

# USABILITY ENGINEERING

## CS/ISE 5714 - SPRING 14

### PROJECT 2: CONTEXTUAL INQUIRY AND CONTEXTUAL ANALYSIS

Inkhorn: a scheduling and feedback system enhance tailored coaching services to patrons

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## 1 System Concept Statement

Inkhorn will serve the Writing Center by providing a common ground tool for use among coaches and other staff. It will allow users, the Writing Center staff, to match coaches with patrons requesting a session by providing a more systematic, but still personalized, scheduling process. As a feedback system, Inkhorn will allow for patron privacy not currently available. Furthermore, Inkhorn will serve as a tool for coaches to suggest resources and methods that will coincide with the needs and goals of the patrons. Inkhorn will help tailor writing enhancing coaching services to specific patrons needs, such as with conference or course papers, technical documents, personal statements, or other interpersonal communications. Playing off the informal but professional atmosphere of the Writing Center, Inkhorn will be a space for users to converse and share thoughts and ideas. In essence, Inkhorn will act as a bridge between the coaches, administrative staff, and patrons.

The Virginia New River Valley community members often seek support services surrounding improving their communication skills and understanding of the English language. The Virginia Tech Writing Center (WC) provides varying personal coaching services for locals in addition to VT affiliates. To maintain the personal touch the WC exemplifies, we propose Inkhorn, an automated scheduling and feedback system, will help tailor coaching services to patrons to develop their skills to enhance their writing, such as conference or class papers, personal statements, and interpersonal communications. To increase a positive milieu between coach and patron, Inkhorn will help manage recommendations from the coach that coincide with the needs of the patron, as well as streamline and retain coach feedback from the patron. Inkhorn will also help promote services offered by WC, manage session scheduling with compatible coaches, automate reporting, provide a continual coach feedback system, manage forms, and suggest appropriate tools for patrons' goals.

## 2 Tailor The Scope

Among our initial ideas for clients and problems, we focused on writing. Our initial problem was in the realm of collaborative writing techniques for technical, novel, and story telling writers. Given client scheduling problems, we had to abandon this idea. Our next client in the writing domain we chose was the Virginia Tech Writing Center (WC), and the Assistant Director Jennifer Lawrence. She has served in this role for 7 years, and her extensive knowledge alongside positional status makes her the ideal candidate within the WC to initially contact and get organizational

information, as well as follow communication for project details.

### 3 Preparation for Interview

Preparation for interviews and observation of the Writing Center (WC) included background research on the Writing Center. We scoped out the WC web pages, taking note of the goals, processes, and other information that was present. Doing this, and gathering initial, informal accounts of patrons who have used the WC, enabled the team to get a feel for the presence the WC holds within the VT community. The websites and initial perspectives from previous patrons of the writing center helped us gather initial insight into the culture of the work domain and the surrounding impact of the WC. The initial impression of the WC we formulated was that the WC services a wide range of subjects or academic fields, all tied to the process of writing. Furthermore, we gathered that the writing center uses a phone call scheduling system for creating appointments and accepts walk-ins. This told us that the WC uses a person-based, as well as a mix of formal and informal scheduling system.

The writing commonality, being fore fronted, was further specified through our initial findings that the WC helps with papers, essays, resumes, cover letters, and personal writings. From the websites, we also got an initial feel for the population of WC patrons, those being not only VT affiliates, but the Blacksburg community as well. This was noted by the WC additional location at the Montgomery-Floyd Regional Library. In terms of the WC staff population, we could tell from the websites that the upper level management team consists of VT English department faculty and the coaches hired can be VT students from any majors who have meet the application process requirements.

One of our team members contacted the WC to inquire about the WC staff and determine who would be a fitting interviewee. Once we did our background investigation, we decided to interview the assistant director, Jennifer Lawrence, and one of the WC coaches. We drafted and revised interview questions based on their work roles and other aspects of the WC and the writing domain.

### 4 Who Was Interviewed

Excluding our previous client, we interviewed two people, encompassing three distinct roles (one person has two roles). Our initial phone conversation with the WC hinted that the Assistant Director Jennifer Lawrence was the best initial contact person for the majority of the assignment concerns. Reviewing the website also

helped ascertain the majority of the services provided by the WC. She also works as a coach, which was known from the initial email that she replied to about meeting for an interview. A brainstorming session with group members allowed us to iterate over questions that would provide information to complete the assignment, as well as provide a structured interview style that would also serve as a positive first introduction. We noticed that some questions were best addressed to specific roles, so we separated the questions accordingly for Jennifer, and used the 'Coach' questions for Nneoma Enyi Nwankwo, another coach whose schedule aligned and agreed to interview in person with a recording. We plan to continue to interview other coaches who have different skills, in addition to the remaining people who are involved in the information flow related to the services provided by the WC.

## 5 Interview Questions

Assistant Director

1. How long have you served as a writing director?
2. Who is your supervisor?
3. Are there any requirements you have to do as a VT affiliated service?
4. How would you describe the atmosphere of the Writing Center?
5. What services does the writing center provide?
6. What policies exist?
7. Are there any current initiatives being offered or planned at TWC
8. How long does a coach typically work at TWC
9. What compensation do coaches receive?
10. What types of questions and writings do writers bring in? (see website for what student can bring in)
11. In a session, how are the WC coaches expected to get their thoughts and comments across to the writer? on paper, orally, etc.
12. Is there any record keeping?
13. Is there a feedback, rating system, or complaint system?
14. What contingency plans are there (for example, what if a coach doesn't show? what if a writer doesn't show?)
15. Does coach seniority gain any benefits, tangible or otherwise?
16. What auxiliary management tools do you use?

Coach(es)

1. What year are you in school?
2. What is your major or majors? Any minors?
3. Why did you decide to become a Writing Center coach?
4. How long have you been working at the Writing Center?
5. How long do you plan on working at the Writing Center?
6. As a coach, how would you describe the atmosphere of a session?
7. Describe the overall process when a writer comes into the WC?
8. Are there any other tools you use?
9. Are there assigned seating arrangements for the coaches?
10. Do writers make multiple appointments to discuss the same work?
11. How do you keep track of a writers drafts?
12. How do you utilize a writers past drafts?
13. Do you ever have multiple writers come in for help on the same document?
14. How does the user take notes?
15. Are there any policies that you follow?
16. What policies are outdated?
17. In a session, how do you get your thoughts and comments across to the writer?  
on paper, orally, etc.
18. How do you give your ideas and comments (verbally, on paper, etc.)?
19. What are some of the harder things to help writers with?
20. How/where/who do you get your feedback from?
21. Do you feel you get enough feedback? Is it constructive?
22. What things do you enjoy about your work here?
23. What do you feel your strengths are as a coach?
24. Do you know the other coaches?
25. Are you happy with your compensation?
26. How does working with ESL writers differ from native speakers?
27. Do you help with LaTeX?
28. Do you write frequently outside of work? If so, what types of works or genres  
do you write?

## 6 Meeting Description

## 7 Data Collection

## 8 Artifacts

New Client Info Sheet

**Virginia Tech Writing Center**

<b>About You</b>		
Name: _____	Email: _____	
Date: _____	Time: _____	
Your First Language: _____		
<b>Select Your Tech Status:</b> <input type="checkbox"/> Freshman <input type="checkbox"/> Junior <input type="checkbox"/> Graduate Student <input type="checkbox"/> Sophomore <input type="checkbox"/> Senior <input type="checkbox"/> Faculty/Staff		
<b>Select Your College:</b> <input type="checkbox"/> Agriculture & Life Sciences <input type="checkbox"/> Engineering <input type="checkbox"/> Science <input type="checkbox"/> Architecture & Urban Studies <input type="checkbox"/> Liberal Arts & Human Sciences <input type="checkbox"/> Veterinary Medicine <input type="checkbox"/> Pamplin College of Business <input type="checkbox"/> Natural Resources & Environment <input type="checkbox"/> University Studies		
<b>About Your Paper</b>		
Is this assignment for a class? _____ Which class? _____		
What is your assignment? What is its central point or focus? _____		
What concerns do you have about your writing for this particular assignment? <input type="checkbox"/> Focus <input type="checkbox"/> Organization <input type="checkbox"/> Development <input type="checkbox"/> Clarity <input type="checkbox"/> Other: _____		
<b>About Your Session</b> <i>Fill this section out after your session</i>		
<b>For you to fill out:</b> Tell us how it went – Use this space for notes for your next session: <hr/> <hr/> <hr/>		
<b>For coach to fill out:</b> Coach's Name: _____ Session Length: <input type="checkbox"/> 30 minutes <input type="checkbox"/> 1 hour <input type="checkbox"/> Other: _____		

Figure 1: New patron form. Patrons fill this out when they visit the Writing Center for the first time.

Figure 2: Returning patron form. Patrons fill this out if they visit the Writing Center more than once.

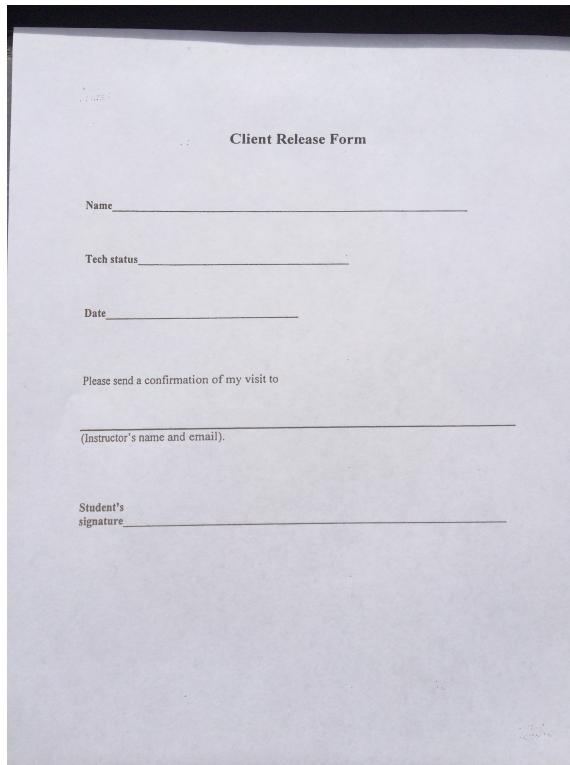


Figure 3: Patron release form.

	University Studi	Ag & Life Science	Arch. & Urban Stu	Sciences	Engineering	Natural Resourc	Liberal Arts & Hum	
Freshman	26	8	9	41	72	3		
Sophmores	2	1	2	12	15			
Juniors	8	3	16	24		1		
Seniors	8	7	16	23				
Grad	4	9	8	30		1		
Staff								
Faculty			1		2			
Other		1			3			
English 1105		2						
English 1106		168						
International Students	164							

Figure 4: Short Term (Semester Long) Statistics

To: Dean Sue Ott-Rowlands, Dean of the College of Liberal Arts & Human Sciences  
Cc: Joseph Eska, English Dept. Chair; Tyler Walters, Dean of University Libraries; Brian Matthews, Associate Dean, University Libraries; Jennifer Lawrence, Assistant Director, Writing Center; Katharine Torrey, Graduate Assistant to the Writing Center Director

From: Diana George, Director of the Virginia Tech Writing Center

Subject: Writing Center Growth

Date: November 12, 2013

Sue, this brief memo is to update you on the growth the Writing Center has experienced since 2005-2006 when I began directing the Center and Jennifer Lawrence was appointed Assistant Director and to thank you for the part you have played in that growth. As you can see, our efforts to professionalize the program and continue to reach out to students and programs across the campus have resulted in an increase in student use. However, by far, the most important changes to the Center came in January 2012 when we moved from Shanks to our current space in Newman Library and, that same year, when we were granted a budget with funding for more undergraduate writing coaches plus four Graduate Teaching Assistants whose time is designated for the Center.

Of course, this progress has also been made possible by the fine support of the Provost's Office, the Department of English, and University Libraries, but we do believe that without the key support and guidance you have given in your position as Dean of CLAHS, we would not be where we are today.

On behalf of the Writing Center staff and all of the students we serve, we would like to thank you for the support you have shown us. I honestly don't believe we could have made these moves without that support – certainly not without the funding your office has helped us procure.

We wish you all the best in your new position at Northern Kentucky University.

Figure 5: Long Term (Several Years) Statistics



## 9 Photos



(a)



(b)



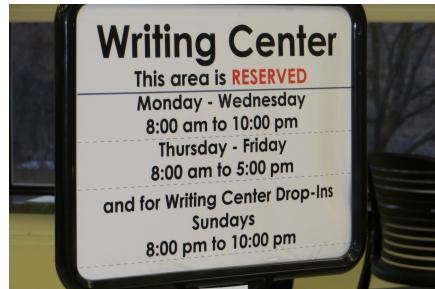
(c)



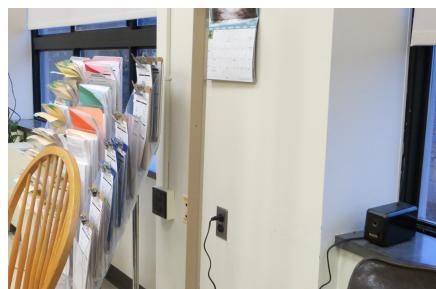
(d)



(e)



(f)



(g)



(h)

## 10 Sketches

## 11 Task Data

Documents handled by people in the WC are noted as pink squares in the work flow figure of 10.

## 12 Raw Data and Work Activity Notes

### Audio Interview Notes

[Audio Folder](#)  
[Assistant Director 1](#)  
[Coach 1](#)

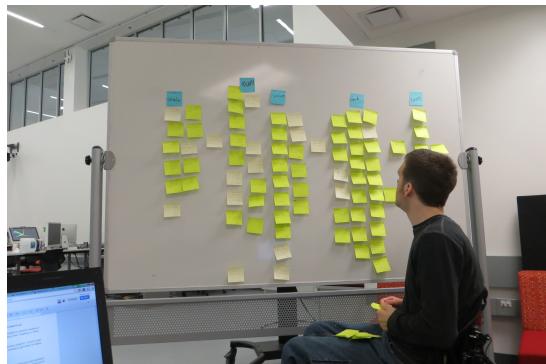
## 13 Building the WAAD

For building the Work Activity Affinity Diagram (WAAD), the raw data was synthesized into work activity notes, which were written on green and yellow sticky notes so that the colors would blend together. We left the bolder colors for the hierarchical categorization labels for the developed clusters of notes. Each work activity note was given a source ID. The first part of the interview with Jennifer Lawrence concerning the work role of Assistant Director of the Writing Center was denoted by the source ID ADIR. The second part of that interview that concerned her work role as a Writing Center coach was denoted by the source ID C1. For the interview with Nneoma Enyi Nwankwo, a writing center coach, the source ID of C2 was used.

Our team added the sticky notes to a whiteboard, grouping similar activity notes together and rearranging them as new notes were added or new connections or relationships between the activity notes were recognized. Once a category was formulated, top-level cluster labels, the blue sticky notes in the images, were added atop their respective clusters. Some of these top-level cluster labels were representative of work roles. If two notes were recognized as holding the same content, one note was stuck to the bottom of the other, so that they were grouped together. This stage of the process is represented by Figure 8a.

The top-level cluster labels were good for overall categorization, but the clusters from these were too broad. These clusters were further broken down into sub-sections by grouping the activity notes into even more specific clusters, which indicated more specific, sub-level cluster labels, the orange sticky notes in the images. In Figure 8b, this process of sub-clustering also resulted in the creation of a new top-level cluster label, Coach-Patron Interactions which pulled notes out of the Coach and Patron clusters. Figure 8c shows the formalization of three of the top-level and 7 of the sub-level clusters. The sub-level clustering process was repeated for the remaining clusters, as seen in Figure 8d, until the final WAAD evolved, shown in Figure 8e.

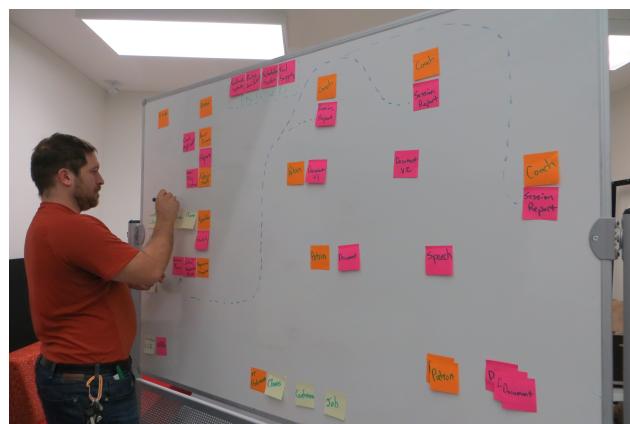
## 14 Team Photos



(a) T.C. at the WAAD



(b) Rebecca at the WAAD



(c) Chris at the flow model diagram

Figure 7: The team in action



15 WAAD Photos



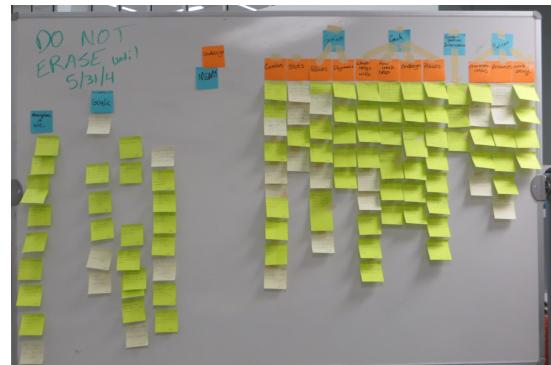
(a) Phase 1



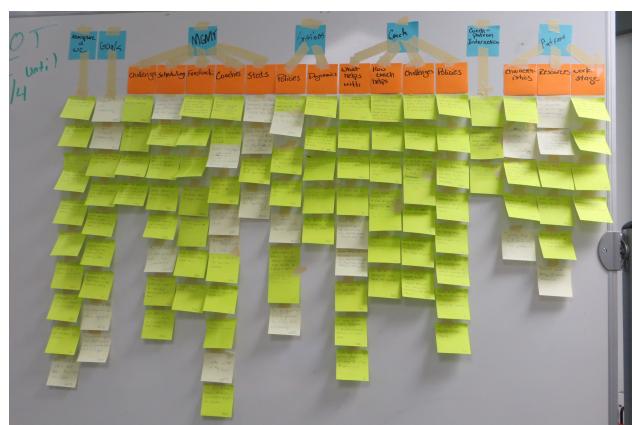
(b) Phase 2



(c) Phase 3



(d) Phase 4



(e) Phase 5

Figure 8: Evolution of the WAAD

## 16 Work Roles

Work roles are noted as orange squares in the work flow figure of [10](#).

**Director** Diana George

**Assistant Director** Jennifer Lawrence (7 years in this position)

The Assistant Director is in charge of hiring all coaches, scheduling coach work allotments, reports, a

**Administrative Staff** Sandra Ross

This role is in charge of making the consolidated reports and trends that are received from the Scheduler, and providing administrative assistance to the Director and Assistant Director.

**Graduate Assistant to the Director** Katharine Torrey

This is a coach who in addition to normal coach role duties, also helps with some of the tasks that are oriented towards the coaches, speaking as a representative for the coaches and a supporting voice for the Assistant Director.

**Coach**

These are undergraduate and graduate students who have a strong skill set in the English language. They are required to have an application, strong GPA, a letter of recommendation from a VT faculty member , and have passed the English 3744 class. Ideally a second language, double major, and/or honor student.

**Patron**

Any local resident of the New River Valley, with or without VT affiliation, who wants help improving their communication skills (writing, grammar, speech, and culture).

**VT Professor**

A professor or lecturer at Virginia Tech.

**Scheduler**

A coach at the WC that is currently not seeing a patron, who makes appointments in the schedule book.

**Paperwork Organizer**

A coach at the WC that is currently not seeing a patron, who arranges the session paperwork to hand to the Admin person.

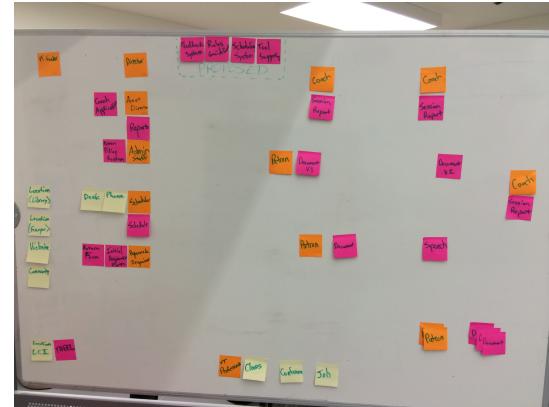
## Funding

People or entities, predominately but not always affiliated with VT, that provide monetary funds to the WC for operational costs.

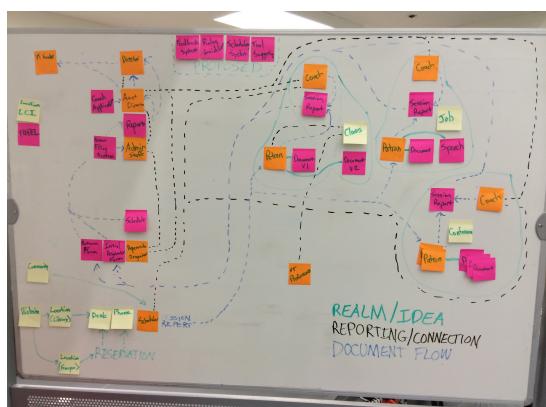
## 17 Flow Model Diagram



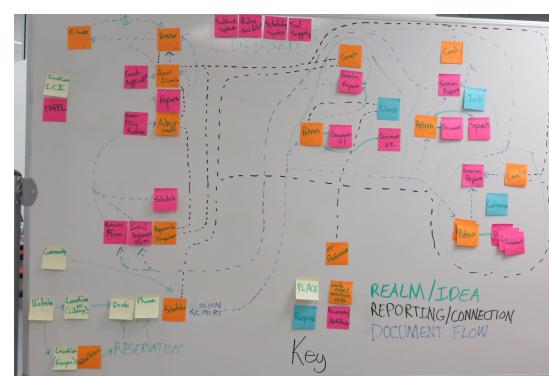
(a) Initial flow chart denoting groupings



(b) Flow chart in a new grouping



(c) Flow chart with arrows



(d) The Final Flowchart with Key

Figure 9: Evolution of the Workflow Diagram

## 18 Work and Machine Role Nodes

Work/machine roles are noted as orange squares in the work flow figure of 10. Meeting purposes are noted as light blue squares in the same figure. Physical places are marked by beige squares.

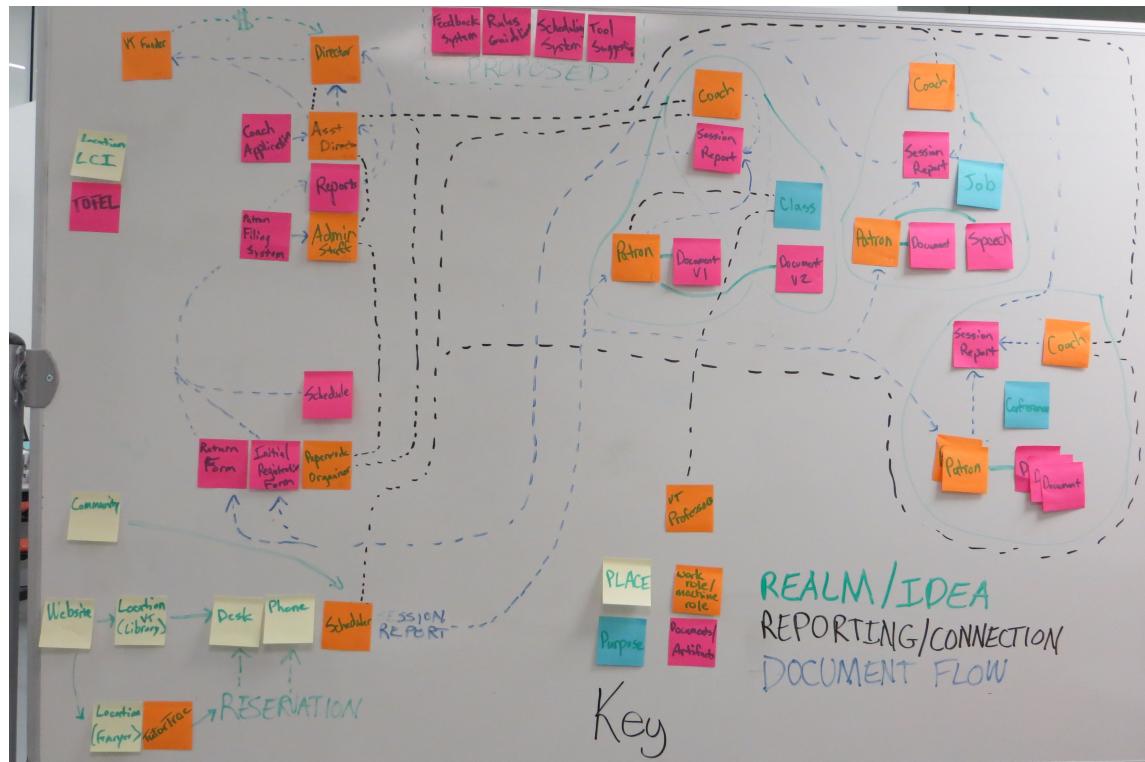


Figure 10: The Final Flowchart with Key

## 19 Information and Work Flow Arcs

There are several main ideas covered by the lines and arrows in the Work Flow Diagram [10]. The **Solid Green** circles delineate realms for a meeting, and encircle people and artifacts that are used during the process. The **D-A-S-H-E-D Green** lines show the linkage or ownership of certain artifacts to their owner. The **D-A-S-H-E-D Black** lines show who reports to who in the organization. The **D-A-S-H-E-D Blue** lines show the flow of information between people and documents.

## 20 Outside Information Flow

Outside information flow is noted in the corners of the Workflow diagram, namely communication between the directors and funders, and patrons and the reservation system.

## 21 Effect of Proposed System

We don't have an after, just the proposed systems. We will continue to incoroparte the proposed ideas into the current workflow diagram and update throughout the project and semester.