

# Product Requirements Document

Enhanced Search Filters for  
Educational Content Discovery

# YouTube

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## 1. The Big Picture

### Why This Matters

YouTube has over 2 billion monthly users, and 83% of students use it for learning. That's a massive opportunity. But here's the problem: **learners are getting frustrated and leaving for competitors.**

When someone searches for a Python tutorial, they don't want to scroll through a bunch of 60-second Shorts. They want a comprehensive 30-40 minute video that actually teaches them something. Right now, YouTube doesn't make that easy.

### What the Research Showed

I interviewed learners about their YouTube experience, and the findings were pretty stark:

- Every learner I talked to sees Shorts cluttering their tutorial searches
- Neha rated her frustration at 8 out of 10, the highest score in my research
- About a third of learners have abandoned YouTube for Google at least once
- Nobody thinks Shorts are useful for actually learning things

### What I'm Proposing

Add an "Exclude Shorts" toggle and prominent duration filters to YouTube search. Let learners quickly find the comprehensive tutorials they're looking for without endless scrolling.

### What Success Looks Like

- Reduce tutorial search abandonment by 30% within 6 months
- Get time-to-first-click down from 45 seconds to under 30
- Increase click-through rate on 20+ minute tutorials from 4% to over 6%
- Keep YouTube competitive against ChatGPT and Google for learning

## 2. The Problem in Detail

### What's Actually Happening

Learners come to YouTube looking for tutorials. They type something like "Python for beginners" and get a mix of Shorts and long-form videos. The Shorts get clicks (they're quick and easy), so the algorithm ranks them well. But learners don't want them. They want depth. So they scroll. And scroll. And sometimes they just give up and go to Google instead.

### Why This Happens

There are a few things going on here:

1. **No way to exclude Shorts:** There's no filter for it. Users can't say "show me only long videos." Browser extensions like BlockTube have 100K+ users trying to solve this themselves.
2. **Algorithm doesn't understand intent:** When someone searches "tutorial," YouTube treats it the same as any other search. It doesn't recognize learning intent.
3. **Clicks matter more than completions:** Shorts get lots of clicks, so they rank high. But clicks aren't the same as learning outcomes.
4. **Duration filters are buried:** YouTube does have duration filters, but they're hidden in a menu. Most users don't know they exist.
5. **No quality signals for learning:** There's no completion rate, no chapters shown in results, no skill level indicators.

### What Users Actually Said

*"When I search for 'Python for beginners', the first few results are Shorts. They're too short to explain anything properly. I have to scroll a lot to find a 30-40 minute tutorial."*

That's Neha, a marketing analyst who rated her frustration at 8/10. She also told me:

*"Sometimes I just leave YouTube and search on Google instead."*

That's platform abandonment happening in real-time. And it's a business problem.

### Why YouTube Should Care

- Learners are high-value users. They have intent. They watch longer videos. They're worth more in ad revenue.
- Google Search and ChatGPT are real alternatives now. If learners start defaulting to those, YouTube loses them.
- YouTube's position as the "world's largest learning platform" is at stake.

### 3. What We're Trying to Achieve

#### The Main Goal

**Reduce tutorial search abandonment by 30% within 6 months for learners searching for educational content.**

#### Why These Numbers

Element	What I'm Targeting	Why
The metric	Tutorial search abandonment	Directly measures whether people find what they're looking for
The target	30% reduction	About a third of learners currently abandon, so cutting that by 30% is ambitious but achievable
The timeline	6 months	2-3 months to build, 1-2 to test, 1-2 to roll out
The users	Learners	83% of students use YouTube for learning. High-intent, high-value.

## 4. Who We're Building For

### Meet Neha

**"I come to YouTube to learn, not to scroll through Shorts."**

Neha is 28 and works as a marketing analyst at a tech startup in Bengaluru. She uses YouTube multiple times a day, mostly on her laptop when she's trying to learn something new, like Python or advanced Excel techniques.

#### What she's trying to do:

- Find comprehensive tutorials, ideally 30-40 minutes
- Learn practical skills she can actually use at work
- Not waste time on stuff that won't help her

#### How she uses YouTube:

- Goes straight to search (doesn't browse the home feed for learning)
- Checks video length and channel reputation before clicking anything
- Scrolls past 10+ results to find actual tutorials
- Uses Google and ChatGPT as alternatives when frustrated

#### What frustrates her:

- "First few results are Shorts" (8/10 frustration)
- "They're too short to explain anything properly"
- "I have to scroll a lot to find a 30-40 minute tutorial!"

#### Her core need:

*When Neha wants to learn a new skill, she needs to find a comprehensive tutorial quickly so she can start learning without wasting time scrolling through stuff that won't help her.*

## 5. What I'm Proposing to Build

I brainstormed 15 different solutions and used RICE scoring to prioritize them. Here are the top three:

#	Solution	What It Does	RICE	Priority
1	Enhanced Search Filters	"Exclude Shorts" toggle + duration quick filters	27.0	Build first
2	Learning Mode	Dedicated mode with completion rates, chapters, no Shorts	9.0	Build second
3	Auto-Detect Intent	AI recognizes "tutorial" queries and optimizes results automatically	9.0	Build later

### Why Enhanced Search Filters Wins

The RICE score tells the story:

- Reach: High. Every learner who searches is affected.
- Impact: High. Directly addresses the core frustration.
- Confidence: High. We have clear user evidence that this is the problem.
- Effort: Low. We're adding UI to existing filter infrastructure.

27.0 RICE score crushes the other options at 9.0 each. It's the clear winner.

## 6. What Exactly to Build

### Feature 1: "Exclude Shorts" Toggle

A prominent toggle in the filter section that removes all videos under 60 seconds from search results. Simple but powerful.

#### What a learner should be able to do:

*"I want to filter out Shorts from my search results so I can find real tutorials without scrolling through 60-second clips."*

#### Requirements:

- Toggle should be visible without clicking into a "Filters" menu
- When on, excludes all videos 60 seconds or shorter
- Show active filter as a tag above results that users can dismiss
- Keep the filter on within a search session
- Option to save as default for returning users

This directly fixes the problem that users can't exclude Shorts from results.

### Feature 2: Duration Quick Filters

Prominent filter chips above search results: Quick (<5m) | Medium (5-20m) | Deep Dive (20m+)

#### What a learner should be able to do:

*"I want to quickly filter by how long I have to learn, so I can find a tutorial that fits my available time."*

#### Requirements:

- Duration chips visible without expanding any menu
- Single-select (pick one duration at a time)
- "All" option to clear the filter
- Can combine with "Exclude Shorts"

This fixes the problem that duration filters are buried where users don't find them.

### Future Features (Not Building Yet)

**Learning Mode** (Priority 2): A toggleable mode that hides Shorts entirely, shows completion rates instead of view counts, displays chapter navigation, and adds skill level filters. Building this later because it requires more infrastructure.

**Auto-Detect Intent** (Priority 3): AI that recognizes queries like "tutorial" and "how to" and automatically optimizes results. Building this last because it requires training models and has higher risk of false positives.

## 7. How It Looks

I've created interactive wireframes in HTML/CSS/JS. Open [youtube-wireframes.html](#) in a browser to see them.

### Wireframe 1: Enhanced Search Filters

Four screens showing the user journey:

6. User searches "Python for beginners tutorial"
7. Current results show 4 out of 6 results are Shorts (this is the problem)
8. New filter UI appears with "Exclude Shorts" toggle and duration chips
9. Filtered results show only long-form tutorials (this is the solution)

### Wireframe 2: Learning Mode

Five screens showing the full learning experience:

10. Learning Mode toggle visible in the header
11. Activation modal explaining what it does
12. Learning Mode active with suggested topics
13. Results showing completion rates, chapters, skill levels
14. Video player with chapter navigation and progress tracking

### Wireframe 3: Auto-Detect Intent

Four screens showing the AI-powered flow:

15. User searches "How to learn Python for data science"
16. Brief indicator shows AI detected learning intent
17. Results optimized with a "Recommended Learning Path" section
18. Optional prompt to save this preference

## 8. How We'll Know It's Working

### The Main Metric

**Tutorial Search Abandonment Rate:** What percentage of people search for educational content and leave YouTube within 30 seconds without clicking anything? We want to drop this from around 35% to under 25%.

### Supporting Metrics

Metric	What It Tells Us	Target
Filter Adoption Rate	Are people actually using the new filters?	>15% of educational searches
Time-to-First-Click	Are people finding content faster?	Under 30 seconds (from ~45)
Scroll Depth	Are good results appearing higher?	Under 4 results (from ~8)
Tutorial Video CTR	Are tutorials getting clicked more?	>6% (from ~4%)

### What We Need to Watch Out For

We don't want to hurt the Shorts ecosystem for people who actually want Shorts. So we're tracking:

- **Shorts Discovery Rate:** Make sure people who want Shorts can still find them easily
- **Overall Search Engagement:** Total clicks per search session shouldn't drop

## 9. What Could Go Wrong

### Risks for Enhanced Search Filters

What Might Fail	Risk Level	How We'll Handle It
Users don't find the filters	Medium-High	Put them above results, not in a menu. Add onboarding tooltip. A/B test placements.
Filtering doesn't help satisfaction	Low	Combine with quality signals like completion rates. Consider ranking changes.
Filters keep resetting	Medium	Persist within session. Add "Save as default" option.
Tutorial creators lose impressions	Low	Only apply filtering in learning contexts. Monitor creator metrics.

### Top 3 Things to Watch

19. **Filter discovery:** If adoption is under 5% after 30 days, we need to make filters more prominent and add an onboarding overlay.
20. **AI false positives (for the later feature):** If users override the AI more than 20% of the time, we need to increase the confidence threshold.
21. **Learning Mode adoption:** If activation is under 3% after 60 days, we might need to simplify it or integrate it into the main experience.

## 10. When We're Building This

### The Plan

Phase	When	What	Move On When
Phase 1	Months 1-2	Enhanced Search Filters	Filter adoption >10%
Phase 2	Months 3-4	Learning Mode	Activation >5%
Phase 3	Months 5-6	Auto-Detect Intent	Intent accuracy >85%

### Tests We'll Run

- **Test 1:** Where to put the filters (above results vs. in a menu) - 2 weeks
- **Test 2:** What to call it ("Exclude Shorts" vs. "Long Videos Only") - 2 weeks
- **Test 3:** How to activate Learning Mode (modal vs. inline toggle) - 3 weeks
- **Test 4:** AI confidence threshold (80% vs. 90%) - 3 weeks

## 11. Things We Still Need to Figure Out

### Open Questions

22. Should filter preferences sync across devices? If I set "Exclude Shorts" on my laptop, should it apply on my phone too?
23. What do we do with videos that are exactly 60 seconds? Are they Shorts or not?
24. Should Learning Mode be available on all platforms (iOS, Android, Web, TV)?
25. How do we roll this out internationally? Different markets might have different content patterns.

### Ideas for the Future

- **YouTube Learn App:** A dedicated app just for learning. Big investment but could be huge.
- **AI Tutor:** GPT-powered assistant that helps you learn from videos.
- **Creator Incentives:** Higher ad rates for educational content with good completion rates.
- **Educator Badge:** Verification program for educational creators.
- **Community Lists:** Crowd-sourced "Best Tutorials" lists.

## 12. Reference Materials

### Research Sources

- Primary: 7 user interviews (3 focused specifically on Shorts in educational search)
- Secondary: Reddit, Quora, GitHub discussions, tech forums
- Competitors: Udemy, Coursera, Khan Academy, Skillshare
- Tech scan: AI intent detection, YouTube existing features, third-party browser extensions

### All 15 Solutions I Brainstormed

#### High confidence (we should build these):

Exclude Shorts Toggle, Duration Quick Filters, Learning Mode, Auto-Detect Educational Intent, Tutorial Content Tag

#### Lower confidence (need more validation):

Completion Rate Ranking, Educator Verified Badge, AI Learning Paths, Quiz Me Feature, Split View Results

#### Moonshots (big bets for later):

YouTube Learn App, AI Tutor Integration, Creator Incentives for Depth, Personalized Learning Dashboard, Community-Curated Lists

### Wireframe Files

- Interactive wireframes: youtube-wireframes.html
- 13 total screens across 3 wireframes
- Wireframe 1: Enhanced Search Filters (4 screens)
- Wireframe 2: Learning Mode (5 screens)
- Wireframe 3: Auto-Detect Educational Intent (4 screens)

— End of Document —

YouTube Product Analysis | Cohort C48