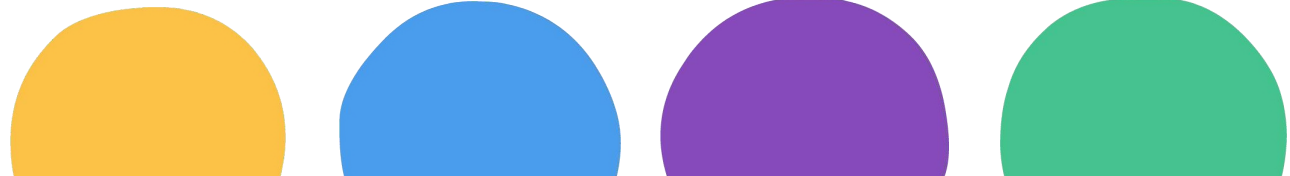


App-Based Education and the Principles of Learning

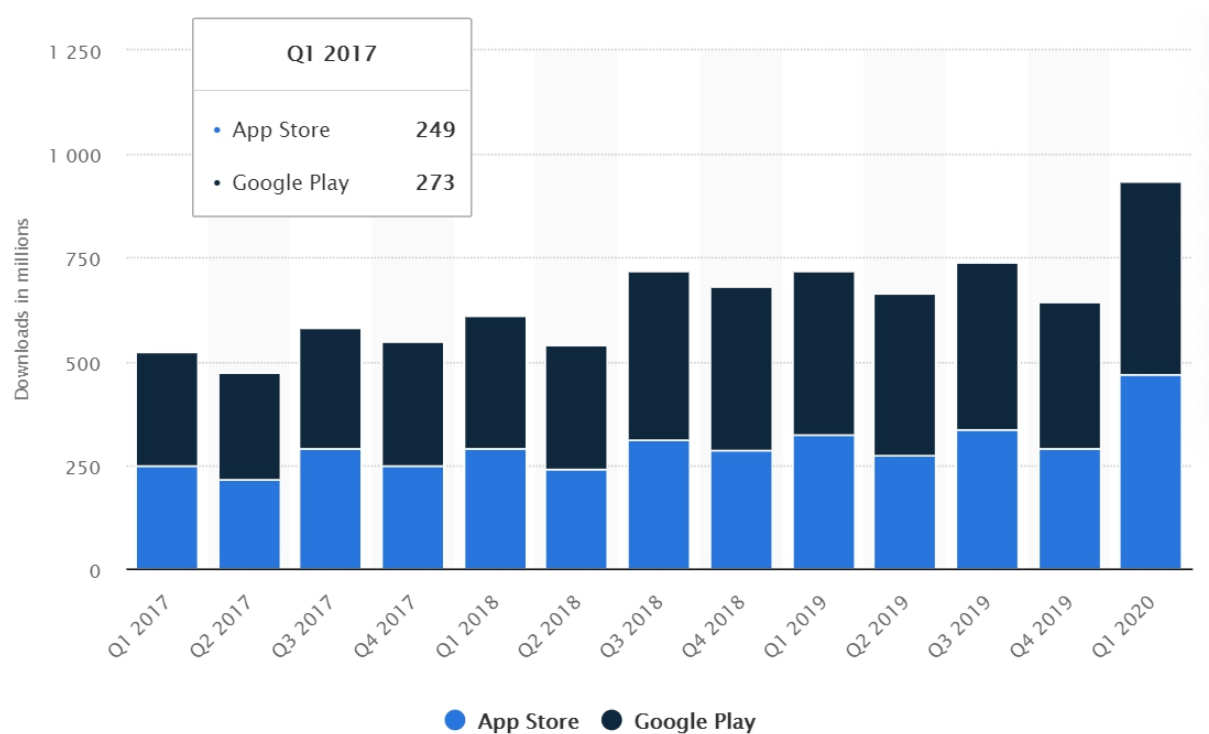
by Jake Whiddon



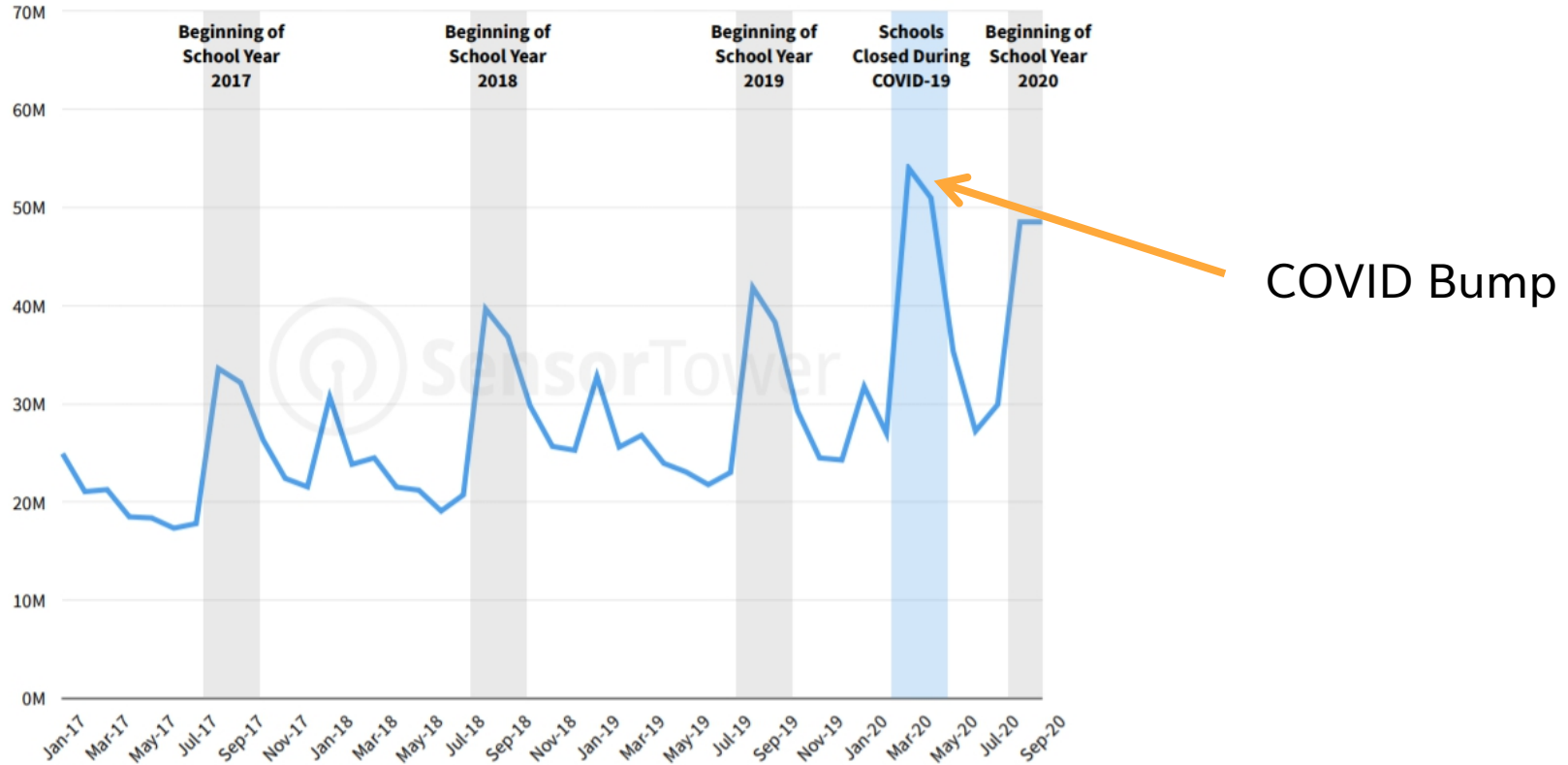
80,000+ educational apps in the stores!













Worldwide mobile education app downloads from 2017 to 2020



U.S. Education App Downloads



Top Education Apps in the U.S. for 2018 by Downloads

- 1  Remind
- 2  Photomath
- 3  Duolingo
- 4  Google Classroom
- 5  ClassDojo
- 6  Kahoot!
- 7  Quizlet
- 8  Google Arts & Culture
- 9  Peak
- 10  Canvas Student

- Coding
- Math
- Language Learning
- Class Management
- Quizzes

Do these apps use principles of learning?



What should schools and teachers look for in educational apps?



Let's look at some research!

Criteria

Opportunities
for **input** and
output

Minds On
(Active)
Learning

Engagement
in the learning
(Motivation)

Meaningful
Learning

Social
Interaction

Scaffolding
of Learning
Targets

Research on 4 leading language learning apps

Key findings!

Overuse of passive activities

Limited social interaction

Limited use of data

Lacking context at times

Highly motivating

Scaffolding

Personal learning journeys

Link homes and schools

Learning insights

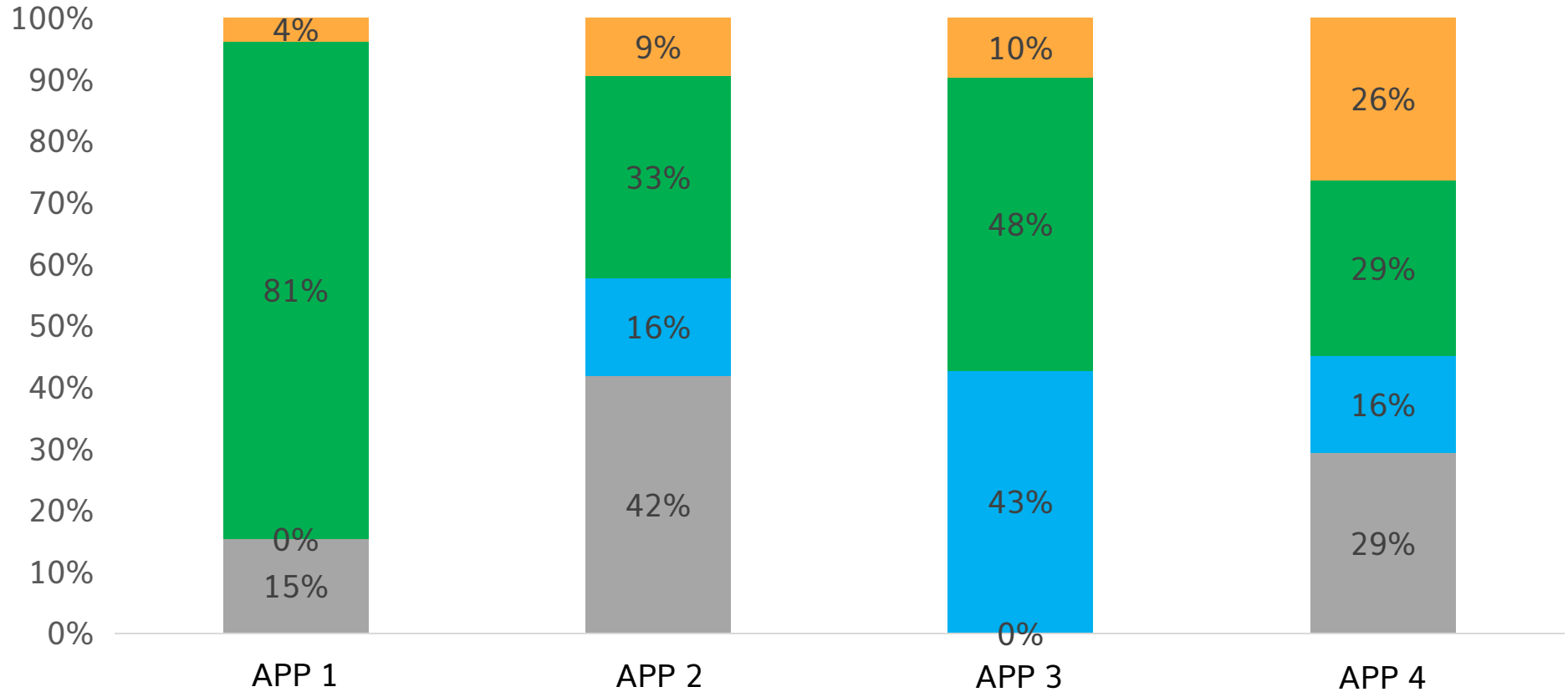
Micro-assessments

Minds On - Active Learning

- **Assessment Activity** Interactive assessed activities providing feedback on learning
- **Experience Activity** Context setting, interaction, input, not assessed
- **Passive Activity** Videos with no interaction
- **Other** Menu, loading time, waiting time

Activity Type by % of Time in app (per unit)

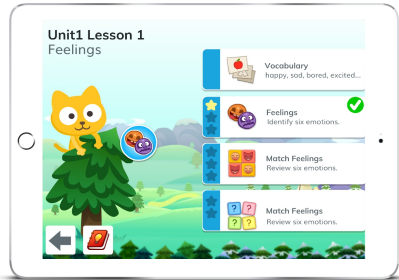
■ Passive Activity ■ Experience Activity ■ Assessment Activity ■ Other



Assessment does not equal boring tests!

Student Experience

Every interaction is an opportunity to assess learning.



Why do we want a lot of assessment activities?

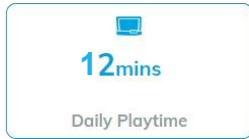
Learning data

but more importantly...

Learning Insights!

Parents and students

Ernesto



colour

new

beautiful

old

clean

dirty



kick



jog



start



run



fly



swim

You learned:



Time

27.1 

27.1 secs



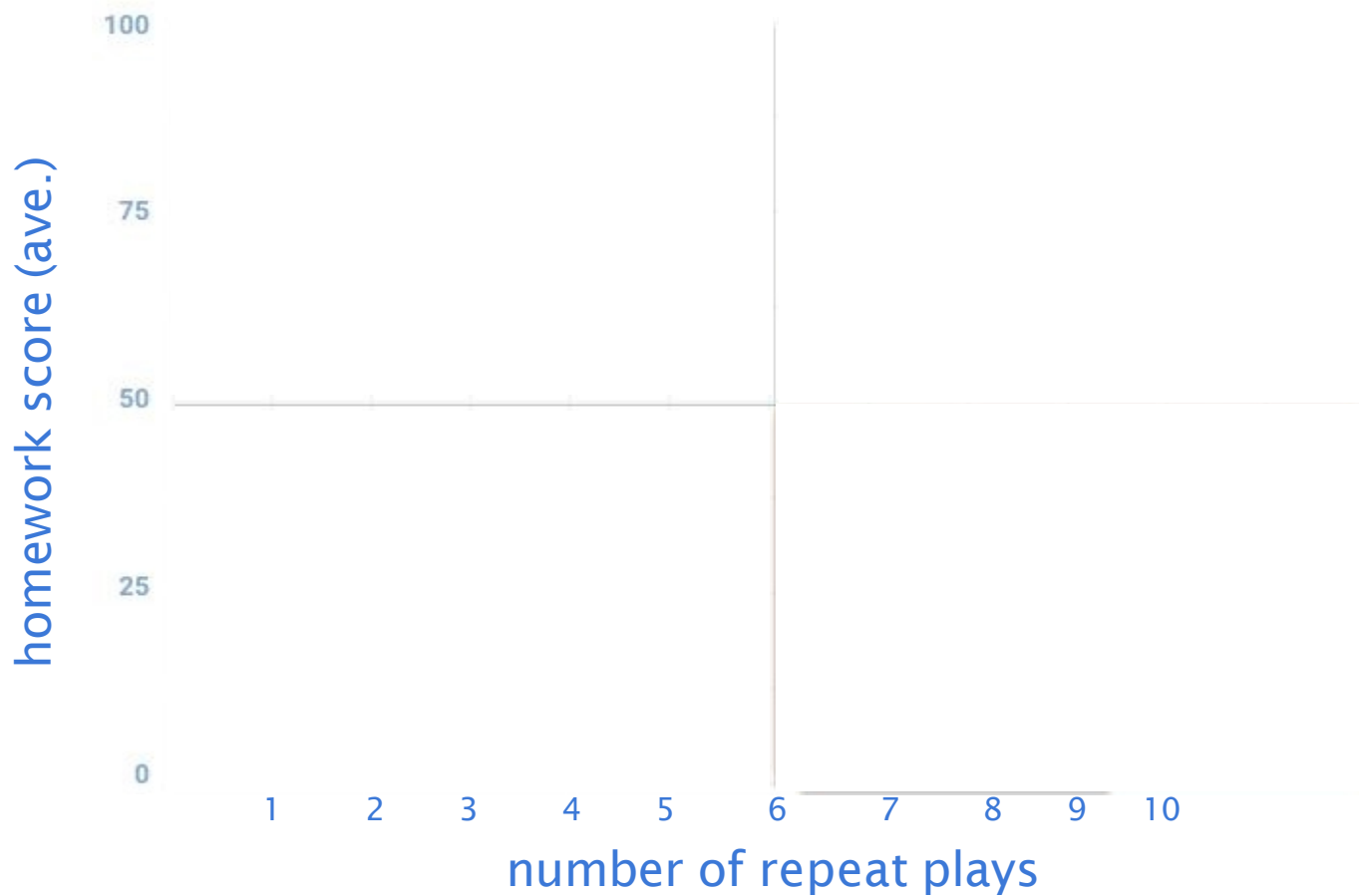
Quality insights into learning



Not just what the student did

but **how** they did it
and **how well** they performed!

Which students need my help?



Jake's top tips for choosing apps

- Ensure limited passive content
- Must encourage **active learning**
- Links between **home and school**
- Provide **learning insights**
- Presents **learning in context**

