

Introduction:

ABT:

IU Fine Arts students frequently purchase expensive required materials with their own money, and these supplies often outlast their course use, which leaves students with an abundance of supplies that are wasted or underutilized. If students can more appropriately discard and source their art materials, then they will reduce unnecessary waste and save money. Existing vendors like the Eskenazi Art Shop or chain supply-stores sell new products at full cost BUT, there is currently no university-supported platform for students to recycle, resell, or exchange art supplies. Therefore, our team proposes a student-centered digital marketplace that grows sustainability and resources in the art community.

Why it Matters:

If students have a centralized system to buy and sell unused art materials, they may save money, perform better academically, and strengthen their professional work.

Research Synthesis:

A summary of our collected data

Interviews:

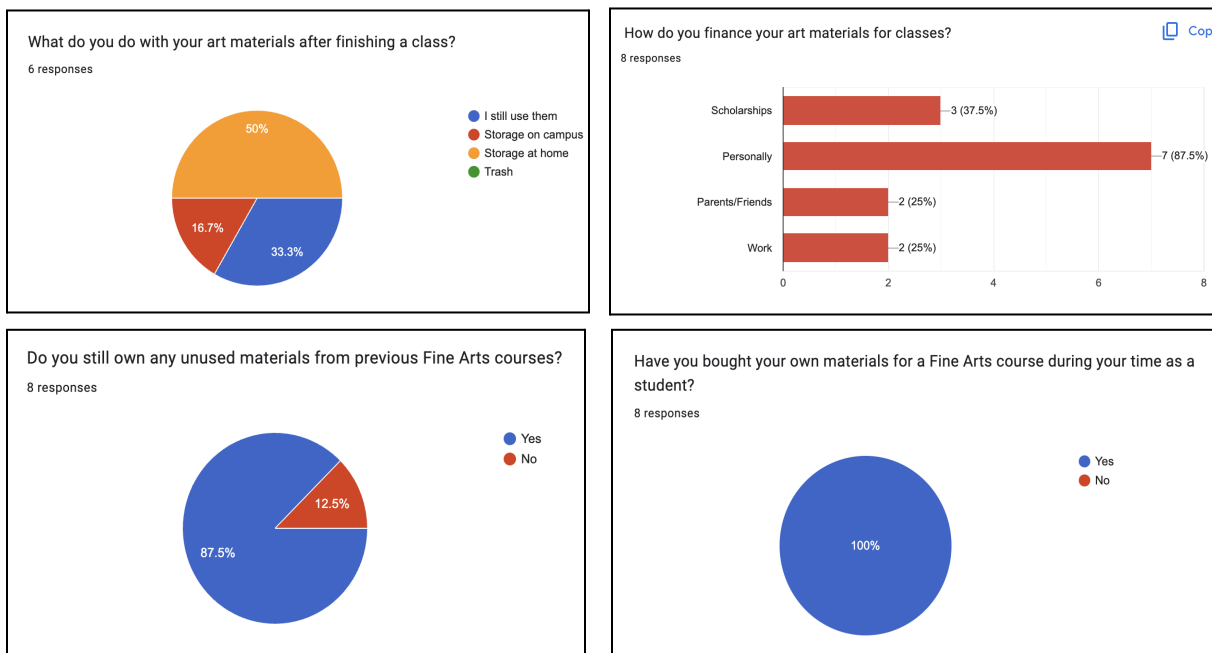
Interviews with Fine Arts faculty members have given us the following insights regarding student relationships with course materials:

- External Hard Drive and Cameras can be the most inaccessible required items for students (financially) in the digital art department

- Faculty have experienced students struggling accessing materials. It has resulted in students under-scoping ambitious projects because they couldn't afford equipment.
- Students are often recommended to buy materials from online
- Common complaint from students regarding materials is “sticker shock”
- On average, faculty has enough in-class resources for students to use in a “shared capacity”
- Sharing resources isn't ideal for students who want to work at home. Generally, students with their own materials complete more ambitious projects in a shorter amount of time

Surveys:

A sample of the most useful survey results from a group of IU students:



Survey Highlights:

83.3% of respondents would be interested in using our website

Most respondents are not directly majoring in fine arts

Respondents are **juniors and seniors**

100% of respondents have bought their own materials for a Fine Arts course

87.5% of respondents still own unused materials from these courses

Most respondents finance art materials **personally**

Hobby Lobby is a popular store for buying art materials amongst respondents

50% of respondents store their materials at home, **16.7%** on campus, and **33.3%** still use them.

Secondary:

Our secondary research has revealed the following relevant information, broken down by our ABT:

And:

Students require a vast amount of supplies and material to prepare artwork and creative designs for their studio courses, which form the “backbone” of their portfolios.

Art students spend hundreds over their degree on general courses, and hundreds within single semesters on senior-level projects.

University studio art students typically discard materials after required studio projects, regardless of their potential reuse.

Many commonly used materials can be recycled or reused.

Art Students typically pay more for class supplies than other majors.

Problem:

Students face financial struggles due to financing their own materials on top of tuition, housing, and food.

University resources can be inaccessible due to:

- Selling out
- Surplus of students, lack of in-class materials
- Student financial situations

- Delay of mailed-in materials

A significant group of surveyed students in a university study received below a C due to not having access to academic materials.

Production of art supplies and discarding leftovers from art making result in environmental pollution

Why it matters:

Expensive materials are necessary for producing a competitive portfolio (based on surveys of university students)

- A competitive portfolio influences success after school and job placement.

Studio art students believe that a common materials exchange would save them money

Material reuse can save energy and environmental resources, reduce landfill and waste, and reduce community health risks.

Indiana University has an ongoing goal of promoting sustainability across all of its campuses, including through the purchasing of goods, both by the university and its students and faculty (Office of Sustainability 2024)

Significant Data:

Art Material: “any substance marketed or represented as suitable for use in any phase of the creation of any work of visual or graphic art of any medium and packaged in sizes intended for consumers” (U.S. Consumer Product Safety Commission 2025)

“Prospective art students face **large out-of-pocket costs** for art supplies. They typically pay **more** for class supplies than students majoring in other subjects at the University of Georgia” (Grady Newsource 2023)

“Roughly 23 % of participants received below a C due to **not having access to academic materials**” (Harris 2023)

“...the majority of [art] students reported that they **throw their leftover materials away** by the end of the semester” (Peavy 2019)

At the conclusion of required studio projects, remaining materials are typically discarded regardless of whether they could be reused, repurposed or saved for later use (Peavy 2019)

“Many of these commonly used materials can easily be recycled or reused” (Peavy 2019)

Personas:

1. Incoming Fine Arts Student
 - Overview: investing in long-term materials for multiple courses, looking to balance cost and quality
 - Most likely to:
 - buy: frequently
 - sell: occasionally
2. Non-major art student
 - Overview: taking one or two courses for gen-eds, doesn't want to overspend
 - Most likely to:
 - buy: occasionally
 - sell: frequently
3. Graduating Students
 - Overview: experienced with course supply requirements and looking to sell to new students
 - Most likely to:
 - buy: rarely
 - sell: frequently
4. Current student with financial problems
 - Overview: specifically looking for low cost or free materials
 - Most likely to:
 - buy: frequently
 - sell: occasionally

User Stories

1. As an incoming art major, I want to see what kind of materials I'll need for my classes so I can plan out what to buy.
2. As an incoming art major student, I want to compare which supplies are reused across courses, so I can invest in long-term items

3. As an incoming art major student, I want to see reviews or ratings of materials/courses, so I know which brands or tools hold up best.
4. As a student taking an elective, I want to filter by my specific course, so I can only see what I actually need.
5. As a student taking an elective, I want to message a seller to arrange a pickup time, so I can get the materials safely and quickly.
6. As a graduate student, I want to get rid of leftover materials from my undergrad classes so I have fewer items while moving.
7. As a graduate student, I want to edit my materials and mark specific items as sold.
8. As a graduate student, I want to track the number of supplies I've sold to measure my sustainability impact.
9. As a current student struggling financially, I want to filter items by price range or "free", so I can find the most affordable options fast.
10. As a current student struggling financially, I want to review materials after using them, so I can help others make informed decisions.

Epics

1. Creating Listings (Tea)

- a. User Story: As a graduate student, I want to get rid of multiple of the same leftover materials from my undergrad classes so I have fewer items while moving.
 - i. Acceptance Criteria:
 1. Navigate to a 'new listing' on profile
 2. Set the amount or number of a specific listing
 3. Update the amount or number of a specific listing
 4. Set and update contact information for a listing
 5. Delete a listing
- b. User Story: As an undergraduate student, I want to sell extra leftover supplies to earn some extra money.
 - i. Acceptance Criteria:
 1. Navigate to a 'new listing' on profile
 2. Set the price of an item
 3. Allow the user to send a bidding for the item
 4. Set and update contact information for a listing
 5. Set a location for a listing
 6. Edit a listing
- c. User Story: As a current art student who didn't use all of the material for a specific class, I want to sell it for any upcoming students next semester.
 - i. Acceptance Criteria:
 1. Navigate to a 'new listing' on profile
 2. Set the price of an item
 3. Set and update contact information for a listing

4. Set a location for a listing
5. Edit a listing
6. Set the course or courses associated with the new listing
7. Set the date used or condition of the listing (new, good, worn)
- d. User Story: As a non-major student, I want to sell a general item that might be useful to art students
 - i. Acceptance Criteria:
 1. Add a photo of the item
 2. Add a short description of the item
 3. Set and update contact information for a listing
 4. Set a location for a listing
 5. Edit a listing
 6. Set the type of the item to 'general' or 'non-course' related

2. Managing Listings (Tea)

- a. User Story: As a graduate student, I want to edit the details of a current material
 - i. Acceptance Criteria:
 1. Edit and update a listing of an item
 2. Set the status of a listing as available or sold
 3. Update the photo of an item
 4. Update the description of an item
 5. Save the changes and officially update the item in the catalog
- b. User Story: As an incoming student of a course, I want to save material listings for later when I want to eventually purchase them
 - i. Acceptance Criteria:
 1. Flag an item on an account to return to later
 2. View flagged items on a personal page
 3. Identify if an item is still available or sold on a list of flagged items
- c. User Story: As a seller, I want to mark a specific item of mine as unavailable.
 - i. Acceptance Criteria:
 1. Edit and update the listing details of an item
 2. Set the status of a listing as available or sold.
 3. Set the status of a listing as pending
- d. User Story: As a buyer, I want to delete a listing saved from my account because I found it elsewhere
 - i. Acceptance Criteria:
 1. Navigate to a personal account from the homepage
 2. View a list of saved listings
 3. Navigate to the page of one of the listings
 4. Delete a single listing from the whole list of saved items

3. Browse Supplies (Sean)

- a. User Story: As an incoming art major student, I want to see which supplies are reused across courses, so I can invest in long-term items

- i. Acceptance Criteria:
 - 1. Browse general material listings
 - 2. Browse a list of courses with active listed materials
 - 3. Browse material listing by course
 - 4. Identify the courses associated with a material listing
- b. User Story: As a current student, I want to see which materials I might need for my class next semester
 - i. Acceptance Criteria:
 - 1. Navigate to a search bar in listings
 - 2. Select a course to filter
 - 3. Browse a list of materials specific to a course
 - 4. Identify the courses associated with a material listing
- c. User Story: As a graduate student, I want to keep my eye out for materials that are in good or new condition for my competitive courses
 - i. Acceptance Criteria:
 - 1. Scroll through items labeled with “Good, New, Used, or Poor”
 - 2. Click on a condition in the material listed in the browse to view more details in the description
 - 3. Filter a general browse by condition “Good, New, Used, or Poor”
- d. User Story: As a current student, I want to see how much my current supplies are selling for.
 - i. Acceptance Criteria:
 - 1. Navigate to a search bar in listings
 - 2. Search for my specific items
 - 3. Browse current listings for the item
 - 4. View history of sales of similar items

4. Course Supply Lists (Sean)

- a. User Story: As an incoming art major, I want to see what kind of materials I’ll need for my classes so I can plan out what to buy.
 - i. Acceptance Criteria:
 - 1. View a list of courses with active listed materials
 - 2. search a course
 - 3. View materials listed under that course
 - 4. Browse the material listing by course
 - 5. Identify the courses associated with a material listing
 - 6. Flag an item on an account to return to later
- b. User Story: As a student taking an elective, I want to view my specific course, so I can only see what I actually need.
 - i. Acceptance Criteria:
 - 1. Browse a list of courses with active listed materials
 - 2. Browse the material listing by course
 - 3. Identify the courses associated with a material listing

4. Redirect to the IU course page for instances where certain materials aren't currently being sold
- c. User Story: As a non-major student, I want to see what kind of departments available course materials are in.
 - i. Acceptance Criteria:
 1. View the medium type of a course on its page
 2. View the skills type of a course on its page
 3. View the medium type of a material on its page
 4. View the skills type of a material on its page
- d. User Story: As a non-major student, I want to see what classes have the most overlap in materials.
 - i. Acceptance Criteria:
 1. View a list of courses with active listed materials
 2. Search a course
 3. View materials listed under that course
 4. Browse the material listing by course
 5. Identify the courses associated with a material listing

5. Search Materials (LeeLoo)

- a. User Story: As a current student struggling financially, I want to search for cheap options so I can find the most affordable options fast.
 - i. Acceptance Criteria:
 1. Browse general material listings with a price filter (cheapest to most expensive)
 2. Browse a list of course material listings with a price filter (cheapest to most expensive)
 3. Browse material listings that are within a certain price range
 4. Browse material listings that are under a certain price value
 5. Browse material listings that are over a certain price value
 6. Identify the price of a single listing
- b. User Story: As a student living on campus, I want to find sellers near me
 - i. Acceptance Criteria:
 1. Search general material listings with a location filter (closest-farthest)
 2. Search a list of course material listings with a location filter (closest-farthest)
 3. Identify the city of the seller on a listing
 4. View an active Google Map location of the seller on a listing
- c. User Story: As an incoming fine arts student, I want to filter materials by quality or brand so I can invest in supplies that will last through multiple courses.
 - i. Acceptance Criteria:
 1. Filter listings by condition (new/lightly-used/heavily used)
 2. Filter listings by recent listing
 3. Filter listing by listed brand or generic

- d. User Story: As a non-major art student, I want to find required materials for my general ed courses quickly so I don't waste time or money on unnecessary supplies.
 - i. Acceptance Criteria:
 - 1. Search by course name or course code
 - 2. Filter results to "required only" vs "recommended" items
 - 3. View listings that have recently been marked down

6. Ratings and Reviews (LeeLoo)

- a. User Story: As a current student struggling financially, I want to review courses and the effectiveness of used versus new materials, so I can help others in a similar situation make informed decisions.
 - i. Acceptance Criteria:
 - 1. Search a specific course
 - 2. Browse reviews on a course
 - 3. Create a review on a course
 - 4. Post a review on a course with a comment
 - 5. Post a review on a course with a star-rating range of material usefulness to the course
- b. User Story: As a graduating student, I want to review courses and tag them by how supply-heavy they are so others can avoid hidden costs.
 - i. Acceptance Criteria:
 - 1. Search for a specific course by name
 - 2. Can create a new review for that course
- c. User Story: As an incoming fine arts student, I want to see "Supply index" rating for each course so I can understand cost expectations at a glance.
 - i. Acceptance Criteria:
 - 1. Display a visual indicator (1-5 icon)
 - 2. Allow sorting of all courses by Supply Index.
- d. User Story: As a non-major art student, I want to check if the general education art course requires expensive materials so I can choose the most affordable option.
 - i. Acceptance Criteria:
 - 1. Browse Gen-ed course by class name
 - 2. Filter by affordability rating ("Low Material Cost")
 - 3. Compare similar courses side by side to see overlapping required materials

7. Exchange Coordination and Seller Validation

- a. User Story: As a student taking an elective, I want to have access to a verified IU student's contact information to arrange a pickup time, so I can get the materials safely and quickly.
 - i. Acceptance Criteria:

1. The seller has logged in with their IU credentials
 2. The buyer has logged in with their IU credentials
 3. The seller has a required list of IU contact information
 4. The seller has an optional list of personal contact information
 5. The buyer can see a map of where the seller's preferred location is.
- b. User Story: As a graduate student, I want to be able to sell my used materials to undergraduate students in a safe and secure environment
- i. Acceptance Criteria:
 1. The seller logs in with IU credentials
 2. The seller sells their materials
 3. The seller sets their preferred contact
 4. The buyer buys the materials
 5. The seller then releases the information to the buyer on how to contact the seller
- c. User Story: As an incoming art major student, I want to be able to buy multiple materials from one person to obtain seller information and validation
- i. Acceptance Criteria:
 1. Buyer signs in with IU credentials
 2. The buyer locates a profile from the search
 3. Buyers can see all previous students' listings for certain materials for classes
- d. User Story: As a current student with financial issues, I want to make sure I get the best deal from browsing different profiles to find the best deals on materials
- i. Acceptance Criteria:
 1. Buyer is logged in with IU credentials
 2. Seller has a list of recent sales with prices shown
 3. Buyers can scroll through active listings and recent sales
 4. Buyer can click between profiles

8. Landing Page

- a. User Stories: As a graduate student, I want to see what courses are available to sell leftover supplies for.
- i. Acceptance Criteria:
 1. Landing page displays course cards with required and recommended supply categories.
 2. Option to buy or sell takes user to respective page
 3. Landing page includes a search bar that takes the user to advanced search
- b. User Story: As a student taking an elective, I want to look for my specific course through the search engine.
- i. Acceptance Criteria:
 1. Landing page includes a search bar that takes the user to advanced search

2. Search results show course cards with the course title and cost rating (\$-\$\$\$\$).
- c. User Story: As an incoming art major student, I want to browse multiple courses to look for overlap in supplies, so I can plan purchases more efficiently.
 - i. Acceptance Criteria:
 1. Landing page displays course cards with required and recommended supply categories.
 2. Option to buy or sell takes user to respective page
 3. Landing page includes a search bar that takes the user to advanced search
- d. User Story: As a current student with financial issues, I want to directly search for courses with lower cost ratings.
 - i. Acceptance Criteria:
 1. Courses are visually tagged with a cost indicator (e.g., dollar icons).
 2. Sorting feature allows “Lowest Cost First.”

Sample Wireframes

[Link to View Wireframes on Figma](#)

Appendix

[UX Secondary Research \(Analysis\)](#)

[Capstone Survey \(Responses\)](#)

[Interviews \(Responses\)](#)

[Bibliography](#)