

# E-Library

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Vision	Strategy	Goals	Key Features	Milestones
To close Ethiopia's education gap by providing <b>inclusive, affordable, and eco-friendly digital learning resources</b> accessible in multiple local languages—both online and offline—to empower students, teachers, and lifelong learners nationwide.	<ul style="list-style-type: none"> <li>Develop a <b>multilingual digital platform</b> (Amharic, Afaan Oromo, Tigrigna, Somali).</li> <li>Provide <b>low-bandwidth and offline access kits</b> for rural/remote communities.</li> <li>Leverage <b>cloud infrastructure</b> and open-source technologies for scalability.</li> <li>Build <b>partnerships</b> with schools, NGOs, and government for curriculum alignment.</li> <li>Integrate <b>climate education modules</b> for resilience and awareness.</li> </ul> <p><b>Key Metrics</b></p> <ul style="list-style-type: none"> <li><b>User growth:</b> number of students/teachers onboarded.</li> <li><b>Engagement:</b> frequency of logins, hours of content consumed.</li> <li><b>Impact:</b> % of students improving test scores.</li> <li><b>Retention:</b> monthly/annual active users.</li> <li><b>Sustainability:</b> CO<sub>2</sub> savings and trees preserved from reduced paper use.</li> <li><b>Partnership growth:</b> number of schools, NGOs, and bureaus engaged</li> </ul>	<ul style="list-style-type: none"> <li>Deliver equitable access to up-to-date learning resources for 100,000+ students by Year 3.</li> <li>Enhance teacher effectiveness and student engagement with interactive content.</li> <li>Reduce learning costs by 35% through digital materials.</li> <li>Contribute to Ethiopia's digital transformation and climate goals.</li> <li>Differentiate from competitors through offline access, inclusivity, and curriculum alignment.</li> </ul>	<ul style="list-style-type: none"> <li>Multilingual access (Amharic, Afaan Oromo, Tigrigna, Somali, etc.).</li> <li>Offline access hubs for rural areas.</li> <li>Curriculum-aligned textbooks and interactive resources.</li> <li>Voice-assisted search &amp; inclusive design.</li> <li>Community engagement tools (forums, feedback, peer learning).</li> </ul> <p><b>Stakeholders</b></p> <ul style="list-style-type: none"> <li><b>Students &amp; Teachers</b> → Primary beneficiaries.</li> <li><b>Schools &amp; Universities</b> → Integration partners.</li> <li><b>NGOs &amp; Donors</b> → Funding, outreach, capacity building.</li> <li><b>Government (MoE, Regional Bureaus)</b> → Policy support, curriculum alignment.</li> <li><b>Tech Partners (Ethio Telecom, startups)</b> → Connectivity, platform development.</li> </ul>	<ul style="list-style-type: none"> <li><b>Year 1:</b> Finalize platform, pilot in 20 schools, reach 5,000 users.</li> <li><b>Year 2:</b> Scale to 100 schools in 4 regions, introduce offline kits, reach 25,000 users.</li> <li><b>Year 3:</b> Expand nationwide, integrate 4 major local languages, reach 100,000+ users.</li> <li><b>Year 5:</b> Become Ethiopia's leading digital education platform with regional expansion.</li> </ul>

## Product Development Roadmap Canvas

1. What is the Problem?	Root Cause Analysis: 5 Whys	Expand on the “Who”	Other stakeholders
<p><b>What?</b> There is no centralized, affordable, and accessible digital platform in Ethiopia for students, teachers, and institutions to <b>buy, sell, or rent educational resources</b> such as textbooks, exam prep materials, short notes, and research projects.</p> <p><b>Who?</b></p> <ul style="list-style-type: none"> <li>• Students (primary, secondary, university)</li> <li>• Teachers and educators</li> <li>• Schools, universities, and NGOs</li> <li>• Content creators (authors, teachers, publishers)</li> </ul> <p><b>Why?</b></p> <ul style="list-style-type: none"> <li>• Existing solutions are fragmented or unavailable.</li> <li>• Physical books are expensive, limited, and often outdated.</li> <li>• International platforms are not localized, affordable, or easy to access in Ethiopia.</li> </ul>	<p><b>Problem:</b> Students and institutions lack access to quality educational resources.</p> <ol style="list-style-type: none"> <li>1. <b>Why?</b> → Physical textbooks and materials are expensive and limited in supply.</li> <li>2. <b>Why?</b> → Printing, distribution, and logistics costs are high, especially for rural areas.</li> <li>3. <b>Why?</b> → No centralized digital platform exists for affordable educational resources.</li> <li>4. <b>Why?</b> → Previous digital initiatives are fragmented, donor-dependent, or not scalable.</li> <li>5. <b>Why?</b> → Lack of investment, infrastructure, and a sustainable marketplace model in Ethiopia.</li> </ol>	<ul style="list-style-type: none"> <li>• <b>Primary users:</b> Students (all levels), teachers.</li> <li>• <b>Secondary users:</b> Schools, universities, NGOs, libraries.</li> <li>• <b>Content contributors:</b> Local authors, teachers, publishers, top-performing students.</li> <li>• <b>Indirect beneficiaries:</b> Parents, community organizations, and employers (via better-educated youth).</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Government / Ministry of Education:</b> Curriculum alignment, policy support.</li> <li>• <b>Publishers &amp; Authors:</b> Content creation, licensing, and monetization.</li> <li>• <b>Tech providers / Payment platforms:</b> Secure transactions, hosting, app maintenance.</li> <li>• <b>NGOs &amp; Donors:</b> Support outreach, digital literacy initiatives.</li> <li>• <b>Telecom companies:</b> Provide internet connectivity and low-bandwidth solutions.</li> <li>• <b>Parents &amp; Community leaders:</b> Platform adoption, trust-building, and local promotion.</li> </ul>

## Problem Analysis Canvas

## Structured list of **proposed solutions** for the problem Ethio E-Library is addressing

Solution #	Proposed Solution
1	Develop a centralized digital library with textbooks, journals, and study materials.
2	Create a marketplace for buying, selling, and renting educational resources (books, exam prep, notes, projects).
3	Offer offline access and low-bandwidth support for rural and underserved areas.
4	Localize content in Amharic, Afaan Oromo, Tigrigna, and Somali.
5	Include exam preparation tools, past papers, and model answers.
6	Enable teachers and students to upload and share content safely, creating income opportunities.
7	Provide a mobile-friendly, user-friendly platform with voice-assisted search and progress tracking.
8	Integrate feedback loops and analytics for continuous improvement and content relevance.

Here's a prioritized scoring table for the top 3 solutions of E-Library based on Feasibility, Desirability, and Viability:

Idea	Proposed Solution	Feasibility (1–10)	Desirability (1–10)	Viability (1–10)	Total
A	Educational Marketplace (buy, sell, rent books, exam prep, notes, projects)	8	10	9	27
B	Centralized Digital Library (textbooks, journals, study materials)	9	9	8	26
C	Offline & Low-Bandwidth Access for rural areas	7	10	7	24

# Value Proposition Canvas

Value Proposition		Customer Profile	
<p><b>Product/Service Features</b></p> <ul style="list-style-type: none"> <li>Centralized marketplace for educational resources: textbooks, exam prep, notes, and projects.</li> <li>Digital access with mobile-friendly and offline capabilities.</li> <li>Local language support (Amharic, Afaan Oromo, Tigrigna, Somali).</li> <li>User-generated content: teachers and students can upload/share materials.</li> <li>Secure payment and rental options.</li> </ul>	<p><b>Gain Creator</b></p> <p><b>Value Addition:</b></p> <ul style="list-style-type: none"> <li>Centralizes access to textbooks, exam prep, notes, and projects for convenience.</li> <li>Offers affordable and flexible rental/purchase options, reducing costs for students and schools.</li> <li>Provides income opportunities for teachers and content creators.</li> <li>Supports better learning outcomes through up-to-date, curriculum-aligned resources.</li> </ul> <p><b>Innovative Features:</b></p> <ul style="list-style-type: none"> <li>Digital marketplace + rental model unique in Ethiopia.</li> <li>Offline/low-bandwidth access for rural and underserved areas.</li> <li>Local language support (Amharic, Afaan Oromo, Tigrigna, Somali).</li> <li>Secure content sharing with ratings and verification</li> <li>Personalized content recommendations and progress tracking.</li> </ul>	<p><b>Gains</b></p> <ul style="list-style-type: none"> <li>Easy access to learning resources.</li> <li>Reduced cost of study materials.</li> <li>Convenience of online/offline access.</li> <li>Improved academic success and exam preparation.</li> <li>Income generation opportunities.</li> <li>Inclusive participation through local language support.             <ul style="list-style-type: none"> <li>Community collaboration via sharing, rating, and feedback.</li> </ul> </li> </ul>	<p><b>Customer Job</b></p> <p><input type="checkbox"/> <b>Tasks / Activities:</b></p> <ul style="list-style-type: none"> <li>Students: Study, revise, complete projects, access additional learning materials</li> <li>Teachers: Share, organize, and curate learning resources</li> <li>Schools/Institutions: Provide up-to-date materials, reduce costs, improve learning outcomes</li> </ul> <p><input type="checkbox"/> <b>Features Sought:</b></p> <ul style="list-style-type: none"> <li>Offline access</li> <li>Local language support</li> <li>Marketplace for renting/sharing materials</li> <li>Personalized recommendations</li> <li>Progress tracking</li> </ul>

<p><b>Pain Reliever</b></p> <p>Solutions to Challenges:</p> <ul style="list-style-type: none"> <li>▪ Provides affordable and flexible access to textbooks, exam prep, notes, and projects.</li> <li>▪ Centralized platform reduces time spent searching for materials</li> <li>▪ Offline and low-bandwidth access addresses connectivity issues.</li> <li>▪ Local language support ensures inclusivity</li> <li>▪ Verified and rated content ensures quality.</li> </ul> <p>Risk Mitigation:</p> <ul style="list-style-type: none"> <li>- Secure payment and content-sharing</li> <li>- Ratings and feedback system for trust</li> <li>- Analytics track engagement to improve</li> <li>- Offline access reduces dependency on</li> </ul>		<p><b>Pains</b></p> <ul style="list-style-type: none"> <li>▪ High costs for textbooks, exam prep materials, and projects</li> <li>▪ Limited access to curriculum-aligned content, especially in rural areas</li> <li>▪ Time wasted searching for reliable resources</li> <li>▪ Connectivity issues preventing online learning</li> <li>▪ Outdated or irrelevant materials</li> <li>▪ Low engagement or motivation due to lack of interactive content</li> <li>▪ Exclusion or language barriers for non-Amharic speakers</li> </ul>	
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## MVP Prioritization for E-Library

No	All Product/Service Components & Features	Prioritized List (Essential / Nice-to-Have)	MVP (Key Essential Features)
1	Centralized marketplace for textbooks, exam prep, notes, projects	Essential	Core marketplace with search and browse functionality
2	Digital access via mobile & desktop	Essential	Mobile-friendly interface for online access
3	Offline access / low-bandwidth mode	Essential	Downloadable content for offline use
4	Local language support (Amharic, Afaan Oromo, Tigrinya, Somali)	Essential	Key languages for pilot regions
5	User-generated content (teachers/students can upload/share)	Nice-to-Have	Limited content upload by selected pilot users
6	Secure payment / rental options	Nice-to-Have	Simple free-access model or token system for initial pilot
7	Personalized recommendations & progress tracking	Nice-to-Have	Basic content bookmarking and simple usage tracking
8	Ratings and feedback for content quality	Nice-to-Have	Optional user rating system for pilot phase

## **Minimum Viable Customer Segment Prioritization**

<b>Customer Segment</b>	<b>Urgency of Need (1–10)</b>	<b>Paying Capacity (1–10)</b>	<b>Easement of Access (1–10)</b>	<b>Total</b>
A – Students	9	4	8	21
B – Teachers	7	6	7	20
C – Schools / Institutions	8	8	5	21

# User Testing Canvas Framework

<p>Customer Sub/Segment profile</p> <ul style="list-style-type: none"> <li>- <b>Who they are:</b> Secondary school students, university students, and teachers.</li> <li>- <b>What we know:</b> They struggle with limited access to up-to-date textbooks, exam prep, and affordable learning materials. Many rely on photocopies, outdated books, or peer sharing.</li> <li>- <b>Why this segment:</b> They experience the most urgent pain (lack of affordable, accessible resources) and stand to gain the most from Ethio E-Library.</li> <li>- <b>Where they are:</b> Schools, universities, libraries, and online communities (Telegram, WhatsApp, Facebook, youth forums)</li> </ul>	<p><b>Testing Scenario/Format</b></p> <p><b>Scenario/Format:</b> Prototype/MVP demo sessions with guided tasks (e.g., searching, renting, or uploading a resource).</p> <p><b>Where:</b> Selected schools, universities, and community libraries in Addis Ababa and regional towns.</p> <p><b>Communication:</b> In-person workshops, focus group discussions, and follow-up via online surveys (Telegram/WhatsApp)</p>	<p><b>Results</b></p> <p><b>Proven/Validated:</b> Demand for centralized digital marketplace, offline access, local language support, and affordable rental/purchase options.</p> <p><b>Didn't Work:</b> Upload/sharing feature confusing; rental/payment system unclear.</p>
<p><b>Motivation for solving their problem:</b></p> <ul style="list-style-type: none"> <li>- Students: Affordable, convenient access to up-to-date study materials.</li> <li>- Teachers: Platform to share resources and earn income.</li> <li>- Schools: Reduce costs, improve student outcomes, and ensure curriculum alignment.</li> </ul> <p>They are solving their problem by using photocopies, limited and outdated textbooks, small school libraries, and informal note-sharing among peers and teachers.</p>	<p>What further frustrations do they have?</p> <p>They face high costs, outdated or fragmented materials, lack of local language content, poor curriculum alignment, and limited access in rural or low-connectivity areas.</p>	<p><b>Learning &amp; Insights</b></p> <ol style="list-style-type: none"> <li>1. What went well: Users liked the centralized marketplace, offline access, local language support, and affordable rental/purchase options.</li> <li>2. What went bad: Some users found navigation confusing, and uploading/sharing content as well as rental/payment features were unclear.</li> <li>3. Next improvements: Simplify the interface, add tutorials or tooltips, optimize offline access, and refine the rental/payment workflow.</li> </ol>

Key Assumptions to Be Tested:	Success Criteria:	Next Steps:
<ul style="list-style-type: none"> <li>Students prefer a digital marketplace over physical books.</li> <li>Offline access is essential for usability in low-connectivity areas.</li> <li>Teachers are willing to upload and share learning materials.</li> <li>Users are willing to pay small fees for rentals or purchases.</li> <li>Local language support increases engagement and adoption.</li> <li>Personalized recommendations improve learning outcomes and retention.</li> </ul>	<p><b>Success Criteria:</b></p> <ul style="list-style-type: none"> <li>At least 70% of users can find and access materials without assistance.</li> <li>Positive feedback on affordability, offline access, and local language support.</li> <li>Teachers successfully upload and share content that students actively use.</li> <li>Early adopters show willingness to pay for rentals/purchases.</li> </ul> <p><b>Failure Criteria:</b></p> <ul style="list-style-type: none"> <li>Users struggle to navigate the platform without guidance.</li> <li>Negative feedback on usability, offline functionality, or local language support.</li> <li>Teachers do not upload or share materials.</li> <li>Users are unwilling to engage with the rental/payment system.</li> </ul>	<p><b>Next Steps:</b></p> <ul style="list-style-type: none"> <li>Simplify the platform interface and navigation for easier use.</li> <li>Add tutorials, guides, and tooltips for key features like uploading, renting, and offline access.</li> <li>Refine and test the rental/payment workflow to ensure clarity and ease of use.</li> <li>Expand pilot testing to more schools, universities, and community centers.</li> <li>Collect continuous feedback from users to iterate and improve features.</li> <li>Monitor engagement metrics and adoption rates to validate assumptions and guide future development.</li> </ul>