In our last iteration we focused on working with making the instructions more concise and applying design principles. Our goal was to reduce redundancies and to record whether these changes will affect the overall usability of the forms. We performed methods of Heuristic tests and think out loud tests to get different views from the users about the form.

Our research question in order were as follows:

Iteration 1: *Will reducing the length of the “Instructions” column while keeping it exhaustive, makes this form more usable?*

Iteration 2: *Will applying principles of design like enclosure, alignment and spacing on the content of this form, create a positive impact on its usability?*

Iteration 3: *How can we make the form more concise and simple while still keeping as many accessibility elements as we can?*

Methodologies

We started with using talk-aloud methodology to analyze the potential issues with late add/drop form. In the thinking aloud test, we asked test participants to use the system (forms in our case) while continuously thinking out loud — that is, simply verbalizing their thoughts as they move through the user interface(forms in our case). This time we decided to conduct the same usability test to make sure that the results are being generated in the same manner with the same

methodology and possible the same environments. We aimed to gather insights by observing the subjects about- whether making the Instructions column concise, leads to better usability, or not. This study was intended to concentrate on the horizontal model to make sure that the content of the form is the same, and we expect to move forward to the method of surveying the users about the content of the form in the next iteration.

Moving ahead we decided to find out if the contrasting changes in the content of this form in terms of its design that we think are more visible and more usable, ACTUALLY seem different and better to the users filling up the form, or not. To put this plan into action, we came up with the idea of testing this prototype with a Focus Group. So, we sat down a group of five individuals (most of them undergraduate students), and discussed the prototype in detail.

Finally in our very last study we decided to use a one-on-one talk-aloud. This allowed us to look into the thought process of the users as they look at the form, and allowed us to gently guide them to get their thoughts on the elements we were most interested in. While doing this, however, we did focus on not tainting the results by guiding them too much. We also made sure to listen to them about aspects of the form that we were not focused on in this iteration, to listen to any opportunity for improvement. With that said, this is the general methodology we used for this iteration. We introduced them to the form, and told them that we wanted them to fill it out with fake information while walking us through what they were thinking the whole time. Throughout the rest of the time, we would ask questions about elements we wanted to know more about as they filled them out. For example, when they filled out the date form we asked their thoughts on how that worked. Additionally, we asked whether they had enough space with the compressed Name line for the course, etc. Overall, we focused on getting honest feedback of the thought process during this iteration's testing, as is appropriate with a talk-aloud study.

Findings

In the first iteration, we refined the instruction section to make it more concise and comprehensive. We created a horizontal prototype incorporating the principles of interaction design and Norman's design principle. After that we did the usability test with the prototype and found that most of the users did read the instructions column this time. They told us that the instructions contain all the necessary information related to the form. They also mentioned that the instructions are well organized and easy to understand. The one with some knowledge about the usability and design principles noticed that the instructions are perfectly aligned and bullet points make them easy to read and understand.

In our second iteration, we focused on making in the form more usable. This utilizes design principles such as similarity, contrast, alignment, proximity, order, and enclosure. These are applied to make sure there is proper distinction between each section, and to improve the overall clarity of the content. We did the usability test with this prototype and found that the form now

has proper spacing, proper alignment, and the form is now more usable. The form looks more concise after the changes were made. We also used Designing boxes for the “CRN” field make it clear for the users that the CRN is a five digit number.

In the final iteration, we further made some changes to the prototype to reduce redundancies in the form. We also added homogeneous design for “date” field with shaded text fields which signifies the format the date should be written in. We found out that students mostly liked the MM/DD/YY format. Nobody had any issues fitting course names in the name field after we moved the fields of subject code, course#, section and credit hours. One of the students said, “It was a nice move to remove those fields and make it more concise”. One International student who had used the form before mentioned that they liked the fact that the ISSS late add and late drop signature fields had been merged.

Recommendation to Client

We understand that the form in use has been thoughtfully designed and it has been fulfilling the purpose successfully for a long time. Our aim was to make the form more usable by applying the basic principles of usability that we learnt throughout the class.

To achieve this, we decided to create prototypes of the form and tested each of them. Usability testing helped a lot in providing perspective to our team with respect to getting insights like- what changes we thought would affect the user versus what actually the users found useful.

During our iterations, we focused on changing only parts of the form at a time in order to isolate the changes we made, and be better able to see the differences in real-world usability due to those changes.

Following is the final prototype we created after 2-3 iterations and it is a result of our initiations in making the design better and the users reaction to the prototypes at each stage of iteration.

We don’t know if this could count as a better form for adding/dropping subjects in late deadlines in RPI, if practically put to practice; But we surely believe it can be a recommended revised version of the original form.

The new version:

Office of the Registrar

Read Instructions First

PART 1:

Name (Last | First | MI): _____ Student ID:
Term: Fall (yr) ____ Spring (yr) ____ Summer (yr) ____ Session 1__ Session 2__ Session 3__
E-mail address: _____ Phone: _____

PART 2:

Late Add: CRN: Course Name: _____

Signature of instructor (required for late add): _____

Print Instructor's Name: _____ Date: MM/DD/YYYY

Late Add: CRN: Course Name: _____

Signature of instructor (required for late add): _____

Print Instructor's Name: _____ Date: MM/DD/YYYY

PART 3:

Late Drop: CRN: Course Name: _____

Late Drop: CRN: Course Name: _____

PART 4: Required authorization for all late drops or late adds:

UNDERGRADUATE STUDENTS:

ALAC Staff Signature: _____ Date: MM/DD/YYYY

GRADUATE STUDENTS:

Advisor Signature: _____ Date: MM/DD/YYYY

Graduate Program Director Signature: _____ Date: MM/DD/YYYY

Dean of Graduate Education: _____ Date: MM/DD/YYYY

International Students (Undergrad/Grad)

ISSS Office Signature: _____ Date: MM/DD/YYYY

*Required for late drops below 9 credits (Undergrads) / 12 Credits (Grads)

Image 1: Page 1 of "Late Add/Drop" form

INSTRUCTIONS

GENERAL INFORMATION:

- You have 2 weeks to add courses and 8 weeks to drop courses on SIS.
- After these add/drop periods, this form is used to add or drop courses (with extenuating circumstances) at the discretion of the Advising & Learning Assistance Center and Academic Standing Committee. Submission of paperwork is NOT a guarantee of approval.
- Students who receive approval to drop a course after the eighth week of classes will receive a grade of “W” in the course.

UNDERGRADUATE STUDENTS: ALAC (Academy Hall, Suite 4226)

- The signature of the course instructor is required for all LATE ADDS.
- An instructor signature is NOT required for a LATE DROP.

GRADUATE STUDENTS: Office of Graduate Education (1516 Peoples Ave)

- Include New Plan of Study (if applicable).
- Instructor (for courses) should send a note to the Office of Graduate Education to verify the student’s attendance and that he/she is making satisfactory academic progress.

INTERNATIONAL STUDENTS: ISSS Office (1528 15th Street) signature is required for LATE DROPS IF FALLING BELOW 9 CREDITS(for graduate students) AND BELOW 12 CREDITS(for undergraduate students)

In addition to the above:

For Late Independent Study submissions

- Both the Late Add/Drop form and the Graduate Independent Study form are required.

For Late Thesis/Project/Dissertation submissions

- Both the Late Add/Drop form and the Thesis/Project Dissertation Registration Form are required.
- Advisor and Graduate Program Director should include a note outlining the reasons for submitting at this late date and a brief description of research and academic progress to date.

Image 2: Page 2 of “Late Add/Drop” form

Changes we made to make the design of the form clearer, more accessible with important instructions and guidelines all accommodated in a compact version, to increase the probability of users actually reading them.

Following are the precise changes in the design we that we made to make improve its usability:

- Removed the redundant information in the instructions column and made it precise by making *only the mission critical information available* in the column- like the address information required for getting an authorization.
- Created *boxes* in the CRN and Student id fields, to bring clarity as to how many digits are to be written in already defined clusters.
- Wrote field prompts in the same line creating more spaces between different fields, vertically.
- Removed the department id and section details as the “CRN” field surely serves as the primary key that can be used to find out which subject is being added/dropped.
- A homogenous format of date has been added throughout the form to make the design more easy on the eyes.
- Improved *Spaces* between fields like- the Term and session fields.
- Since it is important that the date of authorization is recorded as this form is about late deadlines of adding and dropping subjects, but the date on which the form is being filled seems less important. Hence the date field on the top of the original form has been removed.
- We have merged and created one field for the ISSS office signature for the international students.
- Made the font of “read instructions first” bigger and added a yellowish background to it to catch more attention, creating the required *Contrast* in the design.
- Added a greyish background to different headings of the form so that it creates proper *enclosure* and contrast.
- Improved both vertical and horizontal *alignment* of the content throughout the form.

Thus, all the design aspects of alignment, order, contrast, enclosure, spacing and proximity have been applied to create different prototypes of the form and the usability of each of the prototype has been tested on the users (mostly undergraduate students) to record their views and actions for generating a better prototype in each iteration.

We recommend that this version of the “Late Add/Drop” form will be more accessible and easier to be used by the students.