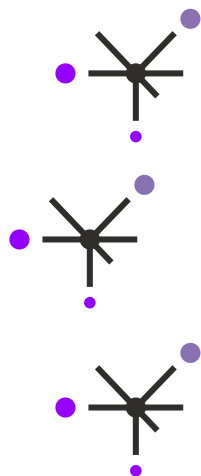


GROWTH INVESTIGATION

Registrations nearly doubled. Paying users didn't.

A five-day investigation into why more sign-ups stopped turning into more customers.

Company	Parla, a language-learning app (fictional)
Question	Why did paying users stop growing while registrations rose?
Data	App Store transactions and search data, analytics, referral logs. All synthetic.
Prepared by	Alex Severianov



This is a sample. The company, people and numbers are invented. The problems, the checks and the reasoning come from real growth investigations I have done.

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Executive summary

Background

Parla's registrations rose from about 4,150 a month in the first quarter to 7,900 in April. Over the same months, paying users stopped growing: 2,447 in April, 2,420 in June. In May the team raised the monthly price and suspected that was the cause.

Objective

Explain why more registrations did not bring more paying users, check whether the price increase was responsible, and recommend what to change first.

What was done

I rebuilt paying users month by month from App Store transactions, split registrations and payments by source, reviewed the referral program, compared App Store search data and keyword rankings around each release, and tested conversion before and after the price change.

Key findings

- **Fewer new payers, not more cancellations.** Each month about 6.2% of paying users left, before and after the price change. New payers fell from 192 in April to 131 in June.
- **The referral promo inflated registrations.** It brought 12,400 sign-ups and 35 payers (0.28%). Rewards worth about €24,780 went out, roughly €708 per payer.
- **Organic search fell after an App Store update.** Version 3.4 changed the subtitle and lost the “learn spanish” ranking (#4 to #29). Search downloads dropped 48%.
- **The price increase was not the problem.** Conversion stayed at 3.9% vs 3.9% ($p = 0.98$), more people chose annual, and first-payment value per new payer rose.

Conclusion

Paying users stalled because Parla lost its best source of new customers, App Store search, at the same time as a referral promo made registrations look healthy. The price change was a coincidence in timing.

Recommendations

Restore the lost keywords in the next App Store version. Change the referral reward to trigger on a friend's first payment, with a cap per referrer. Keep the new price, and watch departures in August, when existing subscribers move to it. Track new payers by source each month, not registrations.

01_

What the team believed.
What the data shows.

Belief	What I found	Verdict
Growth is strong: registrations up	Registrations peaked at 1.9× the first quarter. 61% of May–June registrations came from referral links, which converted at 0.28%.	Misleading
More people are cancelling	Departures stayed at 6.0%–6.2% a month, every month from January to June.	Not the cause
The price increase hurt conversion	3.9% before, 3.9% after (p = 0.98). Annual share rose from 38% to 47%.	Not the cause
The referral promo is working	35 payers from 12,400 sign-ups. 38% of referral accounts share a device with another account.	Costly
(Not on anyone’s list)	App Store search downloads fell 48% right after version 3.4 changed the subtitle.	Main cause

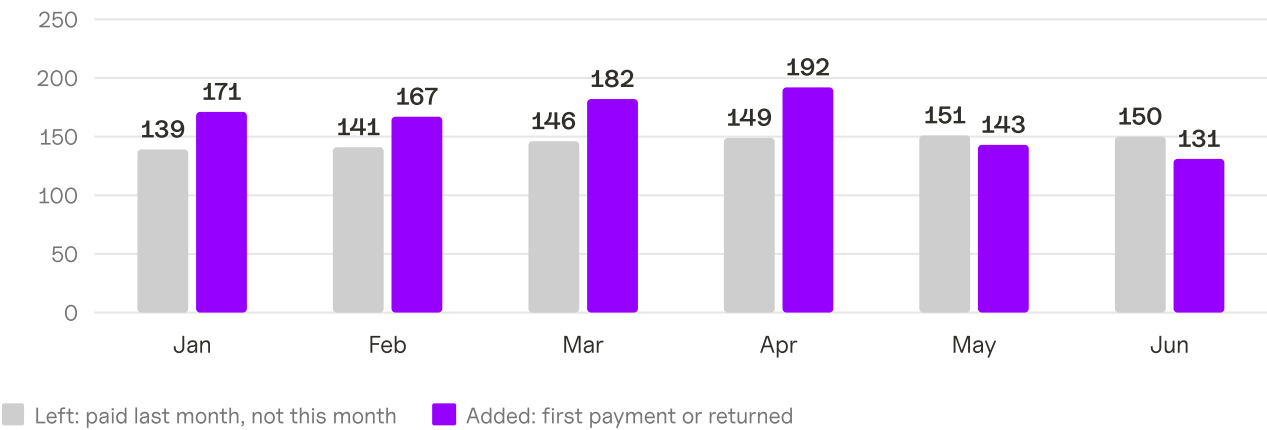
RECOMMENDATION

Fix the App Store subtitle and keywords first: it is the biggest loss and the cheapest fix. Then change how referral rewards are earned. Leave the price as it is.

02_

Paying users stalled because fewer arrived.

Before looking for causes, I rebuilt the paying-user count from App Store transactions: who paid last month, who didn't pay this month, and who paid for the first time or came back.



Month	Previous – left + added = current	Left / previous	Added: new / referral / returned	Net
Jan	2,310 – 139 + 171 = 2,342	6.0%	159 / 0 / 12	+32
Feb	2,342 – 141 + 167 = 2,368	6.0%	156 / 0 / 11	+26
Mar	2,368 – 146 + 182 = 2,404	6.2%	169 / 0 / 13	+36
Apr	2,404 – 149 + 192 = 2,447	6.2%	171 / 9 / 12	+43
May	2,447 – 151 + 143 = 2,439	6.2%	117 / 14 / 12	-8
Jun	2,439 – 150 + 131 = 2,420	6.2%	105 / 12 / 14	-19

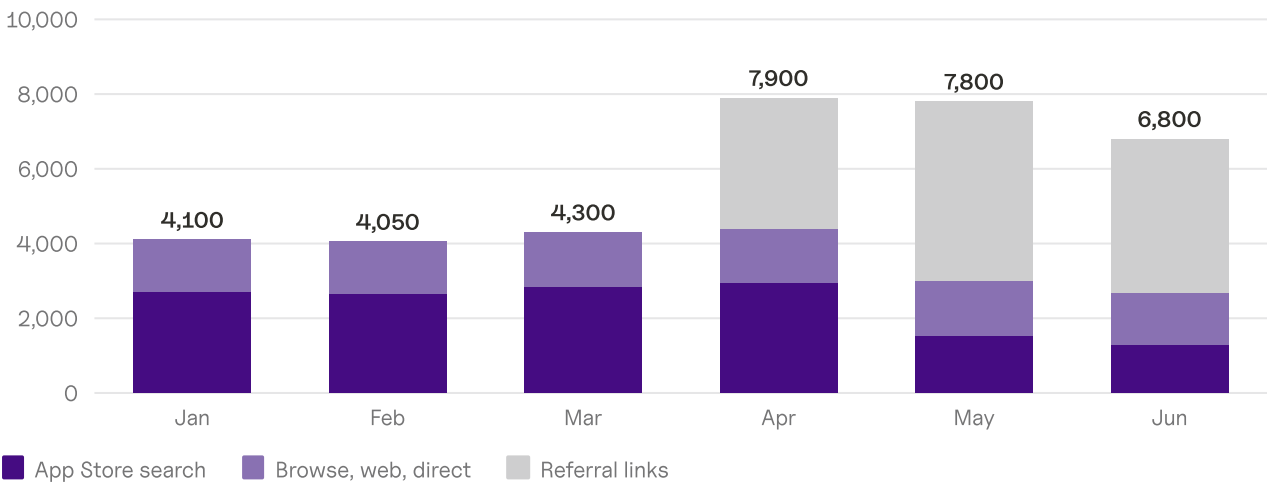
The leaving side barely moved. The arriving side dropped. At about 150 departures a month, Parla needs that many new payers just to stay flat. In June it got 131.

“Left” means paid access last month and none this month, not the day someone pressed cancel. Annual subscribers only appear in “left” when their year ends. Counts are reconstructed from transactions and match the subscription dashboard within 0.5%.

03_

The referral promo bought registrations, not customers.

From April, existing users earned a free month for every friend who signed up through their link and finished a first lesson. Registrations jumped straight away.



April–June	Referral	Everything else
Registrations	12,400	10,100
First payment	35 0.28%	393 3.89%
Accounts sharing a device with another account	4,710 38%	under 2%

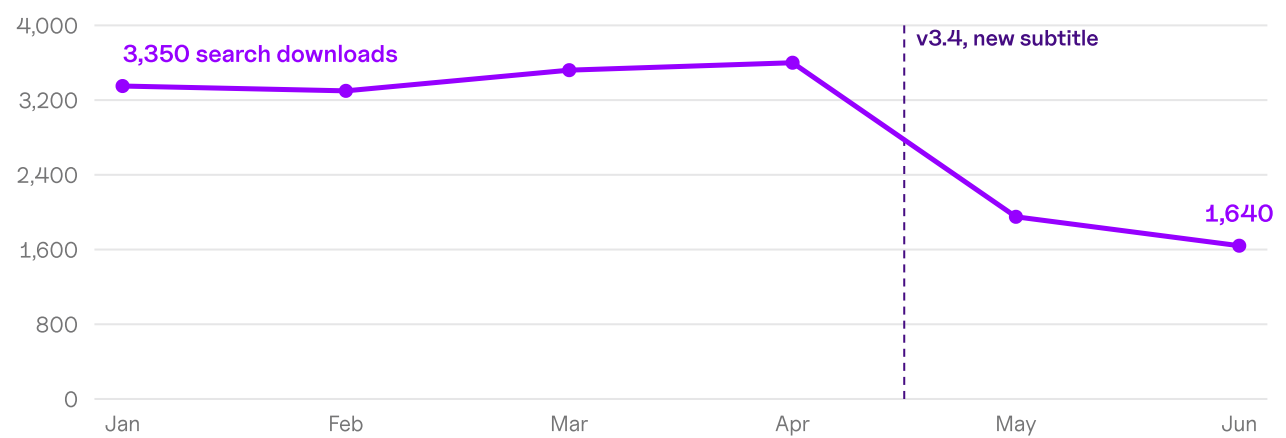
The reward attracted people who wanted the free month, not the app. 51 referrers, the top 5%, produced 41% of all referral sign-ups. Many friends were second accounts on the same phone. 2,950 first lessons triggered 2,950 free months, worth about €24,780. That is roughly **€708 for each paying customer** the program brought.

Reward value uses Parla’s average revenue per subscriber-month (€8.40), so it is an estimate of revenue given away, not cash spent. Some referred friends might have joined anyway; that would make the program look even weaker.

04_

Organic search fell when the subtitle changed.

Search is Parla’s best channel: people who type “learn spanish” already know what they want. On 28 April, version 3.4 shipped with a new App Store subtitle, “Speak any language in 10 minutes a day”, replacing “Learn Spanish, French & Italian”. The subtitle is one of the few places Apple reads keywords from.



Keyword	Average rank, March	Average rank, June
learn spanish	#4	#29
spanish lessons	#6	#34
learn italian	#5	#22
parla (brand)	#1	#1

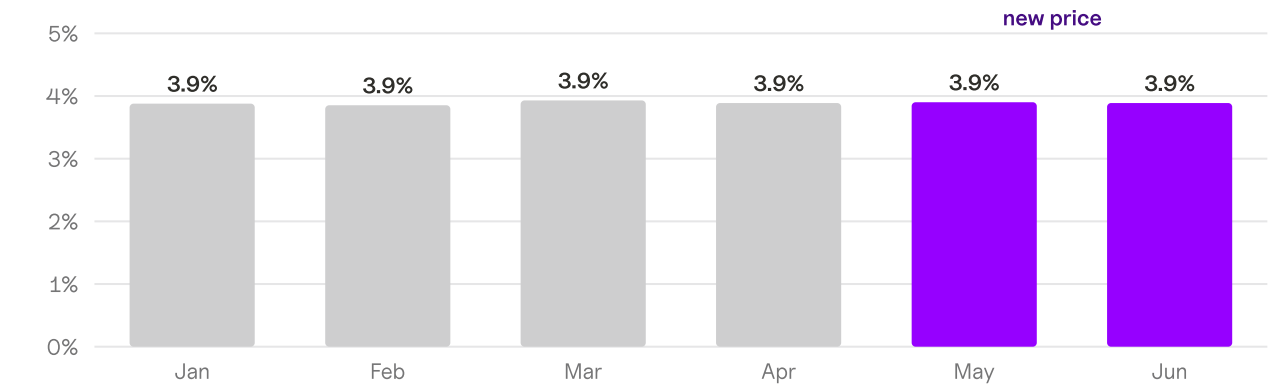
Search downloads dropped 48%, and search registrations 49%. Registrations from every other organic source stayed flat. The brand keyword held its #1 spot, and search popularity for “learn spanish” didn’t change (61 vs 60). **Demand didn’t fall. Parla stopped showing up for it.**

At the usual conversion rate, the lost search traffic accounts for about 53 fewer new payers a month, which is most of the gap in 02_.

05.

The price increase wasn't the problem.

On 1 May, new subscribers started paying €12.99 a month instead of €9.99. Annual stayed at €79.99. Because the payer drop started in May, the price was the obvious suspect. To test it fairly, I left out referral sign-ups and compared conversion of all other registrations.



First payment within 30 days, as a share of non-referral registrations

Non-referral new payers	Jan–Apr, €9.99	May–Jun, €12.99	
Conversion	3.89%	3.89%	p = 0.98
Chose annual	38.0% 249/655	46.8% 104/222	p = 0.02
Average first payment	€36.60	€44.38	+21%

The same share of people paid, and more of them chose annual. The higher monthly price made the annual plan look like better value. Fewer people paid in May only because fewer people arrived from search.

One open question: existing monthly subscribers keep the old price until August. Their departure rate after the change is the real test of the price, and it can't be measured yet.

06_

What checked out.

Before explaining a drop, I checked that it was real, and ruled out the usual alternatives.

- ✓ **Payer counts are real.** Rebuilt from App Store transactions, they match the subscription dashboard within 0.5%.
- ✓ **Tracking didn’t change.** Version 3.4 changed no registration or payment events. Event counts match backend sign-ups in every month.
- ✓ **Market demand is stable.** Brand search held #1, and keyword popularity for “learn spanish” stayed flat. No new competitor entered the top 5.
- ✓ **Departures are steady.** 6.0%–6.2% every month, with no jump after the price change.
- ! **Attribution is by link, not by intent.** Referral sign-ups are counted by invite link. Some would have found Parla anyway.

07_

What I would do next.

This week	Bring “Learn Spanish, French & Italian” back into the subtitle and keyword field, and submit it with the next version. It’s a metadata change, no code.
Referral	Reward the referrer when the friend makes a first payment, not a first lesson. Cap rewards at five a month, and block rewards for accounts on the same device.
Price	Keep €12.99. Watch monthly departures in August and September, when existing subscribers move to the new price.
Measurement	Report new payers by source every month next to departures. At about 150 departures, that is the number to beat.
Releases	Add App Store metadata to the release checklist, with a keyword-rank check one week after each version.

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How this investigation was done.

Data used

App Store transactions and subscription events, App Store Connect downloads by source, keyword-rank history from an ASO tool, product analytics, backend registrations, and referral program logs.

Definitions

Paying user: paid access at any point in the month.

Left: paid last month, not this month. **Added:** first payment, or a former subscriber paying again.

Conversion: first payment within 30 days of registration.

Statistics

Two-sided tests on proportions, 5% threshold. Revenue figures are list prices before Apple's commission and taxes.

Limits

Keyword ranks are averages from a third-party tool, not Apple data. The referral reward value is revenue given away, not cash. Long-term value of annual vs monthly payers needs renewal data that doesn't exist yet.

Time

Five days: rebuilding paying users from transactions, splitting every number by source, testing each explanation against the data, and writing this up.

What you get

An executive summary with the answer, a report like this one with every number traceable, and a call to go through it with the team.



Growing on paper, not in revenue?

Send me your numbers. I'll tell you where I would look first.

x91tech.com · Alex Severianov