

# USABILITY ENGINEERING

## CS/ISE 5714 - SPRING 14

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

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### *Client:*

The Writing Center  
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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.

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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 to 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 patron 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**

### **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 writer's drafts?
12. How do you utilize a writer's 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

## 9 Photos



(a)



(b)



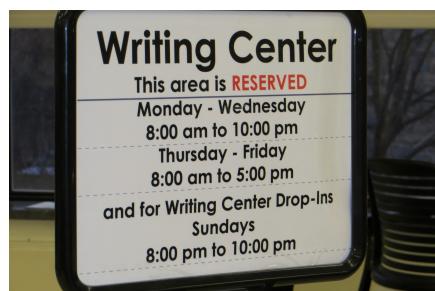
(c)



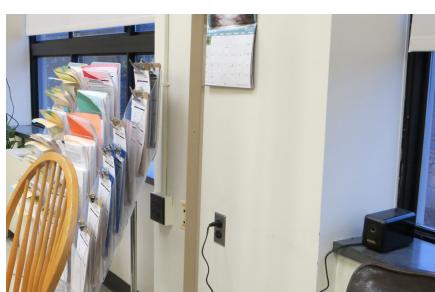
(d)



(e)



(f)



6

(g)



(h)

Figure 1: The Writing Center.

## 10 Sketches

## 11 Task Data

## 12 Raw Data and Work Activity Notes

### Audio Interview Notes

Audio Folder  
Assistant Director 1  
Coach 1

## 13 Building the WAAD

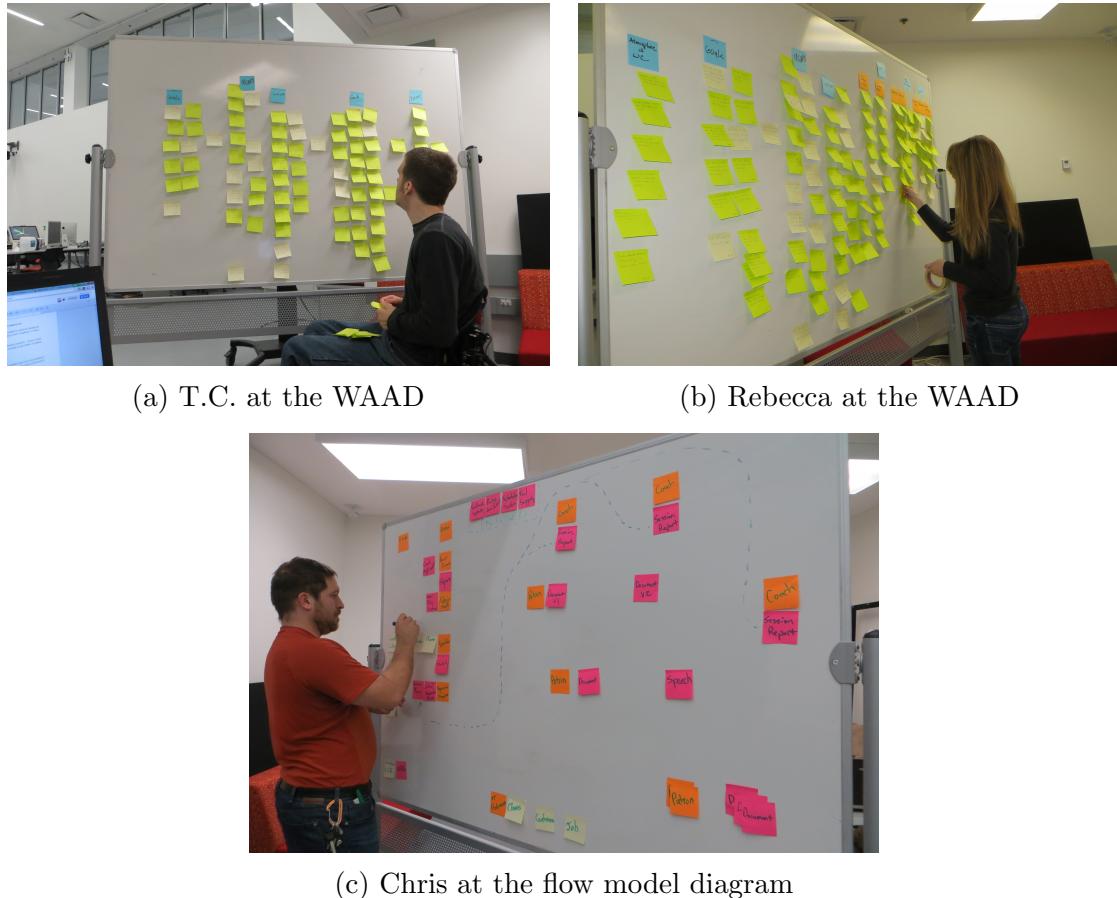
For building the Work Activity Affinity Diagram (WAAD), the raw data was synthesized into work activity notes, which were written on green and yellow sticky notes so that the colors would blend together. We left the bolder colors for the hierarchical categorization labels for the developed clusters of 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 3a.

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 3b,

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 3c 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 3d, until the final WAAD evolved, shown in Figure 3e.

## 14 Team Photos



(c) Chris at the flow model diagram

Figure 2: The team in action.



## 15 WAAD Photos



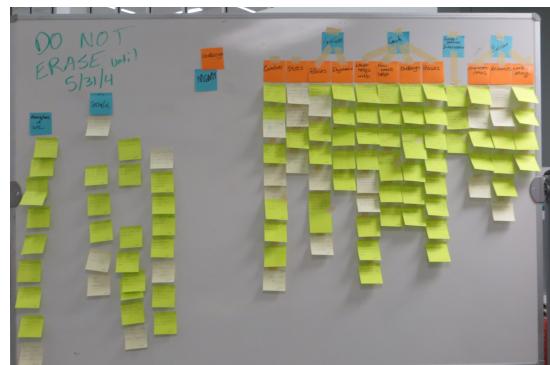
(a) Phase 1



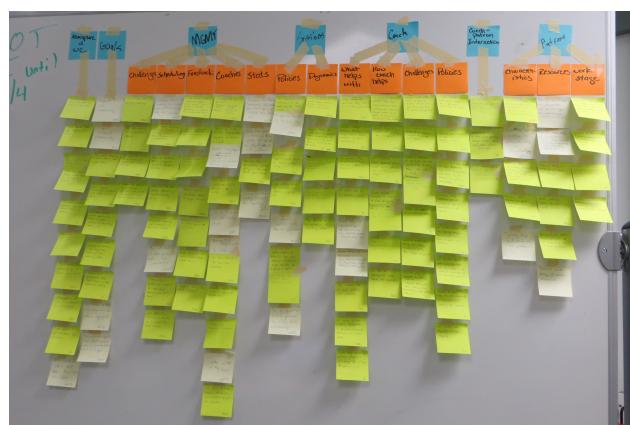
(b) Phase 2



(c) Phase 3



(d) Phase 4



(e) Phase 5

Figure 3: Evolution of the WAAD

## 16 Work Roles

**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.

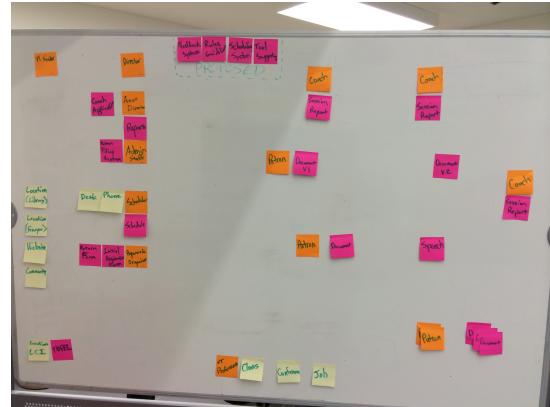
## Funding

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

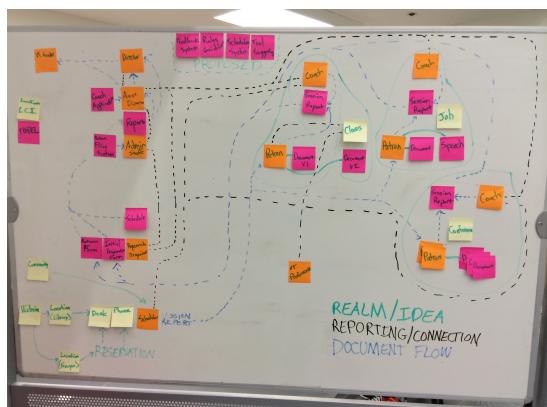
## 17 Flow Model Diagram



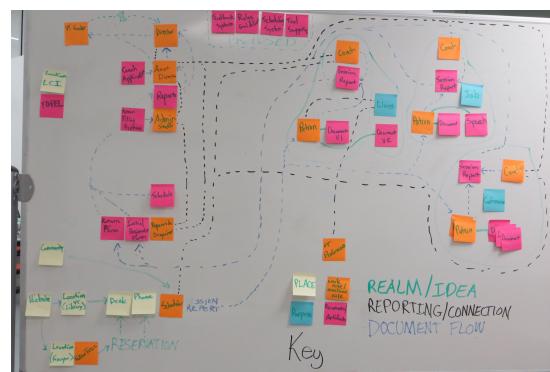
(a) Initial flow chart denoting groupings



(b) Flow chart in a new grouping



(c) Flow chart with arrows



(d) The Final Flowchart with Key

Figure 4: Evolution of the Workflow Diagram

## **18 Work and Machine Role Nodes**

## **19 Information and Work Flow Arcs**

## **20 Outside Information Flow**

## **21 Effect of Proposed System**

We dont have an after, just the proposed systems