Design Problem:

How can we facilitate the process of gathering student and professor feedback to help teaching assistants improve as educators?

Project Description:

The following are two personas developed for our project to help better understand the users of a tool that could help facilitate that process of giving instructor feedback. Notes of interviews with undergraduate and graduate TAs and students in STEM majors have been synthesized and presented below:

TA interviews

T1: Interviewed a PhD student in HCDE who had TA'd for 3 quarters. Does not TA out of necessity but she enjoys teaching and assisting students in coding as well as thinks considers teaching as a great opportunity to learn.

T2: Interviewed a junior in CSE who had TA'd for two quarters. Does not TA out of necessity but just as a way to make extra money.

T3. Interviewed a junior in CSE who had TA'd for eight quarters. Does not TA out of necessity but enjoys the extra cash as well as the experience of being an educator. Hopes to become a teacher later on.

T4: Interviewed a 2nd year graduate student in Atmospheric Sciences who is a TA for an introductory ATM S class as part of her degree requirements. She is involved in research and has found that some of her research time has diminished due to her responsibilities as a TA.

Student Interviews

S1: Interviewed a senior in Informatics who has taken CSE 142 and 143. Took the class as prerequisites to his major and found that his TA used analogies to help explain concepts. Her teaching quality was inconsistent.

S2: Interviewed a junior in HCDE who has taken CSE 142. Took this class as prerequisites to his major. She found this her TA was good at explaining some ambiguous concepts by drawing, but her TA was not so helpful when it came to the assignments. He wasn't always available and questions answered through emails were unclear.

Goals of TAs:
The goals of these users include: being a resource for students so that they are able to achieve a more in-depth understanding of the material. These goals are achieved through leading section, answering emails and holding office hours. However, among busy schedules and other commitments or responsibilities, they strive to find ways to manage their time efficiently.

Goals of a Student:

The goals of the student are primarily focused on learning the material, doing well in the course, and at times, getting to know the other students in the class.

Motivations of TAs:
The motivations for becoming an undergraduate or graduate TA can vary. One motivation includes getting hands on experience in a teaching role or leadership position. Other motivations include fulfilling a degree requirement as well as meeting teaching requirements for TA funding.

Motivations of a student:
Students are primarily motivated to do well in the class because they are eager to apply and get accepted into their competitive majors.

Pains of TAs:
Grading and leading section are the two primary pains expressed by all interviewed TAs. Grading is very time-consuming meanwhile leading section can be a source of stress and uncertainty in one's abilities. Preparing for section can also be a time consuming hassle.

Pains of a student:
TAs often do not have a clear method of understanding, despite using analogies and illustrations for students. As a result, it is very difficult to gain a better grasp on concepts through TA-led quiz sections.

This is Tom.

A 25 year-old Computer Science major who wants to gain hands-on experience in teaching.

Tom is a 20 year-old studying computer science at the University of Washington. His home town is Spokane, Washington where he comes from a family of educators. Since he was a kid, his parents stressed the need for learning and teaching. Through his own experience in school, he too discovered his love for education and wishes to eventually teach computer science to underprivileged students around the Seattle area. After taking CSE 142 and 143, Tom applied and was accepted into the computer science department. He had a fantastic experience learning from this TAs and wants to have a positive influence on new students.

Tom *~ Provisional*

TOM

SKETCH

Characteristics
- Undergraduate TA (20 yr. old)
- Field: Computer science
- In the same department, specializing in data Management
- Second quarter TAing
- Lives close to campus
- Income from being a TA
- Dream project mentor: really likes teaching

Technologies Used
- Using Canvas for grading
- Emails to contact students
- Message board to answer questions
- Internal scripts to check homework
- Instructional Assessment System/ Course Evaluations

Goals
- learn to write succinct email messages that are clear and friendly
- Leave 10 minutes at the end of section for homework help and clarification
- Host additional (non-required) office hours when possible

Pain Points
- difficulty gaining the confidence to be a leader in the classroom
- hard to engage students early in the morning
- hard to explain concepts, leading to wasting alot of time in class
- Leaves little time for homework clarification — leads to more emails

Desires:
- develop strong leadership skills
- Improve written and verbal communications
- Improve accessibility to students
- gain respective from students who are also peers

Scenario Tom teaches an introductory quiz section @ 830 in the morning. He stayed up late answering emails and only got a few hours of sleep. He arrives a few minutes late and has a hard time getting students to stop the side-chatter. He feels uncomfortable telling them how to act as they are his peers, but there is a general lack of seriousness. Tom is new to teaching but seeks to improve. He spends other spare time trying to learn teaching techniques.

Tom ~ *Sources and Assumptions*

Tom McGill

Tom is a 25 year-old studying pursuing a Ph.D. in the computer science department at the University of Washington. Throughout his undergraduate career, he had fantastic learning experiences with his TAs and wants to give other students that same opportunity. He knows that he is new to the world of teaching and has lots to learn. He hopes to get to know the needs of his students better but is not sure where to start.

" TAing has given me a lot of insight in how to run a successful class.

GOALS

- Learn to write succinct email messages that are clear and friendly
- Think of possible questions that students could have in section and be ready to answer them
- Leave 10 minutes at the end of section for homework help and clarification

DESIRES

- Develop strong leadership skills through teaching
- Hopes to gain hands on experience to determine whether or not he was to be an educator later on
- Improve accessibility to students, particularly those who comes from non-traditional engineering backgrounds

SCENARIO

CHARACTERISTICS

- Second year Ph.D. TA for CSE 143
- Second quarter TAing
- Patient and soft-spoken individual
- Lives close to campus with his friends
- TAing is his main source of income

TECHNOLOGY

- Uses internal CSE scripts to help grade
- Primary forms of communication with his students are email and message board
- Email is usually for more personal questions and homework regrades
- Message board is more for general questions
- Uses Course Evaluation Catalog to view feedback

PAIN POINTS

- Hard to balance time required for teaching with time needed for conducting research
- Hard to engage students early in the morning when they're tired
- Hard to explain concepts, leading to wasting class time
- Little time left at section for homework clarification which leads to more emails

Tom teaches an introductory CSE quiz section at 8:30 in the morning. On certain nights, he stays up late answering emails causing him to get only a few hours a sleep. When this happens, he is often running late the next morning and shows up to section late and frazzled. This students are already chit-chatting, making it hard to Tom to put the class back in order. He is already pretty anxious and self-conscious among his peers and this situation makes me feel incredibly uncomfortable. He hopes to eventually become an educator but this job right now is causing him to feel a little overwhelmed and unsure of himself.

Interviews have been labeled based on the initials of the interviewers.
KZ (Kaitlyn Zhou), CI (Cedric Ith), AK (Allyson Kline), KC (Kristy Chen)

| Category	Evidence from Interviews	Sources	Assumptions (Additional details)
Characteristics	Undergraduates in Stem	**KZ, AK, KC, CI**	Junior in CSE
	Comfortable in classrooms but not confident	**CI, KZ**	Who is generally a patient and soft-spoken
Technology	Uses emails	**KC, AK, KZ, CI**	Uses email to communicate with students and colleagues
	Has tools to help grade and teach section	**KC, AK**	Internal scripts to grade homeworks from CSE
	Knows of the course evaluation catalog	**KZ**	Has found very helpful feedback and suggestions from the course evaluation catalog
Pain points	Grading takes a long time	**KC, KZ**	Wishes to grade within two days of due date
Desires	Strengthen leadership skills	**CI**	Figure out if teaching is a potential career path
	Hopes to be a resources to all students	**KZ**	Improve accessibility for students
Goals	Feel prepared to answer questions	**KC, CI**	Feel prepared to lead quiz section with detailed outline
	Explain course concepts more clearly	**KC, AK**	Think of possible student questions and be ready to answer them
Scenario	Feeling overwhelmed	**AK**	Trying to juggle between his work, being with friends and teaching

This is Sarah.

An intended Informatics major who is eager to learn and understand coding concepts.

Sarah is a sophomore at the University of Washington, originally from San Francisco, California. She was always good at math and science in high school, which ignited her passion for programming and desire to be a data scientist. She is one of the few female students in her quiz section and as a result she feels intimidated in the classroom at times. Sarah is normally pretty outgoing and likes to share her thoughts, but in this environment, she prefers to ask the TA questions outside of class via email.

Sarah *~ Provisional*

Sarah
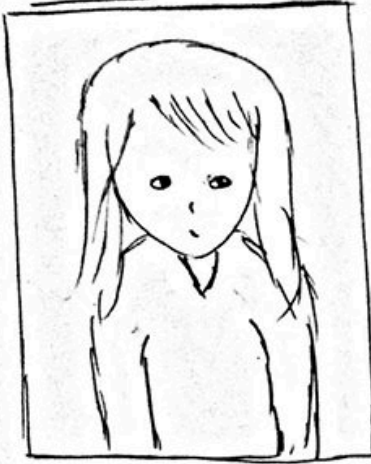
Characteristics
- 19 years old
- sophomore at UW
- outgoing
- involves in some clubs
- good at math & science
- lives on campus w/ 3 roomates.

Technology
- Uses school emails a lot
- Uses Facebook & Instagram
- Uses Canvas for classes
- Has Iphone & Macbook

Pain Points
- Trouble understanding some classes (concepts)
- Hard to get useful feedbacks on assignments

Goals
- Get good grades
- Get into Informatics
- Make new friends in class

Desires
- Be a data scientist
- Work at big companies
- Get scholarships for graduate school.

Scenarios

She goes to class everyday, and she spends most of her time at Odeggard study and coding for home work. Whenever she has questions regarding homework, she would email her TA but it takes long time for the TAs to respond.

Sarah *~ Sources and Assumptions*

Sarah Saveron

Sarah is a sophomore at the University of Washington, originally from San Francisco, California. She was always good at math and science in high school, which ignited her passion for programming and desire to be a data scientist. Sarah wants to give her TA some feedback but is unsure if that is her place to make such comments and suggestions.

"
Often times, I can't rely on my TA to answer the questions I have.

CHARACTERISTICS

- Intended major: Informatics
- Enrolled in a CSE 142 in Tom McGill's class
- Outgoing personality, enjoys talking to everyone!
- Lives on campus with roommates

GOALS

- Get at least a 3.5 in the class so that she is competitive for informatics
- Build strong connections with TAs and faculty members
- Make new friends as a way to become more involved in the UW community

TECHNOLOGY

- Checks messages boards at times to see if others have good questions
- Uses email to ask her TA questions, especially homework clarification questions
- Enjoys keeping up with all her friends on Facebook and Instagram

DESIRES

- To further her programming from this class
- To gain more exposure to the world of technology and information
- To make connections in the informatics community

PAIN POINTS

- Has trouble understanding CS concepts based on the way Tom explains it
- Needs feedback from the last assignment in order to improve for the next one
- Feels intimidated at times during section and has a hard time speaking up

SCENARIO

Sarah usually starts her day with a quick breakfast before heading to campus. She attends her 700-person lecture and takes notes on her laptop but when the concepts become too confusing, she finds herself distracted and messaging her friends over Facebook instead. On Tuesdays and Thursdays, she heads to quiz section and there they practice some exam questions to reinforce course concepts. She struggles with some of the material but feels as though her TA is not explaining things in a clear manner. There are times when she doubts her TAs teaching abilities as he is only an undergrad student himself. Sarah leaves section still confused and emails her TA to clarify on some materials but it takes long time until she receives a response.

Interviews have been labeled based on the initials of the interviewers.
KZ (Kaitlyn Zhou), CI (Cedric Ith), AK (Allyson Kline), KC (Kristy Chen)

Category	Evidence from Interviews	Sources	Assumptions (Additional details)
Characteristics	Undergraduates and graduates in stem	**KZ, AK, KC, CI**	Sophomore with an undeclared major
	Personality among the interviews varied	**KZ**	Driven student, has high, enthusiastic student with an outgoing personality
Technology	Uses emails and message board to communicate	**AK, KZ, CI**	Student is sending TA emails when they need help for clarification.
	Completes the course evaluations	**KZ**	Do not see the purpose of the course evaluations
Pain points	Students waiting a long time to have work graded	**KC, AK**	Hard to work on the next assignment without the feedback from the previous one
Desires	Taking the class as a prerequisite	**KZ, CI**	Interested in applying to the informatics major
Goals	Hard-working and placed this course as a priority	**AK, CI**	Wants to do well in this course and build connections with TAs to get recommendations
Scenario	CSE 142 has been expressed to be an intimidating class	**KZ, KC**	Being one of the few girls in the class, not wanting to ask questions