The Student Journey to Success Project
Applying Behavioral Science to Improve Onboarding Tools
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01 Executive Summary
Prospective students take diversified pathways when applying to the California community colleges (CCC). In the process, often they encounter a series of disjointed digital tools leading to repetitive information requests, creating confusion, or far worse: abandonment.

Annually, hundreds of thousands of prospective students abandon applications before submission, or submit an application but never matriculate. Aligning with the California Community College system’s guiding framework for reform, the Vision for Success: Strengthening the California Community Colleges to Meet California’s Needs, in 2018 the California Community Colleges Chancellor’s Office and the Foundation for California Community Colleges (Foundation) launched the Student Journey to Success project.

With generous funding from the College Futures Foundation and the Stupski Foundation, the project team focused on assessing and reducing prospective student drop-offs through improved tool design. Heeding the Vision for Success commitment to “Always design and decide with the student in mind,” the overarching goal is to create a more seamless, equitable student onboarding process and build system capacity for student-centered design.

The Student Journey to Success project began with a landscape analysis of existing student-facing tools, persona development, and student journey mapping. To provide a framework for improving student-facing tool design and usability, the Foundation partnered with ideas42, a renowned behavioral science and design consultancy.

ideas42 diagnosed behavioral bottlenecks within prospective student pathways, incorporating student and staff input from five community colleges across the state into its three-step Define, Diagnose, and Design process. ideas42 concentrated its efforts on the one platform all prospective students encounter: CCCApply, the system’s online application suite.

Grounded in research, ideas42 proposed five design principles to simplify the online application process for all students, and it collaborated with the CCCApply Redesign Workgroup to begin implementing recommended updates. The second phase of the ideas42 partnership focused on matriculation pathways, including development of a 10-point, California Community Colleges-specific design principles checklist and toolkit to guide post-application communication efforts.

The groundwork has been laid by the Student Journey to Success project to begin testing and applying these insights and principles across a multitude of diverse student-facing tools to improve student success. One of the key next steps is establishing a centralized location for the system to pursue this work. Launching at the Foundation in 2019 with additional funding from the College Futures Foundation, the Student Centered Design Lab will be the system’s epicenter of student-centered research, design, guidance, and evaluation services.
The Purpose of Our Work

With an unwavering focus on innovation and a steadfast determination to reform how it can best serve all students while eliminating achievement gaps, the Chancellor’s Office outlined six goals and seven commitments in the Vision for Success. Among the seven core commitments is to “Always design and decide with the student in mind,” which includes providing clear matriculation pathways.

Serving more than 2.1 million students across 115 colleges, the California Community Colleges comprise the nation’s largest and most diverse system of higher education. An individual’s journey to become one of the more than two million students is multi-faceted, but all must begin by submitting an application.

The Community Colleges increasingly use technology tools along each step of students’ educational journeys, and multiple pathways intentionally exist to guide even more prospective students to begin the application process. But disparate tools and pathways contribute to unintentional institutional barriers to student success before enrollment.

“We have to continue to put students at the center of the conversation. How we get there is always a matter of debate, but we should at least agree on that particular goal.”

Francisco Rodriguez
Chancellor,
Los Angeles Community College District
DROP-OFF IN REGISTRATIONS
Online application user flow (California users only)

Source: Google Analytics, Date Range: 01.01.2017-12.31.2017

* Each registered applicant may apply or re-apply to multiple California community colleges, resulting in higher application figures.
Siloed tool design, development, and refinement processes correlate with student confusion and drop-offs, either before an application is submitted or before matriculation. Recent data have shown hundreds of thousands of prospective student drop-offs within OpenCCC.

OpenCCC is a required step within the application process where prospective students are given an ID for registration. Because of the system’s diverse demographics and its shared equity goals, these barriers are especially acute.

To examine prospective student drop-offs related to registration, application, and matriculation tool design, the Chancellor’s Office, in collaboration with the Foundation, launched the Student Journey to Success project in 2018. The project sought to provide deeper understanding of and a framework for improving student-facing tool design and usability, setting more students up for a clear, consistent onboarding experience where uncertainty is mitigated.

The Student Journey to Success project was supported by generous funding from the College Futures Foundation and the Stupski Foundation.
Crafting Student Journey Personas and Maps

The Student Journey to Success project team began by conducting a landscape analysis of existing student-facing tools, seeking to better understand prospective students’ tool interactions at the beginning of their CCC journeys.

The team developed a set of seven student user personas, which are fictional characters sharing similar characteristics. Personas are commonly used in the development of communication campaigns and technology tool design to represent target audiences.

Incorporating qualitative system data into their design, each persona is representative of CCC student clusters across different racial, ethnic, age, socioeconomic, and other demographic categories that also contain similar behavioral and situational characteristics. These seven personas include a mixture of recent high school graduates, returning students, veterans, immigrants, and adult learners intending to pursue diverse academic goals.

All personas focused on unaddressed onboarding challenges that many CCC students encounter and include both a “current” and “desired” experience. The latter illustrates how flexible technology and more human-focused interactions could provide prospective students with a seamless onboarding experience.

Next, journey maps were created to identify strategies and tactics for improving prospective students’ tool interactions. These visualizations illustrated the multitude of pathways prospective students take to arrive at CCCApply, the system’s statewide online application suite facilitated by the CCC Technology Center.
The team discovered that discordant tool designs, confusing messaging, and the sheer volume of tools related to the registration, application, and matriculation processes overcomplicate onboarding. Because many of the tools are not integrated with one another, students often begin the application process within one tool, OpenCCC, but then shift to another, CCCApply, losing their work along the way.

As the student personas and journey maps were being developed, concurrent policy efforts to streamline the student journey post-enrollment were also underway.

Previously, the vast majority of CCC students were placed in remedial math and English courses before they were permitted to enroll in credit-earning, transfer-level courses. The burden of additional coursework had an inverse effect: It increased both the time and money students spent on their education while often dramatically reducing students’ likelihood of credential completion.

In fall 2019, the system will implement Assembly Bill 705, equity-minded legislation requiring colleges maximize the likelihood that a student will complete a transfer-level math or English course in one year. Multiple measures will now be used to more thoroughly assess student readiness, including past performance in high school. As a more reliable predictor of students’ collegiate performance, this assessment shift is intended to keep more students on the pathway to reaching their academic goals.

To continue the ground-breaking student success work and increase understanding and the CCC system’s capacity for designing student-facing tools with student users in mind, the Foundation partnered with behavioral science experts ideas42.
Partnering with Behavioral Science Experts

Founded at Harvard in 2008, ideas42 is a nonprofit consultancy that applies behavioral science research to the design of low cost interventions within higher education and other sectors.

Having worked with clients across the globe, the consultancy’s expertise was sought specifically to develop a framework for:

- Making systemwide student facing technologies and interventions feel cohesive, connected, relevant, and helpful to students
- Streamlining the collection of student data to reduce fatigue, repetition, intimidation, and confusion
- Improving handoffs between the onboarding tools developed by the Chancellor’s Office and the tools, processes, and people who guide the student experience at individual colleges
- Reinforcing the student experience as the driver for future technology development and other interventions.

ideas42 analyzed prospective and new student user experiences, starting with the creation of a generalized student journey map. Through its rigorous three-step Define, Diagnose, and Design process, the consultancy diagnosed behavioral bottlenecks within prospective student pathways, specifically OpenCCC and CCCApply.
**PROBLEM DEFINITION PROCESS**
Guidelines for a well-defined problem

1. **PSYCHOLOGY**
   - State the problems without embedded assumptions

2. **CONTEXT**
   - Focus on a specific behavior rather than a general issue

3. **EVIDENCE**
   - Define at the right level—not too narrowly or too broadly
DEFINE

Based on its research, the project team defined the problem accordingly:

“Prospective students in California intend to apply to community college, but don’t end up matriculating. We want students to successfully apply and matriculate.”

Through its problem definition process, which included an assessment of the 112-question CCCApply application, ideas42 determined that streamlining the statewide application would be the best place to focus initial reform efforts.

The first major step toward building institutional capacity in student centered design took place on May 15, 2018 when ideas42 led an applied behavioral science Masterclass at the Foundation. More than 30 attendees were introduced to the basics of behavioral science and how they could be applied to student-facing tool design.
 DIAGNOSE

Through iterative behavioral mapping exercises, application of behavioral science data, and consultation with multiple higher education experts, ideas42 refined its hypotheses about design factors contributing to the application to matriculation gap.

Drop-off figures indicate that there are likely barriers to a welcoming, comfortable onboarding process connecting prospective students to their chosen college, next steps, future campus peer groups, and goals. To test these hypotheses and learn more about the breadth of students’ experiences, ideas42 conducted interviews with more than three dozen students at five California community colleges.

SITE VISITS AND INTERVIEWS
ideas42 sought student and staff input to inform its diagnosis process

5 SITE VISITS

- Sierra College
- Cosumnes River College
- Fresno City College
- Pasadena City College
- Los Angeles Mission College

37 STUDENTS INTERVIEWED

21 STAFF MEMBERS CONSULTED
Support staff are vital to many students’ application and matriculation experiences. Accordingly, ideas42 gathered feedback from more than 20 staff members in Outreach, Admissions, Technology, Student Success, Counseling, College Relations, and other campus divisions. The combination of all assessment and research efforts led to ideas42’s determination that CCCApply’s current design is throttled by five key barriers to student success:

1. Hassles
2. Ambiguity
3. Identity
4. Lack of Scaffolding
5. Uneven Channels

ideas42 provided CCCApply redesign recommendations to the project team to overcome these barriers.
“We want the students to get contacted really quickly. ‘Hey, your effort here mattered and we would like to have you at our school. You are welcome here . . . Here’s how to keep going.’”

Dr. Chris Hulleman
Associate Professor, University of Virginia Curry School of Education and Human Development

DESIGN

Based on its research, the consultancy recommended several changes to the CCCApply Redesign Workgroup, overseen by the Chancellor’s Office, to make the application suite more user friendly. Recommendations included adding, removing, and reorganizing content to ensure that questions are presented in a clear, logical order and require as few clicks as possible.

Aligning with its mission to “use the power of behavioral science to design scalable solutions to some of society’s most difficult problems,” ideas42 recommended five design principles to guide CCCApply’s more student-friendly redesign:

1. Reduce Hassles
2. Eliminate Ambiguity
3. Affirm Identity
4. Build Scaffolding
5. Open Channels

ideas42’s proposed CCCApply simplification incorporated user feedback about early prototypes from students and staff across five campuses. It then contributed a list of “quick fixes” to the CCCApply Redesign Workgroup for release 6.2.0. Recommended fixes included improved skip logic throughout, removing the Introduction and Review pages, and renaming the personal information page to demographic information while modifying question language to affirm all identities.

Through research, ideas42 learned that academic goal selection was a significant hurdle for many students; for some, it is an insurmountable one leading to application abandonment. It designed an interactive questionnaire for possible CCCApply inclusion to guide students through major selection, directing them to in-person help when needed.
FOUR BIG CONCEPTS
ideas42 prioritizes these four actions to help CCCApply fit into the Student Journey

1. Move majors and goals to a separate module
2. Use a chatbot to provide 24/7 support
3. Prioritize automation
4. Follow up quickly and actionably
## DESIGN PRINCIPLES TO OVERCOME

### Five key barriers to student success

<table>
<thead>
<tr>
<th>Principle</th>
<th>Description</th>
<th>Evidence</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REDUCE HASSLES</strong></td>
<td>Seemingly small impediments to completing the application can have outsized consequences for students’ abilities to finish the process fully, quickly, and accurately.</td>
<td>Hassles can trigger procrastination and prospective memory failure.</td>
<td>Data show that students abandon at hassle-filled points. Administrators and students cite many examples of hassles. The application has many steps and requires a lot of information that isn’t always on hand.</td>
</tr>
<tr>
<td><strong>ELIMINATE AMBIGUITY</strong></td>
<td>Students are often not sure of why a question is being asked, how the information is being used, and whether there is a correct answer. Because of this, they delay submission or fail to submit entirely.</td>
<td>People generally prefer situations with less ambiguity, even if there is some risk involved in the outcome.</td>
<td>Students and staff mention being confused by jargon and unsure of how answers to questions might be used. The application looks and feels “official,” which reinforces the need to get things right.</td>
</tr>
<tr>
<td><strong>AFFIRM IDENTITY</strong></td>
<td>Students bring many identities with them when they apply to college. Some of these identities are sensitive, and the application asks about them in ways that can appear invasive or evaluative.</td>
<td>Priming people to consider particular identities can alter their performance on tasks.</td>
<td>The personal information page has consistently high drop-off. Students mention confusion around this page. Many students fill out this page in front of friends or family, which can add a layer of sensitivity.</td>
</tr>
<tr>
<td><strong>CREATE SCAFFOLDING</strong></td>
<td>Students are expected to make important decisions about their college and future plans without full guidance around how to best make those choices.</td>
<td>A lack of scaffolding can lead to overconfidence and overreliance on only the most available options.</td>
<td>Students report being unsure of which goal or major is best for them. As a result, staff report unintended consequences from choosing incorrectly. Application forces students to make upfront choices without information about possible repercussions.</td>
</tr>
<tr>
<td><strong>OPEN CHANNELS</strong></td>
<td>Campus outreach staff and first-year programs are strong channels to completion throughout the application and matriculation processes. However, not all students have the same level of access to these channels.</td>
<td>Channel factors help more students complete the application and matriculation steps.</td>
<td>Students with access to college staff while still in high school or on campus reported fewer barriers to application completion and matriculation. The opposite was often true for other students. The current version of CCCApply inhibits some students from reaching channels in time for the available help to matter.</td>
</tr>
</tbody>
</table>
DESIGN (continued)

ideas42 made several other suggestions to reduce hassles and eliminate ambiguity for prospective students within the application suite. Suggestions included minimizing the number of questions and associated legal jargon related to applicants’ social security numbers, in addition to other ways CCCApply could fit into a more cohesive student journey.

Additionally, ideas42 developed a set of CCCApply wireframes intended to be rolled out iteratively. The wireframes serve as a starting point for recommended design changes, including:

- Suggested text for questions, headers, and help bubbles
- Suggested ordering and layouts for key questions and pages
- Callouts in green bubbles describing how design principles were applied.

Next, high fidelity wireframes need to be created for all CCCApply pages, for which additional resources are needed.

Beyond this project, the consultancy’s in-depth analysis and design principles checklist, which includes related questions for consideration and implementation advice, are a strong framework for guiding the design and redesign of other student-facing tools.
Constructing a Seamless Student Journey

 CCCApply, the “online gateway to the California Community Colleges,” is just one part of the student onboarding process. Course enrollment takes place several months after an application is submitted, requiring even more deadline-driven choices, forms, and events for prospective students.

Research has shown that a student’s collegiate success is highly dependent on the perception of their fitting into a college campus. Campus integration begins long before students’ first day of classes. In its second phase of work, ideas42 focused on matriculation pathways and “college melt.”

Defined as the tendency of students with strong college intentions not to matriculate, the consultancy compiled a literature review about college melt, pairing it with student and staff input gathered through primary research. Citing national estimates published in Social Science Quarterly whereby up to 40% of prospective community college students do not enroll anywhere, ideas42 discussed why melt happens, potential interventions, and direct system implications.

ideas42 distilled its analysis and created a 10-point, CCC-specific design principles checklist, which it presented in Getting Students to Day One: A Communications Toolkit for the California Community Colleges. Included in the toolkit are email and text message mockups illustrating how the evidence-based design principles can help each community college develop more effective prospective student communication to boost matriculation rates.
# DESIGN PRINCIPLES CHECKLIST

Recommendations for improving communication with students post-application

## GET ATTENTION

<table>
<thead>
<tr>
<th>1</th>
<th>Align Medium with Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will your message break through, so that students see it?</td>
<td></td>
</tr>
</tbody>
</table>

- Make sure the right message comes in the right format

## TAILOR THE MESSAGE

<table>
<thead>
<tr>
<th>4</th>
<th>Use the Right Sender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is your message easy to understand and credible?</td>
<td></td>
</tr>
</tbody>
</table>

- Have messages come from someone credible

## MAKE ACTION EASY

<table>
<thead>
<tr>
<th>8</th>
<th>Emphasize Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your message prioritize what students have to do?</td>
<td></td>
</tr>
</tbody>
</table>

- Highlight when things need to get done

<table>
<thead>
<tr>
<th>9</th>
<th>Provide Concrete Steps</th>
</tr>
</thead>
</table>

- Link to the next step whenever possible

## MAKE IT PERSONAL

<table>
<thead>
<tr>
<th>5</th>
<th>Prioritize Word Choice</th>
<th>6</th>
<th>Make it Personal</th>
</tr>
</thead>
</table>

- Use plain language whenever possible
- Make individualized help available

## OPTIMIZE TIMING

<table>
<thead>
<tr>
<th>3</th>
<th>Optimize Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remind students without pestering them</td>
<td></td>
</tr>
</tbody>
</table>

## USE THE RIGHT TONE AND VOICE

<table>
<thead>
<tr>
<th>7</th>
<th>Use the Right Tone and Voice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound professional but friendly</td>
<td></td>
</tr>
</tbody>
</table>

## USE A CHECKLIST

<table>
<thead>
<tr>
<th>10</th>
<th>Use a Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make it very clear what needs to happen next</td>
<td></td>
</tr>
</tbody>
</table>
CONSTRUCTING A SEAMLESS STUDENT JOURNEY (continued)

ideas42 recommends that each college tailor its post-application messaging to its community’s needs and conduct both student user testing and A/B testing to optimize messaging efficacy. A/B testing consists of creating two email campaign variations and splitting your audience into two groups. Each group receives a different email variation, and performance metrics are compared.

In addition to CCCApply, the checklist will be applied to three other student-facing onboarding tools that were part of the initial landscape analysis: OpenCCC, MyPath, and Here to Career.

OpenCCC generates a registration ID necessary for prospective students applying to the CCCs. Designed to reduce attrition, MyPath is an onboarding tool that provides students with an individually tailored pathway for career and program exploration, goal-setting, and related messaging. Here to Career is a mobile application providing information about academic programs, career options, wage data, and real career stories from parents and alumni. Available in both English and Spanish, the app is designed to reach students as early as middle school.

Each tool’s connection to the Guided Pathways framework has been mapped to define an ideal state for students’ intention to application journeys. The next step in the process is to secure funding for additional research and begin scoping the onboarding tools’ redesigns.

Creating an ideal state for students also requires an overall reduction in the number of application touchpoints and multi-tool integration. Shifting to a single sign-on model where prospective students’ information is saved and shared across OpenCCC, CCCApply, MyPath, and Here to Career would streamline students’ efforts. By customizing prospective students’ next steps through improved data sharing across existing tools and employing a unified data lake, students will no longer need to enter the same personal data repeatedly.
**LANDSCAPE ANALYSIS**

Tool integration within the Guided Pathways framework

<table>
<thead>
<tr>
<th>CLARIFY THE PATH</th>
<th>GET ON PATH</th>
<th>STAY ON PATH</th>
<th>ENSURE LEARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>OpenCCC</td>
<td>CCCApply</td>
<td>Here to Career</td>
<td>MyPath</td>
</tr>
</tbody>
</table>

FOUR PILLARS OF GUIDED PATHWAYS
Launching the Student Centered Design Lab

The Student Journey to Success project has laid the groundwork for systemwide testing and application of these principles across a multitude of student-facing tools. Each student-facing tool should be assessed to reduce barriers to student success.

Launching in 2019 with seed funding from the College Futures Foundation, the collaborative Student Centered Design Lab will embark upon this vital system work.

Housed at the Foundation, the Student Centered Design Lab services will help facilitate a more seamless educational journey for all students. Usability testing, focus groups, and additional research methodologies will allow for diverse student input to be gathered for the system’s application. From tool inception to deployment, student research will use an adaptable approach, ensuring responsiveness to policy, financial aid reform, and other economic changes.

Longer term, the Student Centered Design Lab will develop a system-recognized student user design certification process for validating evidence-based design principles. The certification process will recognize projects that incorporate student experience into their design.

For the first time, student-centered design best practices will be centralized and widely accessible to the Community Colleges. The CCC system will have unparalleled access to student perspectives, knowledge, and expertise for incorporation into tool design and refinement.
Fulfilling Our Commitment

The engine of Californians’ social and economic mobility, California community colleges proudly serve a wide range of student interests, including workforce training and career education, entrypoint into bachelor’s degree programs, adult education, English as a second language (ESL), and many other types of lifelong educational enrichment. To help all students better define and reach their educational goals, their pathways into the Community Colleges - and all touchpoints along it - must be as integrated as possible.

Providing a seamless student experience is a far greater undertaking than the application and matriculation processes alone. Staying true to the Vision for Success commitment to “Always design and decide with the student in mind” requires a thorough, and repeated, 360-degree analysis of all student-facing tools. It also requires a paradigm shift of including student feedback throughout the design process, and well defined methods and capacity to do so.

With the Student Centered Design Lab, the system can move towards deeper understanding of the student user experience and regular incorporation of diverse student input to strengthen tool design.
Acknowledgments

The Student Journey to Success project was developed in partnership with:

California Community Colleges Chancellor’s Office
California Community Colleges Technology Center
CCCApply Redesign Workgroup
Cosumnes River College
Fresno City College
Los Angeles Mission College
Pasadena City College
Sierra College
ideas42

With generous support from:

College Futures Foundation
Stupski Foundation
About the Foundation for California Community Colleges

The Foundation for California Community Colleges is the statewide nonprofit supporting the California Community College system, the largest system of higher education in the nation. Incorporated in 1998, the Foundation serves as the official auxiliary to the California Community Colleges' Board of Governors and the systemwide Chancellor's Office.

The Foundation is the trusted partner of the California Community Colleges—facilitating collaboration, accelerating innovation, and increasing systemwide resources.

www.foundationccc.org

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