PROPOSAL FOR A MULTI-METHOD USABILITY EVALUATION

Enhancing the Phone Experience for non-native English-speaking international students at The New School's One Stop Student Service Center

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I. User Group Selection

The proposed user group is International students whose first language is not English at The New School. This choice is underpinned by several compelling factors:

A. Diversity and Magnitude of International Student Population:

The New School boasts a substantial international student community, comprising about 3,750 individuals hailing from more than 100 countries. By 2023, the international student percentage is expected to surpass 33%[1], highlighting the importance of addressing the specific challenges they encounter.

B. Multilingual Backgrounds of International Students:

Analysis of demographic data reveals that a substantial portion of international students originates from China, India, Canada and South Korea. Given these origins, their primary languages may include Mandarin, Hindi, and Korean, respectively. Recognizing the linguistic diversity among this user group is pivotal for tailoring support services effectively.

C. Challenges international students are facing:

International students, with their diverse backgrounds, often navigate unfamiliar terrain when adapting to a new academic and social setting. This challenge is especially notable in New York City where The New School lies in, known for its dynamism and cultural diversity. They encounter issues such as language barriers, cultural adjustments, and the loss of familiar support. The importance of providing assistance to this group lies in their potential vulnerability and unfamiliarity with the various aspects of life in such a bustling metropolis.

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[1] "Enrollment Data," Enrollment Data | The New School, accessed December 13, 2023, https://www.newschool.edu/enrollment-data/.

II. Participant Selection Strategy

We aim to enlist 20 students for user observation and surveys to ensure a robust sample for analysis. Our criteria include a diverse mix of undergraduates and graduates, varied genders, and representation from different home countries. To achieve this, we'll create an eye-catching digital poster and distribute it on social media via the school account. Additionally, we'll send it through email to effectively reach The New School's international student community. To express our gratitude, participants will receive $50 gift cards to The New Store as incentives for their involvement.

III. User Task

Using data from SEVIS, 57% of international students are confused about the health insurance and systems in the US. About 20% of international students will also avoid or stop medical care because of the confusion they face.[2] With this in mind, the question participants will be tasked to find an answer to will be in regards to the Student Health Insurance Plan (which falls under Student Accounts). To gauge a representative question, we'll draw from the pre-survey question asking participants what they would need an answer for when calling the One Stop Student Service Center under the SHIP area. Health insurance issues are not only affected by language barriers, but also can be affected by differing cultural understandings

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[2] Echu Liu et al., "Health Insurance Literacy and Medical Care Avoidance among International Students: A Case Study," International journal of public health, October 6, 2023, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10588627/#:~:text=The%20underlying%20reasons%20for%20international,their%20home%20countries%20%5B27%

IV. Aspects of Usability

We aim to analyze the understandability of the phone call options provided, whether wait times are communicated or not, and how efficient the call options are in guiding calls to the desired point of contact. The One Stop Student Service Center allows users to connect to multiple school services from one destination so with the multitude of options allowed, it would be helpful to analyze the concision of their phone calling system.

V. Privacy and Consent

Prior to participation, individuals must provide informed consent using a comprehensive form[3] (refer to Appendix A). This document outlines the nature of the study, encompassing the necessity for video and audio recordings and potential uses of the information.

The consent form is crafted for easy comprehension, avoiding technical language, and is available in multiple languages. Researchers will address questions or concerns, fostering an open dialogue to ensure full participant understanding.

Participants are guaranteed that video and audio recordings will not be published or shared externally. These recordings serve strictly for research outlined in the study, with limited access granted only to authorized personnel. Identifying information will be meticulously anonymized or pseudonymized to prevent unintentional disclosure.

Withdrawal of consent at any stage is permissible without consequences. Continuous communication channels enable participants to voice concerns or

[3] Nielsen Norman Group. “Obtaining Consent for User Research,” 2022. https://www.nngroup.com/articles/informed-consent/.

withdraw if uncomfortable. Upholding rigorous ethical standards[4], the research team prioritizes participant well-being and rights while gathering valuable insights.

VI. Methods Selection

We have chosen user observation, a survey (consisting of two parts), and GOMS analysis to be conducted by a task analyst as our methods. Initially, we'll conduct a brief survey (pre-test) to gather background information, providing context to identify pain points. The next step involves observing users' authentic reactions during their phone calls with the One Stop Center. Subsequently, we'll administer a follow-up survey to gauge participants' thoughts during the calling process. Finally, a task analyst or user experience designer will utilize GOMS to break down the task, additionally allowing for better empathization with users and pinpointing bottlenecks.

A. User Observation Method

We chose to employ the user observation method because it provides analysis for immediate interactions between the caller and the One Stop Student Service Center, as well as the subconscious reactions of the caller. It adds an additional layer to understanding how the call was carried out.

The calls will be best carried out from 1 p.m. - 3 p.m. on weekdays as the calling center hours are Mondays and Wednesdays through Fridays, 9 a.m. - 5 p.m. & Tuesdays 11 a.m. - 5 p.m. The observation will last however long it takes for the participant to get their necessary answer or up until they’re told to wait for a response back from a redirected point of contact.

[4] Nielsen Norman Group. “Maintaining the Privacy and Security of Research Participants’ Data,” 2022. https://www.nngroup.com/articles/privacy-and-security/.

The main data used for this method will be the observers' notes and the video & audio recordings of the participants during their call. Observers will be in a separate room so that they are not visible to the participant. Participants will be brought into a lab-setting room, with a camera and recorder already set up in discreet locations.

The observers will be taking notes on: facial expressions; non-verbal cues (which can be culturally influenced so we have to keep those in mind when analyzing this section); how fast reactions were to pressing a call option (or how delayed they were when asked for a dial-in number); and anything that the observer deems important to note[5]. These note points allow for a measure of how understandable the options were. Additional details to be noted should be on the options the participants have selected, on any repeated expressions/behaviors across all participants, and if any of them ever hang up from frustration/confusion.

B. Survey

The survey (see Appendix B) is designed to capture a nuanced understanding of participants' backgrounds and experiences, with a particular focus on the impact of cultural and linguistic influences on their phone interactions with the One Stop Student Service Center. It consists of two parts: a background survey that will be administered prior to user observation and a survey focusing on user experience that will be administered afterward.

To quantitatively gauge participants' emotional responses and perceptions in the second part of the survey, Likert scales will be employed within closed-ended questions, offering a structured rating system ranging from 1 to 5.[6] This methodology

[5] Nielsen Norman Group. "Observer Guidelines for Usability Research," 2016. https://www.nngroup.com/articles/observer-guidelines/.
[6] Figma. "What Is a Likert Scale + Free Template | Figma," 2023. https://www.figma.com/resource-library/what-is-a-likert-scale/.

allows for the measurement of subjective experiences, providing a numerical representation of participants' sentiments.

The Likert scale data, capturing the spectrum of emotional and perceptual nuances, will undergo meticulous aggregation. This process involves identifying trends and calculating averages, facilitating a comprehensive overview of participants' collective responses. This quantitative analysis serves as a valuable tool for identifying patterns and correlations within the dataset.

Simultaneously, the survey incorporates open-ended questions to solicit qualitative insights into participants' experiences. Thematic analysis, a qualitative research technique, will be applied to these responses.[7] This method involves identifying recurring themes and patterns within the qualitative data, offering a deeper understanding of participants' perspectives and allowing for the exploration of nuances beyond numerical metrics.

Overall, the survey's combined use of Likert scales for quantitative analysis and thematic content analysis for qualitative exploration aims to foster a more profound comprehension of the complex interplay between individual experiences, cultural influences, and interactions with the One Stop Student Service Center.

C. GOMS Method

GOMS is a method for studying human cognition and task execution by decomposing tasks into GOALS/OPERATORS/METHODS/ SELECTION RULES.[8] The goal is to analyze and quantify the cognitive and motor processes during interaction by examining users' steps in completing tasks. This method is well-suited for analyzing the calling process, allowing for a deeper understanding of each step

[7] Nielsen Norman Group. “How to Analyze Qualitative Data from UX Research: Thematic Analysis,” 2022. https://www.nngroup.com/articles/thematic-analysis/.
[8] David Kieras, “A Guide to GOMS Model Usability Evaluation Using NGOMSL,” Handbook of Human-Computer Interaction, 1997, 733–66, https://doi.org/10.1016/b978-044481862-1.50097-2.

based on the information obtained from user observation and surveys. It constitutes the final component of our comprehensive testing process.

We will assign a Task Analyst, whose first language is also not English, to conduct GOMS independently. This individual should ideally have a background in psychology or user experience design and be proficient in the proper application of GOMS.

To complete the GOMS analysis, the following steps will be taken:

Step 01: Call the One Stop Student Service Center, posing questions about school health insurance, replicating the experience of a typical New School student to gain firsthand insight.

Step 02: While awaiting the results of user observation and survey, the task analyst will efficiently draft the GOMS structure based on personal experience to expedite the process.

Step 03: Building on insights from user observation and survey findings, a comprehensive GOMS analysis will be conducted. This aims to understand the user journey, identify pain points, and uncover opportunities for enhancing the overall experience.

GOMS Draft

Meet Bella, our user experience designer and international student from China at The New School. She's the perfect fit to be the task analyst for our test. Below is the GOMS she crafted after calling the One Stop Student Service Center, providing a solid foundation for our future analysis.

A. **GOAL:** To get information about school insurance from The New School One Stop Student Service Center as an international student whose first language is not English.
B. **OPERATORS & METHODS:**

1. Preparing for the questions to One Stop Student Service Center
    - Translating questions into English
    - Writing down the questions
2. Searching the service number
    - Entering information in the search bar on webpage
    - Finding the right number
3. Dialing the phone
    - Picking up the phone
    - Entering the service number
4. Listening to information
    - Holding the phone
    - Greetings and prepare for asking questions
5. Asking questions
    - Looking at the questions
    - Asking the questions one by one
6. Understanding responses
    - Listening to the responses
    - Taking notes

Regarding the “SELECTION RULES” portion, we'll address this aspect after reviewing the user observation and survey results. During the drafting phase, we took into account that users may approach tasks differently based on their English proficiency. For instance, individuals encountering significant language barriers at the "Understanding responses" step might need to request a follow-up instruction email for better clarity.

By leveraging the GOMS draft and insights gathered from previous user tests, conducting the actual GOMS analysis will allow us to gain deeper insights more efficiently.

X. Integrating Methods

The integration of user observation, a survey, and the GOMS method forms a comprehensive approach to identifying and addressing pain points in phone interactions at The New School's One Stop Student Service Center for international students whose first language is not English. User observation captures real-time reactions during the task, providing immediate insights, while the survey offers a deeper understanding of participants' thought processes, perceptions, and backgrounds.

These two methods create a foundation for the GOMS method by empowering task analysts or UX designers — preferably those who do not speak English as their first language — to better empathize with the target user group as they systematically break down the task. This holistic analysis allows for the identification of pain points and a thorough comprehension of contributing factors, facilitating the design of more effective and user-friendly phone interactions that cater to the diverse needs of the target user group.

XI. Proposal Summary

Here are some quick user experience recommendations for the One Stop Student Service Center's phone service that we generated during the proposal development process:

- Add students / staff who are representative of the international student population to the help service
    - Employ international students/staff as assistants and highlight this on the website to alleviate English-speaking confidence concerns among international students
- Establish a feedback loop for ongoing improvement

    - Collect feedback from international students regularly (once a semester) and integrate insights for iterative improvements to the phone call service
- More standardized and friendly service process
    - Provide assistance with a guiding handbook to enhance communication with international students uniformly

Appendix A: Consent Form

Title: Study on the Experiences of International Students at The New School's One Stop Student Service Center

Introduction:

We invite you to participate in a research study aimed at understanding the experiences of international students at The New School who do not speak English as their first language. The study involves user observation and a survey to explore interactions with The New School's One Stop Student Service Center via phone. Before agreeing to participate, we want to ensure that you have all the information you need to make an informed decision. Please read the following details carefully and feel free to ask any questions.

Purpose of the Study:

This research aims to gain insights into the experiences of international students during phone interactions with The New School's One Stop Student Service Center. The study will contribute to improving services for individuals who, like you, navigate these interactions as non-native English speakers.

Study Procedures:

- **User Observation:** Participants will be observed during their interactions with the One Stop Student Service Center over the phone.
- **Survey:** Participants will be asked to complete a survey about their experiences, preferences, and background.

Consent for Video and Audio Recordings:

Video and audio recordings of your interactions will be made for research purposes. These materials will not be published or shared externally. Access will be restricted to authorized personnel involved in the study. Any identifying information will be carefully anonymized or pseudonymized.

Compensation:

As a token of our appreciation for your participation, you will receive a $50 gift card to The New Store. This compensation is not based on your abilities or the feedback you provide. Participants will be compensated after signing this form.

Language Accessibility:

The consent form is available in multiple languages to accommodate participants with diverse backgrounds. Please inform us of your preferred language for communication and documentation.

Voluntary Participation and Withdrawal:

Participation in this study is voluntary, and you may withdraw your consent at any stage without facing any negative consequences. Continuous communication channels will be maintained for you to voice concerns or withdraw participation if you feel uncomfortable.

Contacts and Questions:

If you have any questions or concerns about the study, please contact [Researcher's Name] at [Researcher's Email] or [Researcher's Phone Number].

Agreement:

By signing this form, you confirm that you have read and understood the information provided, and you voluntarily agree to participate in the study.

Participant's Name: _____

Participant's Signature: _____

Date: _____

Researcher's Name: _____

Researcher's Signature: _____

Date: _____

Appendix B: Survey

Understanding the Experiences of International Students at The New School – One Stop Student Service Center

Section 1: Demographics

1. Age:
    a. Under 18
    b. 18-21
    c. 22-25
    d. 26-30
    e. 31-35
    f. 36 and above
2. Country of Origin: [Open-ended]
3. Current Program and Year of Study: [Open-ended]
4. Duration of Stay in the U.S.:
    a. Less than 3 months
    b. 3 to 6 months
    c. 6 to 12 months
    d. 12 to 24 months
    e. More than 24 months
5. Fluent Language(s): [Open-ended]
6. Have you previously visited the One Stop Student Service Center?
    a. Yes
    b. No
7. If yes, via what mode(s)?
    a. In Person
    b. Phone
    c. Digital Assistant
8. What would you like to inquire about regarding the Student Health Insurance Plan via the One Stop Student Service Center? [Open-ended]

Section 2: Experience with the One Stop Student Service Center

1. **Cognitive Perception:**
    - How would you rate your overall satisfaction with using the One Stop Student Service Center during phone interactions? (1 = Not Satisfied at all, 5 = Extremely Satisfied)
2. **Emotional Impact:**
    - To what extent do you feel positive emotions (e.g., relief, satisfaction) after phone interactions with the One Stop Student Service Center? (1 = Not at all, 5 = Very Much)
3. **Decision-Making Processes:**
    - How confident do you feel in your decision to contact the One Stop Student Service Center for SHIP information over the phone? (1 = Not Confident at all, 5 = Extremely Confident)
4. **Cognitive Load and Information Processing:**
    - Rate the ease with which you can process the information received from the One Stop Student Service Center during phone interactions. (1 = Very Low Ease, 5 = Very High Ease)
5. **Trust and Confidence:**
    - On a scale of 1 to 5, how much trust do you place in the information provided by the One Stop Student Service Center during phone interactions? (1 = No Trust at all, 5 = Complete Trust)
6. **Language and Communication:**
    - How comfortable do you feel communicating in English over the phone with the One Stop Student Service Center staff? (1 = Not Comfortable at all, 5 = Very Comfortable)
    - Have you encountered any language barriers during phone interactions with the One Stop Student Service Center? If yes, please describe. [Open-ended]
7. **Cultural Identity and Interaction:**
    - To what extent do you feel your cultural identity influences your interactions with the One Stop Student Service Center staff during

phone interactions? Are there cultural factors that enhance or challenge your experience? [Open-ended]

8. **Personal Goals and Expectations:**
    - How well do the services provided by the One Stop Student Service Center over the phone align with your personal goals and expectations? (1 = Poor Alignment, 5 = Excellent Alignment)
9. **Future Phone Engagement:**
    - Considering your experiences, how likely are you to engage with the One Stop Student Service Center over the phone in the future? (1 = Very Unlikely, 5 = Very Likely)

Thank you for participating in our survey! Your feedback is valuable in improving the phone interactions and experiences of international students at The New School.