Case Study Title: Unacademy Growth Accelerator – Boosting Tier-2/3 City Engagement & Course Completion

Overview:

This case study outlines a detailed growth initiative implemented on Unacademy to improve video watch time, course completion, and referral-driven user growth in Tier-2/3 Indian cities. These users form a large and high-potential segment for Unacademy, especially for competitive exam preparation in vernacular languages.

Problem Statement:

While Unacademy has a strong user base, metrics indicate that engagement and course completion rates among Tier-2/3 city users plateau after initial sign-up. A drop in daily active usage, limited referrals, and incomplete courses represent missed opportunities for monetization and user success.

Project Goal:

To increase:

- Daily video watch time by 15%
- Course completion rates by 12%
- Referral-based MAU by 20% Over a 12-week experimental period focused on Tier-2/3 users.

Target Users:

The primary focus of this growth project is on Tier-2 and Tier-3 city learners in India, who represent a rapidly growing digital audience in the ed-tech sector. These users typically include:

1. Competitive Exam Aspirants: Students preparing for UPSC, SSC, Banking, Railway, and NEET/JEE.
2. Language Preferences: Users who prefer content in regional languages such as Hindi, Telugu, Tamil, Marathi, and Bengali.
3. Device Usage: Majority access Unacademy via low-to-mid range Android smartphones, often on mobile data connections.
4. Socio-Economic Background: Many come from modest-income families with limited access to coaching centers in their cities.

Behavioral Characteristics:

- ❖ Motivated but need consistent nudging to stay on track.
- ❖ Tend to engage more with live classes, mentorship, and community-driven features.
- ❖ Frequently influenced by peer recommendations and regional influencer endorsements.

Understanding their needs and constraints was central to developing experiments that were empathetic, accessible, and designed to maximize value in a resource conscious environment.

Step 1: Analytics Audit & Baseline

Objective: Establish a clear understanding of existing user behavior across different cohorts (Tier-1 vs Tier-2/3), identify drop-off points, and gather data to form growth hypotheses.

1. Data Segmentation:

We start by dividing the user base into cohorts based on:-

- ➔ Geographic Location: Using IP data and self-declared information to distinguish Tier-1 vs Tier-2/3 users.
- ➔ Language Preference: Based on app language setting or content watched.
- ➔ Device and OS Type: Android/iOS versions, screen size, and bandwidth capabilities.

2. Identifying Key User Behavior Metrics:

To understand how users interact with the platform, we define a set of behavior metrics:-

- Engagement Metrics:
  - ➔ Daily Active Users (DAU): Users who log in and perform key actions.
  - ➔ Monthly Active Users (MAU)
  - ➔ Average Session Duration: Total time spent per session.
  - ➔ Session Frequency: Average number of sessions per day/week.
- Learning Behavior:
  - ➔ Video Watch Time: Minutes of content consumed per user/day.
  - ➔ Drop-off Rate: Percentage of users who stop watching after each video checkpoint (e.g., Video 1 → Video 3).
  - ➔ Course Completion Rate: Ratio of users who complete all modules of a course.
- Viral Coefficient Indicators:
  - ➔ Referral Rate: Number of invites sent per user.
  - ➔ Referral Conversion: % of invited users who registered.
- Notification Response:
  - ➔ Push Notification Open Rate: % of users opening messages.

- ➔ Click-Through Rate (CTR): % of opened messages that result in key actions (e.g., video view, quiz attempt).

3. Tools and Techniques Use

Mixpanel:

1. Event Setting: Tracking key in-app behaviors such as video_played, course_completed, invite_sent, session_start.
2. Funnels: Defined funnel stages to trace user flow

Step 1: Course Enrollment

Step 2: First Video Watched

Step 3: Third Video Watched

Step 4: Test Attempted

Step 5: Course Completion

3. Cohort Analysis: Track retention and engagement for users grouped by geography and language.
4. Retention Charts: Daily/weekly retention trends segmented by Tier.

Google Analytics (GA4):

1. Audience Reports: Device category, location, app version.
2. Behavior Flow: Visual paths users take, including entry and exit pages.
3. Acquisition Overview: Breaks down traffic sources—paid, direct, referral, organic.

These patterns helped formulate targeted experiments to reduce friction and improve personalized engagement.

Step 2: Hypothesis Development & Experiment Design

<u>Hypotheses:</u>

1. Weekly personalized study plans delivered via push/email will increase course engagement and completion.
2. Adding a referral badge on the profile page will encourage peer-to-peer invites
3. Sending vernacular reminder messages will lead to higher CTRs and reactivations among dormant users in Tier-2/3 cities.

Practical Experiment Design:

To validate the above hypotheses, we designed a controlled A/B test setup. Users were randomly assigned into two groups from the same Tier-2/3 cohorts, ensuring balanced samples in terms of language, geography, and device types.

Group A (Test Group):

- Received weekly study plan push notifications(maybe meme notifications) based on course progress and remaining syllabus.
- Had a referral badge visible on their user profile with a message: "Refer a friend and unlock premium tests!"
- Received reminder notifications and nudges in their regional/vernacular language (based on language preference from profile or past content).

Group B (Control Group):

- Continued with standard notification flows.
- No access to referral badges or personalized nudges.
- Notifications sent only in default app language (mostly English or Hindi).

Derived Metrics to Track Impact:

We tracked five key metrics across both groups to assess the impact of the interventions.

First, I monitored **average video watch time** per user per day, which served as a core engagement metric to determine if users in the test group were consuming more learning content than those in the control group.

Second, I tracked the **course completion rate** to evaluate whether the study plans and personalized nudges helped users stay consistent and complete their enrolled courses more frequently.

Third, I measured the **click-through rate (CTR)** on push notifications to assess whether regional language messages led to higher interaction rates compared to generic notifications.

Fourth, I calculated the **number of referral invites sent per user** to see if the visibility of the referral badge on the profile encouraged more users to share Unacademy with their peers.

Finally, we tracked the **referral conversion rate**, which measured how many of the invited users signed up and became active learners on the platform.

These metrics gave us a comprehensive view of changes in user behavior, engagement levels, and viral growth.

Step 4: Monitoring & Iteration

We conducted daily and weekly monitoring using Mixpanel dashboards and GA4 insights to track key performance indicators in real time. This allowed us to make timely observations, catch early signals, and flag anomalies.

With the help of the A/B test, I conducted a checkpoint analysis to answer critical questions:

1. Are Group A users showing statistically significant improvements across engagement metrics compared to Group B?
2. What is the week-on-week trend in video watch time, course completion, and referral activity?
3. Which regions or language segments are showing the highest engagement and uplift?
4. Are push notification CTRs improving specifically due to vernacular content?
5. Are any user segments showing unexpected drop-offs or negative responses?
6. Do users in Group A return more frequently to the app compared to Group B?
7. Are technical issues (e.g. delayed notifications, broken links) affecting experiment performance?
8. Which experiments should be scaled, paused, or redesigned for the next sprint?

Step 5: Growth Loops & Scaling

This was the centerpiece of our project: how to engineer and scale sustainable, self-reinforcing growth mechanisms. Once initial user motivation is captured through personalized engagement, we aimed to design loops that would generate compounding user acquisition and retention with minimal manual input.

1. Referral Badge → Gamified Loop :

We hypothesized that the referral badge would lead to increased sharing behavior. To amplify this behavior, we planned a gamified leaderboard system. Users would earn points for each successful referral and unlock rewards such as free tests, badges, and mentorship tokens. The leaderboard could be localized by region—users in Bihar could see their rank among peers in the same area—thus increasing competitiveness and social visibility.

2. Vernacular Nudges → Automated Regional Scaling
Regional-language nudges were expected to lead to higher engagement. To make this scalable, we proposed automating the segmentation of users based on preferred language settings and previous behavior (e.g., which videos they watched in which language). This would allow the marketing team to automate push notification campaigns with relevant language and tone at scale, increasing user receptiveness without additional manual work.

3. Social Proof → Shareable Achievements

To spark organic growth, we planned shareable certificates and badges that students could distribute on WhatsApp and Instagram. These would highlight user names, achievements, and milestones such as "Top 10%" status or "Completed Advanced Math Module." These social elements would create visibility among peer networks, drawing in new users from similar backgrounds.

4. WhatsApp Study Circles → Community-Based Retention

Once users reached a certain threshold (e.g., 50% course completion), they would be invited to join small WhatsApp Study Circles moderated by mentors or active learners. These would include daily quizzes, peer questions, and motivational messages. Users who became regular contributors could also become brand advocates and referral drivers, completing the feedback loop.

5. Loop Architecture Summary

Trigger: Personalized nudges (study plans, vernacular reminders)

Action: User engages with content, completes learning milestones

Reward: Badges, certificates, referral perks.

Share: Visible achievements and referral invites distributed via social media or messaging platforms

Feedback Loop: New users onboard through referrals, receive nudges, and begin their own loop cycle

These loops were designed to make user acquisition and engagement self-sustaining. Rather than relying solely on paid campaigns we structured the product to allow users to become both the consumer and promoter of value.In scaling these loops, we laid the foundation for a repeatable growth engine tailored specifically for Tier-2/3 learners—users who don’t just respond to ads, but to recognition, community, and shared success(targeting the emotion of the user group).