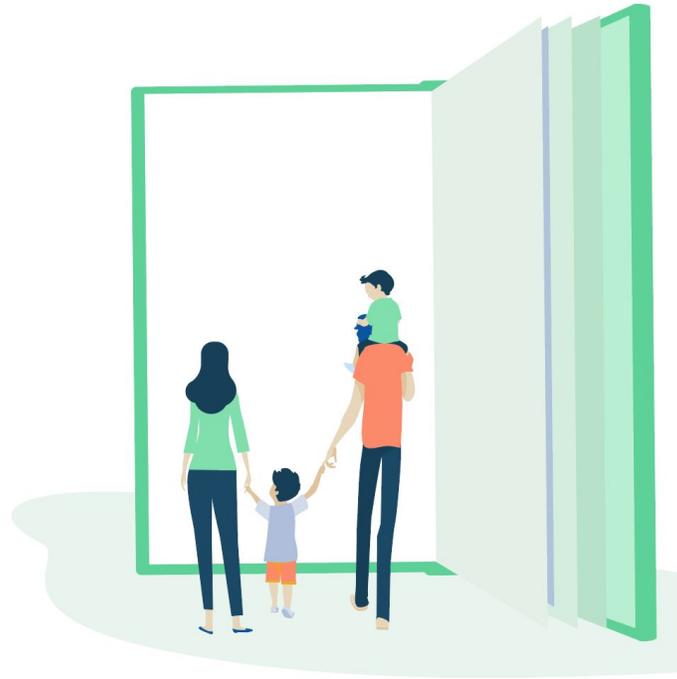


Improving the Enrollment Experience for Families

A project in collaboration with the San Francisco Unified School District



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Abstract

This project aims to understand the problems faced by families as they navigate the enrollment process for public schools in the San Francisco Unified School District (SFUSD). SFUSD enrolls over 50K students from families which are as diverse as the San Francisco district in terms of ethnicity, socio-economic status, and comfort with digital technology. We were able to identify the problems encountered by these diverse set of parents by distributing surveys in 6 different languages - English, Chinese, Spanish, Vietnamese, Arabic and Tagalog - that received 569 responses, conducting 17 semi-structured interviews and 12 usability sessions.

The surveys indicated that the EPC counselors were the least used source of information. Interestingly, in the interviews, some parents mentioned having an extremely positive experience just because of being helped out by an EPC counsellor. The survey also acted as a tool to recruit participants for the user interviews, through which we identified that finding and narrowing down schools was a problem consistent across all personas.

The project resulted in two meaningful bodies of work the online School Explorer solution prototype and an offline workbook. Along with three companion deliverables, namely user personas, journey maps and design principles, the team also identified areas of improvement like trustworthiness and transparency of the system to uplift SFUSD's perception among parents. Additionally, we provided a list of short-term and long-term recommendations to the school district. This report describes the project and the recommendations made to the SFUSD for improving the enrollment experience.

Project Background

San Francisco has a unique way of assigning children to public schools. Conventionally, children get assigned to a school in their neighbourhood. However, according to the system put in place by San Francisco Unified School District, a child can indicate preference to enroll in any in the district. These choices are put down in the application which are then fed into an algorithm called the 'Student Assignment System' (SAS). This algorithm then assigns the child to a school based on the number of seats available in a particular school and choice rank in the application. If more students request a particular school than there are seats available, then the assignment process uses a series of preferences, called tiebreakers, and random numbers to assign students to the limited number of openings.

This system was put in place to improve diversity within schools in terms of ethnicity and academic background so each school could have the opportunity to grow. It also provided an opportunity for parents to choose to go another school if they didn't think the school in their neighbourhood fit their child's needs.

Problem Space

Though the system is put in place to bring out positive outcomes, there are adverse effects that make parents angry and frustrated with the system. These include not getting a school of their choice, difficulty in understanding how the SAS works and lack of transparency. This adversely affects parents' perception of the school district.

A consequence of such a system is that parents who can afford to, choose private or charter schools and leave the school district, while others continue to remain in schools that don't fit their child's needs.

By addressing this problem space, we hope to understand the problems faced by families on a deeper level and identify solutions that help ease the challenges faced by them. We are additionally taking into considerations, the resource constraints of SFUSD to ensure our solution fits into their short-term and/or long-term roadmap.

On higher level, being strong advocates of equal access to education, we hope to take the step in the direction of providing equitable access to public schools through our project.

MIMS Impact

As graduate students of the MIMS program at the Berkeley School of Information, we are aligned with the school's mission to study and advance the interaction of humans with information. Exposure to interdisciplinary skills coupled with a passion to address real issues faced by the community motivated us to work on this project with the San Francisco Unified School District.

Learning from the following courses shaped our approach in this project:

Social Issues of Information - INFO 203

Social Psychology in Information Technology - INFO 233

User Experience Research - INFO 214

User Interface Design and Development - INFO 213

Interface Aesthetics - INFO C265

Information Visualization and Presentation - INFO 247

Quantitative Research Methods for Information Systems and Management - INFO 271B

User Research

The research was split into two phases : Generative and Evaluative. Each phase employed different research methods to understand the user and their problems. In the generative research phase, we tried to understand the goals of the stakeholders through interviews, captured problems encountered by users through surveys, and conducted semi-structured interviews to delve deeper into the problems faced by the parents and develop solutions. The evaluative research phase was instrumental in assessing the solutions proposed by the team.

Generative Research

Stakeholder Interviews

The team conducted interviews with Rosina Tong, Executive Director and Susan Shu-Ha Hsieh, Marketing Specialist at the Educational Placement Center to understand their goals from the project. The key takeaways from our interviews were as follows:

- The stakeholders wanted to understand the difficulties families face during the enrollment process
- The stakeholders highlighted their priority of encouraging and improving diversity and inclusion in schools
- The stakeholders were keen on creating user-focused solutions to alleviate the stress and anxiety associated with the enrollment process

Survey

We designed a survey to understand the general sentiment of families towards the current enrollment process, and understand the sources of information families referred to in order to educate themselves about the enrollment process. Moreover, the survey acted as a tool to recruit participants for user interviews as the survey takers had the choice to opt-in to be interviewed. **The survey was translated and distributed in six different languages: English, Spanish, Chinese, Vietnamese, Arabic and Tagalog with the help of translators at the EPC.** This was a crucial step to capture voices from San Francisco's diverse population. (See all survey in Appendix F)

The survey was distributed using three channels:

- San Francisco Unified School District website
- Parent Committees (CAC, AAPAC, PPS etc.)
- Offline distribution at the Educational Placement Center

Challenges

1. We received ~400 responses to the English survey. However, the response rate to the other languages was not high. The following table shows the distribution of survey participants across all languages as of March 18th, 2019.

Language	English	Chinese	Spanish	Vietnamese	Arabic	Tagalog
Responses	286	22	0	0	0	0

2. On performing a preliminary analysis of the English survey, we realized the response from the African American community was low. In order to overcome

these challenges, we visited the EPC on March 20, 2019 when parents were expected to arrive for counselling following the Round 1 decisions. The team printed copies of the online survey and distributed them to parents present at the location. Using this approach, we were able to get 9 survey responses in Chinese, 5 responses in Spanish and 1 response in Arabic.

We were unable to get any responses from the African American population and sought the help of our stakeholders at the EPC to recruit from this community. The stakeholders reached out to school principals and community leaders which resulted in 4 interviews with African American parents.

The Chinese and Spanish online surveys saw an increased activity between 11 - 15 April, 2019. We suspect this increase was due to distribution of the survey in parent group meetings. The survey responses as of May 6th, 2019 are as follows:

Language	English	Chinese	Spanish	Vietnamese	Arabic	Tagalog
Responses	~410	104	50	5	0	0

Synthesis

The synthesis of the survey consisted of the following steps:

1. Compiling responses from multiple surveys: Since the surveys were distributed in 6 different languages one of the first steps was translating responses to english and compiling them into a single data sheet.
2. Data cleaning: For data to be ready for analysis, the next step was data cleaning. Since we used Google Forms, multiple choice questions where participants

selected multiple answers were stored on the sheet as comma separated values within the same cell. We separated out each value and store them in separate column for data to be easy to visualized in Tableau.

Survey Outcome and Analysis

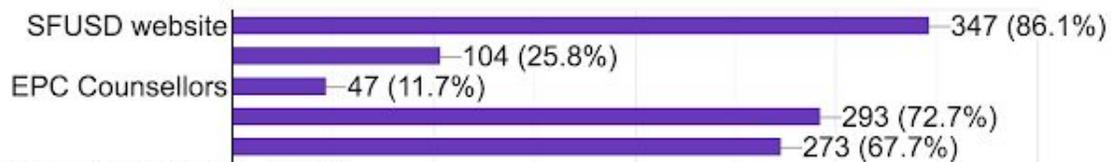
The analysis of the survey responses shows that SFUSD is heavily used by English and Chinese survey takers while it is one of the least used resources among the Spanish survey takers. In all three surveys, it is evident that EPC Counsellors are the least used resource.
The Vietnamese survey had only 5 responses, but it is noteworthy to mention that none of the participants referred to the SFUSD website or the EPC counsellors as a resource.

Survey responses for the sources of information

English Survey

Where do you get information about the application and enrollment process? Select all options that apply.

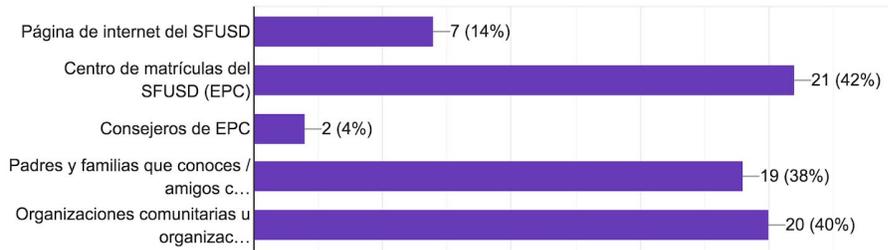
403 responses



Spanish Survey

¿Usted dónde obtiene información sobre la solicitud y el proceso de inscripción? (Por favor seleccionar todo lo que aplica)

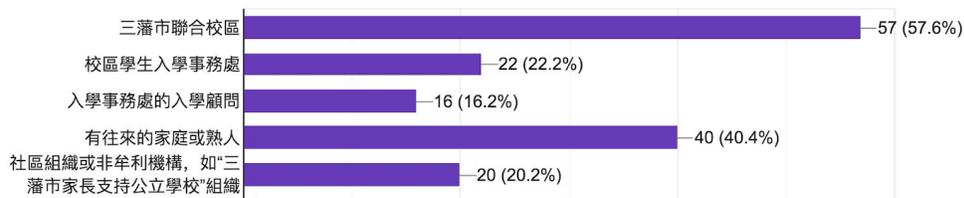
50 responses



Chinese Survey

您在何處了解有關入學申請程序? (請勾選所有適合選項)

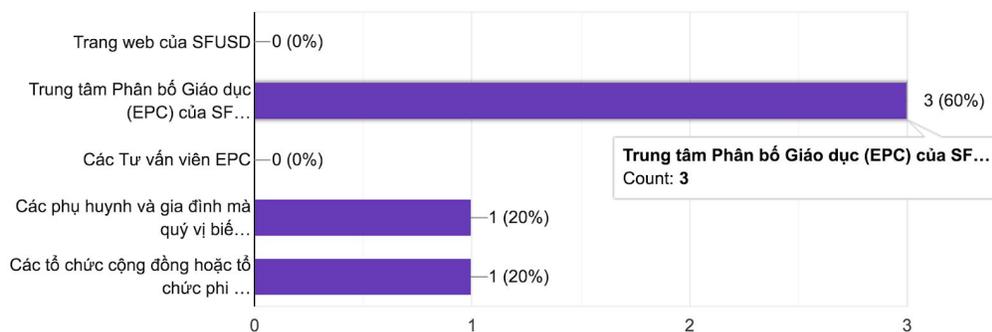
99 responses



Vietnamese Survey

Quý vị nhận được thông tin về đơn xin và qui trình ghi danh ở đâu? Chọn tất cả câu trả lời phù hợp.

5 responses



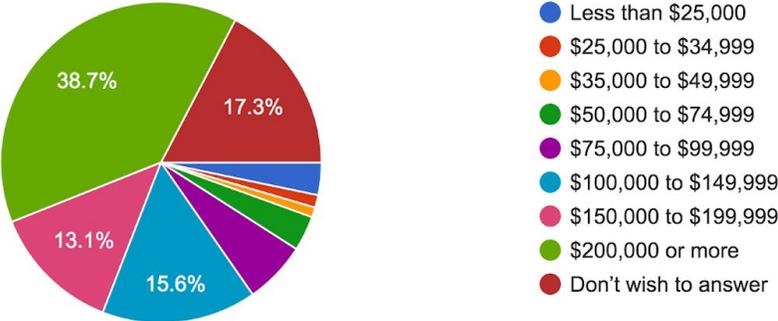
The income distribution is drastically different across the surveys in English, Chinese, Spanish, and Vietnamese. The English survey had 67.4% survey takers with a total household income greater than \$100,000, the Spanish survey had 68% survey takers with a total household income less than \$50,000 and the Chinese survey had 66.3% survey takers with a total household income less than \$50,000. The Vietnamese survey had only 5 responses, but it is noteworthy to mention that all the participants had a total household income less than \$25,000.

Survey responses for income distribution

English Survey

What is your total household income per year?

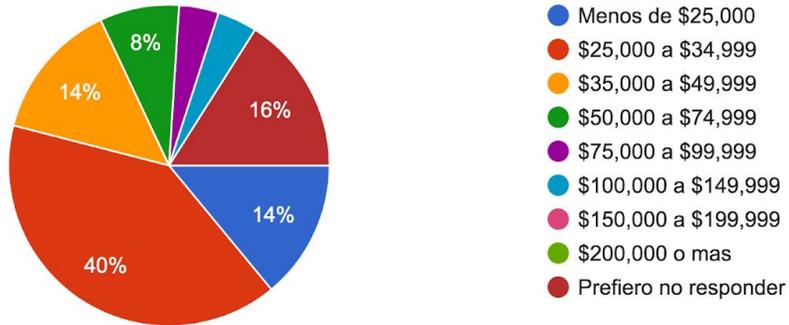
398 responses



Spanish Survey

¿Cual es el ingreso anual de su hogar?

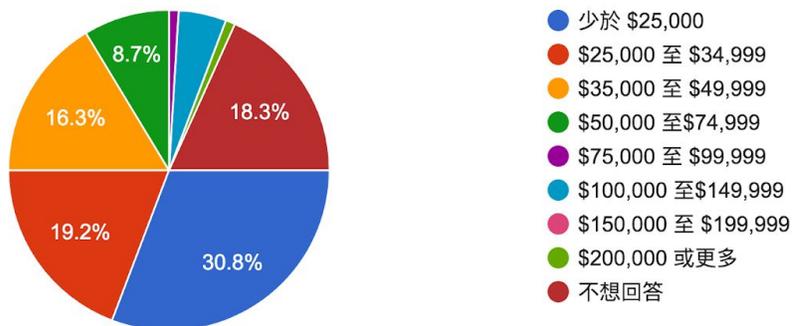
50 responses



Chinese Survey

您的年收入是?

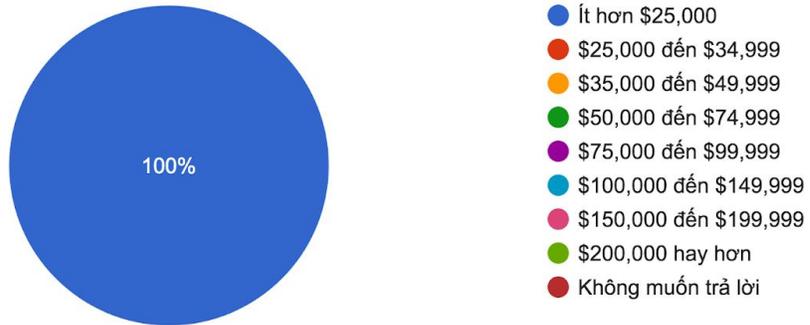
104 responses



Vietnamese Survey

Tổng thu nhập hộ gia đình quý vị mỗi năm là bao nhiêu?

5 responses



Semi-structured interviews

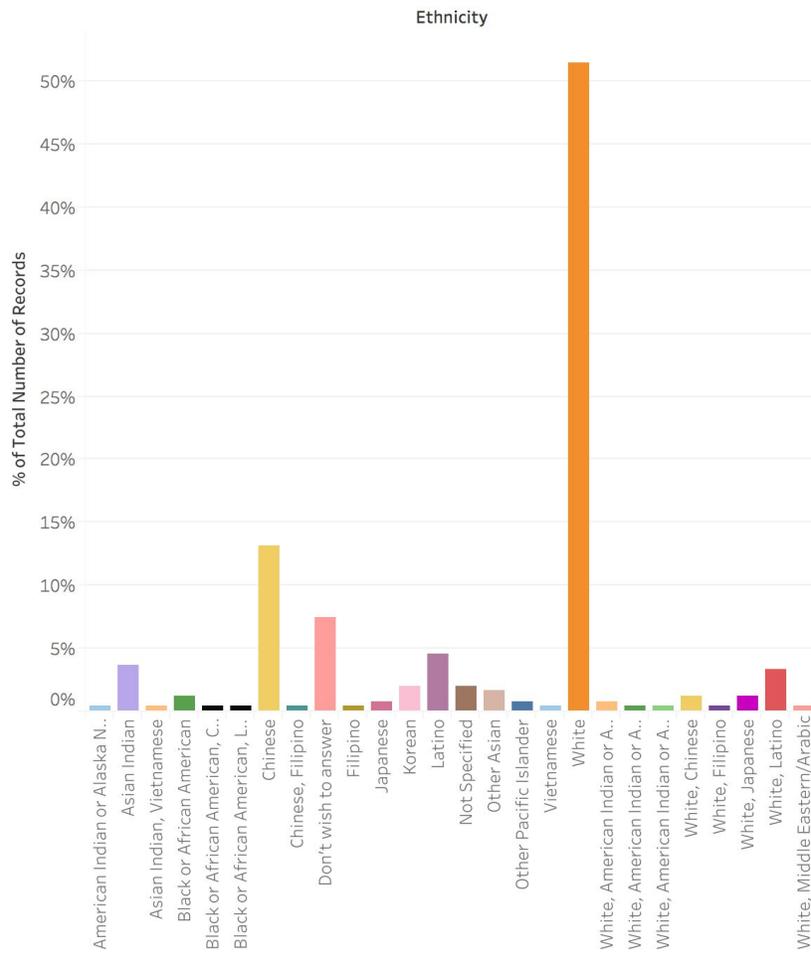
We systematically analyzed the survey and recruited participants for the interview process. We conducted 3 pilot interviews to identify the limitations of the interview guide (see Appendix A). The survey questionnaire was refined after the pilot interviews in that confusing questions were removed, and questions were added for areas which were not addressed earlier.

Following these changes, we conducted 14 semi-structured remote interviews. The interview participants belonged to the following ethnicities - White, Japanese-American, Chinese and African-American. The participants had a household income ranging from \$25,000 to more than \$200,000 a year. There was a mix of parents who had been through the enrollment process once with kids in TK/Elementary school and those who were experienced with the process with kids in Middle School/ High School. Out of the 14 interview participants, 11 participants were female and 3 participants were male. There was a mix of working parents and stay-at-home parents in the interview pool.

Challenges

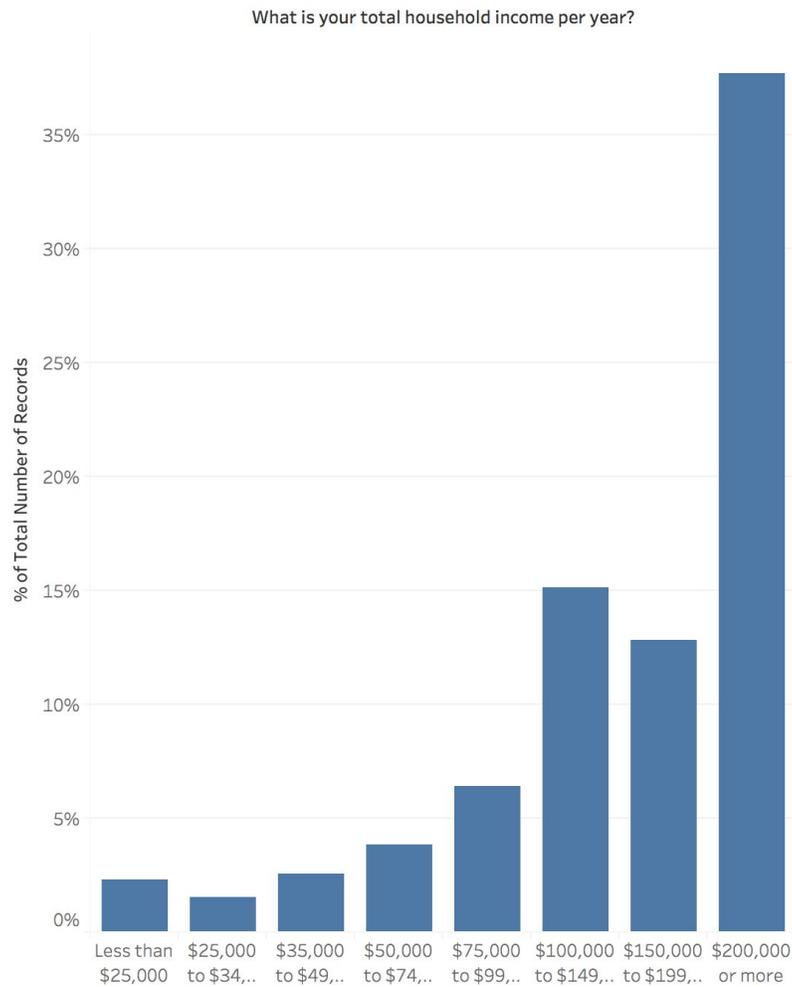
- A high percentage (~50%) of the survey participants were White. There were significantly fewer responses from the African American and Hispanic communities.

Ethnicity



- 35% of the survey participants were very high income (>\$200,000/year) while less than 7% had very low income (<\$50,000).

Income Distribution



- We did not have any interview participants from the Hispanic community which is an integral part of San Francisco's population.

Addressing the challenges

As the survey was distributed online, the population that did not have easy access to computers was eliminated. We wanted to include populations that had limited or no access to technology in our research. We assume this population was likely to be lower income and part of minority ethnic groups.

In order to seek diverse perspectives from an ethnic and socio-economic standpoint, we visited the Educational Placement Center on March 20, 2019 and distributed physical copies of the survey as well as invited the parents present at the EPC to chat with us about their enrollment experience thus far. We were able to conduct lightning interviews with approximately 25 parents at the EPC, 11 of whom were Chinese, 5 Hispanic, and 1 Middle Eastern. This population had household incomes ranging from 'Less than \$25,000' to 'More than \$200,000'. Access to the low-income Hispanic and Chinese populations was a huge positive, however, there was a language barrier due to which we were able to conduct limited number of interviews based on the participant's comfort with English. As we conducted 11 remote interviews before March 20th, these lightning interviews were a good way to confirm patterns established in the earlier interviews as well as identify key differences.

Synthesis

For the synthesis of the interviews we performed affinity mapping. In the affinity mapping, we went through each of the 14 interviews and noted key insights from them and grouped similar insights into distinct categories. The following categories emerged at

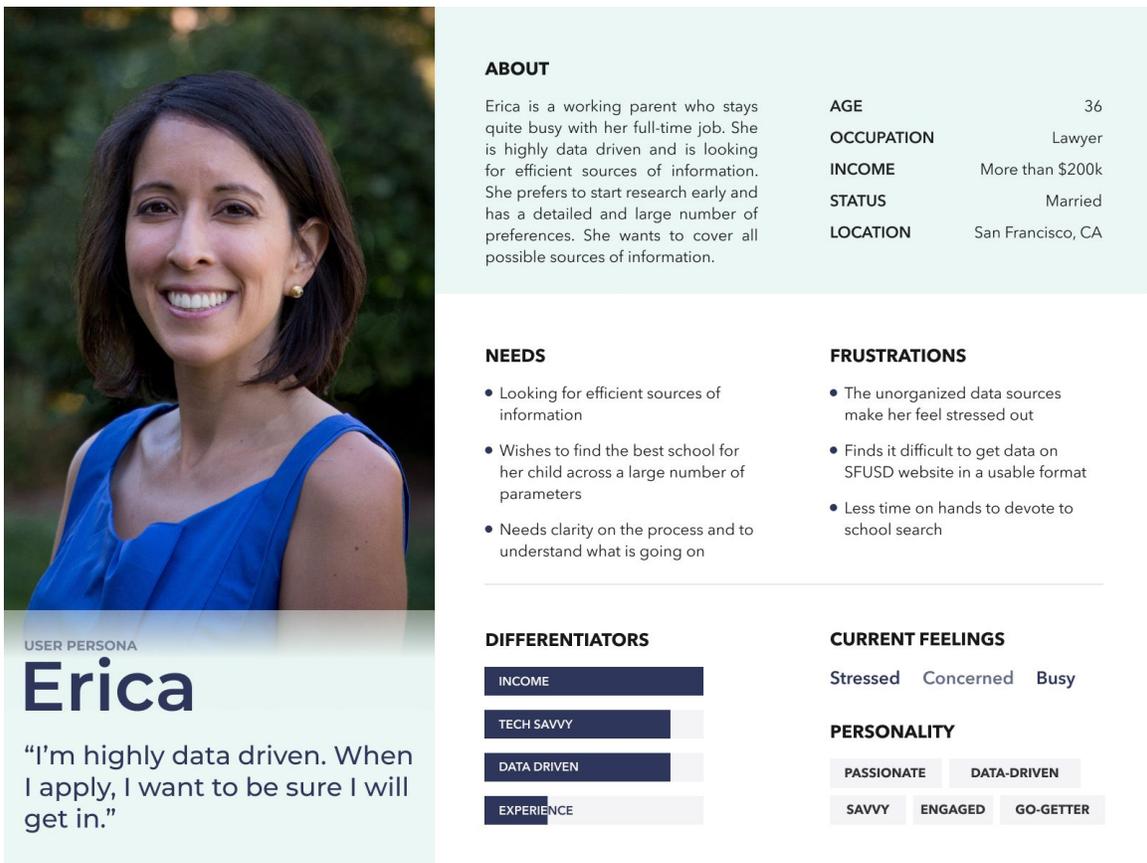
the end of the affinity mapping exercise (see Appendix C: for the complete synthesis document):

1. Sources of information (online and/or offline) to identify schools
2. Preferences of families for selecting schools (diversity, start-time, language pathways etc.)
3. Process used to rank schools on the application
4. Tools used by the parents (spreadsheets, physical map of the district)
5. Issues they faced along the process
6. Wishes for an ideal experience

The detailed analysis helped us group interviewees by similar traits, laying the foundation for the generation of the user personas.

Outcome - User Personas

1. Parents differed in terms of their process of discovering schools, identifying their preferences and the level of stress they endured through the process.
 - a. **Information Go-getters:** These parents exhausted both online as well as offline material to ensure they got the best option for their child. They were highly educated and spent time doing detailed analysis to find and gain a mathematical edge. This led to the formation of the persona - Erica.



ABOUT

Erica is a working parent who stays quite busy with her full-time job. She is highly data driven and is looking for efficient sources of information. She prefers to start research early and has a detailed and large number of preferences. She wants to cover all possible sources of information.

AGE	36
OCCUPATION	Lawyer
INCOME	More than \$200k
STATUS	Married
LOCATION	San Francisco, CA

NEEDS

- Looking for efficient sources of information
- Wishes to find the best school for her child across a large number of parameters
- Needs clarity on the process and to understand what is going on

FRUSTRATIONS

- The unorganized data sources make her feel stressed out
- Finds it difficult to get data on SFUSD website in a usable format
- Less time on hands to devote to school search

DIFFERENTIATORS

INCOME	██████████
TECH SAVVY	██████████
DATA DRIVEN	██████████
EXPERIENCE	██████████

CURRENT FEELINGS

Stressed Concerned Busy

PERSONALITY

PASSIONATE	DATA-DRIVEN	
SAVVY	ENGAGED	GO-GETTER

USER PERSONA

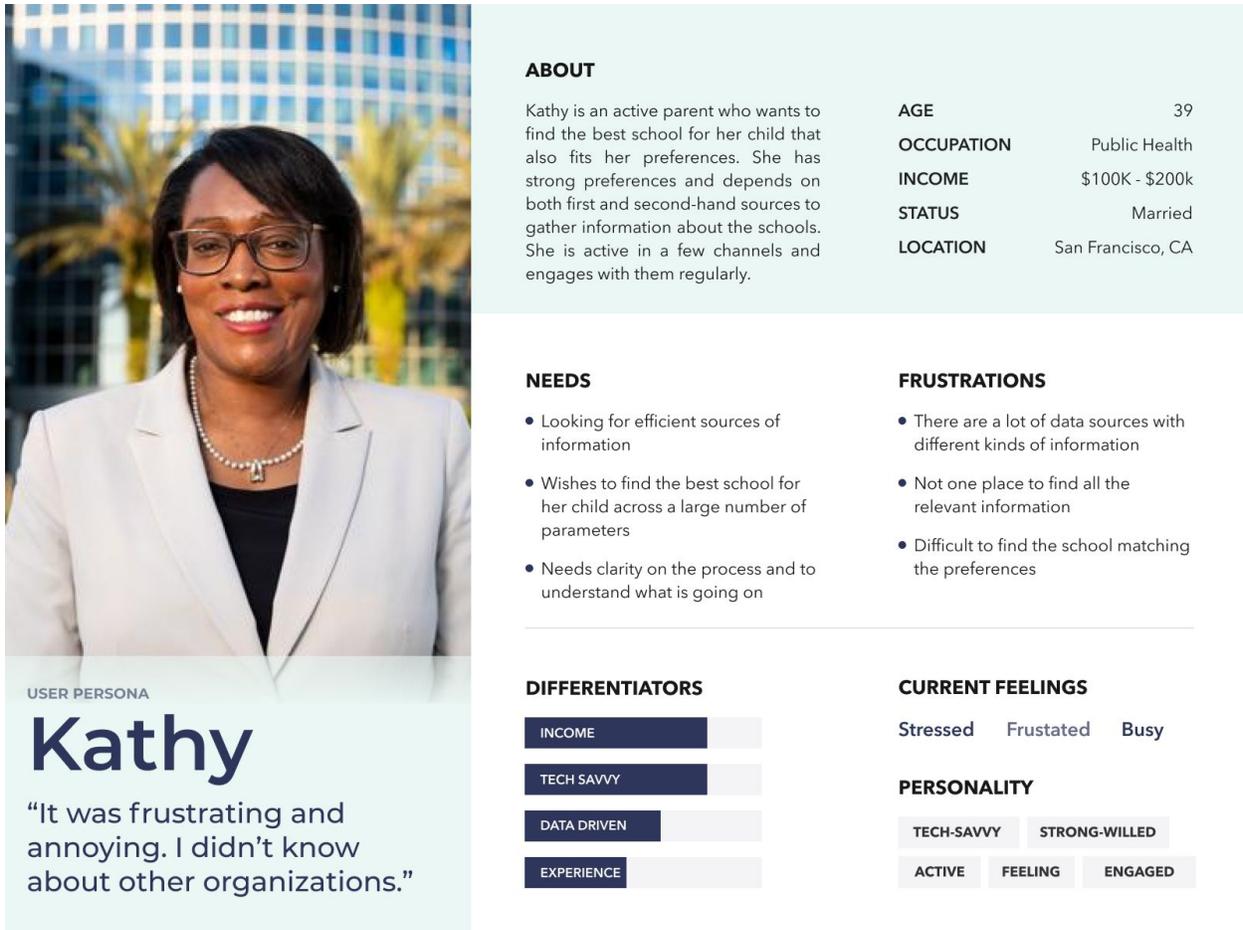
Erica

“I’m highly data driven. When I apply, I want to be sure I will get in.”

Image 1: User persona for Erica

- b. **Active parents:** These parents were active only on a few channels and utilized them as much as possible. They weren’t aware of all sources of

information. These parents, like information go-getters, were very stressed about the process. This led to the formation of the persona - Kathy.



ABOUT

Kathy is an active parent who wants to find the best school for her child that also fits her preferences. She has strong preferences and depends on both first and second-hand sources to gather information about the schools. She is active in a few channels and engages with them regularly.

AGE	39
OCCUPATION	Public Health
INCOME	\$100K - \$200k
STATUS	Married
LOCATION	San Francisco, CA

NEEDS

- Looking for efficient sources of information
- Wishes to find the best school for her child across a large number of parameters
- Needs clarity on the process and to understand what is going on

FRUSTRATIONS

- There are a lot of data sources with different kinds of information
- Not one place to find all the relevant information
- Difficult to find the school matching the preferences

DIFFERENTIATORS

INCOME	Progress bar (approx. 75%)
TECH SAVVY	Progress bar (approx. 75%)
DATA DRIVEN	Progress bar (approx. 50%)
EXPERIENCE	Progress bar (approx. 25%)

CURRENT FEELINGS

Stressed Frustrated Busy

PERSONALITY

TECH-SAVVY	STRONG-WILLED	
ACTIVE	FEELING	ENGAGED

USER PERSONA

Kathy

“It was frustrating and annoying. I didn’t know about other organizations.”

Image 2: User persona for Kathy

- c. **Easy going parents:** These parents relied heavily on other parents to gain knowledge of the system worked and what options would be best for them. These families had a stay at home parent who could do the research at leisure and start the process later as they had the flexibility of time. This led to the formation of the persona - Hans.

USER PERSONA

Hans

"For folks who have enough knowledge about the system - it's not too bad."

ABOUT

Hans is an easygoing father. He is a stay-at-home parent and he feels much more in control of his child's education. He feels less stressed about the enrollment process and finds it easy to understand. He started researching for schools later than the other parents.

AGE 34
OCCUPATION Stay-at-home
INCOME \$100K - \$150k
STATUS Married
LOCATION San Francisco, CA

NEEDS

- Looking for a good school that match a few preferences
- Asking other parents about their thoughts and experiences. Relies heavily on word of mouth
- Just wants the overview of the process that applies to him

FRUSTRATIONS

- The wait time after application deadline made him feel stressed
- Solo effort on the research, didn't get much help

DIFFERENTIATORS

INCOME

TECH SAVVY

DATA DRIVEN

EXPERIENCE

CURRENT FEELINGS

Relaxed Content Happy

PERSONALITY

FRIENDLY EASYGOING

SECURE SOCIAL FEELING

Image 3: User persona for Hans

- d. **Expert parents:** These parents were experience and have gone through the system multiple times. Due to their knowledge, they now volunteer to help other parents navigate the process. This led to the formation of the persona - Olivia.

ABOUT

Olivia is an expert parent. She has been through the process and knows it well enough to guide other parents. She goes the extra mile to learn the system and explain it to other parents by conducting workshops. She has a slightly positive outlook towards the student enrollment process.

AGE 34
OCCUPATION Non-profit Worker
INCOME \$75K - \$200k
STATUS Married
LOCATION San Francisco, CA

NEEDS

- Looking for information about the current process to guide parents
- Finding the best school that matches her large number of preferences
- Needs to understand all the aspects of the enrollment process

FRUSTRATIONS

- The prevalence of myths and lack of trustworthy sources for parents
- Finds it difficult to get data on SFUSD website in a usable format
- Too frequent changes to the process

DIFFERENTIATORS

INCOME
 TECH SAVVY
 DATA DRIVEN
 EXPERIENCE

CURRENT FEELINGS

Motivated Inspired Secure

PERSONALITY

FRIENDLY SYMPATHETIC
 HELPFUL SOCIAL CURIOUS

USER PERSONA
Olivia
 “There is a lot of false information. I try to clarify it for parents in my workshops.”

Image 4: User persona for Olivia

- e. [Potential persona] Constrained parents: Since we did not have enough data to make them a complete persona, we wanted to acknowledge the presence of parents who were undocumented and unaware of their child’s right to get educated in SF. They were often led by NGOs to be part of the process.

Outcome - Journey Maps

In addition to personas, the interviews led to analysis of each persona's journey through the entire process. The journey map explores parents' journey through the application process which lasts about 9 months and spans three phases - discover, apply and enroll.

Each journey map consisted of what the persona was doing, thinking and feeling, along with problems faced by the persona in a particular phase and the subsequent opportunities for design. Creating journey maps across all personas led to discovery of the numerous opportunities for design interventions. For example, parents who had limited amount of time found it difficult to come to the the SFUSD office to submit their application. This brought up the opportunity to create an online application process.

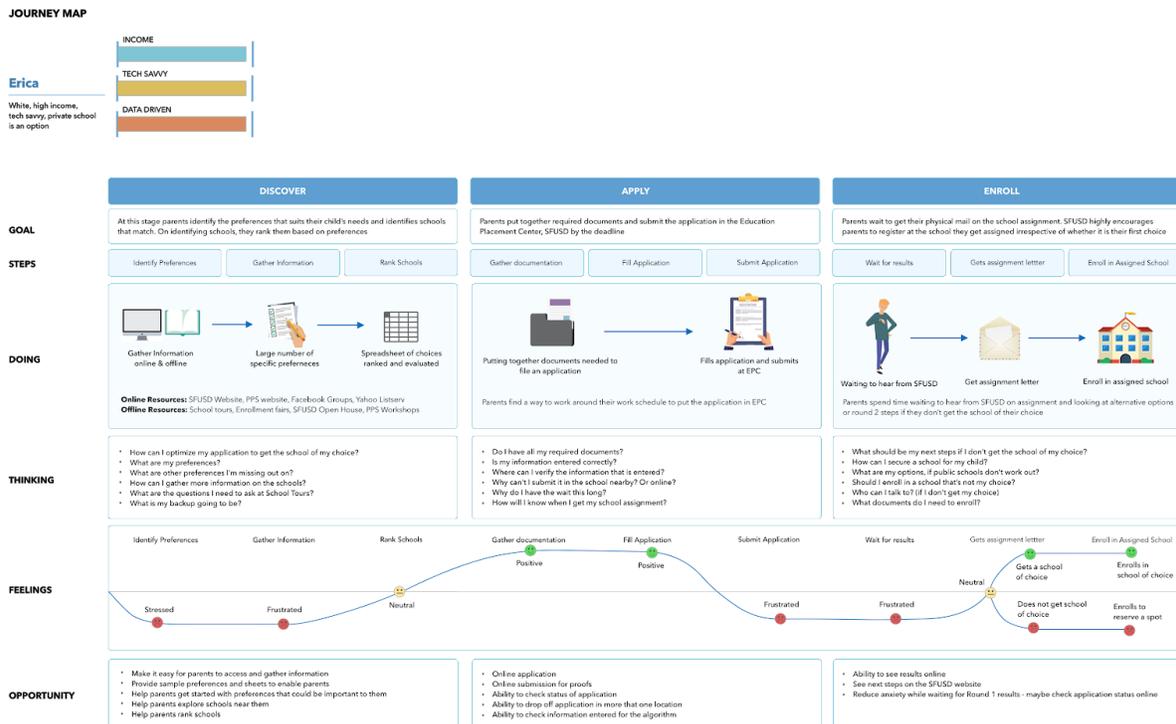


Image 5: Journey Map for Erica's persona

Additionally, this helped in identifying problems that remained consistent across multiple personas. For instance, all personas had difficulty identifying what preferences they had as family - start time, location, etc. Addressing these problems could lead to solutions that would have high impact and positively affect the experience for families. (See Appendix D for all the journey maps).

JOURNEY MAP

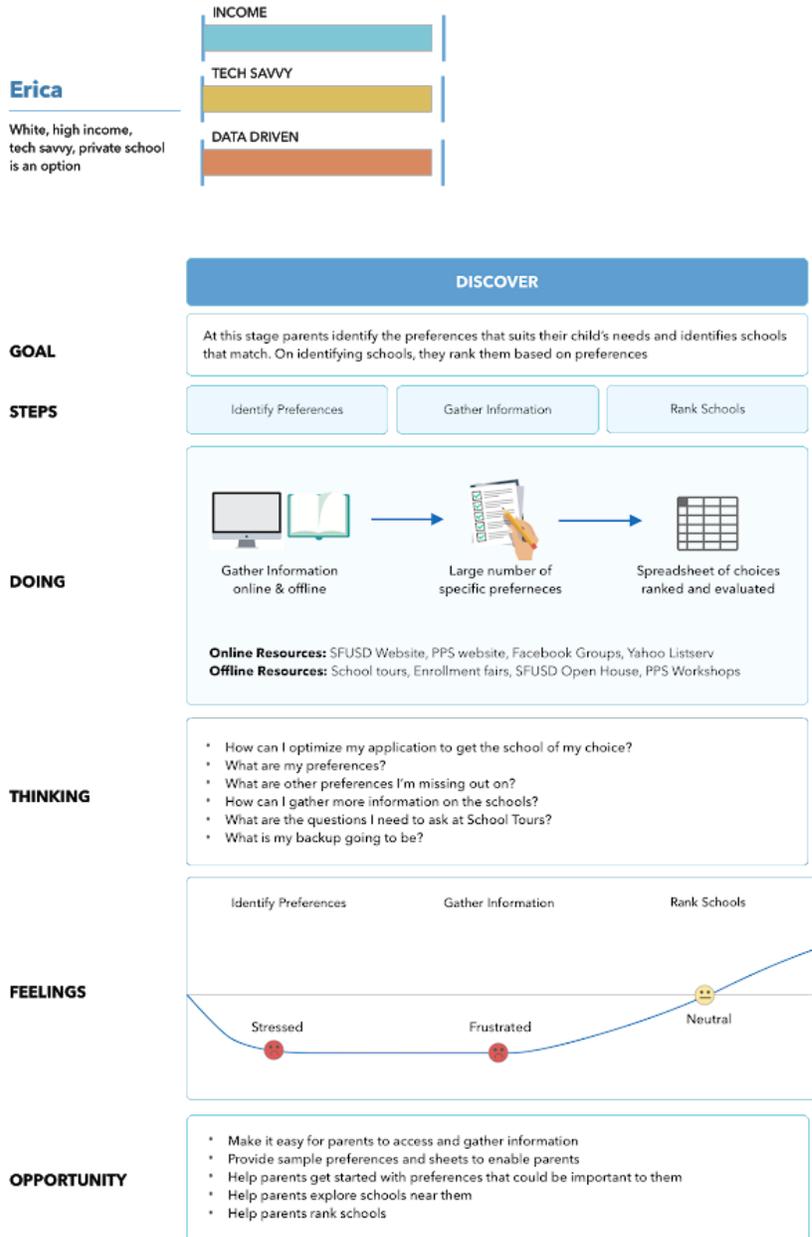


Image 6: A closer look at Erica's journey map showing what she is doing, thinking & feeling, along with a list of opportunities to design a solution.

Key Finding

A problem consistent across all personas was identifying preferences and discovering schools that matched these preferences. **This presented an opportunity to create an online and offline solution that helps parents identify their preferences and progressively narrow down school choices through a customized experience.**

Brainstorm and Prototype Development

Following the user research, we conducted detailed a design process that included brainstorming, low fidelity prototyping and high fidelity prototyping to develop a complete online and offline solution. A detailed description of the process is available under “**Design Process.**”

Evaluative Research

The research team conducted remote, moderated usability testing to evaluate the low fidelity and high fidelity prototypes. Each interview comprised of an interviewer and a note-taker. The usability sessions were recorded with the consent of the interviewee.

Low Fidelity Usability Testing

We conducted 7 interviews across the four persona types - the information go-getters, active parents, easygoing parents and expert parents. The participants were diverse in terms of ethnicity, socio-economic status and gender.

Synthesis

Post usability sessions, we went through each interview and identified users first impression of the application, areas of confusion and aspects of the prototype they liked. We then grouped insights that were similar. Each team member ideated individually and presented sketches of what changes must be made to the low fidelity. After a discussion, we put together a final list of all changes that must be made for the prototype to be of more value to our users.

Key learnings from low fidelity usability testing

- The prototype was designed in English, with no option to change languages. This would render the application unusable for non-English speakers without the help of an English speaker

- Some parents were uncomfortable providing the name of their child and their address without sufficient information about why these details were needed
- Some preferences like Special Education and Language Pathways have sub-categories, which were not mentioned in the prototype. Parents wanted the prototype to be detailed.
- Preferences such as diversity and active Parent-Teachers Associations (PTA) were subjective and raised questions about how they were measured. The stakeholders confirmed that the district did not maintain statistics about these preferences and would be difficult to portray.
- When the school list was displayed, the participants wanted more details on the map view. Visual representation of school information was important to further analyze school choices.
- The purpose of the mythbusters page was confusing to parents.

High Fidelity Usability Testing

Based on the feedback from the low fidelity usability tests, we made the following changes in the high fidelity prototype:

- Introduced the ability to select language of the tool to serve parents who don't use English as their preferred language
- Added subtext wherever we ask for personal information such as address and name of the child. We also made the child's name optional
- Provided detailed categories under Special Education Programs and Language Pathways

- Subjective preferences such as Diversity and active PTA were replaced with preferences such as school start times, before and after school programs, school bus, etc.
- Introduced two views on the school options page - list view and map view. This was designed to help parents absorb information in a detailed as well as visual manner
- The standalone Mythbusters page was modified to be included in the Frequently Asked Questions page

In addition to the feedback from participants, the high fidelity prototype was designed by using the design principles and visual language as the guiding stars. Detailed information about these artefacts created by the team can be found on pages 36 and 39.

Synthesis

Similar to low fidelity usability test synthesis, we went through each interview and identified users first impression of the application, areas of confusion and aspects of the prototype they liked. Additionally we also measured certain usability aspects through a 5 point scale - from strongly disagree to strongly agree (See table below). After discussing each interview, we noted down insights from the high-fidelity usability test sessions.

Questions	Average score
It is easy to find my way around the website	4.8
The naming and labeling of different components were easy to understand.	4.4
The website's functionality would keep me coming back.	4.6
The website is designed with me in mind.	4.5
Screens have the right amount of information.	4.4
The information is relevant to my needs	5
I can get to information quickly.	4.4
It is clear how screen elements (e.g., pop-ups, scrolling lists, menu options, etc.) work.	4
The counsellor persona, Dorothy, helped me feel a sense of belonging in the process.	3.2
The counsellor persona's guidance throughout the application made me feel like I was getting personalized recommendations.	3.2
Overall usability score	4.25

Table #1: Average system usability measure based on tests conducted with high fidelity prototypes

Key learnings from high fidelity usability testing

- On the whole, the system usability measure is 4.25/5
- All parents strongly agreed that the information presented in the application was relevant to their needs.
- The visual representation of the presence or absence of tiebreakers applicable based on address and grade-level chosen caused confusion among all users.
- The usability score for counselor varied from 1 to 5. This showed a high variability to the perception of counselors among parents. Some parents did not take to counselors while others really liked having them on.
- The ability to search schools using a map was a feature that was very liked among all parents interviewed. They additionally liked the ability to hover over schools and get more information about them
- The repetition of language pathways in preferences, after the special programs which listed language pathways as well, was confusing to 3 out of 5 parents
- When the school counter on the preferences page indicated that no schools matches their chosen preferences, parents thought the school list would be empty
- Parents found features such as ability to export list of schools and choosing start time as a preference as very valuable features
- 3 out of 5 parents wanted to know what format they would be able to export school lists in
- Parents wanted to be able to book schools and maintain a check-list of the app itself

Summative evaluation

The usability tests on the low fidelity prototype validated the need for such a tool and brought valuable insights that shaped the design of the high-fidelity prototype. The high-fidelity prototype brought in more refined input from users on how to further improve the experience and usability of the tool.

Design Process

Ideation

Brainstorming:

Our solution ideation began with brainstorming ideas that emerged from the synthesis of the semi-structured interviews. We performed an individual brainstorming session and tied the ideas back to specific insights from the generative research. We then convened to discuss the overlapping as well non-overlapping solution ideas. Based on the discussion, we decided to prototype the School Explorer tool, a solution that would help parents in the discover phase of the enrollment process as it was a pain point that was consistently mentioned across all parent personas and made the parents feel most stressed about.¹

Sketching solutions:

After the brainstorming session, we took the parallel prototyping approach for the School Explorer tool. This helped us to think of multiple ways the solution could be implemented and gave us a chance to see whether our understanding of the solution aligned or not. We felt that parallel prototyping was a really effective way of designing a solution where the team could have a shared understanding at each step of the process. It also helped us to iterate quickly over our solutions and come up with the final version of the sketches that would be prototyped in the low fidelity stage.²

¹ Brainstorming document link:

<https://docs.google.com/document/d/10ImqJjZCDMx2qm-1T6CiNLjnOGtVJjvMHdgKlslaUF8/edit?usp=sharing>

² Link to the sketches presentation:

https://docs.google.com/presentation/d/1vwVlz8X_tHIWFf9Hh0-9XPSq78sXtccmd_xsiB4yrKk/edit?usp=sharing

Low Fidelity Solution

The sketches from the ideation stage were converted to interactive low-fidelity mockups that would be tested with real users. We used Figma to collaborate on designing the low-fidelity prototype. The low-fidelity was designed for desktop version only, the rationale behind this being - the parents are familiar with SFUSD's website offerings and they would expect to see related solutions on the website only. However, we later found out in a usability testing that this was not true as the user expressed the need to see the mobile version of the prototype as well.

School Explorer

Timeline Myth Busters Frequently Asked Questions

≤ BACK

Basic Information Address Tiebreakers Preferences Schools

What is your child's name?
Felicia Liu

Which grade level are you applying for?

Early education (preK, TK) Elementary (K-5) Middle (6-8) High school (9-12)

NEXT

Image 7: A page from the low-fidelity prototype of the School Explorer.

We consciously chose not to add colors to the low-fidelity versions such that the parents do not get distracted by them. We specifically wanted to test whether the tool and the features would satisfy a real need for the families, and how would they expect the

features to work. For more information on the low fidelity prototype testing, please refer to the section on User Research -> Evaluative Research -> Low Fidelity Usability Testing.

Design Principles

Design principles are an essential deliverable - they act as the guiding star for developing a product. As our team was working with SFUSD for limited amount of time and the development of the product would be overseen by a different team, we wanted to lay out design principles so the vision of the product could be executed even in our absence.

The group used the following steps to create design principles:

1. Individual brainstorm - come up with principles they associate with this project
2. Every group member self-selecting the top 5 preferences from their list
3. Use Maslow's hierarchy of needs to affinity map design principles into three buckets - basic, psychological and self-fulfillment needs.³

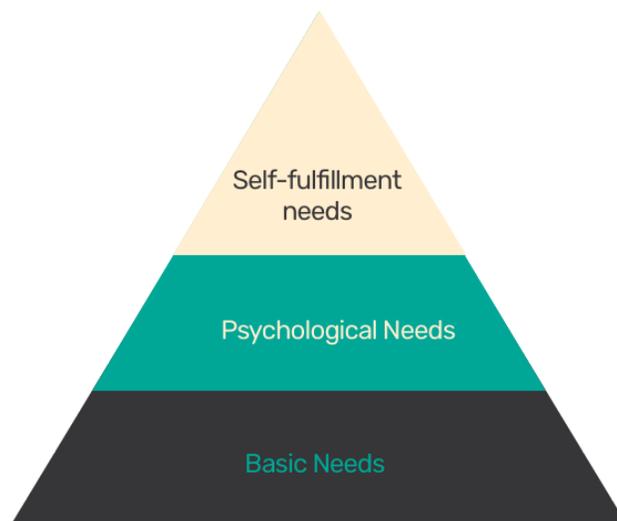


Image 8 : Maslow's Hierarchy of Needs

³“Lyft redesign - A UX case study” <https://uxdesign.cc/lyft-re-design-case-study-3df099c0ce45>

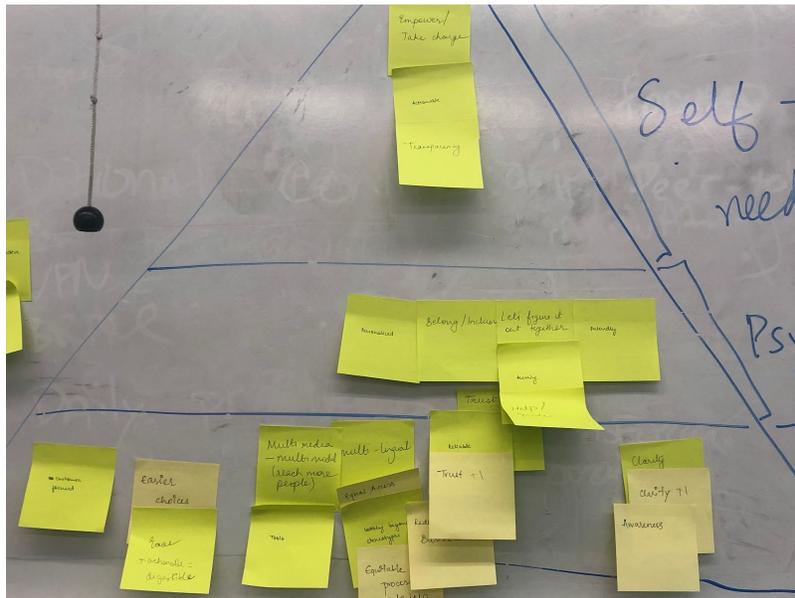
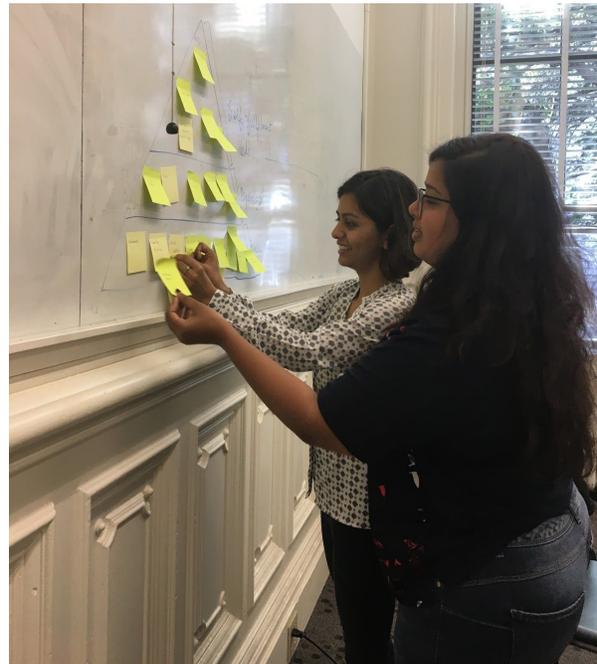
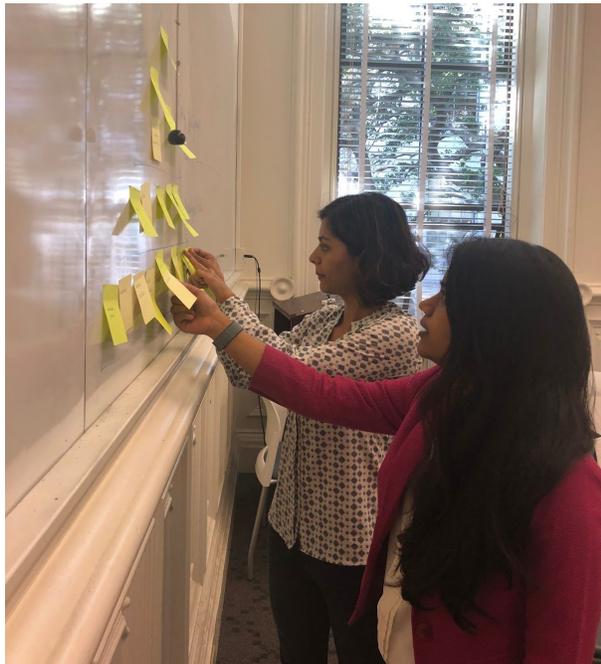


Image 9 : Affinity mapped diagram of design principles



Images 10 and 11: Working session

The affinity mapping led to the following 6 design principles:

1. Empower

Provide **actionable data** and maintain **transparency** in our processes, helping families take charge of the enrollment process.

2. Let's figure it out together

Offer guidance in a **friendly** and reassuring manner to **work with the user** through the process, providing information that is **digestible** and easy to consume.

3. Personalized

Understand that every child and family is **unique** and create personalized recommendations by taking their needs into consideration.

4. Belong

Make education **accessible** to every child in San Francisco regardless of their ethnicity, gender, socio-economic background or immigration status.

5. Trustworthy

With **consistent and reliable** performance, showcase SFUSD has your best interest at heart.

6. Clarity

Help families clearly **understand their own expectations** from schools and inform them about SFUSD's offerings and processes.

Visual Language

After creating design principles, we crafted the visual language of the product. The main considerations for the visual language were:

1. Typography
2. Grid and layout
3. Colors and tone

Typography

We chose Lato as the typeface for the product. Lato means means 'summer' in Polish and, as described by Smashing Magazine, 'the name perfectly fits this warm-feeling sans-serif. Lato feels very modest and unassuming when set at small sizes in body copy, but the italic variant is distinctive and easily recognizable.'⁴ This font fits the design principle 'Let's figure it out together' which focuses on a friendly and reassuring solution.

Lato

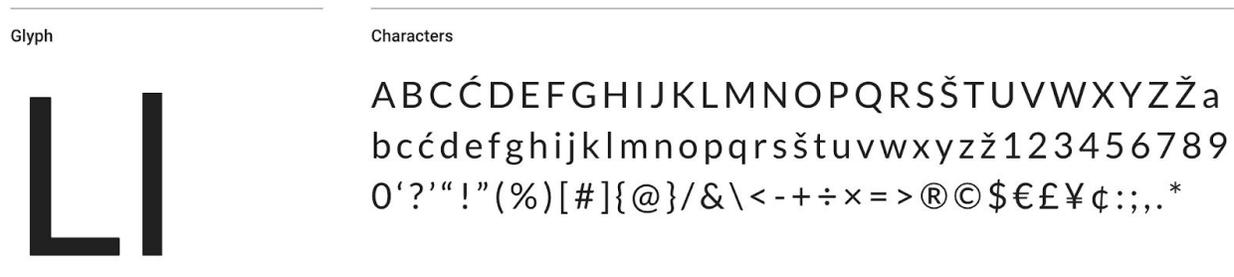


Image 12: Lato by designer Łukasz Dziedzic on Google Fonts

⁴ <https://www.smashingmagazine.com/2014/03/taking-a-second-look-at-free-fonts/>

Grid and Layout

'Aligning items' as a general principle can help designs and layouts look coherent.⁵ We used the bootstrap 12-column grid layout for responsive web design that is popular among many web developers. This grid system adds flexibility to any web design because the 12-columns divide evenly into 6-columns (halves), 4-columns (quarters) and 3-columns (thirds). This makes adapting to a variety of layouts much easier. It is well understood by the developers, making it easier to implement from design specifications.

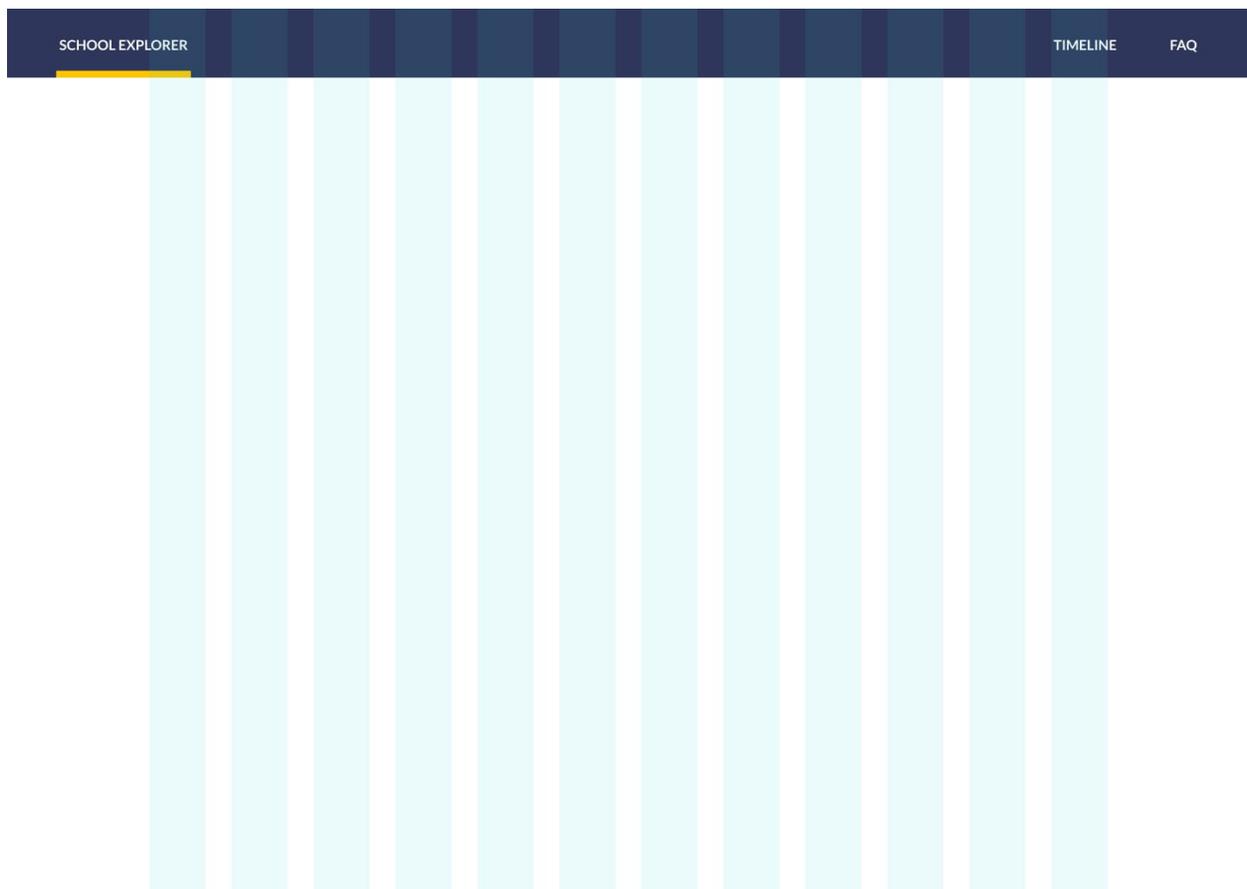


Image 13: Example of a 12-column bootstrap grid layout

⁵ "Is there any reason why Bootstrap follows 12 column grid layout system?"
<https://hashnode.com/post/is-there-any-reason-why-bootstrap-follows-12-column-grid-layout-system-ci5hzi2qe02uy4xwtbzd78kdu>

Colors and Tone

Parents expressed the need for a friendly, supportive figure throughout their journey that would ease their stress. We wanted to design an experience that is approachable yet formal for our users. Thus, we decided to choose friendly counselor personas such as Dorothy who would provide helpful tips and nudges to the users at different stages of the process. The tone of Dorothy's speech is warm and supportive and it is overlaid on top of a relaxing mint-colored speech bubble. For the formal aspect, we chose the color scheme and layout that is in line with SFUSD's beta website.

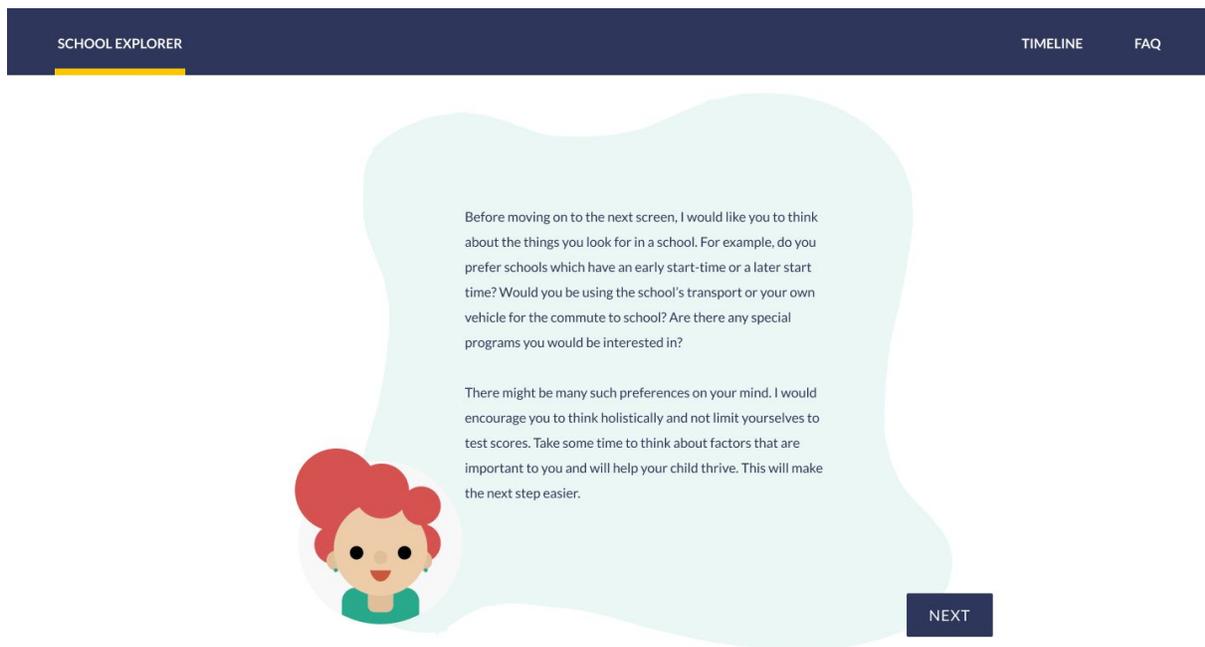


Image 14: Friendly and supportive elements on the page within a formal layout

High Fidelity Solution

UX Writing

The UX Writing was done to ensure the language on the platform conformed with the design principles that were identified. We wanted to have a warm and friendly tone that infused a feeling of empowerment and belonging for families who used the application. For this step, we sat together as team to run through the text present on every page. We drew out what aspects of design principles were relevant for the page and then wrote down text that embodied the principles. Here's a sample text of when the counselors asks the parents to look beyond test scores while looking at schools -

“There might be many such preferences on your mind. I would encourage you to think holistically and not limit yourselves to test scores. Take some time to think about factors that are important to you and will help your child thrive. This will make the next step easier.”

Design Decisions

The design decisions for the high fidelity solution came from the design principles, visual language, UX writing and discussion with the stakeholders. A major design decision was to include a 'Brainstorming Preferences' page before showing the actual list of preferences that would nudge the parents to think holistically about the schools based on their life situations rather than limiting themselves to metrics like test scores.



Image 14: Parents are encouraged to think holistically about their preferences.

We also used the insights from the low fidelity usability testing to modify the confusing aspects in the prototype. For example, the Mythbusters were moved from an individual page to a section in the FAQs as the parents strongly associated the question and answer style of the page with the FAQ page.

Solutions and Recommendations

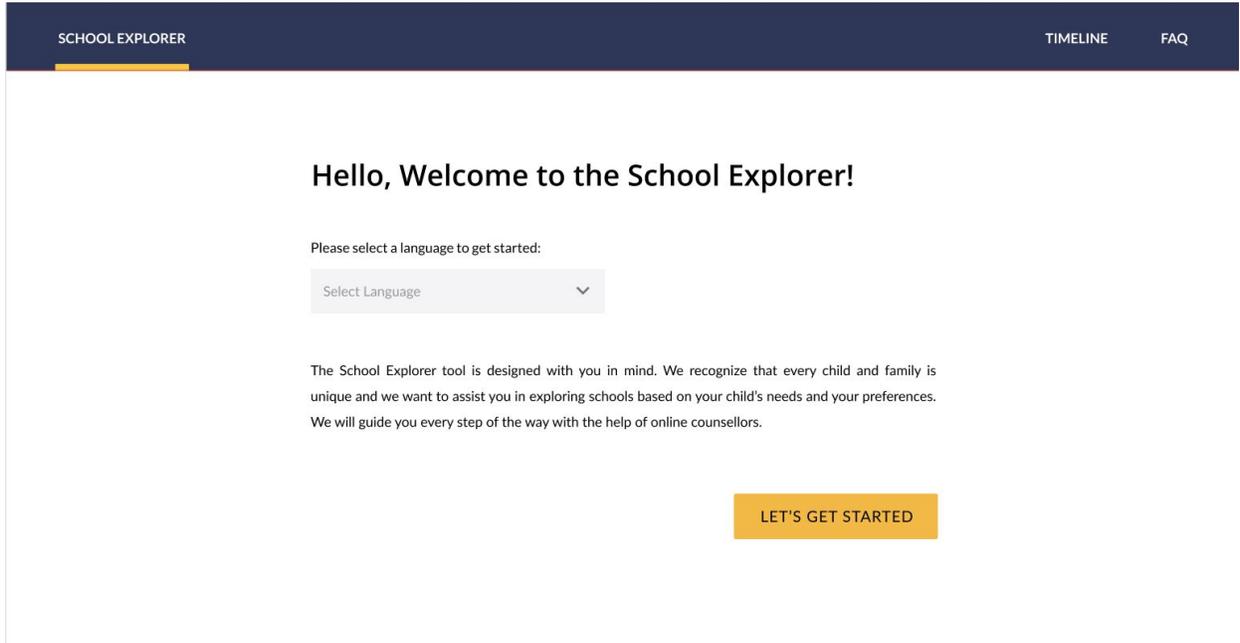
The project resulted in an online School Explorer tool and an offline workbook as two major body of work. In addition, a list of recommendations was provided to SFUSD.

Online Solution - School Explorer

Based on our user research and design process, our final recommendation is an online school explorer tool that helps parents progressively narrow down school options according to their needs.

Below are its key features (see full prototype in Appendix I):

- 1) A multilingual platform: Our user research (survey and low fidelity usability tests) indicated that having the option to use the tool in multiple languages will be very vital for it to be used among all parents.

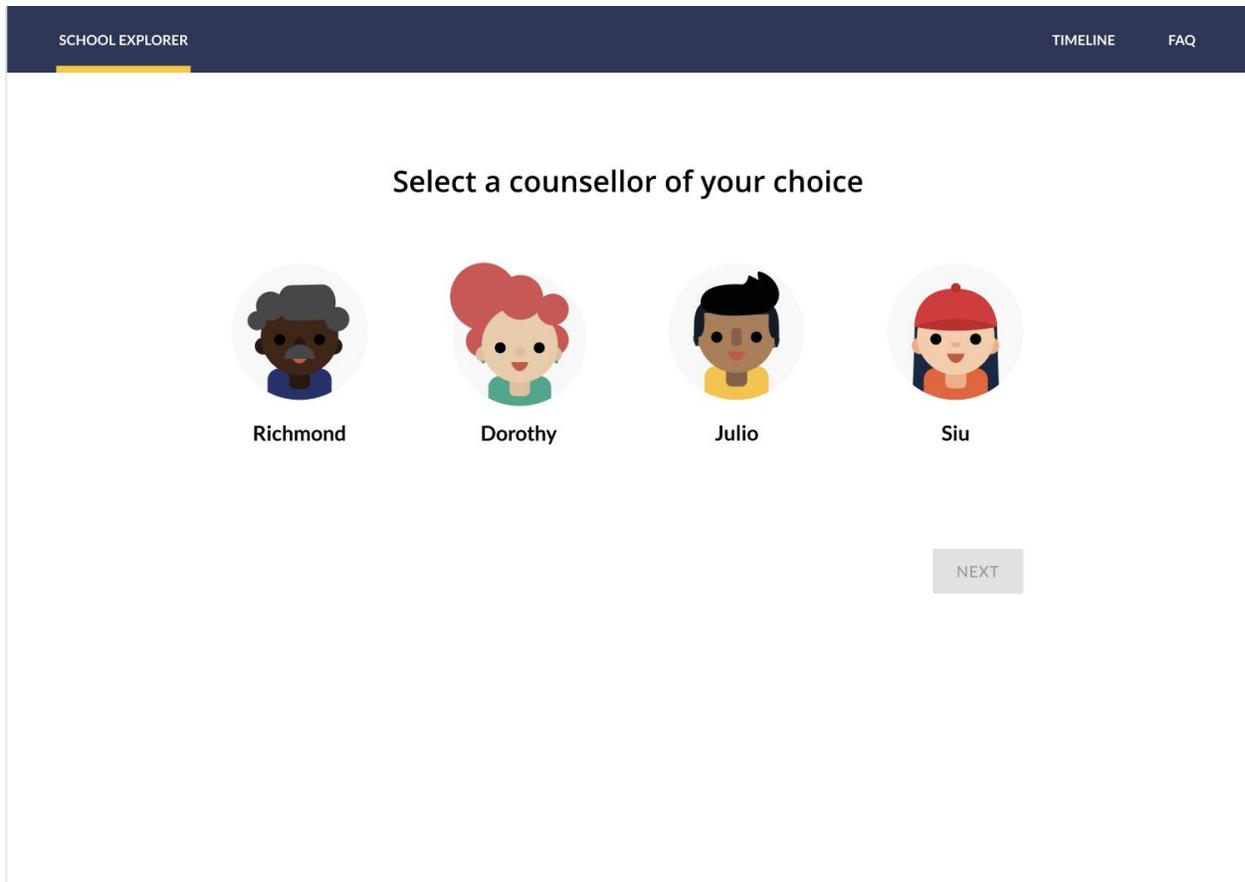


- 2) Our online solution includes an online counselor that embodies the characteristics and functions of an EPC counselor. This online counselor will provide tips and nudges to parents throughout the process for a personalized experience.

We will first collect some basic information to understand you better. This information will help us show relevant school options for your child.



3) Representing a diverse selection of counselors to choose from: Our solution provides parents with the option of choosing among four online counselors each representing various ethnic groups. Through this design, we hope to provide a sense of belonging to parents from different ethnic groups.



- 4) Encouraging parents to think of preferences that suit their family and child: The online counselor nudges parents to take time to think about preferences apart from test score that might be important for them as a family or for their child's needs. This helps parents identify what's important to them before they are presenting with multiple preferences to choose from.
-



Before moving on to the next screen, I would like you to think about the things you look for in a school. For example, do you prefer schools which have an early start-time or a later start time? Would you be using the school's transport or your own vehicle for the commute to school? Are there any special programs you would be interested in?

There might be many such preferences on your mind. I would encourage you to think holistically and not limit yourselves to test scores. Take some time to think about factors that are important to you and will help your child thrive. This will make the next step easier.

NEXT

5) Presenting a range of preferences for parents to pick and choose from: From our user interviews we gathered a wide range of preferences that parents have for schools and provided them as options they could choose from. This functionality helps parents narrow down school choices.

SCHOOL EXPLORER
TIMELINE FAQ

You may not see all the preferences you initially listed. To assess whether the school fits these preferences, we encourage you to learn more about them by attending school tours and visiting enrollment fairs. For instance, factors like diversity, environment, values, etc. could have different interpretations and can be better assessed by you when you visit the school.



✓ ✓ ✓ ○ ○
BASIC INFORMATION ADDRESS TIEBREAKERS PREFERENCES SCHOOLS

These amenities are available at all SFUSD schools:

- State standard Math and English courses
- School nurses and social workers
- Visual performing arts & music programs
- Healthy school breakfast & lunch
- Weekly comprehensive physical education
- Library & enhanced learning tech
- Social and emotional learning
- Out-of-school learning opportunities

Additional school preferences to help narrow your choices:

Address Search Radius

1250 Quintara St, San Francisco, CA Edit

1 mile ↑ ↓

9 out of 72
schools matching all preferences

After school program [Learn more](#)

Early Education Department Out-of-School-Time (TK-5) ⓘ

ExCEL programs ⓘ

School start times

Before 8 am 8:30 am - 8:59 am 9:30 am - 10:00 am

8:00 am - 8:29 am 9:00 am - 9:29 am After 10 am

Other preferences

School bus STEAM focus After school supper

Language pathways Uniform not required On-site before school program

NEXT

6) School List: Our solution provides parents with a list of schools along with information matching their preferences. Parents can use this list as a starting point to explore more schools by going to school tours and enrollment fairs. The information provided includes address, contact information, school hours, school tours, middle school feeder (in case of elementary schools), academic enrichment programs, language pathways and a list of matched and unmatched preferences.

Here's the list of schools based on your selected preferences!

Export List of Schools

[← Edit preferences](#)

List view Map view

YU, ALICE FONG SCHOOL (K-8)

1541 12th Avenue, San Francisco, CA, 94122 | 415-759-2674

WEBSITE www.afypa.org

SCHOOL TOURS Call school to schedule

DETAILS

School hours 9:30 am - 3:30 pm (K-5) 8:40 am - 3:30 pm (6-8); School bus from 94124, 94110, 94112 and 94115

ACADEMIC ENRICHMENT

Arts residency, Visual arts, Ceramics, Science in the garden

LANGUAGE PATHWAYS

Cantonese dual language immersion

Attendance Area

ExCEL After School

Start time: 8:00AM

Language Pathway

WESTPORTAL ELEMENTARY SCHOOL (K-5)

5 Lenox Way, San Francisco, CA, 94127 | 415-759-2846

WEBSITE www.westportalschool.com

SCHOOL TOURS Thursdays 9:00 am - 10 am from October to January

DETAILS

School hours 8:40 am - 2:40 pm; School bus from 94124, 94112 and 94117; Middle school feeder - Hoover

ACADEMIC ENRICHMENT

Computer lab, Computer carts, STEAM (Science, Technology, Engineering, Arts, Mathematics)

LANGUAGE PATHWAYS

Cantonese dual language immersion

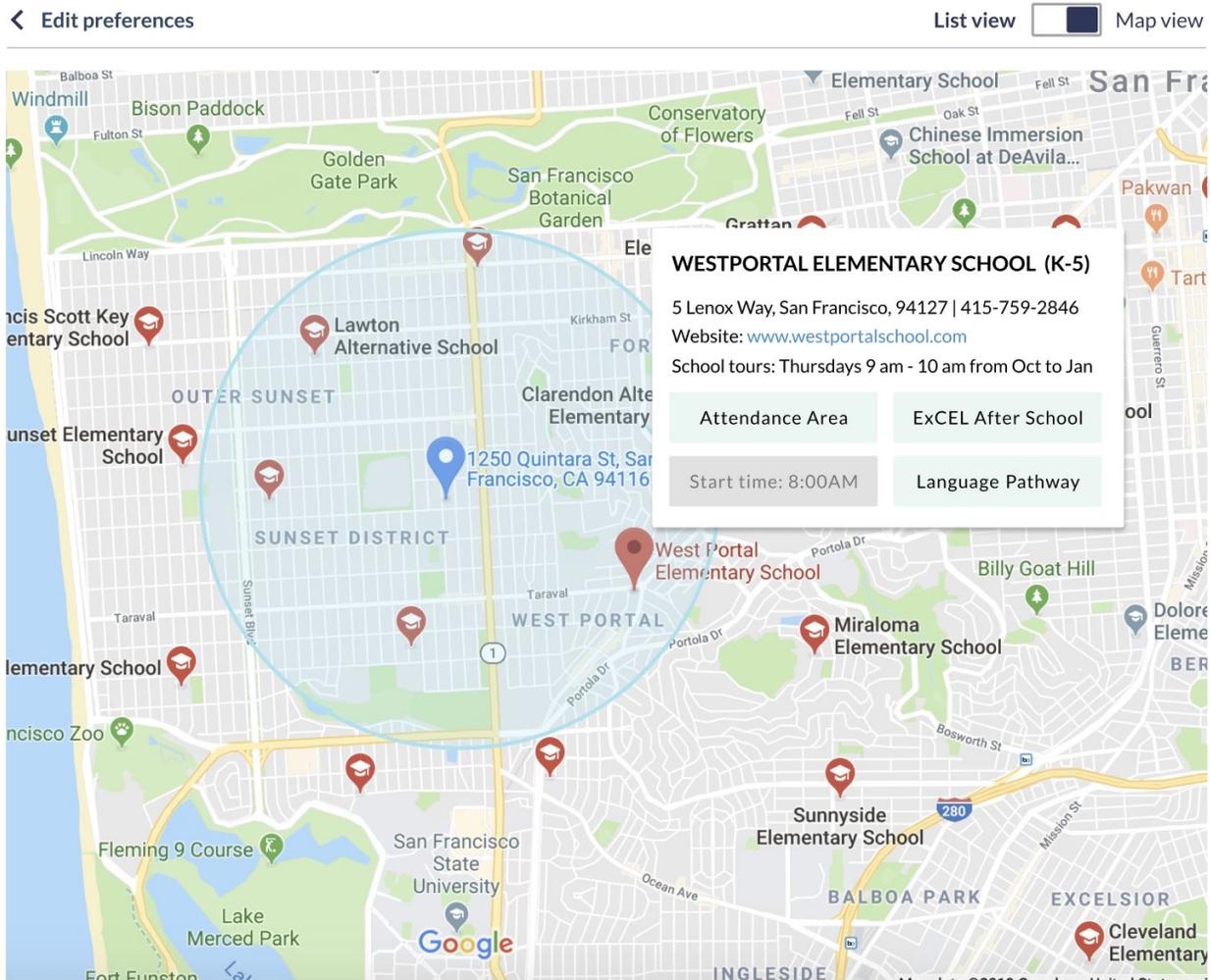
Attendance Area

ExCEL After School

Start time: 8:00AM

Language Pathway

7) Map-view of schools: The map view of schools helps parents explore schools around a particular address by choosing the radius. This help parents whose most important preference in location to identify schools near them. When parents hover over the school, they get information about the school along with the list of matched and unmatched preferences.



Offline Solution - Enrollment Guide Workbook

The offline solution was designed for populations with limited or no access to technology. From our research, we found that these families seek help/advice through offline channels such as EPC office, EPC counsellors, community organizations and/or other parents. The offline solution will be attached to the enrollment guide and is a 3-step solution to narrowing down schools.

The welcome page is designed with a friendly tone which focuses on finding the right fit for the child and the family. (screenshots to the solution can be found below)



The getting started page focuses on asking the parent to think about their daily schedules and needs, for example: personal vehicle, when they start their day, etc.

2

Step 1 of 3 - Getting Started

Take five minutes to think about the following questions and pen your thoughts in the space below each question:

1. Are you an early riser family or do you prefer to start your day later?
2. Do you have any considerations about the distance to school?
3. Do you have any other requirements? (e.g. uniform, after school meals, etc.)

If you have any questions throughout the process, feel free to call our EPC Counsellors at (415) 241-6085. You can also visit us in person at 555 Franklin Street, San Francisco, CA 94102.

The preferences screen asks directed questions about language pathways, special education programs, etc. These questions require the parent to refer to the specific enrollment guide and list down schools matching their preference.

Step 2 of 3 - Preferences

For this section, you will refer to the enrollment guide.

1. Are you interested in language pathways?

Refer to Page 24 and 25 of the enrollment guide to know more about language pathways and learn more about the options offered by SFUSD schools. If you see schools on Page 24 and 25 that offer language pathways you are interested in, write them down here.

2. Are you interested in Special Education programs?

Refer to Page 29 of the enrollment guide to know more about the Special Education programs and learn more about the options offered by SFUSD schools. If you see schools on Page 29 that offer special education programs you are interested in, write them down here.

3. Are you interested in using school transportation services?

Refer to page 43 of the enrollment guide to more about the transportation services offered by schools in various zip codes. If you see schools on Page 43 that offer transportation services, write them down here.

4. Are you interested in afterschool programs?

Refer to page 41 of the enrollment guide to more about the after school programs offered by schools.

If you have any questions throughout the process, feel free to call our EPC Counsellors at (415) 241-6085. You can also visit us in person at 555 Franklin Street, San Francisco, CA 94102.

The final step involves listing the schools in a tabular format. This list can be carried by parents to school tours or the EPC to get answers to additional questions.

Step 3 of 3 - List

The questions in Steps One and Two would have given you a good starting point for your exploration. You should have a some (or many) schools that match your interests and needs. Enter these school names in the table below. As an additional check, we encourage you to browse the following pages of the enrollment guide to look at a complete list of schools. Feel free to add schools to the list below.

Elementary schools: Enrollment guide, Page 50-79

Middle schools: Enrollment guide, Page 82-88

High schools: Enrollment guide, Page 92-103

Number	Name of School	Matched preferences	Comments/Questions
e.g.	Alvarado	Special education, School hours (7:50 am), language pathway - Spanish dual language immersion	What is the principal's vision? Does the school have active PTA? How is the school environment?

If you have any questions throughout the process, feel free to call our EPC Counsellors at (415) 241-6085. You can also visit us in person at 555 Franklin Street, San Francisco, CA 94102.

Additional Recommendations

Additional recommendations to SFUSD are compiled in a Feature List spreadsheet.⁶ We also added the analysis on the difficulty of implementation and the level of impact a solution would generate. The feature list document can serve as a roadmap for the SFUSD to continue implementing the recommendations even when the project the ended.

⁶ Feature list spreadsheet
https://docs.google.com/spreadsheets/d/1GSj2SuAoE-m4kA_H8CczpLUZwywwwxugobczBlkYyS2A/edit?usp=sharing

Impact

In the year 2017, SFUSD enrolled 54,063 students in its public schools. For the TK-5th grade level alone the number of enrollments were 22,725. These staggering numbers indicate the potential reach of impact of our solution and recommendations to SFUSD.

The massive numbers are also coupled with diversity factors. About 35% of the total enrolled students in 2017 were Chinese, followed by 27% Latino and 15% White students. The African American students were 7%, closely followed by 5% Filipino. Diversity in ethnicity, socio-economic status, comfort with technology calls for a solution that is beyond the 'one size, fits all' framework. We acknowledged this early on in our project and provided well-rounded solutions that can reach both online and offline families. The evidence of the impact of our work comes mainly from the responses of our usability study participants. A user mentioned that "If they have this tool - SFUSD impression would be positive. My impression currently is that the district is antiquated. The school district is at least trying." The users "liked the design of the website" and said that "it was sensitive to their needs as a parent". The solution received an overall usability score of 4.25 out of 5 on the system usability scale (described further in the synthesis section of High Fidelity Usability Testing). Our deliverables are already helping the staff members at the SFUSD in justifying their efforts with real user insights. There are still improvements to be made to the solution, however, these qualitative and quantitative assessments help us to evaluate the high impact of our work that may take months to get fully implemented and reach the actual users for whom it was designed.

Conclusion / Discussion

Based on the insights and the solutions generated, we believe that the project has the potential to be used or to serve as a platform for future work in different school districts of the United States. We also believe that project is an intellectual contribution to the design of user personas in a choice architecture problem.

Diversity in classrooms is considered crucial to a holistic learning environment for a child. Improving diversity within classrooms is a large and complex problem that a lot of school districts are likely to battle with in the future. Currently San Francisco district has employed an algorithmic solution which tries to solve the problem but it ended up exacerbating the problems faced by parents in the process. It is likely that in the coming years, diversity would be need to be addressed in many district schools which may choose to tackle the problems in similar ways as the SFUSD. We hope that the case study on SFUSD helps other schools districts to understand the implications of using an algorithm for student assignment and its effect on the parents perceptions on the school district. We also believe that through our deliverables like the user personas and the design principles, other school districts could find value in our solution recommendations while they are ideating to improve diversity within classrooms.

This project also contributes to the way we understand users in a choice architecture problem. The users in our case were given many school options to choose from and rank. Different personas had a different approach to the same problem - an information go-getter would exhaust all possible sources of information, have a very large and detailed

list of preferences and try to maximize the efficiency of their sources of information, whereas, an easygoing parent would start later and rely almost entirely on word of mouth and be less stressed about the process. We feel that these personas can be found in other unexpected contexts too. Let's take the example of apartment search, while searching for apartments there is also a similar type of user persona like the information go-getter who tries to gather all possible information and has an extensive and detailed set of preferences on what kind of house do they want. A few apartment search tools acknowledge these needs and preferences in their tools. For example, Apartmentlist.com asks its users about their preferences and life situations such as pets etc and provides multiple lists of apartments that cover different combinations of the user's preferences. Apartment Guide is a phone app that lets its user share an apartment with a friend for second opinion thereby acknowledging the word of mouth aspect in a choice problem. In conclusion, we believe that the project could intellectually contribute to other choice architecture problems through the identified user personas. However, it requires further research to determine the scope and extent to which it might be applicable in the choice architecture problems.

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- Interview protocol
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Appendices

Appendix A: Interview Protocol

Objective, Measures and Scope of the Study

- To identify the stages that are confusing for parents in the enrollment experience, and understand specific pain points. To identify the process stages that make sense to parents.
- To understand what resources do the parents use when they have questions about the process. E.g. Community / groups, websites

Timeline for a 1-hour interview (approximate durations)⁷

Approximate duration	Procedure
5-10 minutes	Introduction (welcome participant, complete forms, and give instructions)
3-5 minutes	Warm-up (easy, nonthreatening questions)
30-45 minutes	Body of the session (detailed questions)
	<i>This will vary depending on the number of questions</i>
5-10 minutes	Cooling-off (summarize interview; easy questions)
5 minutes	Wrap-up (thank participant and escort him or her out)

Introduction (5 - 10 mins)

Hi, My name is <> and I am a graduate student at UC Berkeley. Thank you for coming in today! We will spend the next hour talking about your experience in applying to the schools for your child through SFUSD. We have planned the interview to talk about different phases of the enrollment experience like looking for schools, filling your application, submitting your application to SFUSD and then the next steps to get enrolled in the school.

⁷ Baxter, Kathy, et al. Understanding Your Users: a Practical Guide to User Research Methods. Morgan Kaufmann, 2015.

Warm-up (3-5 mins)

How was your day? How long have you been in SF for? How many times have you been through the process? Which child was your most recent enrollment experience for?

Body of the Session - divided into four segments on Discovery, Applying and Enrollment, and Useful Resources (45 mins)

Discovery/Pre-phase 1 (15 mins)

- Tell me about your most recent enrollment experience.
- What steps did you take before the application began?
 - How long before did you start researching?
- From where did you get information regarding the system in SF?
 - Which source did you find most useful?
 - Can you describe what each source gave you in terms for information?
- How did you decide the schools you wanted to apply to for your child?
 - How did you actually map it down before putting it down in the your application? (You could give an example of spreadsheet if the participant doesn't get the question)
 - Was there any source of information that was valuable in helping you make this decision?
 - How could SFUSD help you make these list of choices? Or what did you wish SFUSD had told you about the making choices?
 - How better can this information be conveyed on the website or by counselors?
- Who researched the school options for your child? Did you take anyone's help?
(To know whether the interviewee themselves researched the options or they hired someone to do it for them. High chances of inducing social desirability bias: the interviewee might respond yes even when they didn't research the options on their own. Make them feel comfortable in sharing what they *actually* did.)

[Interviewee themselves researched the school option]

- How was your experience when you were researching your child's school options?
- How did you discover the school choices for you child?
- Describe a specific instance that stood out to you when you were researching your child's school options. <may be confusing>

[Interviewee did not research the school option]

- What factors stopped you from researching the school options on your own?
- What was confusing?
- When you were choosing the schools, what was important for you? How did you rank your schools?
 - Potential response back is usually: What you mean by criteria?

Applying/Round 1 (10 mins)

“Now let's move to the application process.”

- Think about your child's application process. Which aspects went well, and which did not go well.
- Describe where the application process made sense.
- Describe where the application process did not make sense? What were your next steps.
- What did you learn from the first experience that helped you go through it the next time?/ If there's one important thing you'd like to tell someone who is doing the enrollment process for the first time, what would it be?

Post Round 1 (10 mins)

“Those were really insightful. Now we will move ahead to discuss the enrollment stage.”

[Interviewee has been through the post-round 1 process]

- When you got the assignment letter, how did you feel? What did you do next?

- Describe the actions you took after receiving your child's assignment letter. What did you think? How did you feel? What did you do?
- Have you gone through the appeals process? (If yes) Describe the steps you took in the appeals process.

[Interviewee hasn't been through the post-round 1 at the time of the interview]

- If you want to apply to the school that your child was assigned to, how do you go about it/ how do you plan to go about it?
- If your child gets assigned to a school that wasn't in your list, how do you go about it/ how do you plan to go about it?

Enrollment (School Registration)

- Have you been through the enrollment process before?
- How was your experience registering your child to the school?

Useful Resources (10 mins)

I wish to understand more about the resources that you turn to to know more about the process. (Keep it open-ended. Should have some prompts: Non-profit / Communities / Schools / Other Parents)

- What resources do you use to get familiar with the process?
- Are you a part of any group that helps you with the enrollment process?
- Think about a group that is most helpful for you with regards to the application process. In what way does this group help you?
- Describe an instance where the community was **most** helpful for you in understanding the application process.
- What annoyed/frustrated you most about the whole enrollment process?

Go-to follow up questions

Can you tell me more about that?

I want to make sure I understand this. Can you explain more?

Closing questions

- What does an ideal enrollment experience look like for you?
- Before we end the interview, is there anything else you want to share about the process that we didn't talk about?
- Can we reach out to you after Round 1 assignment?

Appendix B: User Personas

Erica - The “Information Go-Getter”

Kathy - The “Active Parent”

Hans - The “Easygoing Parent”

Olivia - The “Expert Parent”

Unknown - We acknowledge that there is a fifth type of parent persona, but more research needs to be done to define the persona. One example of a parent that would fit this persona is an undocumented Latino immigrant mother who doesn’t know that it is her right to get her child educated in the SFUSD public schools.



USER PERSONA

Erica

“I’m highly data driven. When I apply, I want to be sure I will get in.”

ABOUT

Erica is a working parent who stays quite busy with her full-time job. She is highly data driven and is looking for efficient sources of information. She prefers to start research early and has a detailed and large number of preferences. She wants to cover all possible sources of information.

AGE	36
OCCUPATION	Lawyer
INCOME	More than \$200k
STATUS	Married
LOCATION	San Francisco, CA

NEEDS

- Looking for efficient sources of information
- Wishes to find the best school for her child across a large number of parameters
- Needs clarity on the process and to understand what is going on

FRUSTRATIONS

- The unorganized data sources make her feel stressed out
- Finds it difficult to get data on SFUSD website in a usable format
- Less time on hands to devote to school search

DIFFERENTIATORS



CURRENT FEELINGS

Stressed Concerned Busy

PERSONALITY





USER PERSONA

Hans

“For folks who have enough knowledge about the system - it's not too bad.”

ABOUT

Hans is an easygoing father. He is a stay-at-home parent and he feels much more in control of his child's education. He feels less stressed about the enrollment process and finds it easy to understand. He started researching for schools later than the other parents.

AGE	34
OCCUPATION	Stay-at-home
INCOME	\$100K - \$150k
STATUS	Married
LOCATION	San Francisco, CA

NEEDS

- Looking for a good school that match a few preferences
- Asking other parents about their thoughts and experiences. Relies heavily on word of mouth
- Just wants the overview of the process that applies to him

FRUSTRATIONS

- The wait time after application deadline made him feel stressed
- Solo effort on the research, didn't get much help

DIFFERENTIATORS



CURRENT FEELINGS

Relaxed Content Happy

PERSONALITY





USER PERSONA

Kathy

“It was frustrating and annoying. I didn’t know about other organizations.”

ABOUT

Kathy is an active parent who wants to find the best school for her child that also fits her preferences. She has strong preferences and depends on both first and second-hand sources to gather information about the schools. She is active in a few channels and engages with them regularly.

AGE	39
OCCUPATION	Public Health
INCOME	\$100K - \$200k
STATUS	Married
LOCATION	San Francisco, CA

NEEDS

- Looking for efficient sources of information
- Wishes to find the best school for her child across a large number of parameters
- Needs clarity on the process and to understand what is going on

FRUSTRATIONS

- There are a lot of data sources with different kinds of information
- Not one place to find all the relevant information
- Difficult to find the school matching the preferences

DIFFERENTIATORS



CURRENT FEELINGS

Stressed Frustrated Busy

PERSONALITY





USER PERSONA

Olivia

“There is a lot of false information. I try to clarify it for parents in my workshops.”

ABOUT

Olivia is an expert parent. She has been through the process and knows it well enough to guide other parents. She goes the extra mile to learn the system and explain it to other parents by conducting workshops. She has a slightly positive outlook towards the student enrollment process.

AGE	34
OCCUPATION	Non-profit Worker
INCOME	\$75K - \$200k
STATUS	Married
LOCATION	San Francisco, CA

NEEDS

- Looking for information about the current process to guide parents
- Finding the best school that matches her large number of preferences
- Needs to understand all the aspects of the enrollment process

FRUSTRATIONS

- The prevalence of myths and lack of trustworthy sources for parents
- Finds it difficult to get data on SFUSD website in a usable format
- Too frequent changes to the process

DIFFERENTIATORS



CURRENT FEELINGS

Motivated Inspired Secure

PERSONALITY



Appendix C: Interview Synthesis

Insights:

<https://docs.google.com/spreadsheets/d/1tZmxAdsFP2XZ1zyaO3p9IXIR1YzX4XYIO2IfirtQ780/edit?usp=sharing>

Appendix D: Journey Maps

JOURNEY MAP

Erica

White, high income, tech-savvy, private school is an option

- INCOME
- TECH SAVVY
- DATA DRIVEN

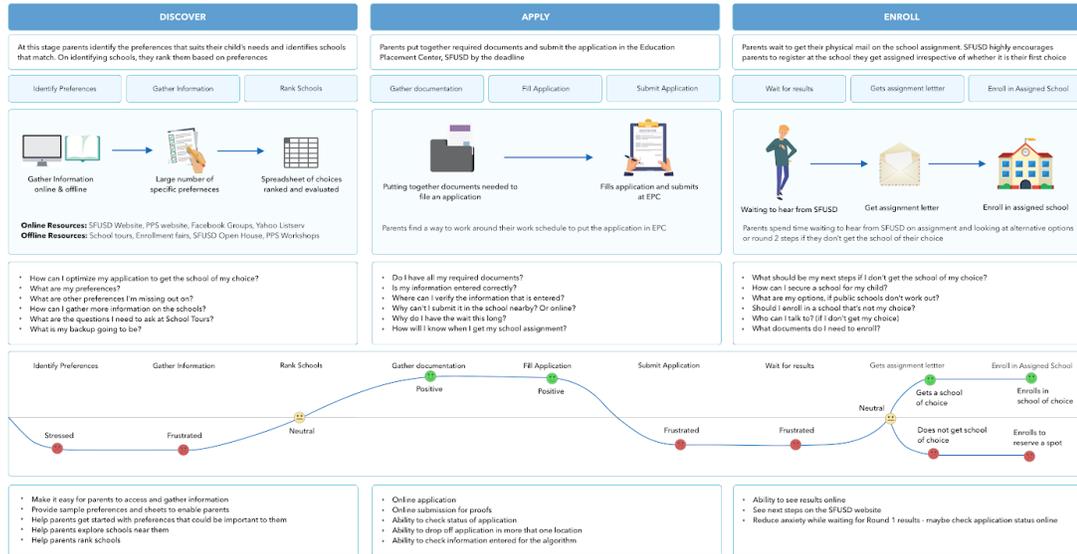


Image: Journey map for Erica

JOURNEY MAP

Kathy
 African American, medium income, feelings based, medium tech savvy

INCOME
TECH SAVVY
DATA DRIVEN

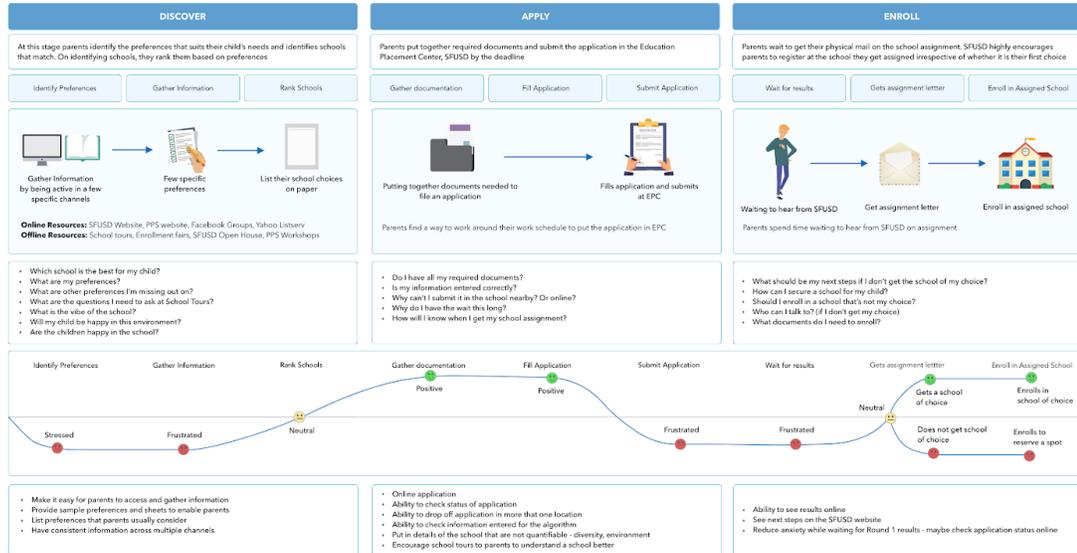


Image: Journey map for Kathy

JOURNEY MAP

Hans

Latino, stay at home dad, less stressed, wants a school nearby, relies on other parents

INCOME
TECH SAVVY
DATA DRIVEN

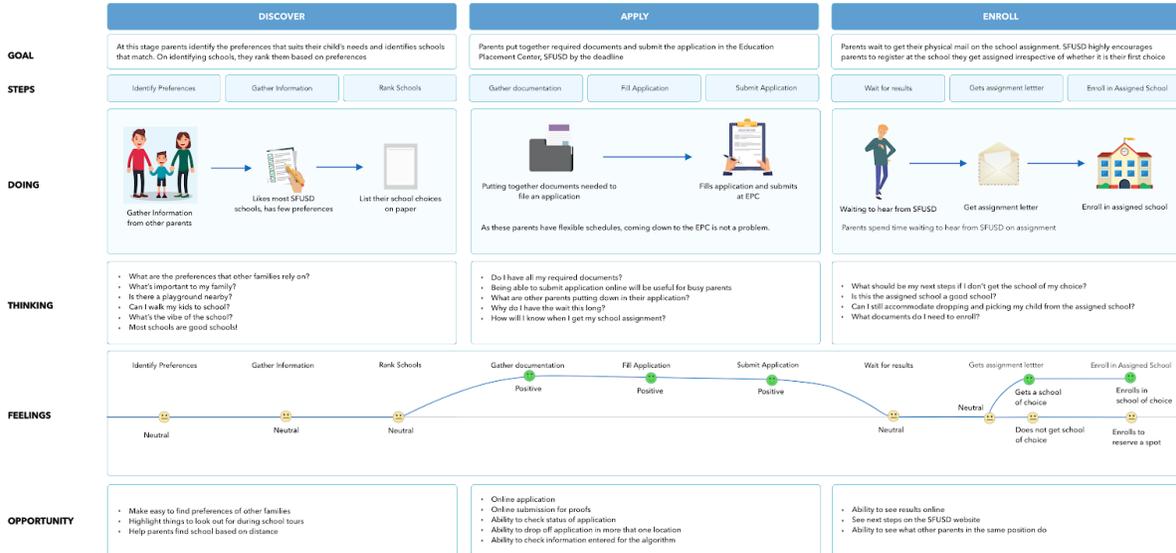


Image: Journey map for Hans

Appendix E: Sample Meeting Agenda

Date: April 5, 2019	Time: 2:00 PM
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Purpose	Weekly meeting to check in on research project status, needs, deliverables.
Participants	Varshine, Rajasi, Kaushiki, Rosina, Susan
Agenda	<ol style="list-style-type: none"> 1. Synthesis of all interviews 2. Persona creation in progress 3. Survey Analysis in progress 4. Low fidelity prototyping to begin today <p>Concerns</p> <ol style="list-style-type: none"> 1. No responses to Arabic, Tagalog and Vietnamese Surveys 2. No interviews with African-American population [Bay View, John Muir] - Susan to email principal [Malcolm X, MLK] 3. Rajasi to follow up to Rosina/Susan on Monday regarding African American interview participants and Vietnamese/Tagalog/Arabic Survey responses
Resources	
Notes	

Appendix F: Surveys

The links to the survey can be found in the links below:

[English Survey](#)

[Spanish Survey](#)

[Chinese Survey](#)

[Vietnamese Survey](#)

[Tagalog Survey](#)

[Arabic Survey](#)

Appendix G: Workplan

SFUSD Project Work plan								
Week	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Dates	4-10 Feb	11-17 Feb	18 - 24 Feb	25 Feb-Mar 3	4-10 March	11-17 March	18-24 March	25-31 March
Important SFUSD dates							Families receive letter March 18th. Registration (week 1) March 19th: Post round 1 workshop	Spring Break
Research/Design Method	User Research	Synthesis User Research	Synthesis User Research	Low Fidelity Prototyping				
							Lot of families visiting EPC	
							VR gone from 21 to 26 March	
					7 interviews lined up	Target 10 interviews	Target 10 interviews	

Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
25-31 March	1-7 April	8-14 April	15-21 April	22-28 April	29 April-5 May	6-12 May
Spring Break	Registration (week 2) Round 2 deadline April 5 Post round 1 workshop - April 3rd					
Low Fidelity Prototyping	Usability Testing User Research	High Fidelity Prototyping	Usability Testing Final Presentation/Documentation	Final Presentation/Documentation	Buffer	
	Lot of families visiting EPC					
21 to 26 March	Synthesis	Personas and Low Fidelity	Usability + Refining Low Fidelity	High fidelity	Usability + Refining High Fidelity	Final Presentation/Documentation
	Target 15 interviews?					

Appendix H: Usability Test Guides

Low fidelity:

<https://docs.google.com/document/d/1Xzl9-3Eu4h2pG0NA030spJN2LKImkSV9mNw4dw6FSdE/edit?usp=sharing>

Low fidelity feedback:

<https://docs.google.com/spreadsheets/d/1idvmTsN4UaoXr3X-mc66peessO2cpabnYc-m4oBozSM/edit?usp=sharing>

High fidelity:

<https://docs.google.com/document/d/1IUGjf6w2m0kWOa2PI-PdOQS5IGGEJcJPf812XNPLiDw/edit?usp=sharing>

High fidelity feedback:

<https://docs.google.com/spreadsheets/d/1uuz3DapPF9Zir1RvRz7jEXkYh9jMQuty3ev7w14jNMI/edit?usp=sharing>

Appendix I: Prototype

Low fidelity prototype:

<https://www.figma.com/proto/MxKIR3htGRonwDOKt16WTi79/Low-Fidelity?node-id=35%3A7&scaling=contain>

High fidelity Prototype:

<https://www.figma.com/proto/D5rm0cqY8ggs2r3fXVcAmQ3g/High-Fidelity?node-id=155%3A4382&scaling=min-zoom>