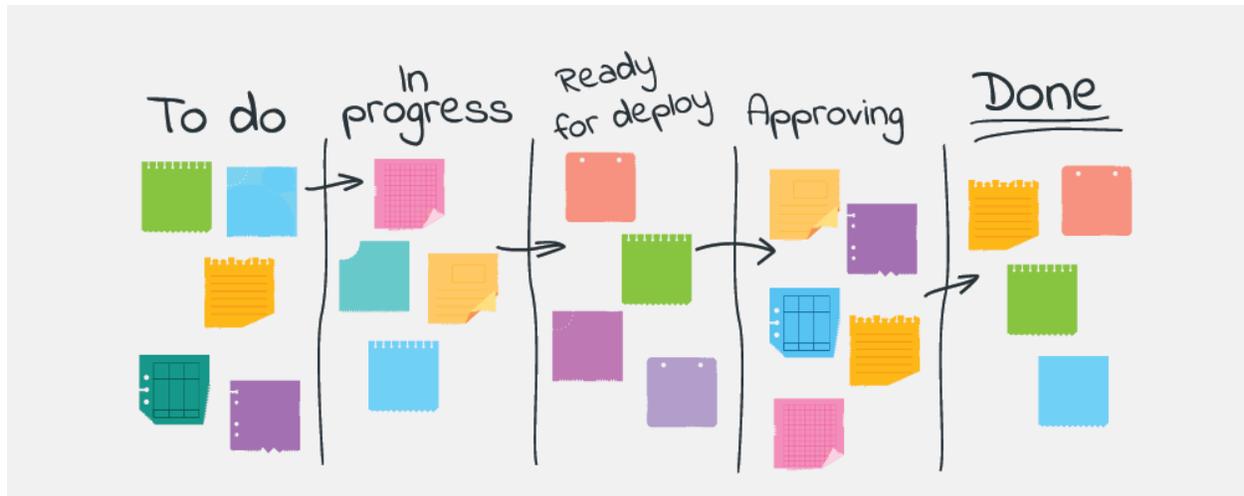


Artzy™

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Measure Progress

Originally a small design community and art-design workshops host, with created the Artzy app and with a vision towards apply fresh virtual arts and e-learning trends, best practices and principles for creating community-based learning. In getting acquainted with all the ins and outs of e-learning platforms, we aimed towards applying specific and measurable criteria to creative arts subject matter, unique and engaging course experiences, and also with flexibility for varied learning styles.

Establishing Key Objectives:

Summary of analytics brainstorming session

How might we. . .?

Appeal to learners without looking like a sales platform?

Stand out competitively with other remote learning platforms and product offerings

Add assistive technologies for those with disabilities

Provide a use case for implementing a virtual assistant feature

Be the go-to link for creative courses, all mediums and skill levels

Track our marketing analytics and digital media campaigns

Leverage incentives & free offers. Will the "first course free" offer or "30 day free trial" increase conversion rate?

Gauge effectiveness of our digital marketing plan, e.g., unpaid, social media influencers, demos, free workshops

Gauge effectiveness of offering fresh new courses every week/month/90 days

Collaborative or team-based subscriptions?

Host design and creativity conferences?

Explore the effectiveness of offering fresh new courses every week/month/90 days?

Implement certain e-learning trends, such as curriculum-as-community?

Offer premium subscription, loyalty or quantity discounts?

Feature: hoc live demos and workshops

Feature: Art and design competitions

Feature: Host teaser workshops for instructors and authors

**high priority*

Results of Brainstorm session for eLearning Hypotheses - Areas of Focus

Response, technology and settings accommodations

Assistive Technologies: Screen readers magnifiers, closed captioning, transcription downloads, voiceover, voice activation or virtual assistance search, vision braille, voice recognition

Screen recorder, voiceover, so that learners can listen while working, multitask

Requirement and guidance for YouTube closed captioning plug-in and transcription features

Creator studio video manager

Nuance - creates transcripts from mvp3 or mvp4 files

Multiple formats

Flexibility for absentees

Course reviews, environment for discussions, diff learning styles, typically dominated by extroverts, and back channels that give all learners a voice

High priority metrics

Digital marketing analytics, such as surveys, focus groups, page workshops and page iterations, ID'ing opportunities, pain points within the customer journey,

OKRs: Objectives and Key Results.” It is a collaborative goal-setting tool used by teams and individuals to set challenging, ambitious goals with measurable results. **OKRs** are how you track progress, create alignment, and encourage engagement around measurable goals.

KPIs a quantifiable measure of performance over time for a specific objective. **KPIs** provide targets for teams to shoot for, milestones to gauge progress, and insights that help people across the organization make better decisions.

Dashboard

M E T R I C	N O T E S
<p>Customer Support Metrics A/B testing A: New feature virtual assistant, average usage, issue severity levels, issue resolution rate vs. B: As is, w/o virtual which page views, resources accessed, and decision points are accessed without virtual assistance</p> <p>Hypothesis: enhance the course experience</p>	<p>Strengths:</p> <p>Track usability, curriculum content issues</p> <p>Track issue severity levels</p> <p>Test learner success rate with or without virtual assistance</p> <p>Track average resolution time per issue versus learner’s self-resolve</p>

<p>and learner time and issue management; overall time per module, sticking points and related support requests</p>	<p><i>Weaknesses:</i> Experimental. Weak hypothesis. Assumptions about virtual assistance effectiveness is often proved wrong after it's feature freshness wanes</p>
<p>Growth & ROI Metrics Track OKRs and KPIs, for example: Course Registration Conversion rate Courses Saved for Later Track user downloaded materials Abandoned Track new and active users monthly % of new subscribers attained through free workshops % of new subscribers from free 30-day trial % of new subscribers from digital / social media voucher offers Hypothesis: enhance the course experience and provide incentives for repeat purchases</p>	<p>Pages / screens per session = # of pages in session per configured goal Bounce rate - users who had only one interaction with site without a second to calc duration (duration 0) Track hits, or sessions of individual users <i>Strength/Value:</i> <i>Weaknesses:</i> Conversions, average orders Course Registration Conversion rate Courses Saved for Later Abandoned</p>
<p>Qualitative / Behavioral Research Metrics Return customers and/or upgrades % of new subscribers who drop a class or cancel membership Inactive users after registering for the free 30-day trial % of new user engagement through workshops= conversions / total visitors * 100%</p>	<p><i>%= conversions / total visitors * 100%</i> --- <i>% of new subscribers who drop a class or cancel membership</i> <i>Inactive users after registering for the free 30-day trial</i></p>

<p>Overall time per module, sticking points and related support requests</p> <p>Churn Hypothesis: Free offers, trials, etc. will grow subscribers, customer loyalty</p>	<p><i>% of new user engagement through workshops</i></p> <p><i>Strength/Value:</i> Generate new ideas for the product after it's initial launch Feed qualifying metrics into the design, for example, contextual offers and personalization</p> <p><i>Weaknesses:</i></p>
<p>Metrics for UX - Quantitative Research</p> <p>New vs. Returning users Surveys, feedback and assessment during workshops - how effective? Click through rate or cost per click</p> <p>Track which courses are saved for later and for how long, and what was purchased instead</p> <p>Hypothesis: Course reviews will increase subscriptions; improve the learner and course author experiences.</p>	<p>Google Analytics (monitor actions, events, # of sessions, hits, page views, clickthroughs, session duration, acquisitions, pages per session)</p> <p><i>Strength/Value:</i> <i>Data driven vs. opinion driven</i></p> <p><i>Weaknesses: user generated content / quality levels of instruction difficult to monitor</i></p>

<p>Top 5 Key Performance Indicators (KPIs) used in eLearning platforms</p>	<p>Revenue per member (RPC) Average Class Attendance (ACA) Learner Retention Rate (CRR) Profit Margin (PM) Average Daily Attendance or Usage (ADA)</p>
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Validate Hypotheses for MVP Virtual Assistant

KEY NOTES & OBJECTIVES

Validate the product hypotheses based on data and results.

Objectively assess whether or not the initial hypothesis was true

Adjust hypotheses until data and results prove true.

Practice ruthless intellectual honesty

Maximize your chances of winning in the market.

CATEGORIES FOR TESTING

Objects: New Feature: Virtual Assistant

Relationship: Learner support

Events: Learner success, and related data, product growth and ROI

Classifications: Qualitative and Quantitative Research

Scenario

You built a Minimum Viable Product for a virtual assistant, which *helps working professionals better manage their calendar by providing recommendations about work, social, and family activities.*

You launched it and your user base is growing. After seeing initial results, you developed a few hypotheses and prioritized features on the roadmap accordingly. 3 key hypotheses, the actions you took based on your hypotheses, and the results.

Hypothesis 1

Context: 1% of users who visit your website were signing up for an account.

Hypothesis: While this is in line with many benchmarks, we felt that the value prop was not clear enough and by making adjustments to the website, which could increase the number of website visitors who register for an account.

Action: A series of changes to the website.

Results: Website visitors who register for an account changed from 1% to 2%

Assessment

With only a 1% improvement, and because testing and analytics doesn't appear to be part of the process, the hypothesis and the key objectives/results are most likely off the mark. Hypothesis testing criteria must include specifics: objects, relationships, events, classification and/or accurate user data. None of these are provided in the example. I would add to that *qualitative research methodologies*, since these are essential to building value. If we apply one vague solution - "changes to the website" it may be only a marginally effective band-aid, vs. a true, tested iterative design solution.

Since the hypothesis lacks substantive, results-oriented design thinking I would first explore at least 2 or 3 viable options based on data analytics of paid vs. free users. If the value proposition lacks clarity, the team might want to *research, discover, brainstorm and define a tangible, actionable set of criteria required for building value.*

Consider first looking at some simple analytics, for example, Google Analytics Channel Reporting, Growth rate, CPM, or media campaign analytics across the full customer journey, especially Engagement--> Awareness → Purchase. A variety of analytics will help the team to go deeper into the root causes of limited engagement. Next, brainstorm potential solutions for improving the weak link in the customer funnel, choose 2 or 3 priority issues to address, then run A/B testing on two of proposed design solutions. Next, run additional testing on varied scenarios to see which performs best before pushing live.

Hypothesis 2

Context: 40% of account registrations were for paid accounts, 60% were for free accounts.

Hypothesis: It's believed we could increase the % of registrations for paid accounts by accepting Apple Pay so that Apple users wouldn't have to enter credit card information.

Action: We implemented Apple Pay as an option.

Results: Paid registrations dropped from 40% of registrations to 20%.

Assessment

The hypothesis assumes that adding Apple Pay will increase registrations, however it

doesn't provide detailed info to what extent or if it's the only payment option offered. A more detailed hypothesis, outlining specifics could be more effective. Although proven inaccurate, this is useful data because it shows, in truth, that only about a 5th of new registrants will not choose Apple Pay. The other one fifth of all potential product users who chose (or might have chosen) Apple Pay is still substantial - e.g., potentially 200,000 per 1 million users. For the next iteration, perhaps run A/B testing with (A) credit card entry or Apple Pay vs. (B) credit card or Apple Pay or a third non-card, easy payment option such as PayPal or Google Pay (especially if Google login is used to access the product)

Hypothesis 3

Context: For people who registered for a free account, 10% of them upgraded to a paid account within the first 30 days.

Hypothesis: It's believed that highlighting a few premium features in the free version would entice upgrades.

Action: We changed the free version to highlight features from the premium (paid) version.

Results: Users who upgrade from free accounts to paid accounts within the first 30 days stayed flat at 10%.

Assessment

The hypothesis / solution definitely calls for much more substantive research and evaluation, and was likely proven inaccurate because it's based on 'belief' versus hard data and logic. Offering premium features for free appears to have reduced incentive and/or value perception. Zero gain of upgraded users = wholly inaccurate hypothesis. A more effective approach might be to survey or gather metrics from engagement to buy-in and if possible, metrics for determining value perception. For example, survey or analyze which features capture the spirit of what users want to achieve with the product (then decide if these are free core activities). Alternately, decide, based on qualitative results, what new or premium features will be perceived as additional benefit or value. If, for example, the findings show that users fall back on usage within the free version, it may be falling short of their baseline expectations, therefore the free version could require higher-priority design

iterations. If users stick with the free product for extended periods, repeatedly passing on upgrades, the issue could be that value and benefits of upgrade are calling for greater value-driven considerations. An alternate scenario might be to first establish the essential OKRs and behavioral (activity focused) - attitudinal (feeling, perception) KPIs.

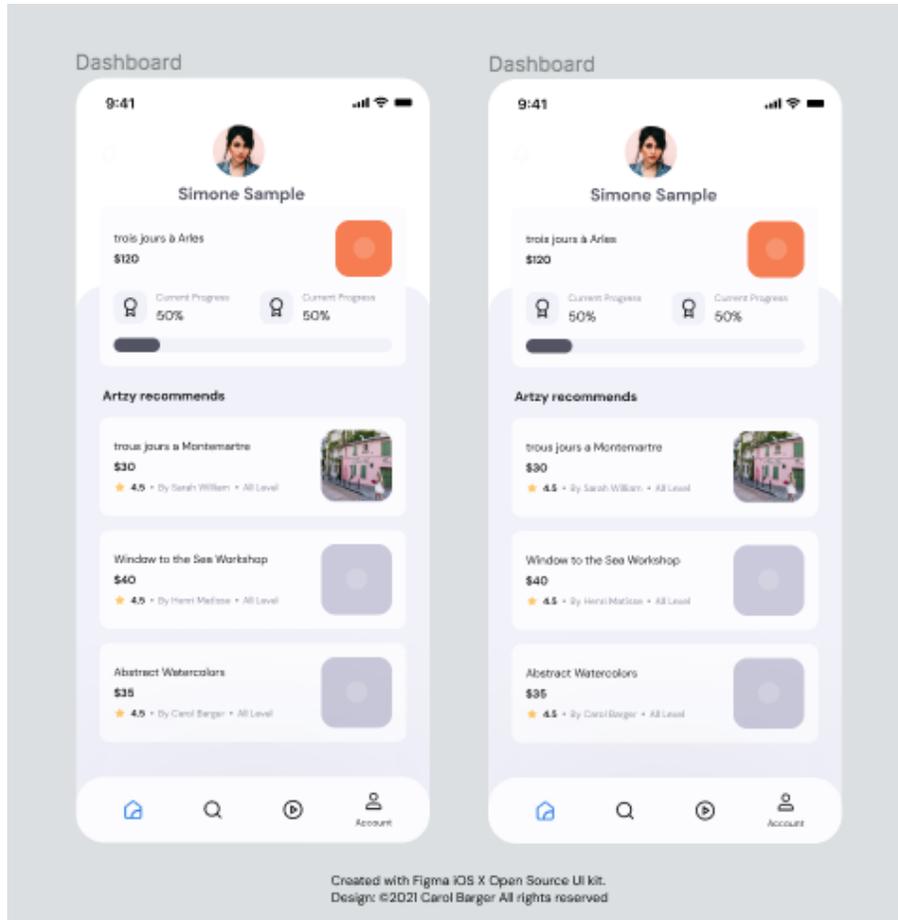
Also from a quantitative perspective, run various margin comparisons, e.g., cost of acquiring free vs. paid users, for example. For accurate user research, analyzing active and inactive free and paid users, LTV/CAC could also be factored in. Actual data vs. conjecture/belief may very likely reveal an entirely different picture.

The Path Forward

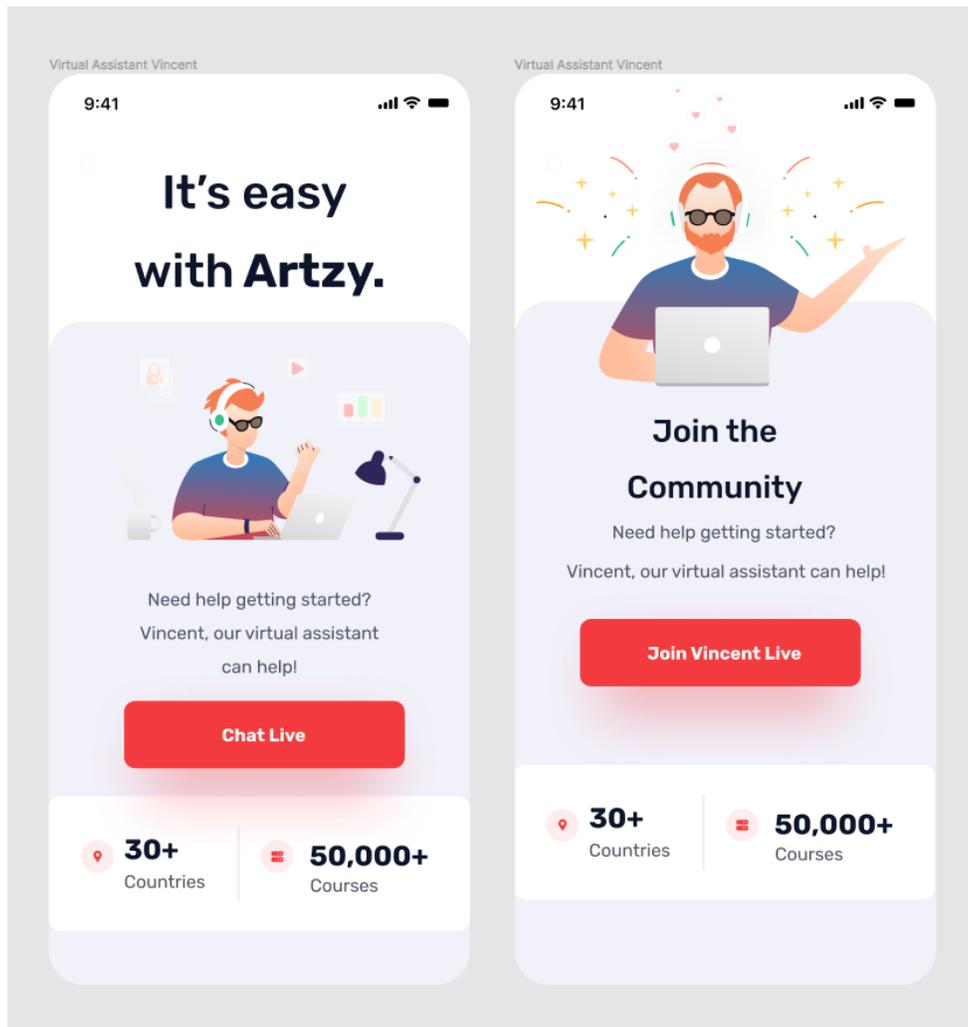
Scenario

Minimum Viable Product for a virtual assistant, which **helps Artzy users to better manage coursework, the calendar, and obtain live help when needed. Since recommendations are already built into the search and save functionality, our virtual assistant may alternate as a tool with the user's personalized profile-account page.** The main features of **Artzy** are learner and author-generated content, artists workshops, collectives, coursework and art competitions and awards.

Current Dashboard



The current dashboard includes global, contextual searches, and personalized recommendations, course status, course list. For this hypothesis, users select the persistent footer icon for Account. For the course project part three, I'm sharing a hypothesis and considerations of adding a top level, hi-visibility feature "Virtual Assistance Vincent" to my elearning product, Artzy. For our virtual assistant, we created a basic introductory concept for Vincent, a unique and memorable personality. Since all feature and user research metrics overlap for a total user experience, I've included a couple of concepts for A/B Testing.



Hypothesis I : Add 'Vincent the Virtual Assistant'

Adding a virtual assistant feature to the Artzy app will enhance the overall experience, create a memorable brand, build community, reduce support ticket load, help our learners to self-resolve issues, organize coursework, improve time management* manage workshop trip details*, calendars* and course materials* . . . and more.

*high priority issues resulting from user surveys

We hypothesized that by adding a virtual assistance component within the user profile-account-help space, the elearning data analytics could also be leveraged along with initiation and post-course surveys and other user research.

We ran A/B testing of Vincent the Virtual Assistant and the results were about 50% perceived Vincent as “positively useful.” After launch we’ll gather actual metrics for our hypothesis, rather than rely solely on the initial metrics, since we may want to gather and revise the tool requirements, based on how often Vincent will actually be accessed, how used and the subsequent benefits.

By Implementing assistive technologies, there is potential to capture another 10-30% of category-specific e-learning market share

Objective / Timeline:

Measurable decrease in call center and support ticket request. Measurably improved **Artzy** user experience. Exceed expectations and delight users. Target: 10% increase in registrants post release

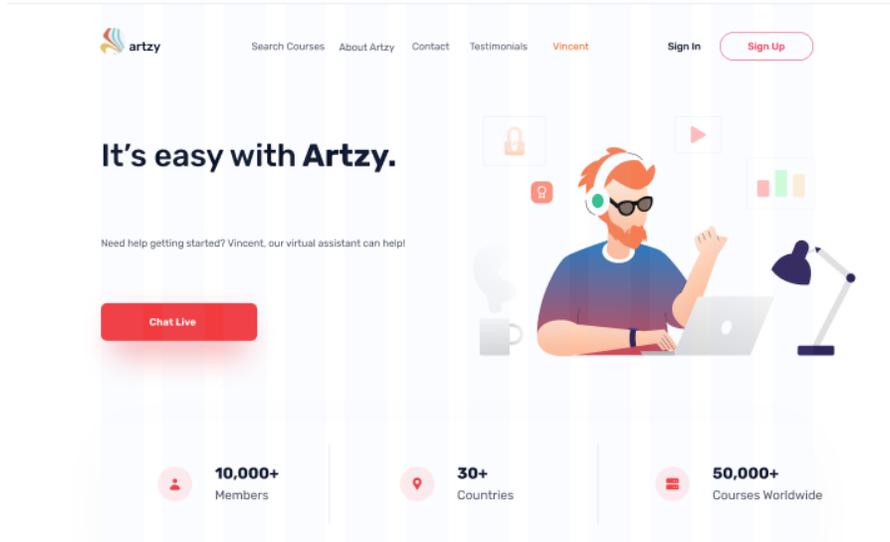
Measurement: How we’ll apply metrics

AB test two concepts for Artzy / Help. Vincent the Virtual Assistant will give Artzy a unique personality, brand and enhance learner engagement as well as provide practical and useful functionality that enables learner success and by pointing users to recommendations, etc., encourages additional course work and personal growth.

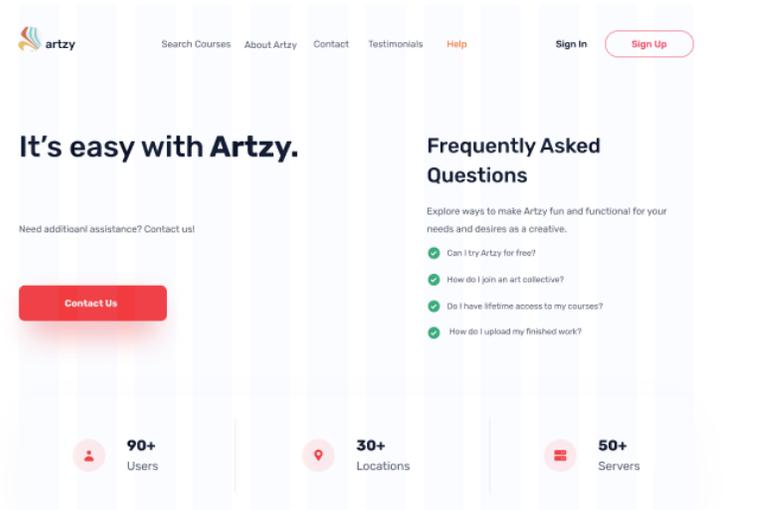
Steps / Vision

According to our surveys users are most challenged with time management, connecting with art collectives, finding local workshops and with organizing their time and coursework. About 50% of users only purchase one course. Less than 1% enter featured art competitions.

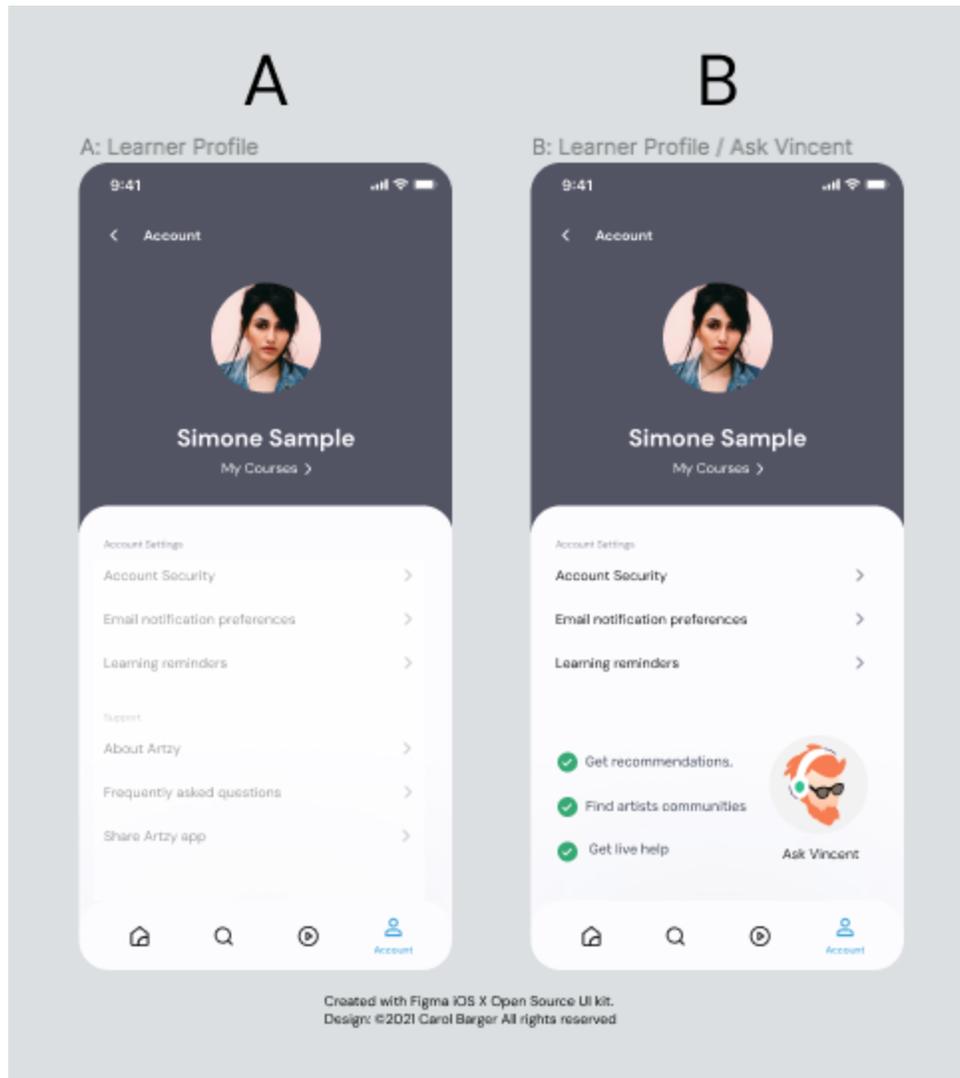
A. Vincent the Virtual Assistant



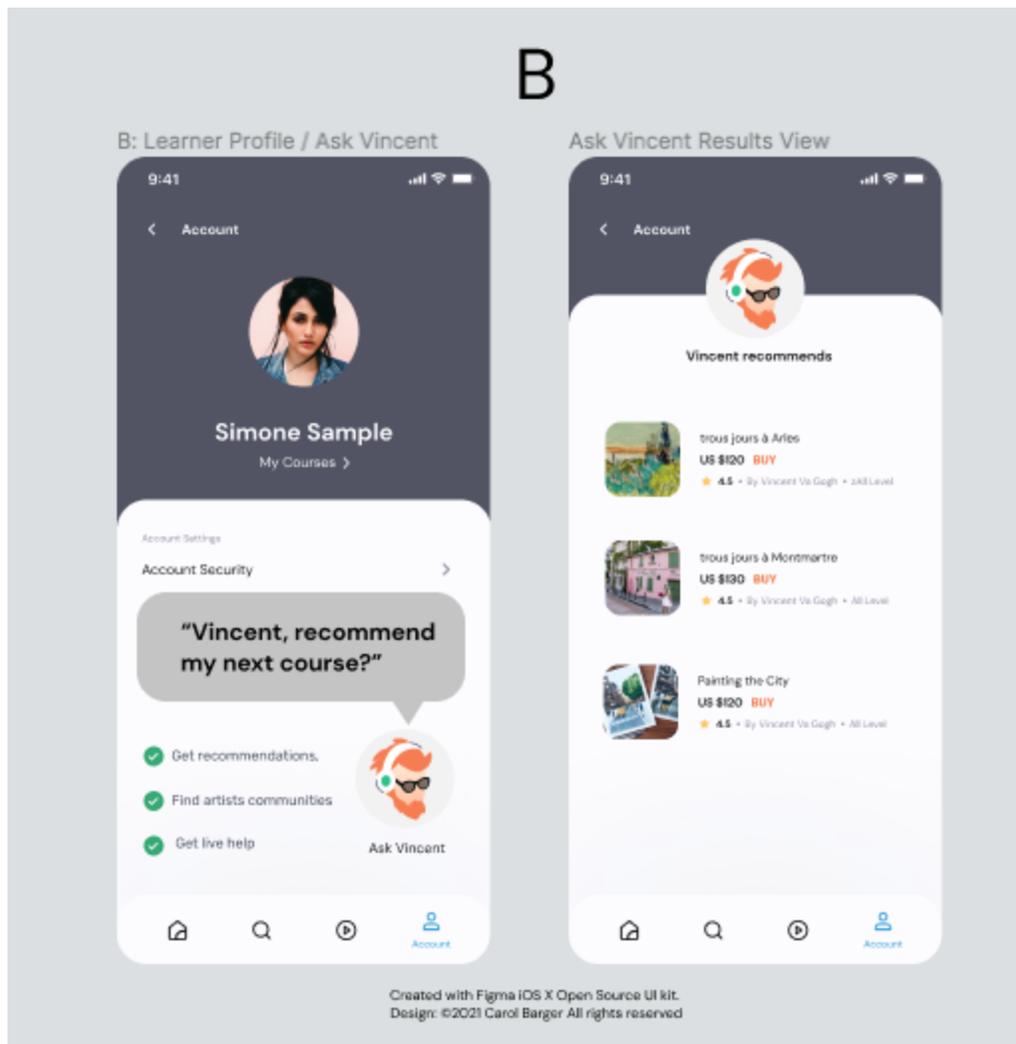
B. Standardized help feature



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What didn't work.

1. Seven out of ten users did not see or access the tool, typically because rather than visit their profile, they tend to begin the primary activity flow by first 1) accessing their dashboard, 2) searching and 3) resuming their coursework via the dashboard.
2. Not enough data to gather the most complete picture of learner analytics, since Vincent isn't viewed as a top-level, primary action or part of the primary user flow.
3. We may run additional metrics with alternate specs, for example, A. relocate the tool to a more high visibility location within the persistent navigation, and/or B. also look at additional tools / means for learner engagement.

4. Long term scalability may be challenging. Virtual assistance at first glance looks like a simple solution, but it may well increase in complexity as our versatile offerings and user base grow.

What worked well.

The original dashboard concept fulfills all of the baseline ubiquity for eLearning platform functionality. After we applied and tested Vincent the Virtual Assistant, however, an increasing number of users are embracing the tool as one of Artzy's most beneficial, unique, and value driven features.

As we offer our learners greater density and breadth of course offerings, quality instruction, easy virtual/anywhere access, and accessible, inexpensive course, "Vincent the Virtual Assistant" may become simply "Vincent" --more of a monitored interactive space or forum to share and gather feedback about courses, materials, art competitions and user-authored media.

As a result of our analytics, it will also include extras, such as creative community, social, sharing, and a categorized host space for international, national and local art and design competitions - all new hypotheses for future exploration.

Key takeaways

User-centered design can be both linear and cyclical, so we started off with certain linear, logic-based steps to ease the transition to other steps. Google analytics **identifies the drivers of unique user engagement** and touchpoints and performance whereas feeding user testing, surveys and attitudinal key performance indicators into our design iterations **are value-driven**.

Next steps

Next steps were to outline both business and user requirements gained from marketing and data usage analytics, and we brainstormed ways to amend the feature as component with the now common assumption that **self-generated content, community, virtual conferencing and live interaction with e-learners and instructors** are all soon to become baseline features. of the dashboard rather than a stand alone module. We considered

other metrics to track, and also will continue to test that re-design's effectiveness on actual users.

Overall, we learned that **everything new** challenges the process of moving our designs and engineering forward.

The easy part: Since creativity is our bag of goods, we can easily spot quality of design and art instruction and detect the strengths and weaknesses of competitors.

Recommended changes

Pursue attitudinal as well as behavioral metrics.

Tracking traffic, conversions, duration and behavioral KPIs (what users do) are not necessarily an indicator of attitudinal KPI, which focuses on how learners feel.

Behavioral UX KPIs

Time on task: Time that users require to complete a task (measurable during usability testing)

Inclusiveness: Involving a diverse community with regard to disabilities, age, learning challenges.

Activity error rate: Number of user errors divided by total number of attempts

Course or task success rate: Number of successfully completed tasks divided by the total number of attempts

Navigation versus search: Number of tasks completed using search or navigation divided by the total number of tasks completed

Customer satisfaction scale: Customer satisfaction, which can be gauged using various scales—such as numbers from 1-10 or smiley faces versus sad faces

Behavioral metrics listed above reveal user response from a call to action. More honest, useful qualitative metrics might also include:

Attitudinal UX KPIs and Metrics:

System usability scale (SUS) A ten item questionnaire with five response options for respondents; from Strongly agree to Strongly disagree.

Net promoter score (NPS) : subtract the percentage of detractors from the percentage of promoters.

Customer satisfaction (CSAT): divide total positive responses by the total number of responses and multiply by 100.

Benchmarking (tracking performance with best practice)

The road ahead

eLearning has been a huge market opportunity during, and will continue beyond the pandemic. The greater challenge is moving away from legacy systems and even the current standard platforms, adapting newer trends, instructional design practicum and e-learning experience design, and growing our knowledge base for e-learning technologies.

Hypothesis II: Add Assistive Technologies

Strategy

By Implementing assistive technologies, there is potential to capture another 10-30% of category-specific e-learning market share

Objective / Timeline:

Measurable increase in course registrants whose experience is greatly enhanced by assistive technologies.

Target: 15% increase in registrants post release
Approximately 10% of users within the next 12 mo

Scenario

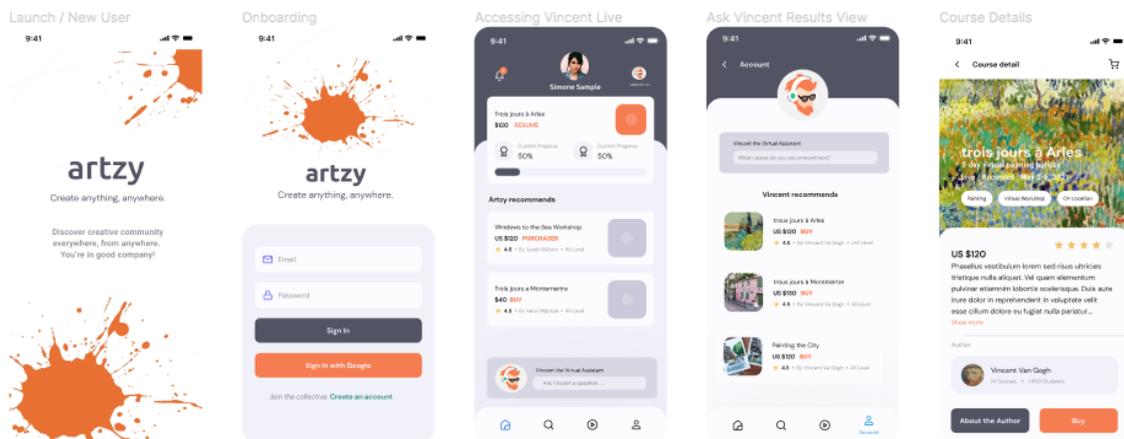
We anticipate receiving user requests for assistive technologies, since we have yet to implement these features.

- Estimate the users with hearing challenges alone, comprise about 10% of the user base. RESEARCH: "1 in 5, or over 470,000 million people have hearing loss.
- In the US alone, 1 in 7 has a disability, including learning disabilities.
- Nearly 7 million disabled students in the U.S. make up 14% of national school enrollment, according to data from the National Center for Education Statistics.
- This group has grown 11% between 2000-01 (when there were 6.3 million students) and 2017-18, the most recent year for which data is available." (Source: Pew Research)

Measurement: How we'll apply metrics

Gather behavioral metrics relative assistive technology via Google Analytics, Google Forms Survey and learner support requests relative to visual, hearing and learning disabilities.

Research and compile a list of standard assistive technologies, functionality and features for implementation.



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Additional metrics to pursue

- **Greater understanding of the learner's journey** from a learner's perspective.
- **Additional A/B testing** for virtual assistance component vs. contextual help, contextual offers and personalization.
- **Time on task:** Time required for multi-level and learning types to complete a task, module or full course (during usability testing)
- **Deeper study into abandon rate, error rate, dropped or uncompleted courses:** Number of user errors divided by total number of attempts
- **Task success rate:** Number of successfully completed tasks divided by the total number of
- **Navigation versus search:** Number of tasks completed using search or navigation divided by the total number of tasks completed
- **Customer satisfaction scale:** Customer satisfaction, which can be gauged using various scales—such as scoring satisfaction from 1-10 or smiley faces versus sad faces.

Next steps

eLearning has been a huge market opportunity during, and will continue beyond the pandemic. The greater challenge is moving away from legacy systems and even the current standard platforms, adapting newer e-learning trends, instructional design practicum and e-learning experience design, and growing our knowledge base for e-learning technologies, and e-learning. The hypothesis proves true--it's not if live assistance, community and assistive technologies will create value for learners, but how, when, and how soon.

The path forward

Explore additional trends in e-learning

Curriculum as a community

Online collaboration and teamwork

User Generated Content

Learners develop content and share it with their peers

Mobile Friendly online course platforms

Ability to learn anywhere in real time

Smart Content Creation

Expertly designed user journeys

Virtual Conferencing

Live education platforms, virtual learning vs at a physical location

Learning Analytics

Program instructors and education success teams use data analytics to track how students perform. They monitor learners progress, gather feedback and adjust the curriculum as needed.

Interactive video

Rapidly rising trend in video learning

Emphasis on the instructional design thinking, support and guidance

The instructional design or e-learning team will become the unsung hero in many organizations

Micro-Learning, boot camp and immersion programs

Learning in digestible chunks, with the goal to train faster and teach specific skills.

Additional Sources

(Source: Anthea Papadopoulou, "10 e-Learning Trends," The State of eLearning / Learn Worlds, January, 2020 <https://www.learnworlds.com/elearning-trends/>)

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