THE CUBING
COMMUNITY
MEGASURVEY

2022

ACKNOWLEDGEMENTS

This work follows in the footsteps of the r/Cubers tradition of yearly Megasurveys, of which this is the sixth instalment. Like last year, we have integrated other communities, who do not always have access to the same online spaces. We're happy to present the results of this survey as a whole, reuniting several communities

The following people contributed to this project:

- **The r/Cubers mods**: have been running the survey for the past 5 years, wrote and managed the bulk of it and proofread this whole monster of a document. Thank you naliuj, gilzu, stewy, niijiro, topppits, BibbitZ, GreenCrossOnLeft, g253 and pianocube93!

- **The Speedsolving.com community**: kindly sent out the link to boost survey responses and responded in droves to fill in this beast

- **Shawn "SpeedCubeReview" Boucke** for plunging head first into this mess of a data dump and coming out with a ton of suggestions, questions, challenges and ideas, and **Ming Dao "Tingman" Ting** for taking upon himself the ingrate task of summarising this into a small, digestible bit of media!
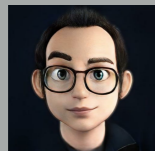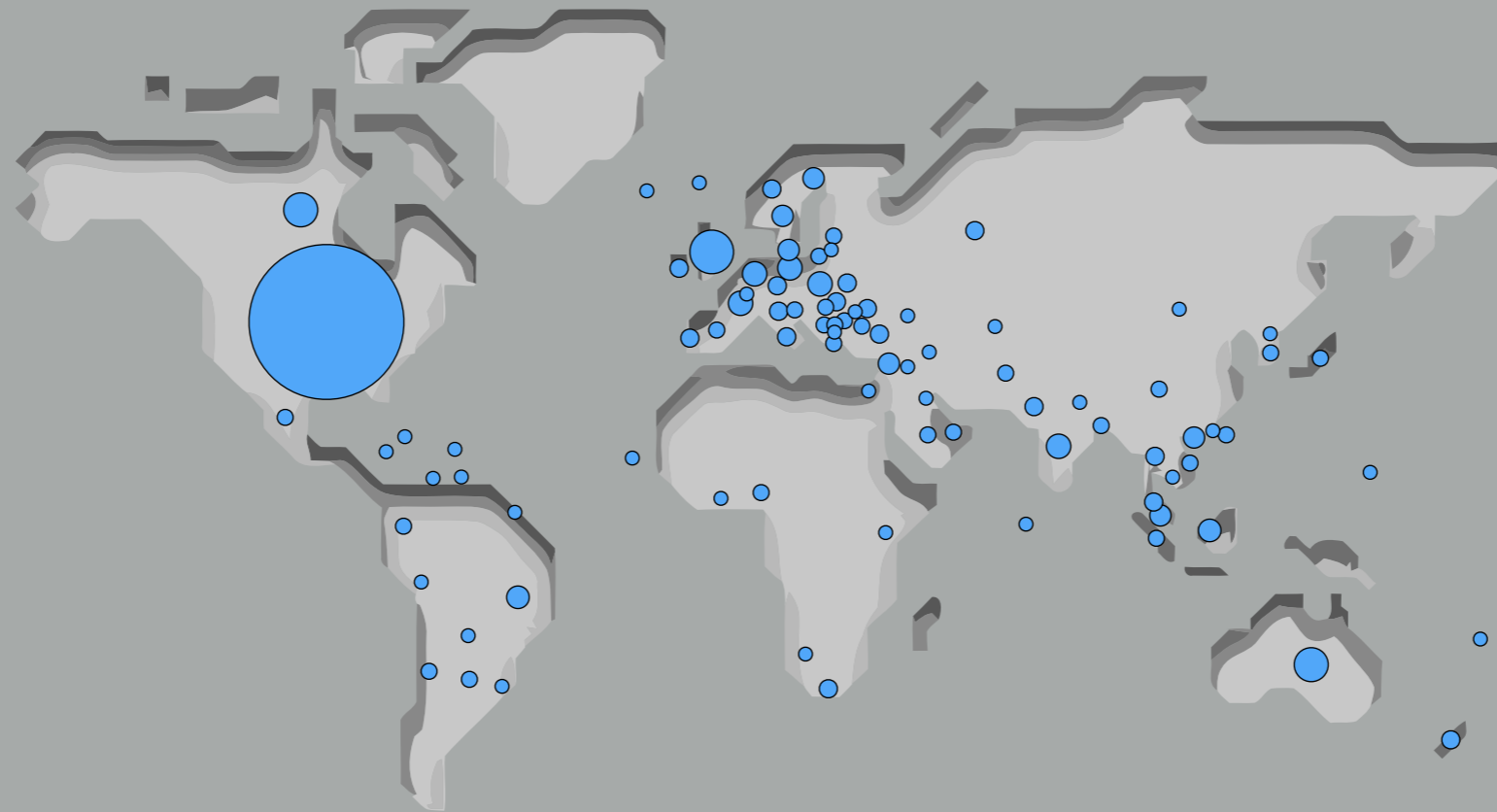
AND BEFORE WE FORGET...

A Very Big thank you to the
1410 participants who filled in the
survey from all the sides of the globe

Yet again, you have transformed this into a serious dataset with a sample size that is on par with professional large-scale surveys in politics, psychology and behavioural sciences

THE DATASET IN NUMBERS : MILLENNIA WORTH OF EXPERIENCE, A RIDICULOUS AMOUNT OF CUBES, AND WAY TOO MUCH TIME TO SPARE FOR SURVEYS

1'410
respondents
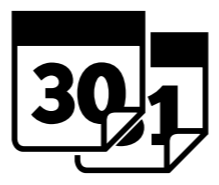
6'425 years
of cubing xp

14'487 puzzles
in our collections

653 hours
of survey time

65 hours
of data analysis
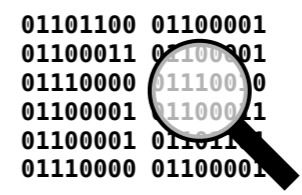
314'241
datapoints
(excl. Cube Collections)

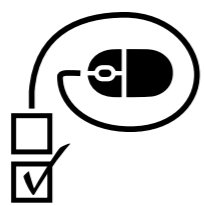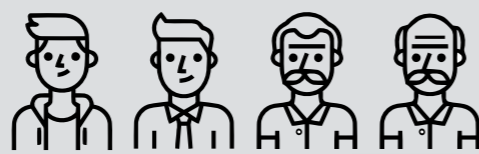# SOME JUST OPENED THE SURVEY, SOME GOT PAST THE FIRST FEW PAGES, MANY GOT ALL THE WAY TO THE END!

COMPLETION OF SURVEY PAGES (# OF PARTICIPANTS)

I clicked by error

You beautiful basterds

Ooof there's actual questions?

The stamina war

653
11
422
55
44
8
21
11
25
26
13
785

0 | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | Finished

Survey page reached (out of 10 pages)

SURVEY COMPLETION TIME (DISTRIBUTION)

Most people took between 20 and 40 minutes
(median : 29m53s)

25% 50% 75%

0s | 20m | 40m | 1h | 1h 20m | 1h 40m | 2h

WE THE CUBERS

A POPULATION THAT SKEWS MOSTLY YOUNG AND MALE, BUT NOT ONLY! SINCE LAST YEAR, WE'VE BEEN GETTING OLDER T_T

AGE OF THE ONLINE CUBING COMMUNITY

Age	Percentage
14-	25%
15-16	22%
17-18	16%
19-20	9%
21-25	12%
26-30	6%
31-35	3%
36-40	3%
41-50	3%
51+	0%

AVERAGE

2021
18.6
years old

2022
19.4
years old

GENDER SPLITS

85%
Gents

7%
Fabulous

9%
Ladies

3X3 AVERAGE BY GENDER

16.86

17.05

17.67
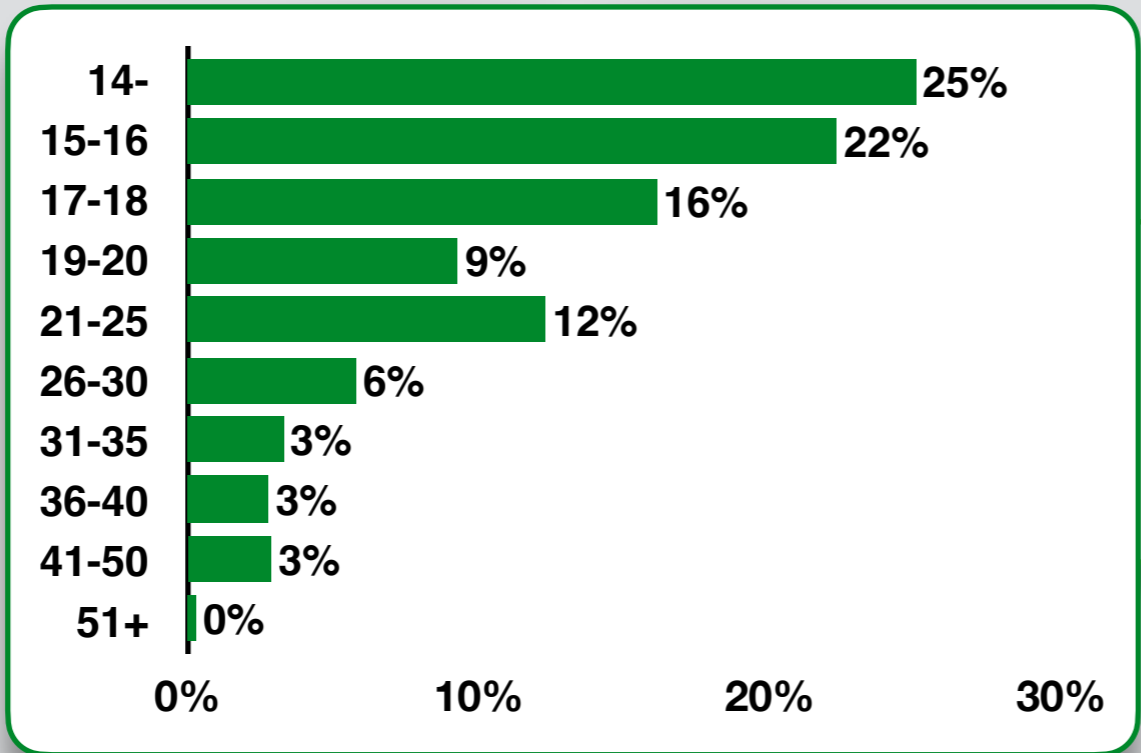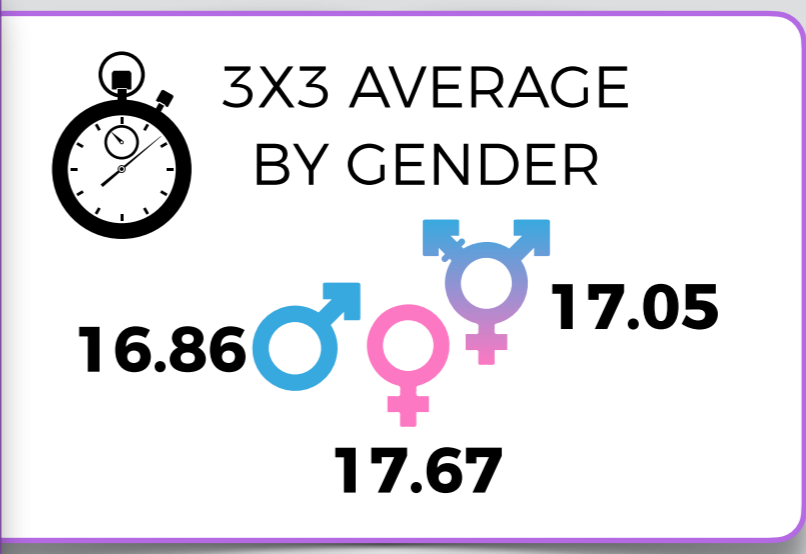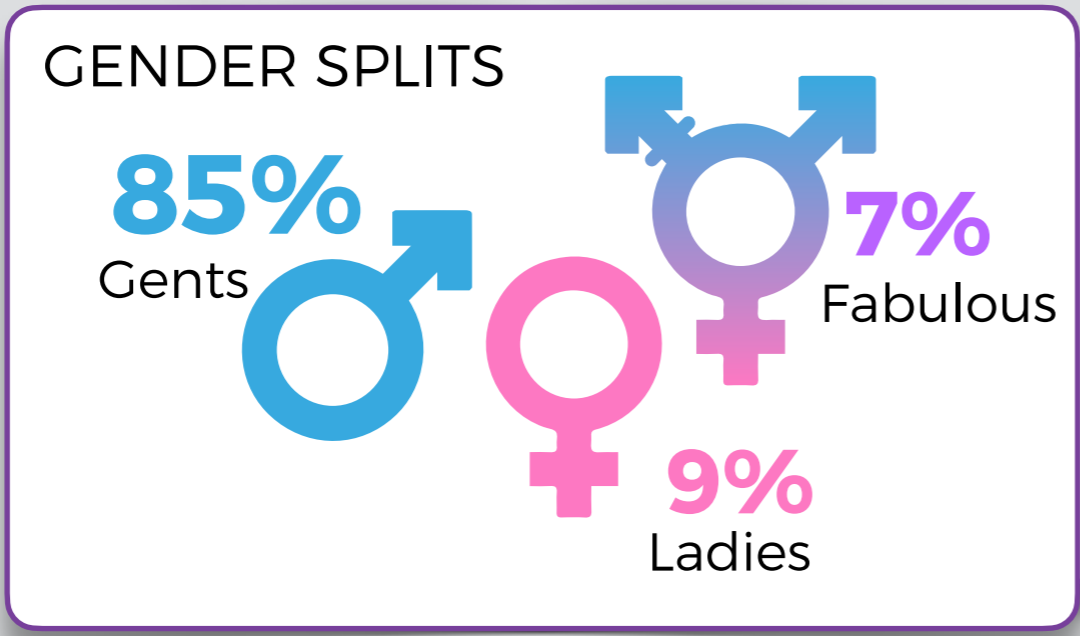
And that's why boys are better than... shhhhhhh

7

MOST OF US ARE RIGHT-HANDED, SOME LEFT-HANDED, AND A TINY BIT ARE AMBIDEXTROUS (ALSO, WE'VE BEEN A BIT MORE HONEST IN OUR ANSWERS THAN LAST YEAR!)

HANDEDNESS OF THE ONLINE CUBING COMMUNITY

Left Handed
11%
2021 : 8%

Right Handed
86%
2021 : 83%

3%
Ambidextrous
2021 : 9%

3X3 AVERAGE BY HANDEDNESS

17.00 **17.00**
16.90
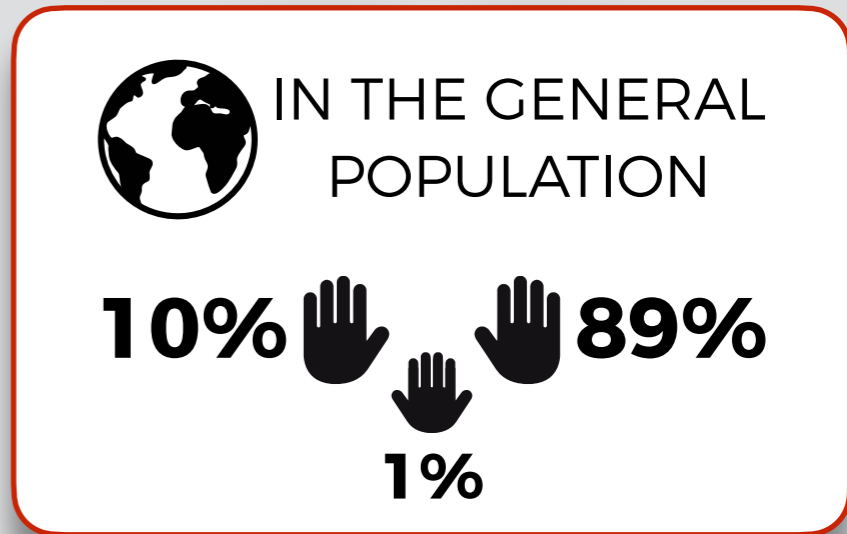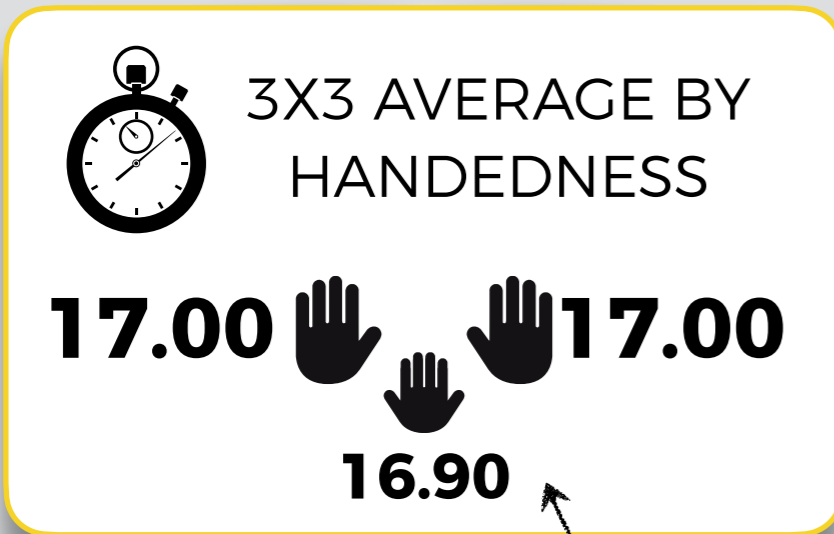
Call them whatever we want, but ambidextrous people are definitely a bit more dextrous than the others. As for Lefty/Righty, there is no difference!

IN THE GENERAL POPULATION

10% **89%**
1%

AMBIDEXTERITY BY CUBING EXPERIENCE

9%
2% 2% 1% 4% 5% 2%

< 3m ~6m 1 y 1.5 y 2 y 3 y 4+ y
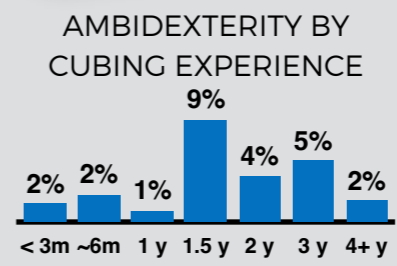
No significant correlation between ambidextrousness and cubing experience (or age, for that matter)

8

WE DISCOVERED CUBING ON AVERAGE 4 YEARS AGO, BUT STARTED SPEEDCUBING MORE RECENTLY; SINCE LAST YEAR, NOT AS MUCH NEW BLOOD HAS COME IN!

HOW LONG AGO DID YOU GET INTERESTED IN CUBING?

1 month	2%
3 months	4%
6 months	7%
1 y	10%
1.5 y	8%
2 y	13%
3 y	13%
4 y	11%
5 y	10%
6+ y	13%
10+ y	6%
15+ y	1%
In the 80's	1%

Average:

2021	2022
3y 10m	4y 1m

Discovered cubing in the past year

2021	2022
23.5%	23.2%
	-1%

71%
Started Speedcubing as soon as they discovered cubing

29%
Started Speedcubing after a while

On average:
4.2 years
after discovering cubing in general

HOW LONG AGO DID YOU START **SPEED**CUBING?

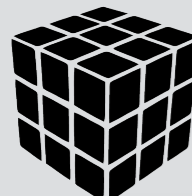|	
1 month	3%
3 months	7%
6 months	14%
1 y	16%
1.5 y	10%
2 y	13%
3 y	13%
4 y	7%
5 y	5%
6+ y	11%
10+ y	3%
15+ y	1%
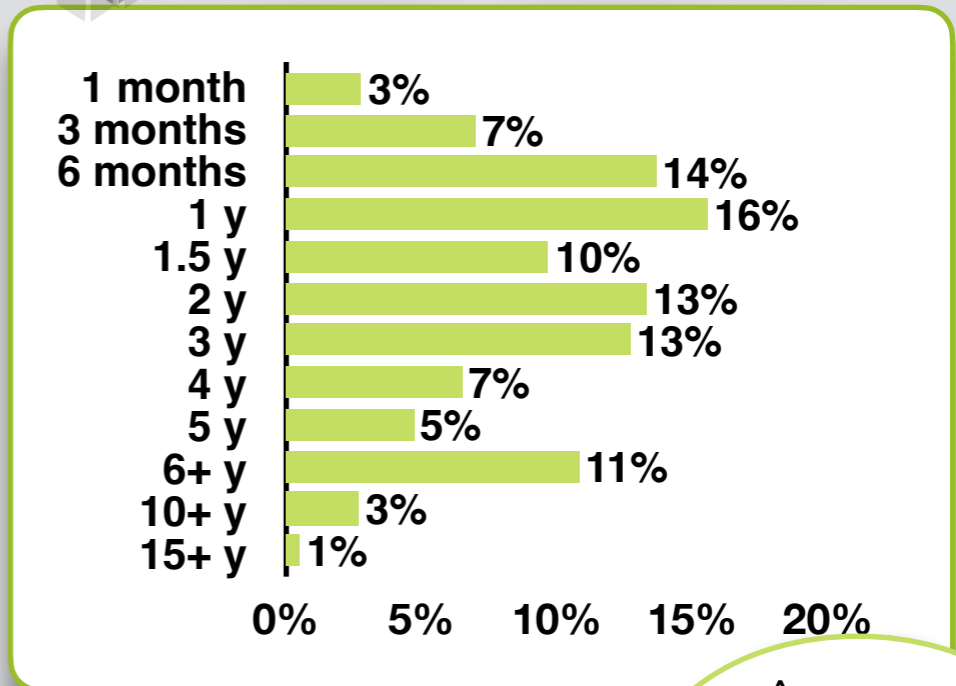
Average:

2021	2022
1y 10m	2y 6m

Started speedcubing in the past year

2021	2022
48%	39%
	-19%
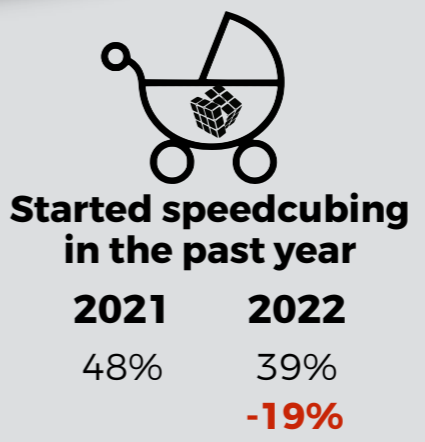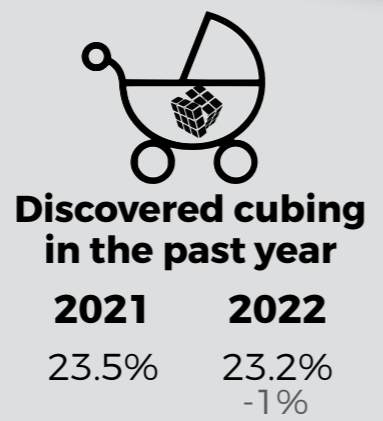
Basically the same amount of us discovered cubing in general in the past year. However SPEEDcubing has not had as much success as last year

OK, BUT HOW FAST ARE WE? OUR MEDIAN AVERAGE IS SUB18! SINCE LAST YEAR WE'VE GOTTEN A TINY BIT FASTER ON AVERAGE!

CUBERS 3X3 GLOBAL AVERAGE

Category	Percentage	Cumulative
Sub6	0.1%	99.8%
Sub7	0.4%	99.7%
Sub8	1.2%	99.3%
Sub9	2.1%	98.1%
Sub10	3.4%	96.0%
Sub11	4.6%	92.6%
Sub12	4%	88.0%
Sub13	6.9%	84.0%
Sub14	7.2%	77.1%
Sub15	7.2%	69.9%
Sub16	4.6%	62.7%
Sub17	5.7%	58.1%
Sub18	5.4%	52.4%
Sub19	4.2%	47.0%
Sub20	3.6%	42.8%
Sub25	12.8%	39.2%
Sub30	8.6%	26.4%
Sub40	10.1%	17.8%
Sub50	3.4%	7.7%
Sub60	1.5%	4.3%
Sub90	1.6%	2.8%
Sub120	0.9%	1.2%
Sup120	0.3%	0.4%
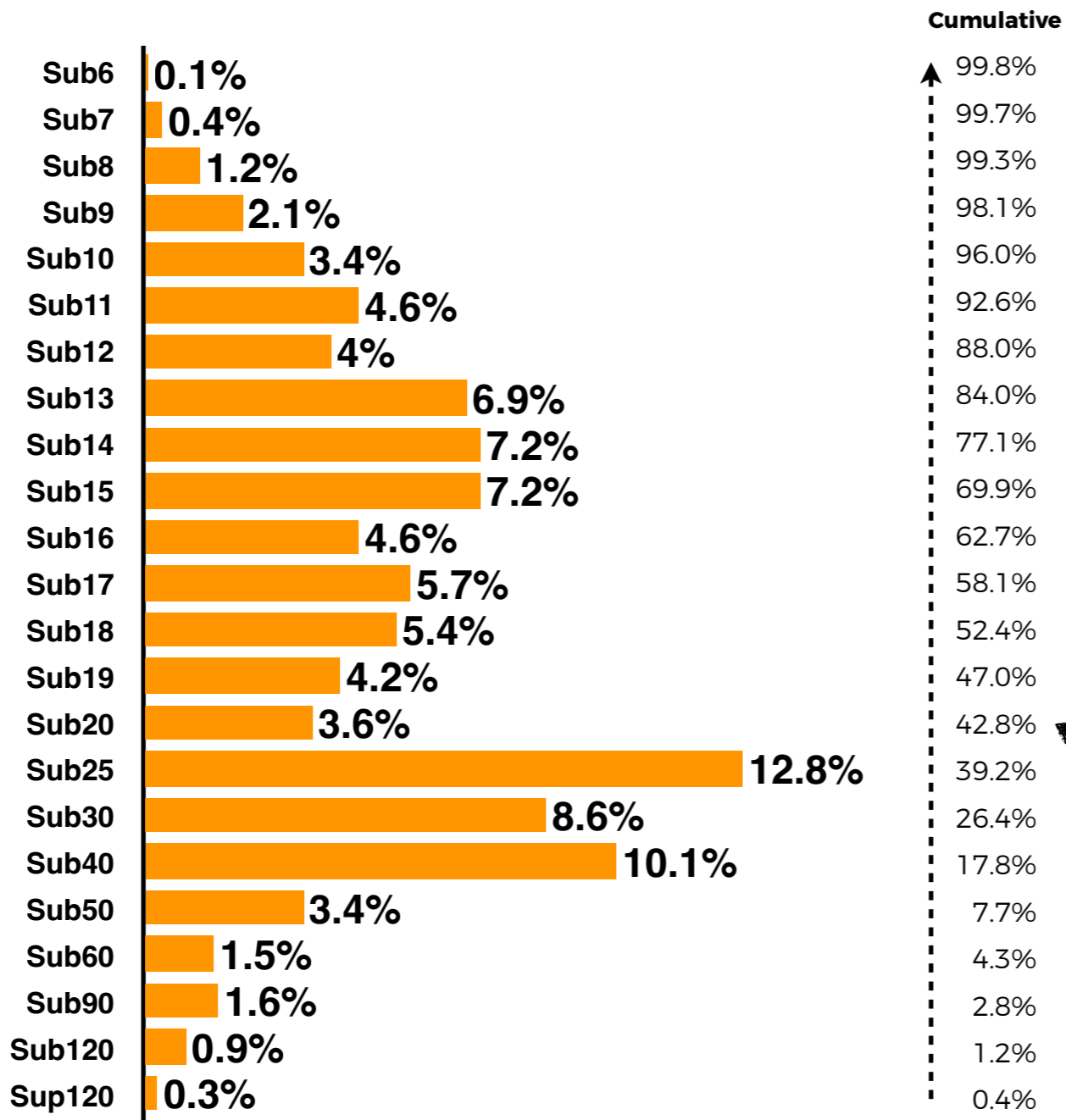
3X3 GLOBAL AVERAGE

2021	2022
17.7s	**17.0s**
	-4%

Without the oldies*

2021	2022
16.9s	16.5s

*Median global average if we remove all cubers above 36 years old. Brought to you by one of the oldies!

If you average sub20, you're faster than 43% of cubers

SOME CLARIFICATIONS GOING FORWARD

WE WILL BE USING SOME DEFINITIONS THAT MIGHT
NOT BE IMMEDIATELY CLEAR TO THE LAY PERSON

Median Cuber

The "Average" cuber :
50% of people are faster
and 50% are slower
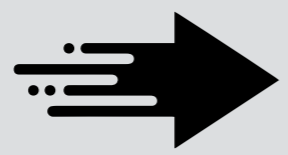
Top25% Cuber

A cuber that is
faster than 75% of
all other cubers

We use these to understand how "normal" cubers work vs fast ones, regardless of how long they have been cubing
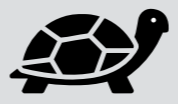
Slow Learners

Bottom 25% of
their respective
experience group

Medium Learners

Mid 50% of
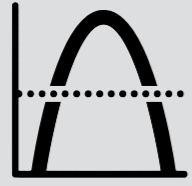their respective
experience group

Fast Learners

Top 25% of
their respective
experience group

We use these to evaluate cubers that are "fast for how long they have been cubing". A Fast cuber with 3 months experience is most of the time slower than a Slow cuber with 4+ years under their belt

Global Average

Cubing experience
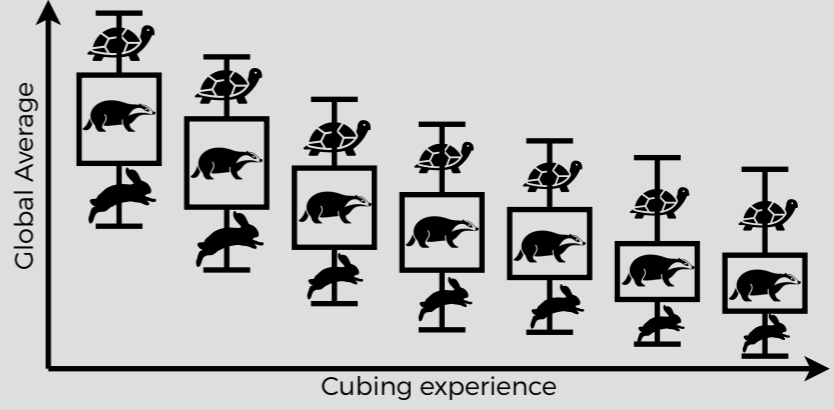
Also, we don't put axis names and units on all our charts. We are confident that you'll be able to figure out what we're talking about

If you don't like that, get a PhD in science, then get some experience in the real world and then come back and complain…

CUBING LIFE

WE PRACTICE ABOUT AS MUCH AS WE DID LAST YEAR (~1H PER DAY ON AVERAGE). AND THE MORE WE DO, THE FASTER WE ARE (MOSTLY)

HOW OFTEN DO YOU CUBE

Category	Percentage
4+ hours every day	6%
A couple of hours every day	25%
One hour each day	24%
I do a handful of solves every day	35%
Once per week	6%
More rarely	5%

AVERAGE

2021
64 min
per day

2022
63 min
per day
-2%
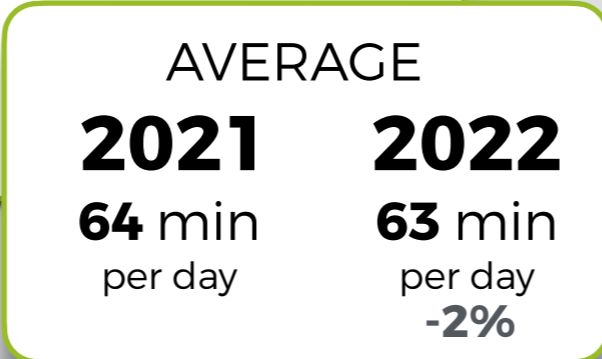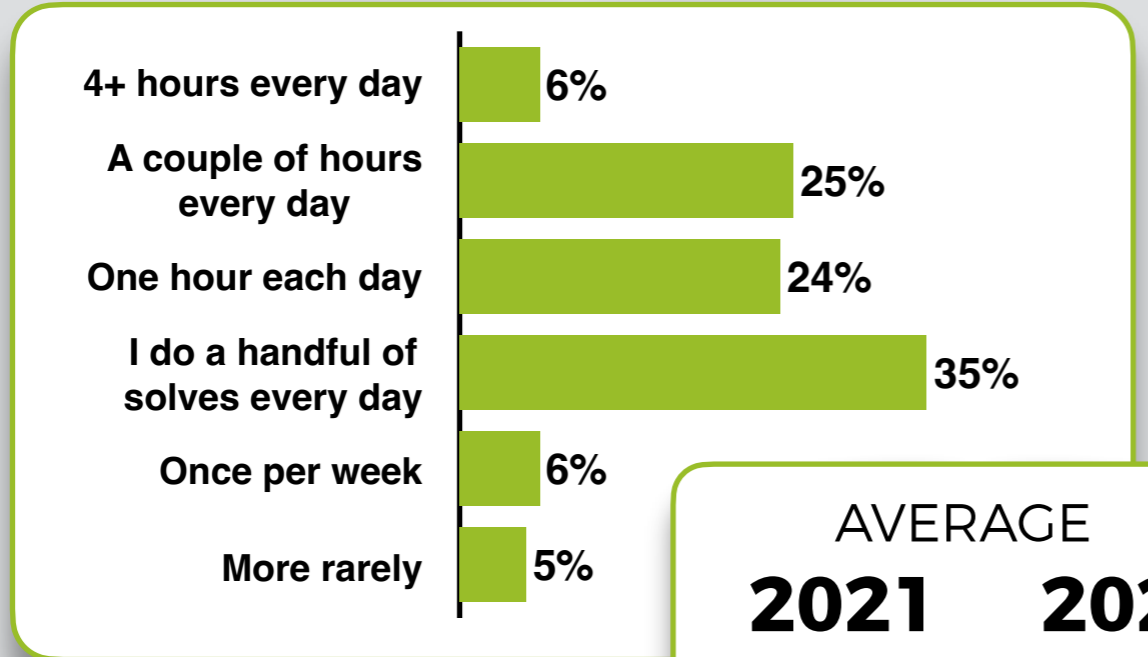
WHAT IS THE LONGEST BREAK YOU'VE TAKEN?

Category	Percentage
I am unable to stop!	6%
A couple of days	18%
A couple of weeks	18%
A couple of months	14%
Half a year	8%
A year or so	11%
More than a year	18%
Several years	5%

Hardcore cubers doing 4+ hours a day tend to be more at the beginning of their cubing career, hence the slightly slower averages than people cubing slightly less time per day.

GLOBAL 3X3 AVERAGE BY CUBING AMOUNT

Category	Value
More rarely	24.7
Once per week	19.0
I do a handful of solves every day	20.0
A couple of hours every day	15.7
One hour each day	15.0
4+ hours every day	15.7

1 IN 4 OF US CUBES WHEN WE REALLY SHOULDN'T... ALSO, CARRYING MORE CUBES DOESN'T REALLY MAKE US SIGNIFICANTLY FASTER

WHERE DO YOU USUALLY CUBE?

Category	Value
At home	96%
In public (when I'm waiting / when I'm bored)	45%
At school, during breaks	40%
At parties, family reunions	21%
At school, while in class	20%
In public (all the time)	10%
At work	4%
While Travelling	2%
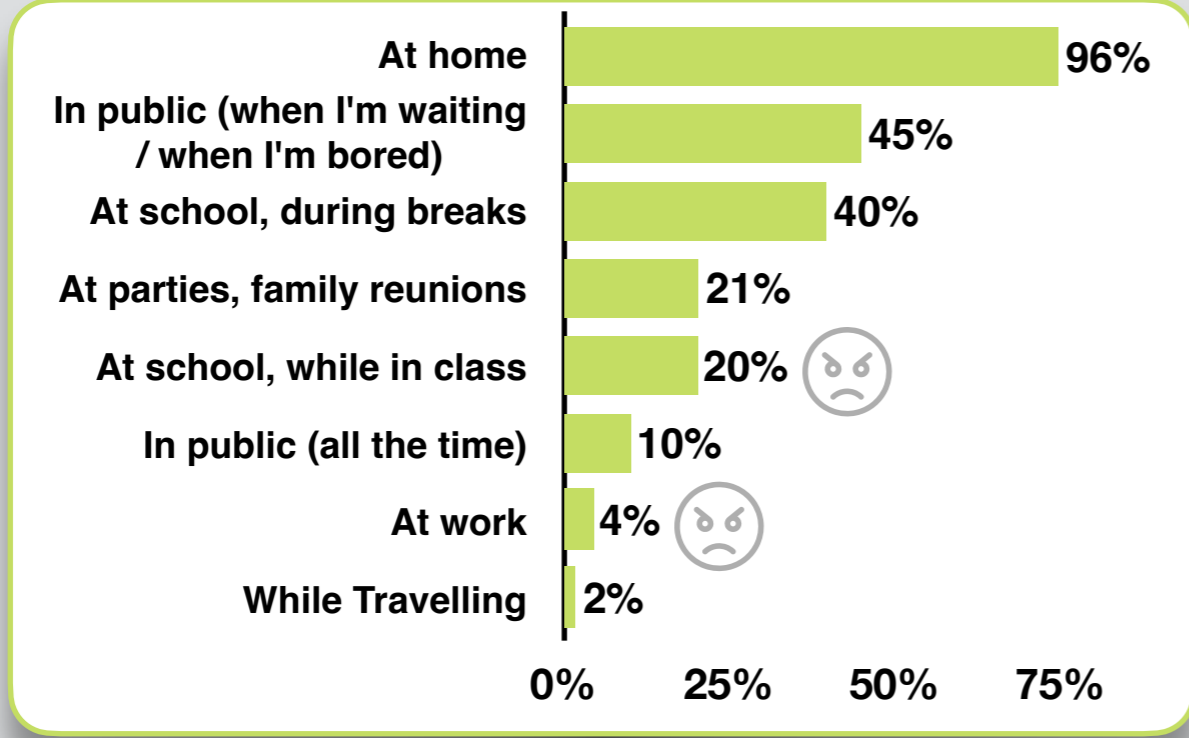
HOW MANY PUZZLES DO YOU USUALLY CARRY WITH YOU?

In 2021

Category	Value	In 2021
0	25%	53%
1-2	61%	40%
3-5	11%	5%
6+	4%	1%
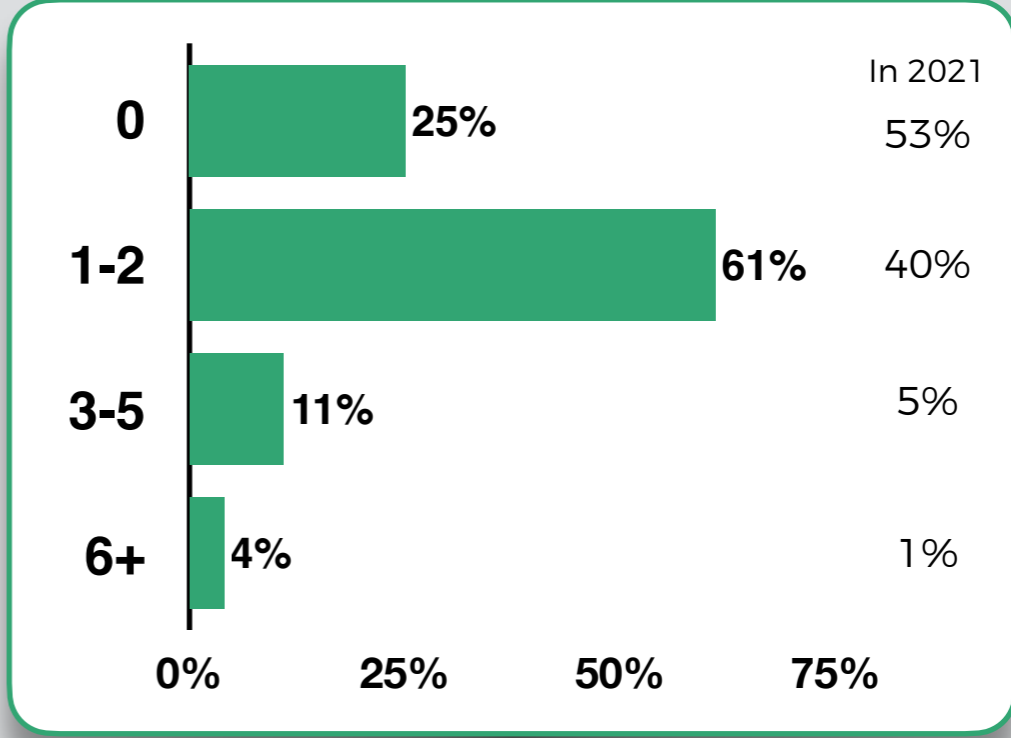
GLOBAL 3X3 AVERAGE BY AMOUNT OF CUBES USUALLY CARRIED

Category	Value
0	17.00
1-2	17.00
3-6	16.90
7+	16.83
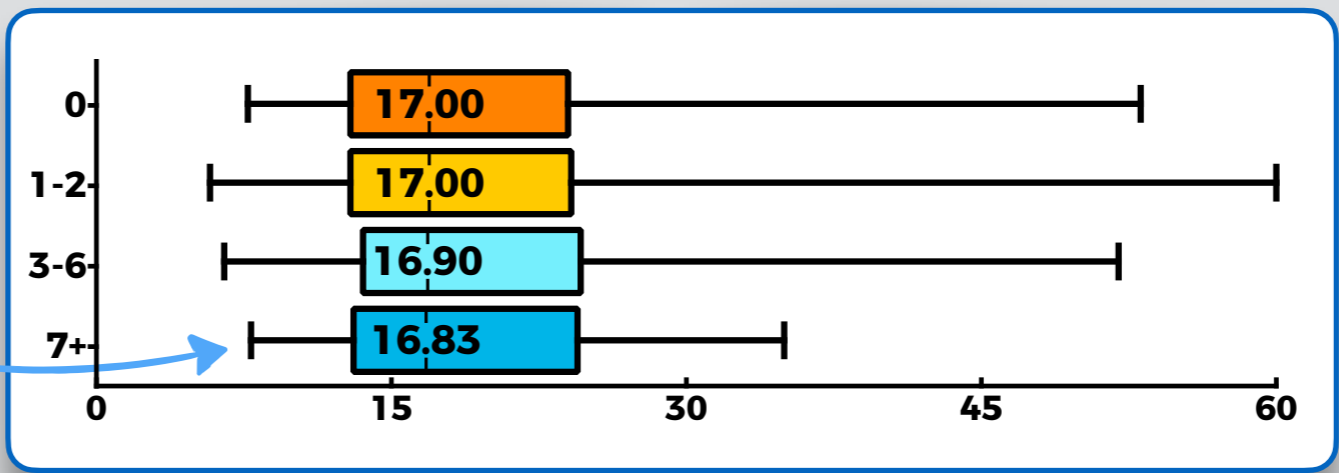
The data is in ! Having more cubes in the bag shaves up to 0.2 sec off your average

P.s. that's not really true! The difference is not statistically significant

14

THE FASTER OF US TEND TO TIME OURSELVES MORE OFTEN, BUT THE FASTEST ONES DON'T FORGET UNTIMED PRACTICE; TIMING HAS BEEN GOING UP A BIT SINCE LAST YEAR

"WHEN I CUBE, I..."

- ...only do untimed solves — 1%
- ...mostly do untimed solves — 24%
- ...do timed and untimed solves in equal part — 22%
- ...mostly do timed solves — 44%
- ...only do timed solves — 9%
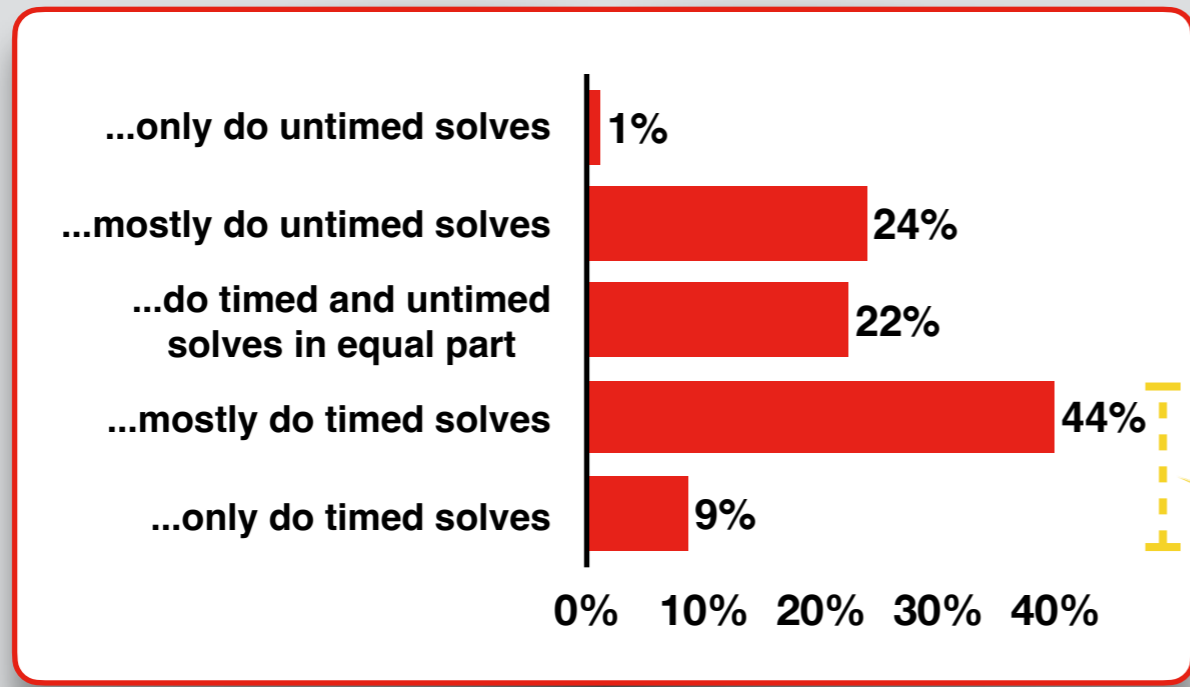
SOME REGIONAL DIFFERENCES

AVERAGE

2021	2022
49%	**53%**
do mostly or only timed solves	do mostly or only timed solves
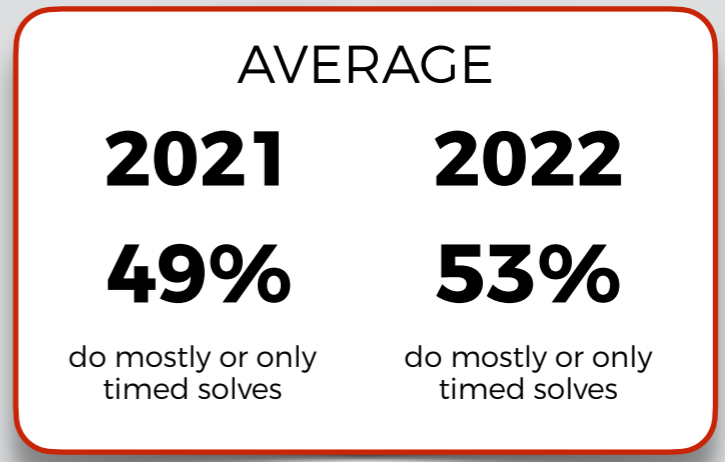
GLOBAL 3X3 AVERAGE BY TYPE OF CUBING ACTIVITY

- ...only do untimed solves — 45.00
- ...mostly do untimed solves — 23.10
- ...do timed and untimed solves in equal part — 19.00
- ...mostly do timed solves — 15.00
- ...only do timed solves — 13.50
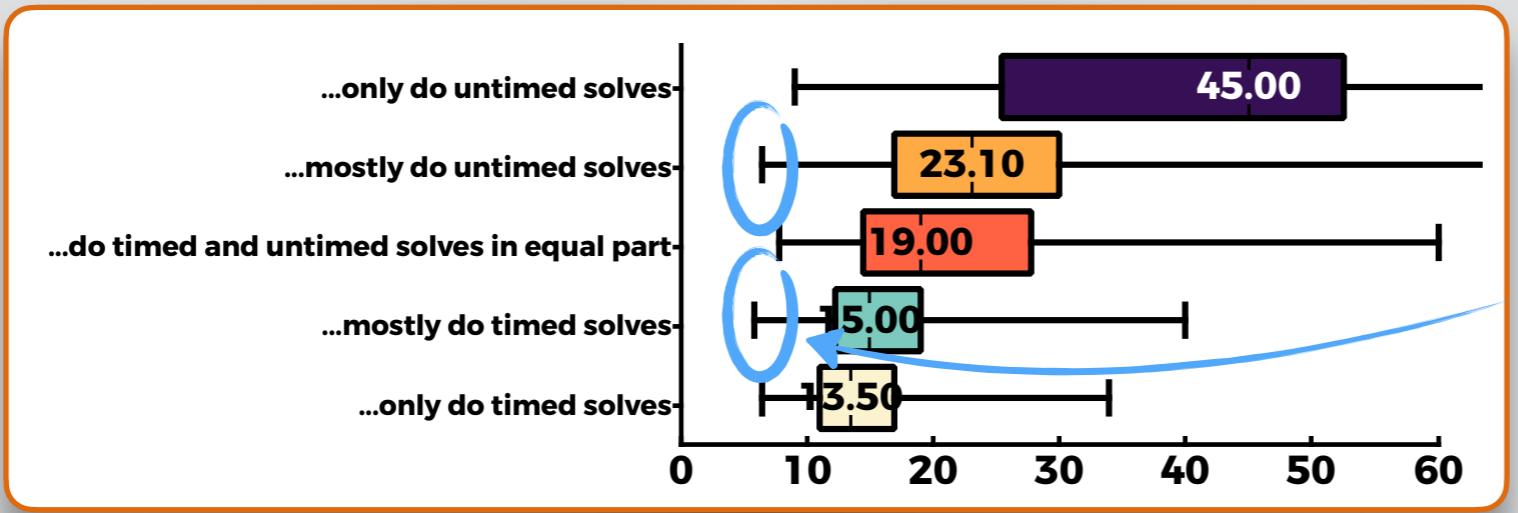
The fastest cubers do mostly timed solves, but not only, putting in some untimed practice seems to be useful!

15

WE DISCOVERED CUBING FROM FRIENDS OR FROM GETTING A CUBE AS A GIFT. OUR FAMILIES ARE MOSTLY OK WITH THIS VICE OF OURS, BUT WHEN THEY SUPPORT US, WE TEND TO GET FASTER

HOW DID YOU DISCOVER CUBING?

- A friend/family introduced me to it — **34%**
- My parents got me a cube and I started from there — **23%**
- I saw a video on youtube / a documentary — **22%**
- I saw someone solving and got interested — **21%**
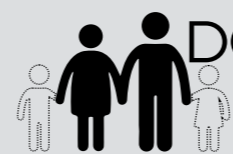
DO YOUR PARENTS / FAMILY SUPPORT YOUR PASSION FOR CUBING?

- Yes, I share with them my achievements, PBs, ... — **40%**
- They are ok with me cubing but I do not talk to them about it — **45%**
- They do not like much the fact that I spend time cubing — **12%**
- They are against / forbid me cubing — **1%**
- Other — **1%**
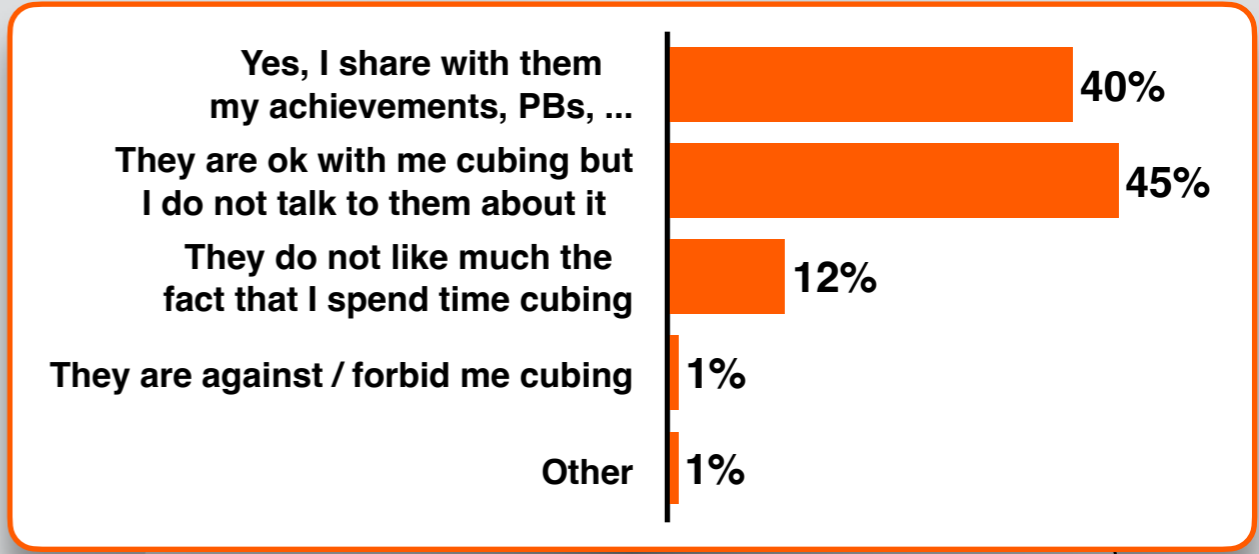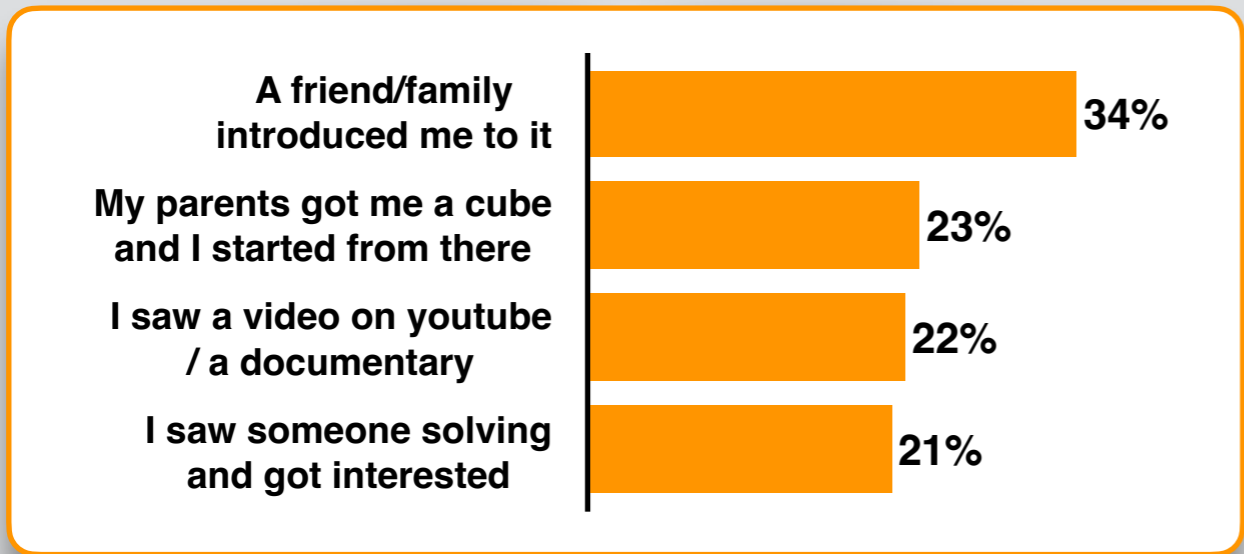
HOW DID THE COVID19 PANDEMIC INFLUENCE YOUR CUBING?

- I cube more than before — **27%**
- I started during the lockdowns — **27%**
- About the same — **18%**
- I started after the lockdowns — **16%**
- I cube less than before — **8%**
- Other — **4%**

3X3 GLOBAL AVERAGE BY FAMILY SUPPORT LEVEL

Yes, I share my achievements...	They are OK with it...	They don't like it...
16.4s	17.8s	18.0

TIME SPENT CUBING BY FAMILY SUPPORT LEVEL

9.3 hours per week	6.8 hours per week	9.3 hours per week
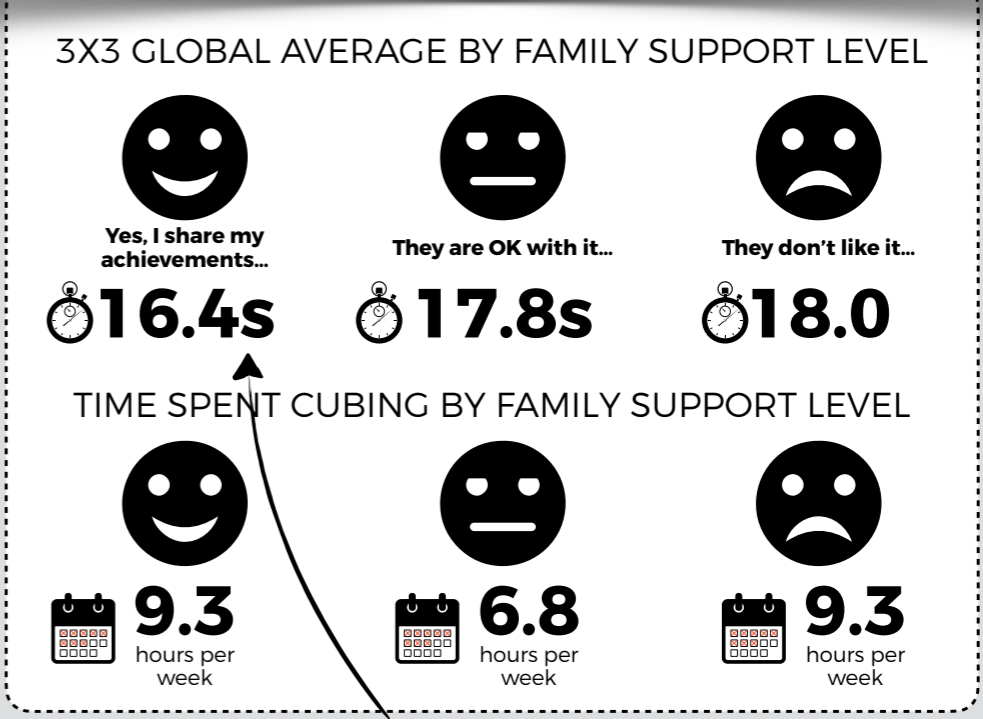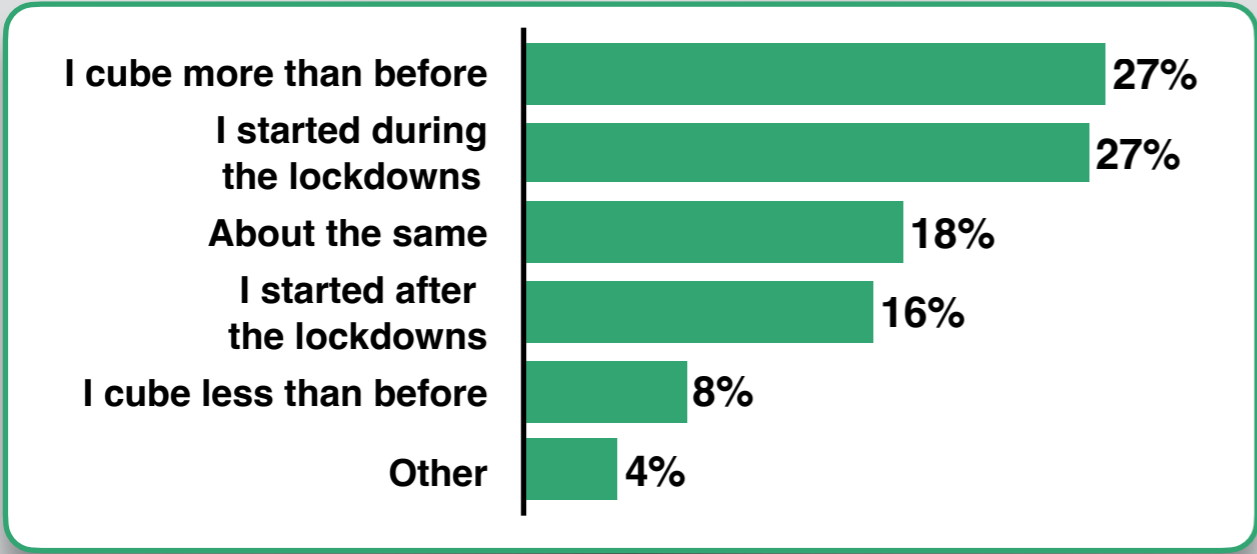
The difference is actually significant. Having someone who can share in your excitement and success is a big thing : cherish it!

16

MOST OF US US LEARNED FROM YOUTUBE, BUT SOME LEARNED IN OTHER WAYS, AND MOST OF US LIKE TO TEACH OTHERS (EVEN IF, APPARENTLY, WE'RE NOT VERY GOOD AT IT)
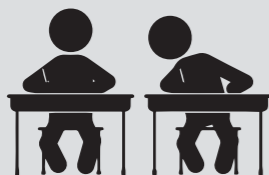
HOW DID YOU LEARN HOW TO SOLVE THE CUBE?

Watching youtube videos — 73%
A friend/family showed me — 14%
From a book — 6%
From the small leaflet that came with my cube — 5%
I learned on my own trying things out on the cube — 3%

0% 20% 40% 60% 80%

HAVE YOU EVER INTRODUCED SOMEONE TO CUBING?

Yes 77%
No 23%

To someone...

younger 47%   my age or older 53%
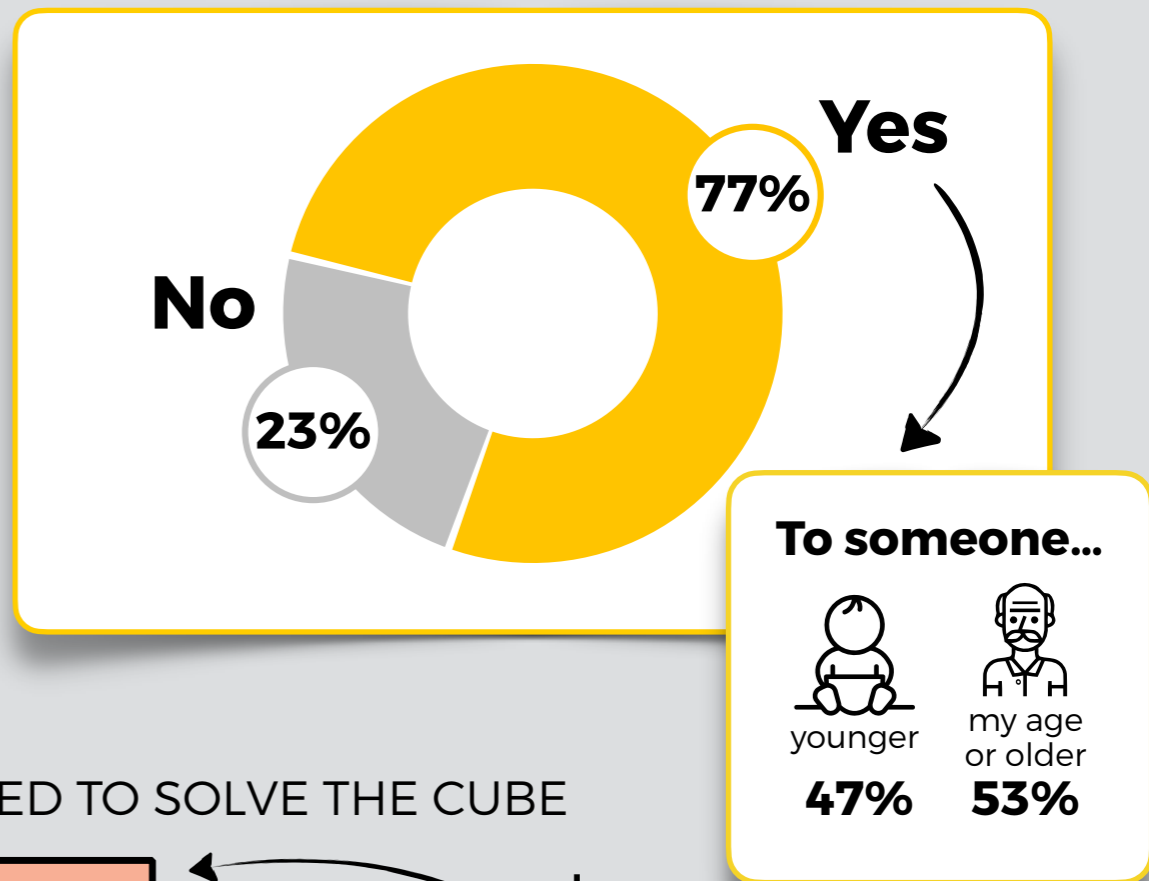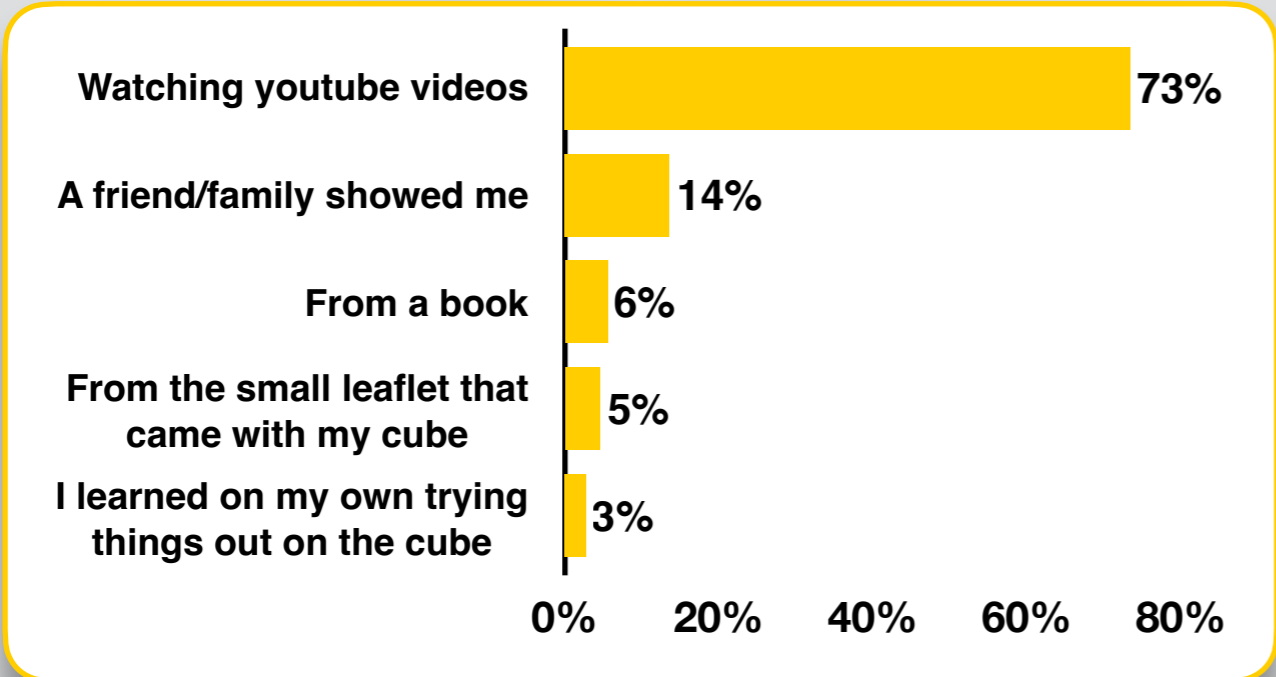
GLOBAL AVERAGE BY HOW WE LEARNED TO SOLVE THE CUBE

I learned on my own trying things out on the cube — 20.4
Watching youtube videos — 17.5
A friend/family showed me — 16.0
From the small leaflet that came with my cube — 15.4
From a book — 13.8

0   10   20   30   40   50   60
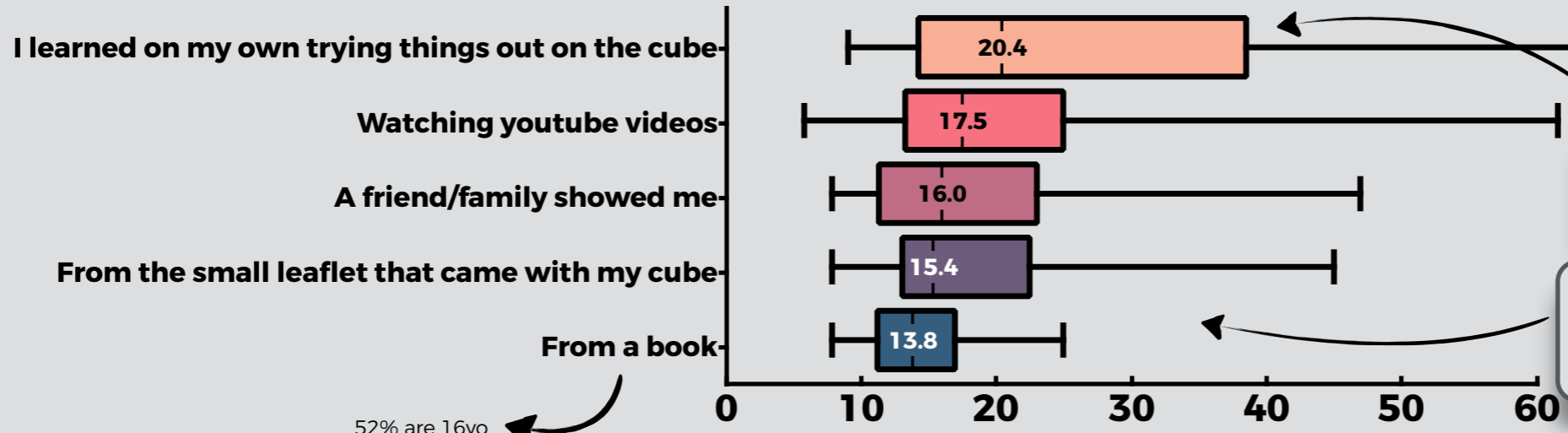
Trying things out on our own is nice but not very conducive to getting fast

We apparently suck as teachers: Books and leaflets are doing a better job than most of us

52% are 16yo or younger
Turns out, young people are still learning to read...!

17

ABOUT 2/3 OF US HAVE FRIENDS WHO CUBE, LESS SO FOR THE OLDER AMONG US. AND WE TEND TO TALK NERDY : ALGS, METHODS AND HARDWARE ARE THE TOPICS WE DISCUSS MOST

DO YOU HAVE FRIENDS IRL WITH WHOM YOU CUBE?

Response	Percentage
No	37%
Yes, many	36%
Yes, but only one	23%
Other	4%

0% 10% 20% 30% 40%

% HAVING FRIENDS BY AGE

Age	Percentage
<=14	73%
15-16	60%
17-18	58%
19-20	48%
21-25	42%
26-30	39%
31-35	16%
36-40	38%
41-50	27%
51	33%
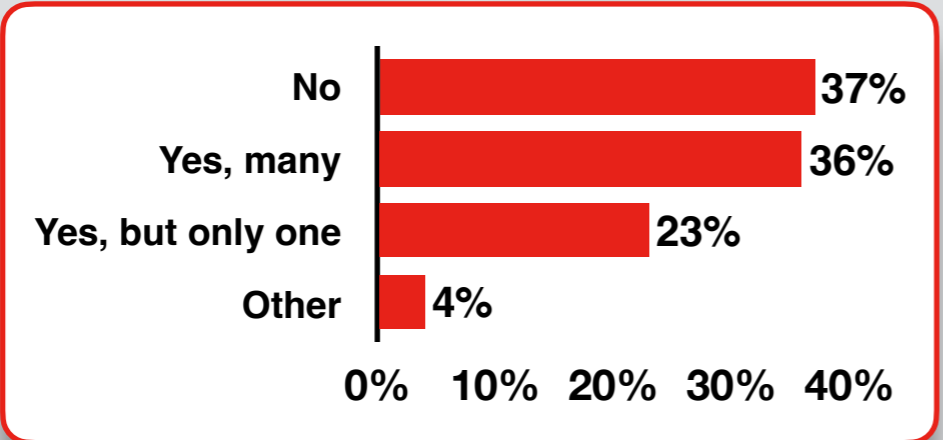
WHAT DO YOU DISCUSS WITH FRIENDS (IRL OR ONLINE) ?

Topic	Percentage
...algorithms	55%
...methods	51%
...hardware	49%
...top cubers & records	41%
...speed-cubing related youtubers	26%
...the Megasurvey results	3%

We seriously need to fix this!
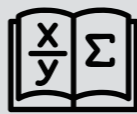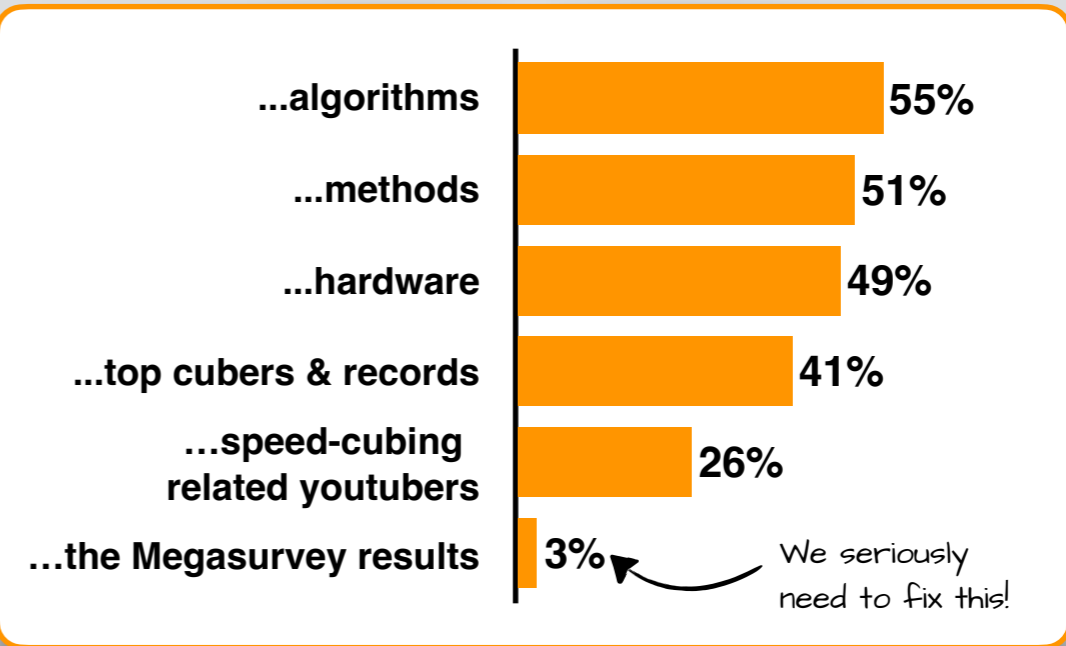
AND ARE YOU INTERESTED IN THE THEORY / MATH BEHIND CUBING?

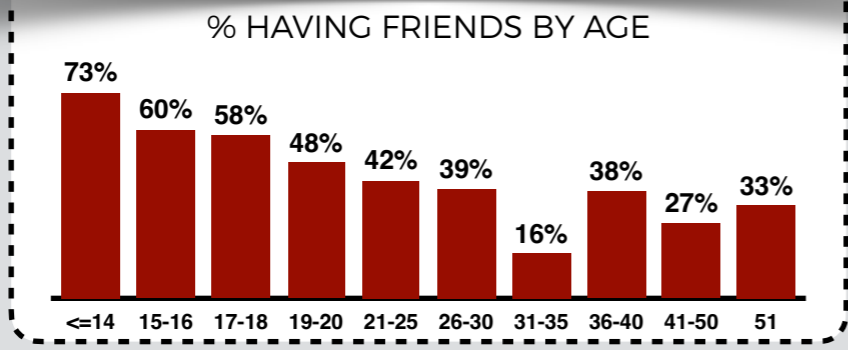| Response	Percentage
Nah, I just like solving	21%
I like the statistics of cubing	32%
I like to analyse specific methods or algsets	28%
I like to study how cube theory relates to other domains of math	18%
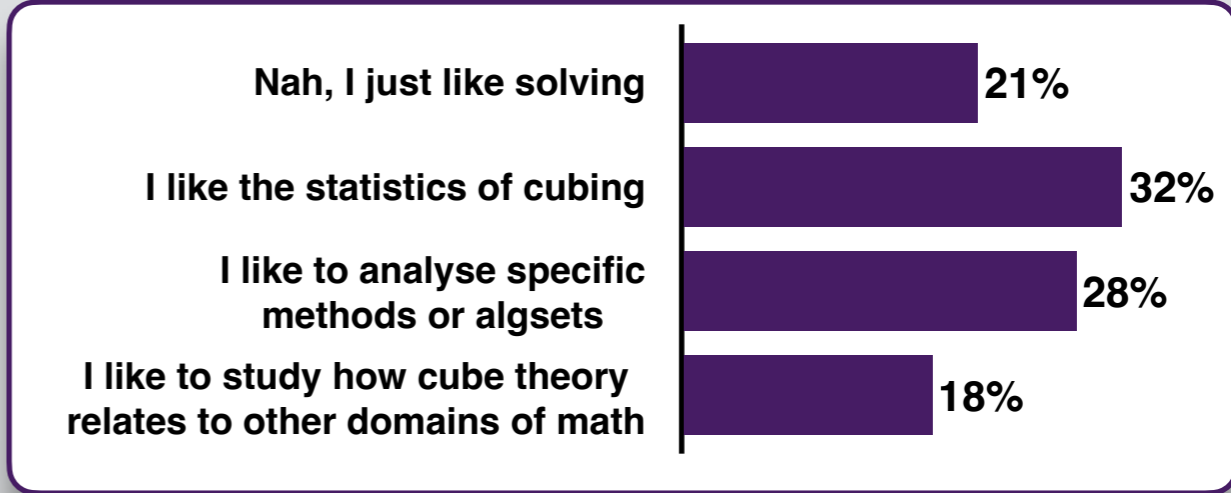
This could mean that older people are simply bad at having friends (ok boomer…), but more likely for younger people having friends is a motivator to cube, whereas older cubers are more able to have a passion by themselves

The vast majority of us like to dig a bit into the inner mechanics of cubing. But careful with selection bias : people who detest that probably don't fill in 30+ min surveys!

A LOT MORE OF US WENT TO COMP SINCE LAST YEAR; AND THE FASTEST OF US ARE GOING WHENEVER THEY CAN. THE BUG GETS US WHEN WE START APPROACHING SUB20

HAVE YOU EVER BEEN AT A WCA COMPETITION?

- Yes, all the time when I can — 24%
- Yes, once or twice — 21%
- No, but I want to go to one. — 37%
- No, never been — 19%

0% 9.5% 19% 28.5% 38%

Went to a comp

	2021	2022
	29%	45%

+55%
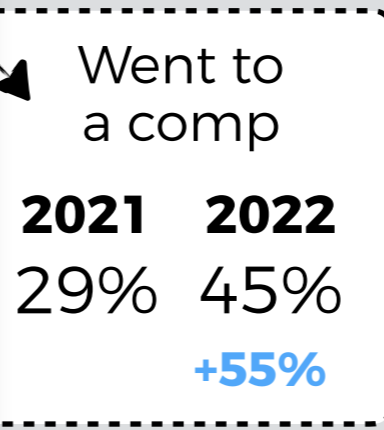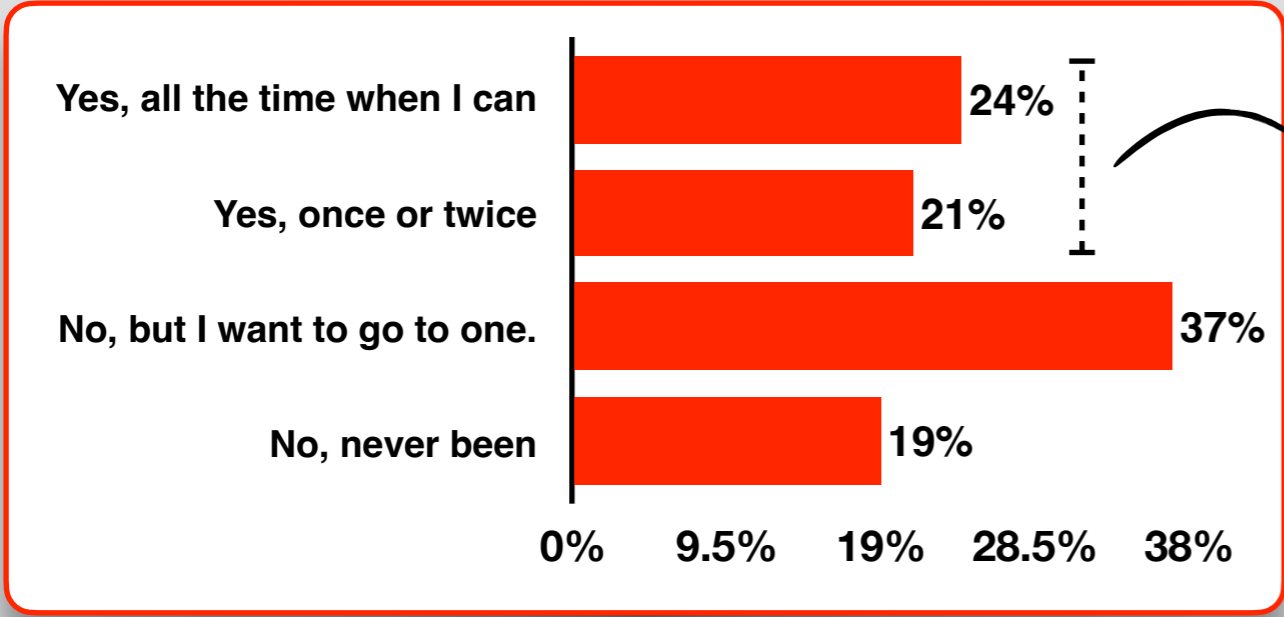
We can finally say the lockdowns are over!

AT WHICH TIER OF COMPETITION DID YOU GO?

- Local Comp — 44%
- National Comp — 17%
- Continental Comp — 5%
- Worlds — 2%
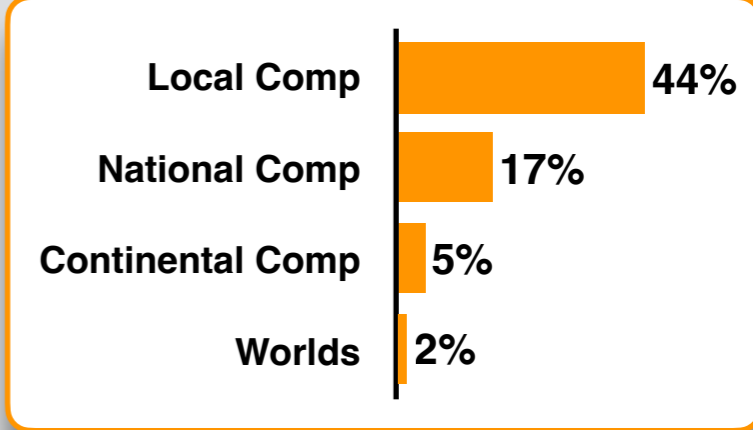
GLOBAL 3X3 AVERAGE BY COMP PARTICIPATION

- Yes, all the time when I can — 12.7
- Yes, once or twice — 16.3
- No, but I want to go to one. — 21.0
- No, never been — 25.0

60 45 30 15 0
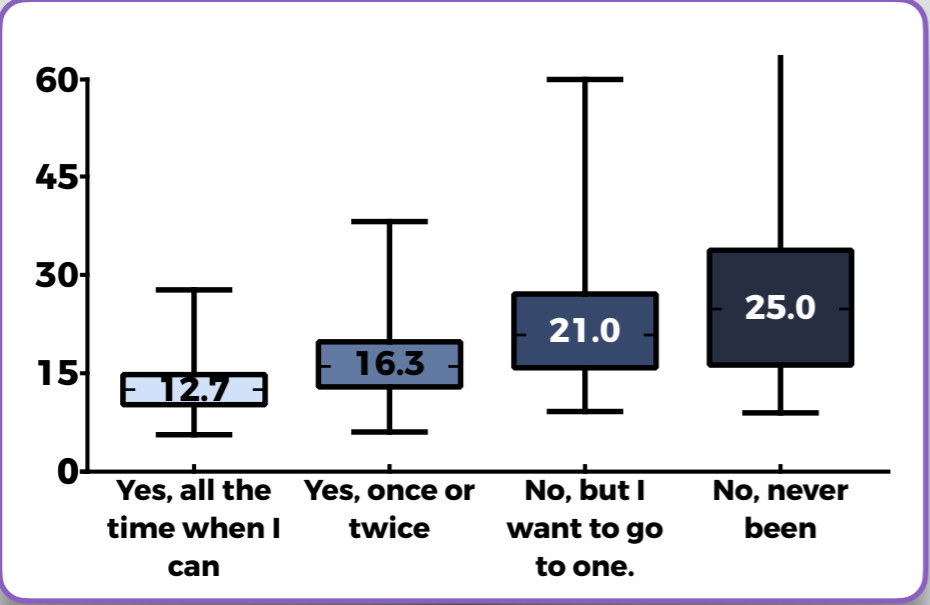
HAVE YOU READ THE WCA REGULATIONS?

- Yes! — 26%
- Yes, even though I've never competed. — 22%
- What I need to know for my events — 24%
- No, but I've never competed. — 25%
- No, even though I compete. — 3%

0% 10% 20% 30% 40%
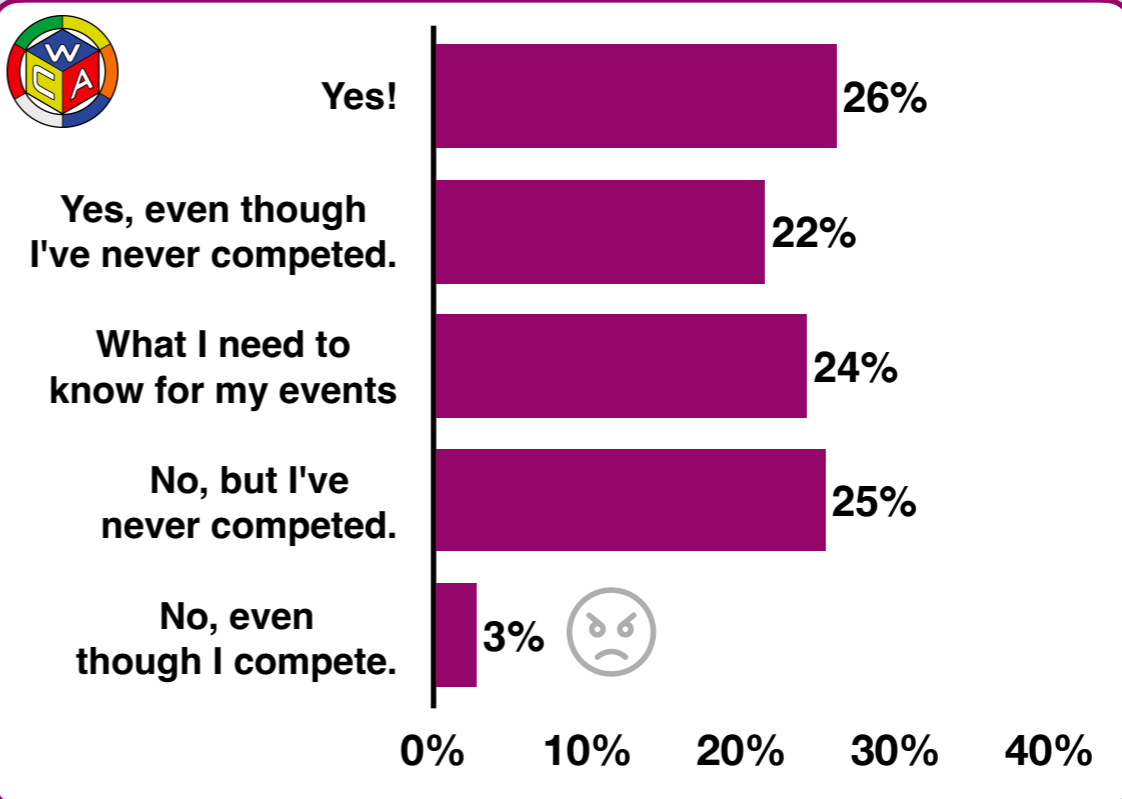
HALF OF US HAVE TRIED TO BLINDSOLVE A 3X3, ONLY ABOUT 1 IN 3 HAVE SUCCEEDED. MANY OF US FIND 3BLD INTIMIDATING, AND ITS MORE COMPLEX METHODS EVEN MORE

DO YOU KNOW HOW TO SOLVE A CUBE BLINDFOLDED?

Yes but I've not done it in ages — **13%**

Yes — **22%**

Yes but I've never succeeded — **17%**

No — **20%**

No but I'd like to learn — **28%**
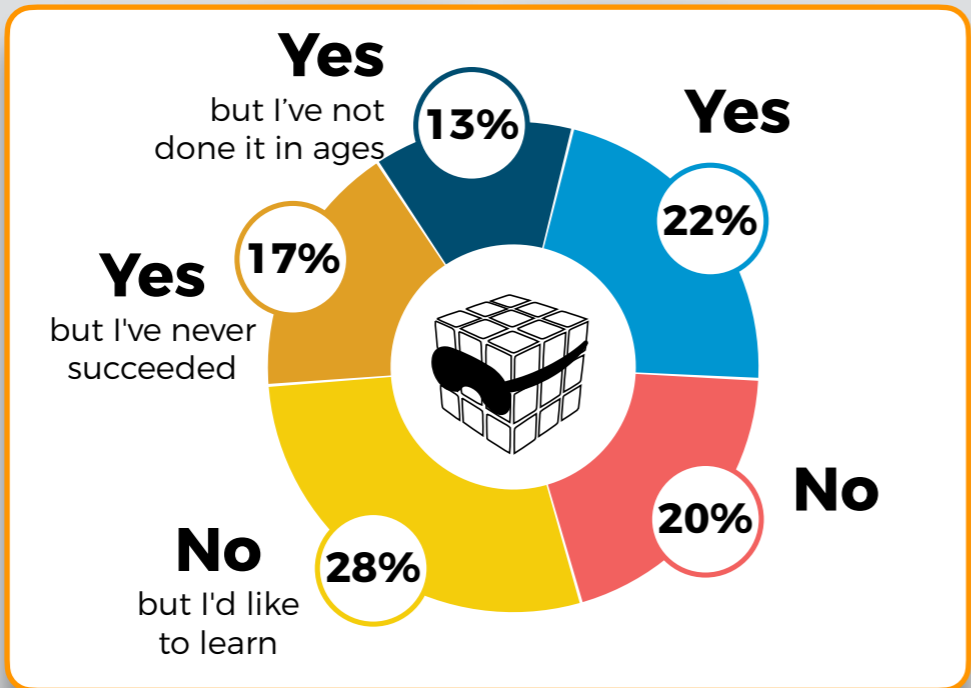
WHAT IS THE MAIN DETERRENT KEEPING YOU FROM LEARNING BLD?

It looks too difficult	30%
Havent taken the time yet	29%
No interest	16%
I'm new to cubing	12%
Don't have the time	10%
Other	2%

DO YOU AGREE WITH THE FOLLOWING STATEMENTS?

Top2 boxes

These are those who agree somewhat or completely

	Completely disagree	Somewhat disagree	Neutral	Somewhat agree	Completely agree	Top2 boxes
I find blind events intimidating	8%	15%	18%	43%	16%	**59%**
I find 3-style intimidating	8%	7%	19%	29%	37%	**66%**
I wish there were more BLD resources	5%	10%	29%	30%	27%	**57%**
I wish there were more resources specifically for bigBLD	5%	5%	46%	20%	26%	**46%**

■ Completely disagree ■ Somewhat disagree ■ Neutral ■ Somewhat agree ■ Completely agree

SOLVING AND TIMES

ON AVERAGE WE PRACTICE 3-4 EVENTS, AND WE'VE BEEN EXPLORING MORE PUZZLES, WITH 5X5, SQUAN AND 3BLD AS THE MAIN WINNERS
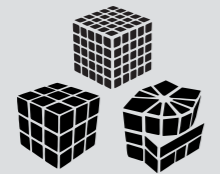
WHICH PUZZLES DO YOU ROUTINELY PRACTICE?

Puzzle	%
3x3	93%
2x2	39%
4x4	39%
OH	28%
5x5	26%
Pyraminx	19%
Skewb	16%
Square-1	16%
Megaminx	15%
3BLD	13%
Clock	11%
6x6	10%
7x7	9%
FMC	4%
4BLD	4%
5BLD	3%
MBLD	3%

0%   25%   50%   75%   100%

Big changes between 2021 –> 2022

+7.2%   -1.6%

+5.3%   -1.7%

+4.3%

This is consistent with us becoming older and preferring more complex events!

OF DIFFERENT PUZZLES PRACTICED

#	%
1	27%
2	19%
3	17%
4	12%
5	8%
6	6%
7	3%
8	2%
9	1%
10+	2%

AVERAGE

2021
3.1
different events practiced

2022
3.6
different events practiced
+16%

As we have gotten more experience we've also started exploring more

FIRST WE GET TO KNOW ABOUT IT, THEN WE WANT TO BE FAST AT IT; THEN WE WANT TO LEARN SOMETHING ELSE, AND THEN SOMETHING MORE...

Discover Cubing

We start practicing 3x3 speedcubing after 1 month

1 mnt

7-8 months

3 mnts

1st year

That's not enough! we add Mega, 5x5 and Skewb pretty shortly afterwards

After 8 months 3x3 is not enough anymore, we add 2x2, 4x4 and Pyra

2 mnts

After 1.5 years we're ready to try out almost everything

2-4 mnts

OH

6x6

7x7

2nd year

3rd year

1.5 years
...

Squan, OH and larger cubes require a bit more time

But to get to the really hardcore stuff, we need to be REALLY comfortable with our solving

AVERAGE START OF PRACTICE FOR WCA EVENTS AFTER DISCOVERING CUBING

0.9 months	**11.1** months	**13.1** months	7x7 **15.1** months	**34.1** months
8.0 months	**11.2** months	OH **13.2** months	**15.5** months	**36.0** months
8.6 months	**11.7** months	6x6 **13.9** months	**16.8** months	**38.0** months
8.9 months		**18.6** months		

3BLD AND FMC ARE THE MOST ENTICING EVENTS; THE FASTER EVENTS ARE THE ONES THAT DISAPPOINTED US THE MOST, AND BLIND EVENTS ARE PROVEN TO BE THE APEX EVENTS

WHICH EVENTS WOULD YOU LIKE TO TRY BUT HAVE NOT YET?

Event	%
3BLD	29%
FMC	26%
Square-1	19%
Clock	19%
MBLD	18%
4BLD	17%
5BLD	15%
7x7	15%
Skewb	14%
Megaminx	14%
6x6	13%
5x5	12%
OH	11%
Pyraminx	9%
4x4	9%
2x2	4%
3x3	3%
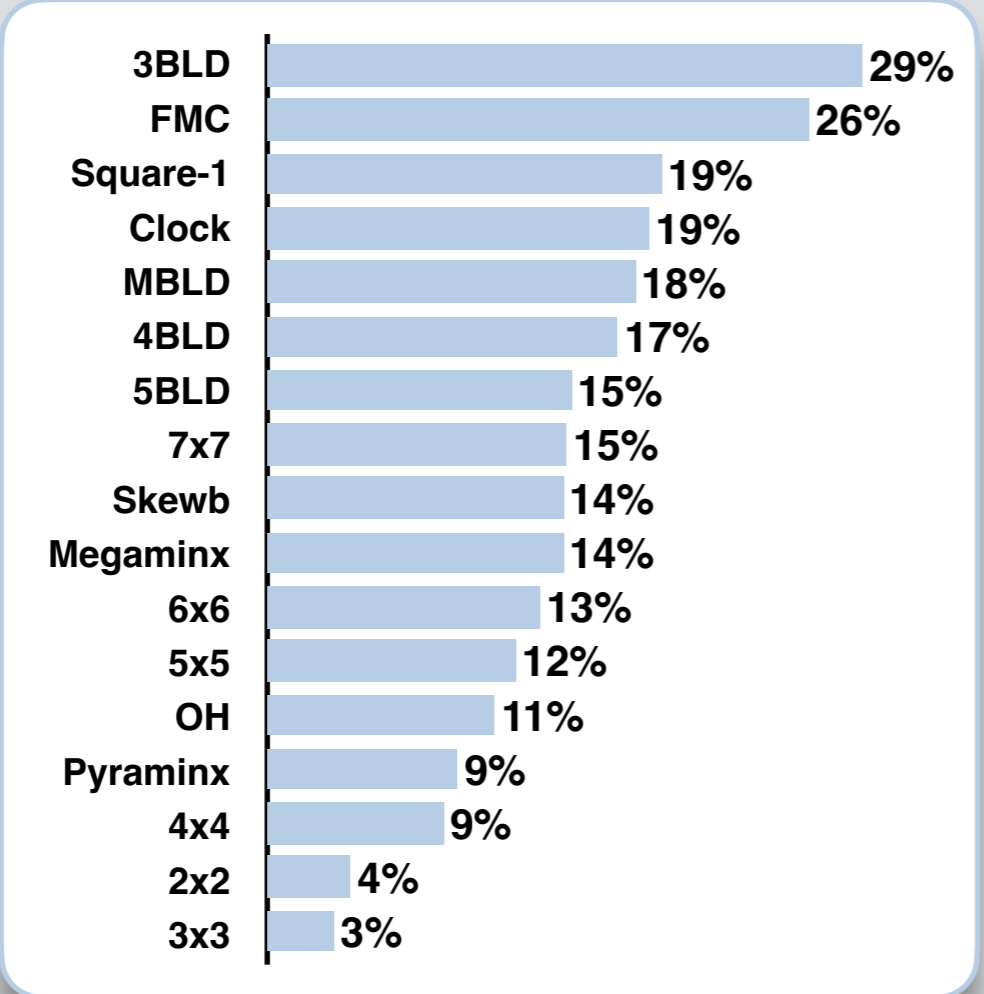
WHICH EVENTS DID YOU TRY BUT DIDN'T LIKE?

Event	%
Pyraminx	22%
Skewb	20%
2x2	14%
Megaminx	13%
Square-1	11%
OH	9%
6x6	7%
Clock	7%
4x4	7%
7x7	6%
FMC	6%
5x5	5%
3BLD	5%
4BLD	2%
MBLD	2%
5BLD	1%
3x3	1%

See! Clock almost never disappoints!
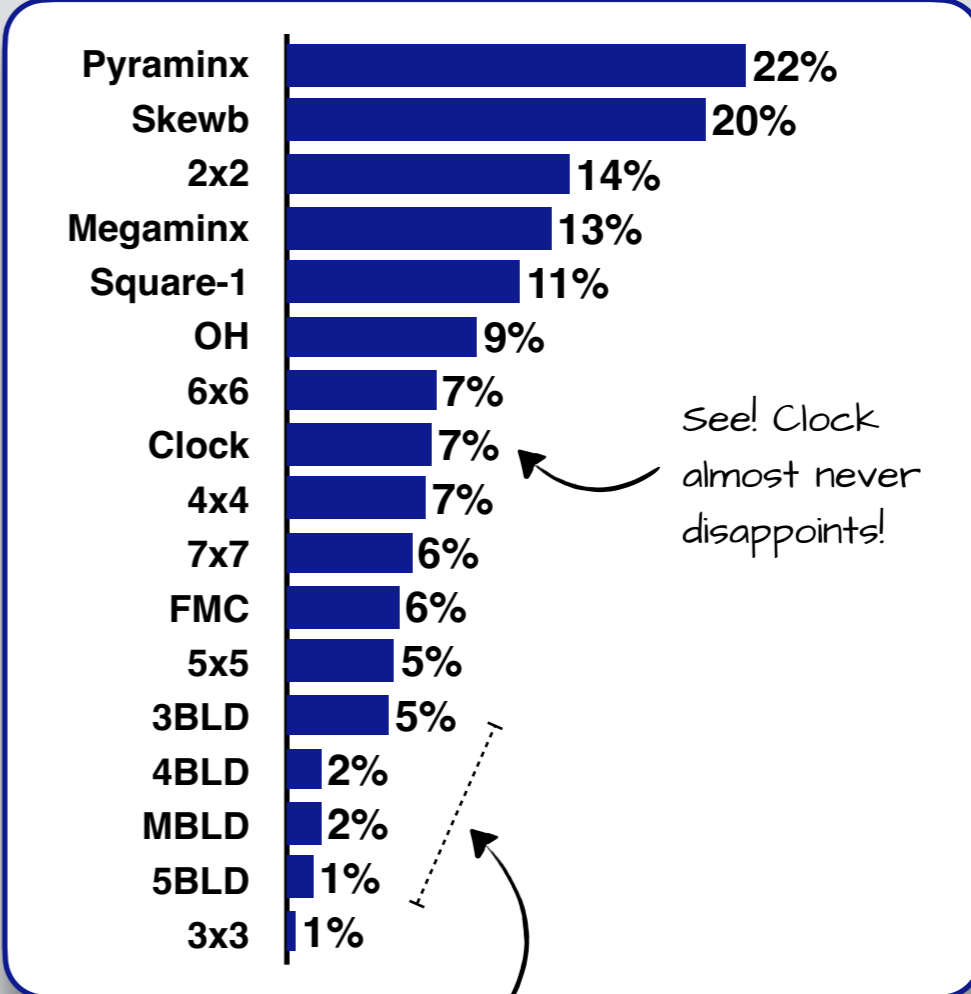
The sheer amount of swag that comes from being able to BLD is enough to let no one regret trying it

AS WE GET OLDER WE SWITCH FROM QUICK EVENTS TO BIGGER CUBES, UNTIL WE HIT 35, THEN WE DON'T HAVE TIME FOR THOSE LONG EVENTS ANYMORE AND WE GO BACK TO THE QUICKIES

% OF CUBERS PRACTICING EVENTS BY AGE GROUP

2X2

Age	%
<=14	62%
15-16	48%
17-18	32%
19-20	25%
21-25	25%
26-30	8%
31-35	20%
36-40	28%
41-50	17%
51+	50%

5X5

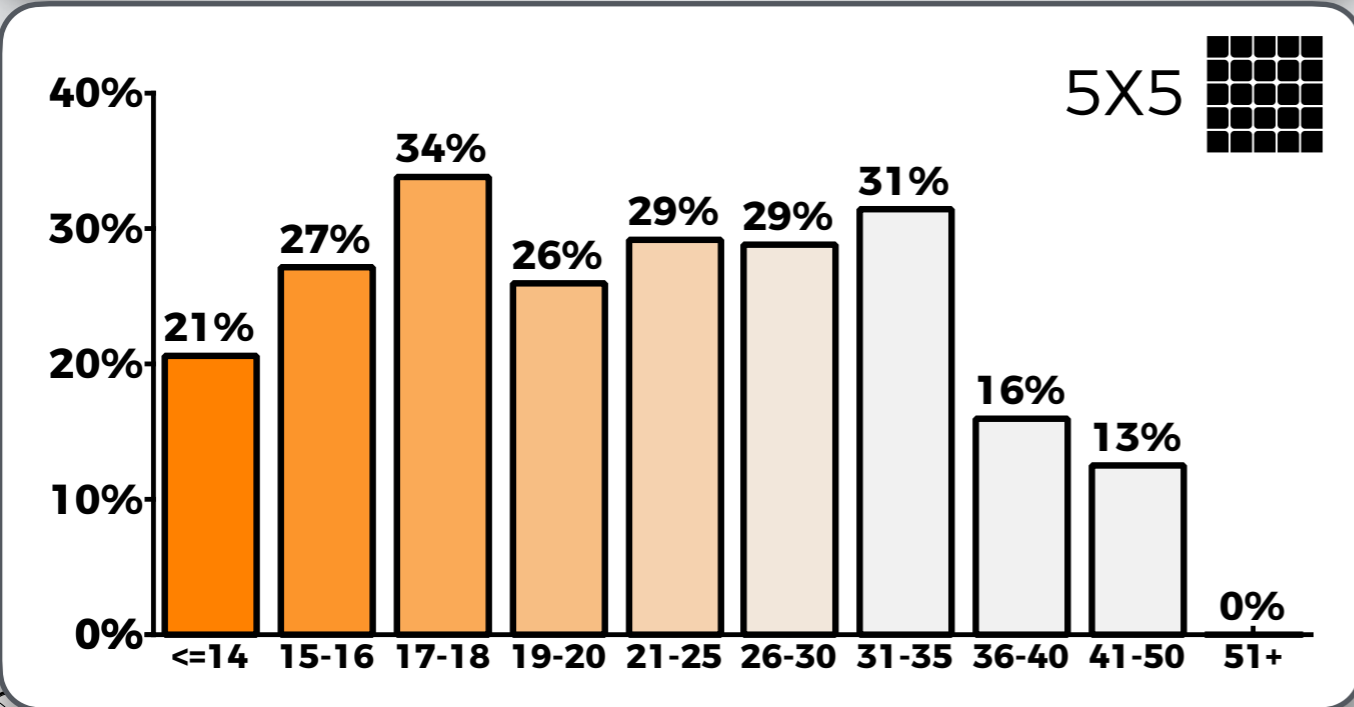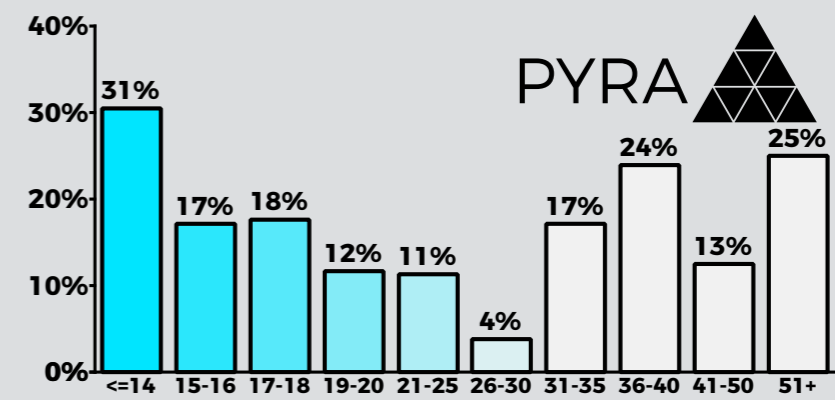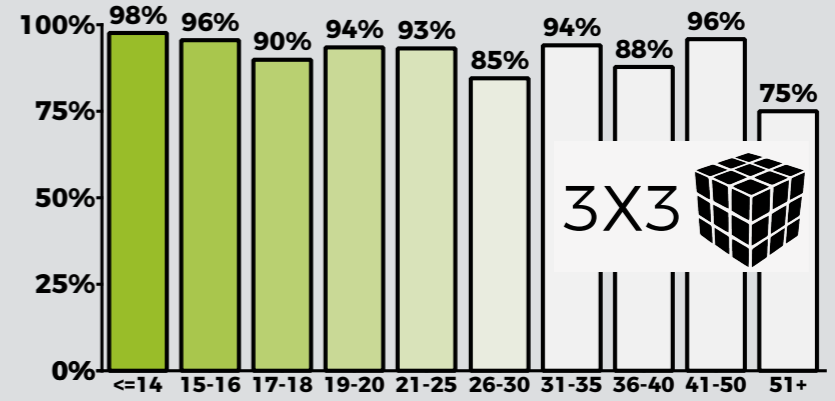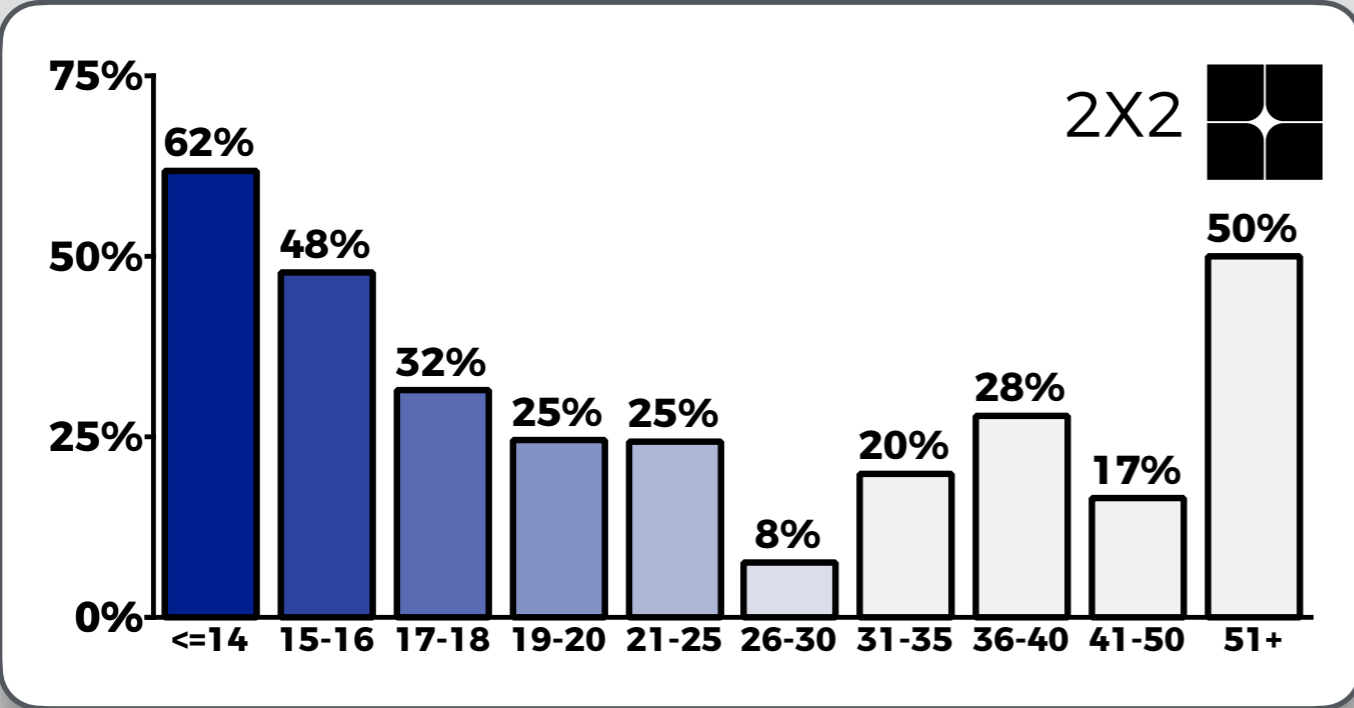| Age	%
<=14	21%
15-16	27%
17-18	34%
19-20	26%
21-25	29%
26-30	29%
31-35	31%
36-40	16%
41-50	13%
51+	0%
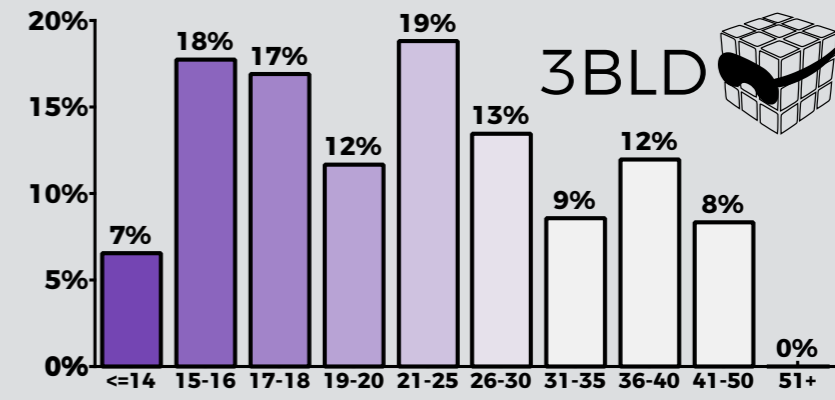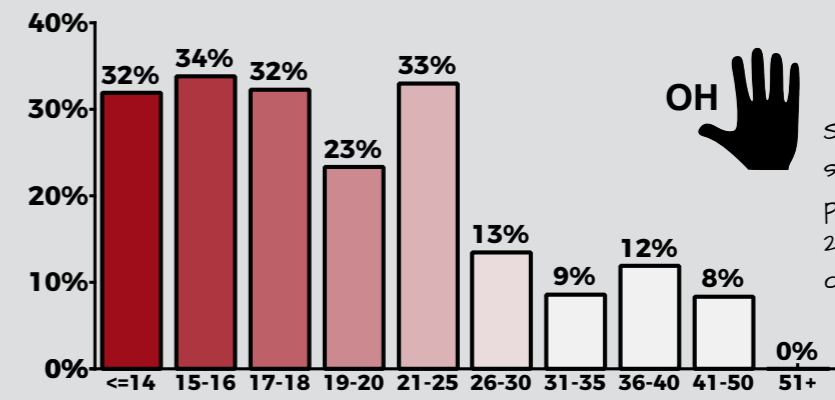
The length of our favorite cubing events is correlated to how long we can control our bladders

3X3

Age	%
<=14	98%
15-16	96%
17-18	90%
19-20	94%
21-25	93%
26-30	85%
31-35	94%
36-40	88%
41-50	96%
51+	75%

PYRA

Age	%
<=14	31%
15-16	17%
17-18	18%
19-20	12%
21-25	11%
26-30	4%
31-35	17%
36-40	24%
41-50	13%
51+	25%

OH

Age	%
<=14	32%
15-16	34%
17-18	32%
19-20	23%
21-25	33%
26-30	13%
31-35	9%
36-40	12%
41-50	8%
51+	0%

Studies have shown that people after 26 can't use only one hand

3BLD

Age	%
<=14	7%
15-16	18%
17-18	17%
19-20	12%
21-25	19%
26-30	13%
31-35	9%
36-40	12%
41-50	8%
51+	0%

25

3X3 SINGLES AND AVERAGES HAVE PRETTY CONSISTENT GAPS AT ALL LEVELS; PB SINGLE IS ~60% OF GLOBAL AVERAGE AND ~3/4 OF PB AO5

3X3 GLOBAL AVERAGE

12.9
17.0
24.6

25% 25% 25% 25%

0 5 10 15 20 25 30 35 40 45 50 55 60 65

The distribution is long tailed: at the beginning there is a lot of variability, the faster we get, the more difficult it is to get faster, so many of us hit a wall
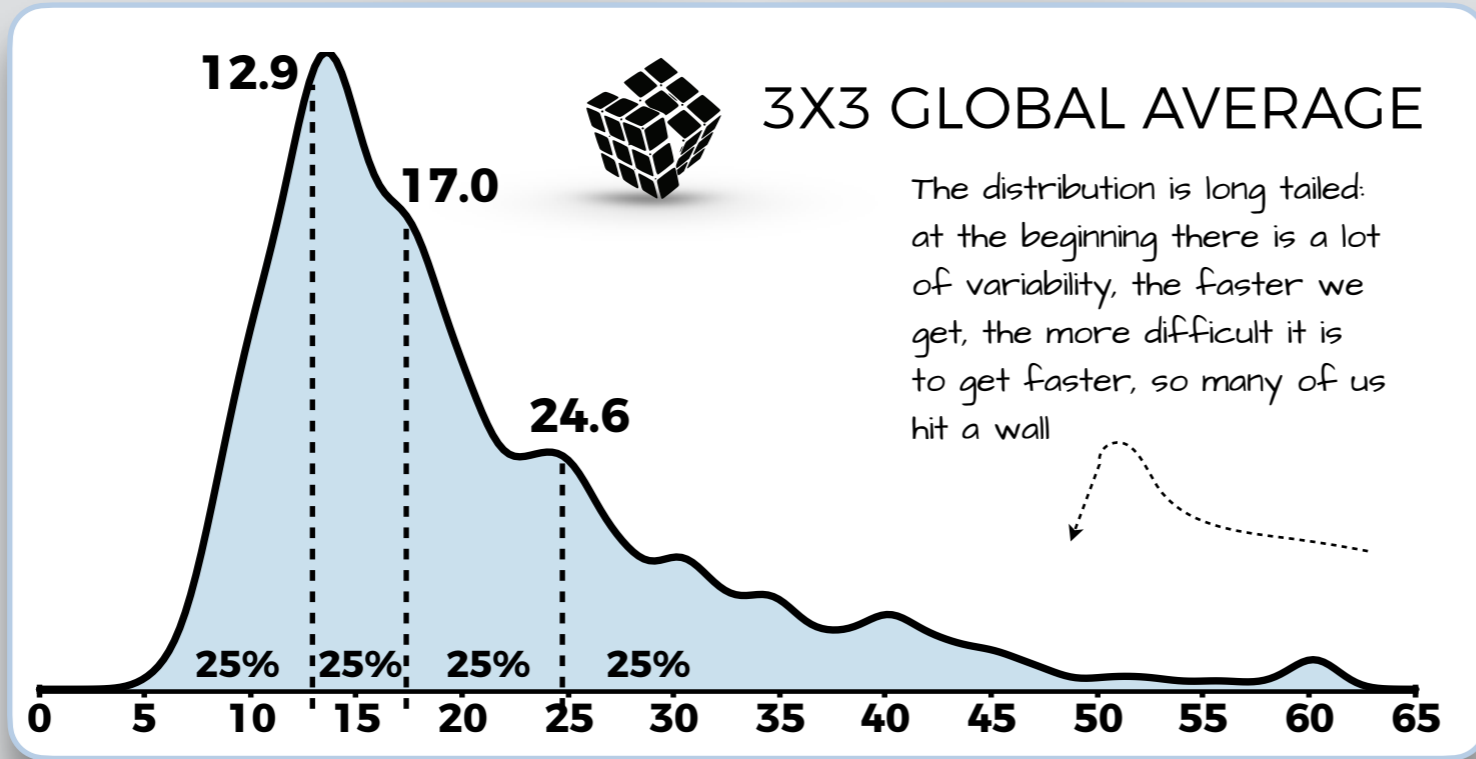
PB AO5 → PB Single
x0.75

PB AO5 → Global
x1.20

PB AO12 → Global
x1.14

TIME GAP BETWEEN PBS AND GLOBAL AVERAGE

	PB Single	PB AO5	PB AO12	Global
	10.6	14.1	15.0	17.0
Median cuber	**62%**	**83%**	**90%**	**100%**
Top25%	57%	80%	87%	100%

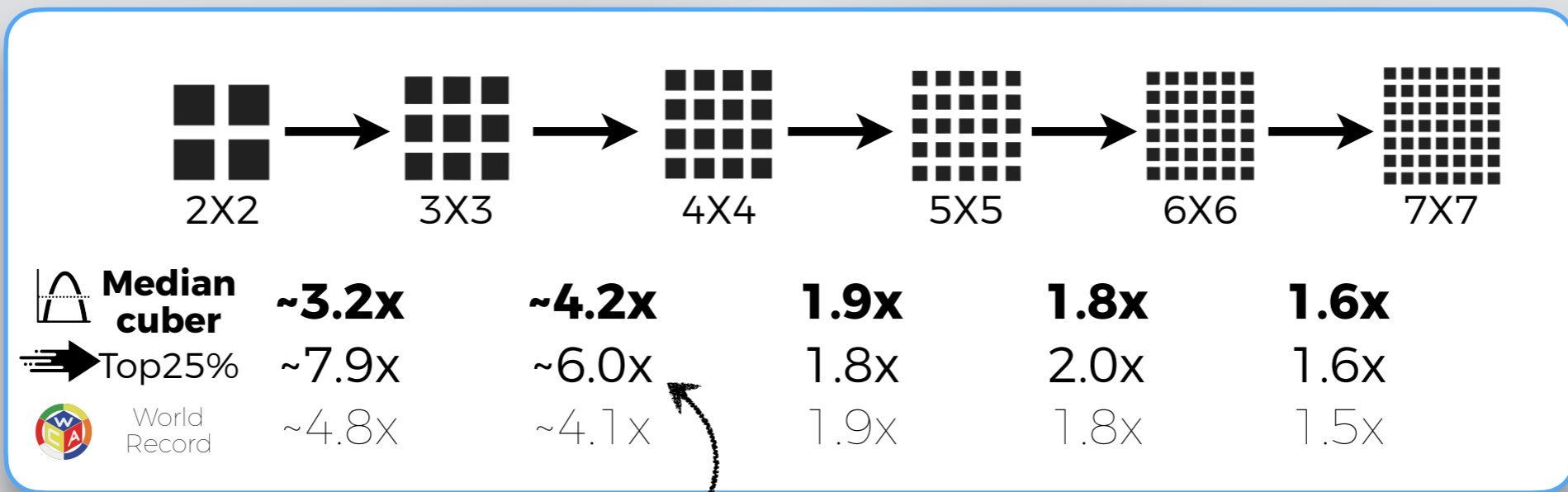On average the PB single is approx 60% of a cuber's global average

DISTRIBUTION OF GAPS
PB vs Global results
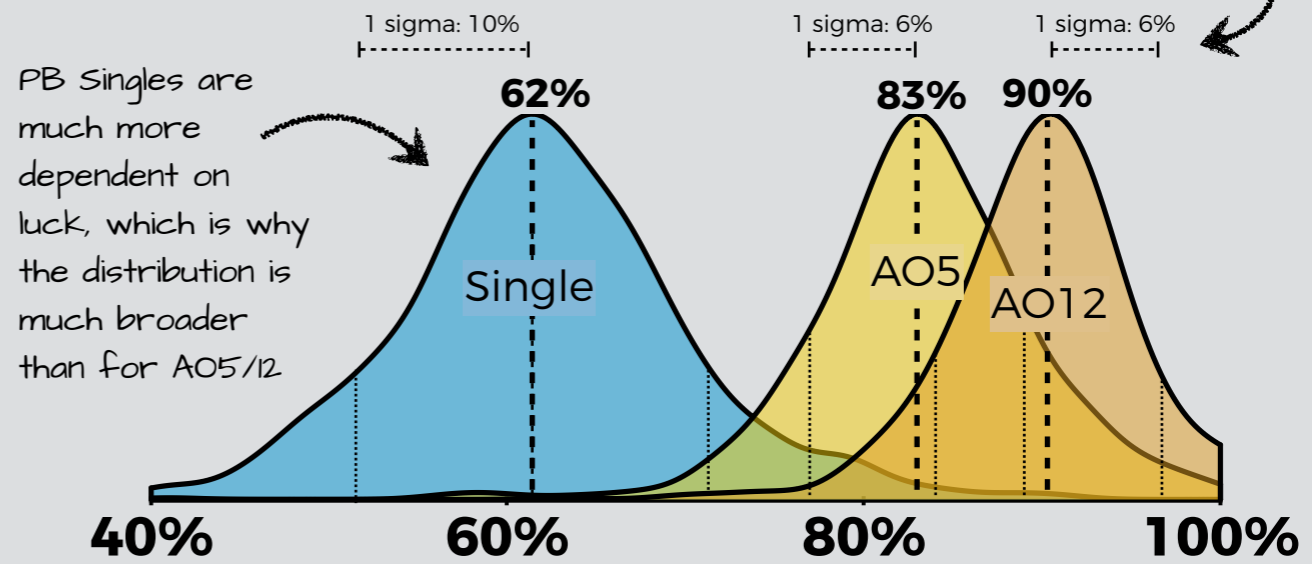
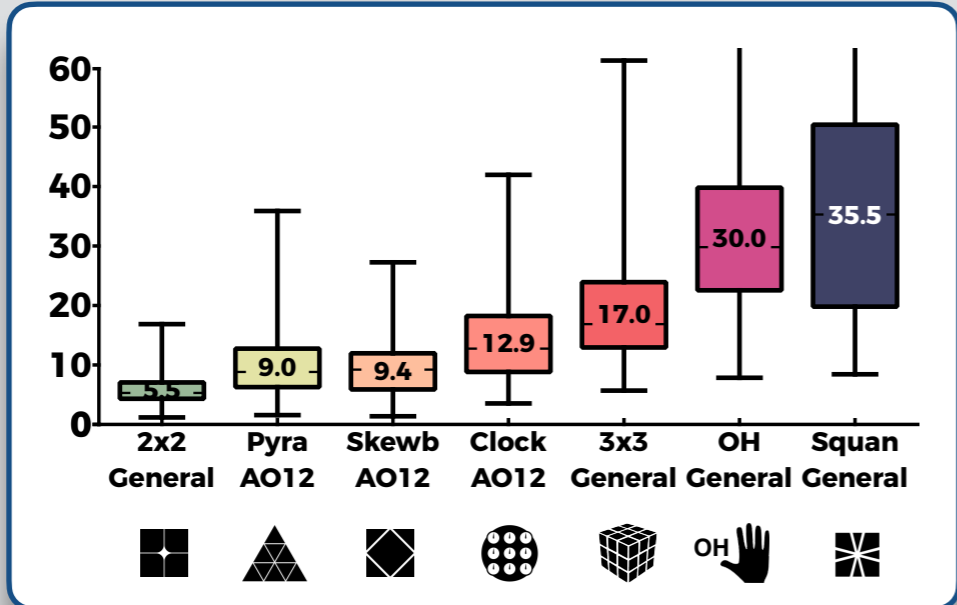Approx 2/3 of all cubers fall within the average plus or minus 1 sigma

PB Singles are much more dependent on luck, which is why the distribution is much broader than for AO5/12

1 sigma: 10%
1 sigma: 6%
1 sigma: 6%

62%
83%
90%

Single
AO5
AO12

40% 60% 80% 100%

THE LARGER THE CUBE, THE MORE TIME IT TAKES. MULTIPLIERS ARE RATHER CONSISTENT FOR MOST CUBERS

CUBE-SIZE IMPACT ON TIME

2X2 → 3X3 → 4X4 → 5X5 → 6X6 → 7X7

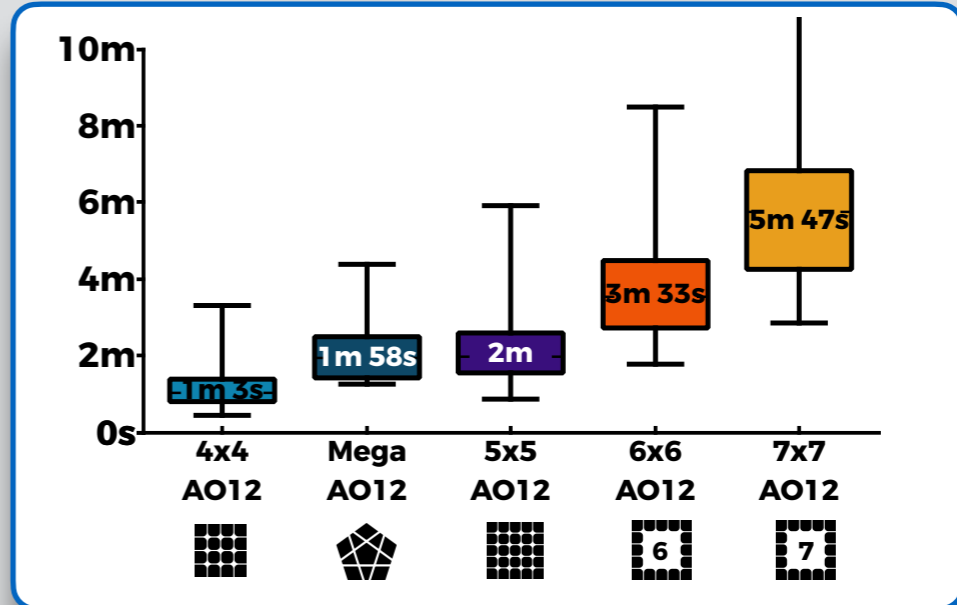|	2X2→3X3	3X3→4X4	4X4→5X5	5X5→6X6	6X6→7X7
Median cuber	**~3.2x**	**~4.2x**	**1.9x**	**1.8x**	**1.6x**
Top25%	~7.9x	~6.0x	1.8x	2.0x	1.6x
World Record	~4.8x	~4.1x	1.9x	1.8x	1.5x

Difference between Top and median cubers for smaller cubes is mostly due to a lot of people doing these. Only "fast-ish" cubers do big cubes, so the "median" cuber is much more similar to the Top25%

The fact that world record resembles more the median cuber is interesting, although World Record is a collection of different people and best averages of 5, which makes it easier to be faster on simpler events, where a "bit of luck" can have a very large impact on the whole solve (props to /u/TheRealUncleFrank for checking the WRs for his calculator!)
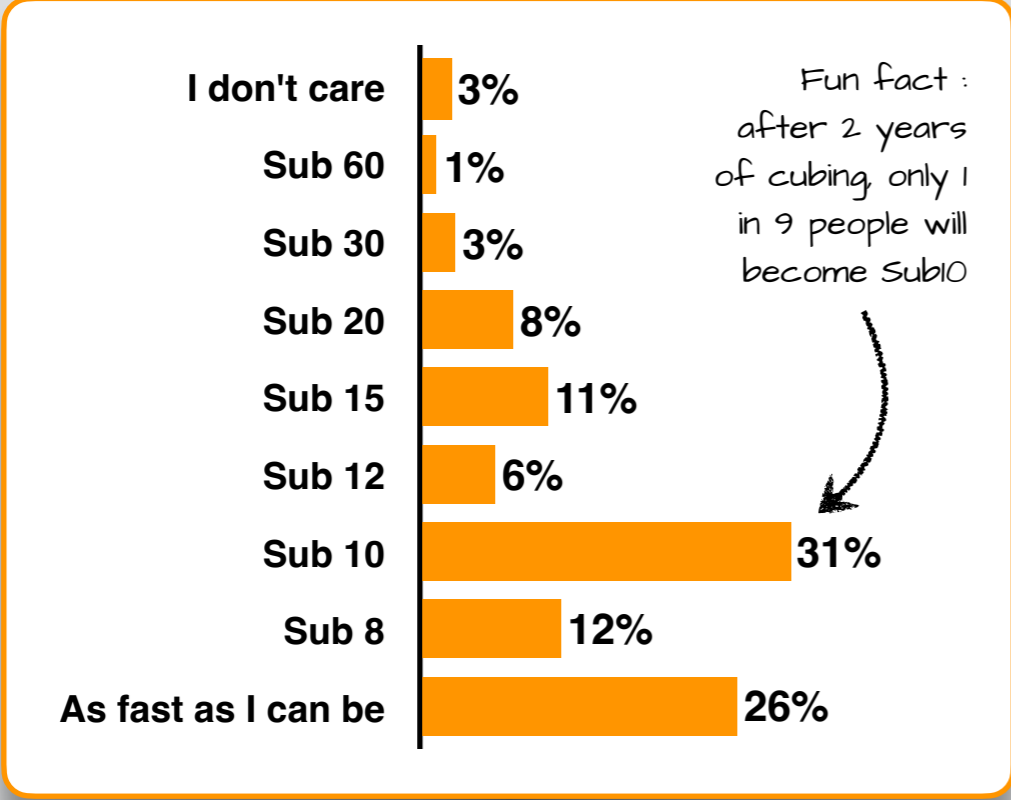
SMALL PUZZLES AVERAGES

Puzzle	Value
2x2 General	5.5
Pyra AO12	9.0
Skewb AO12	9.4
Clock AO12	12.9
3x3 General	17.0
OH General	30.0
Squan General	35.5

LARGE PUZZLES AVERAGES

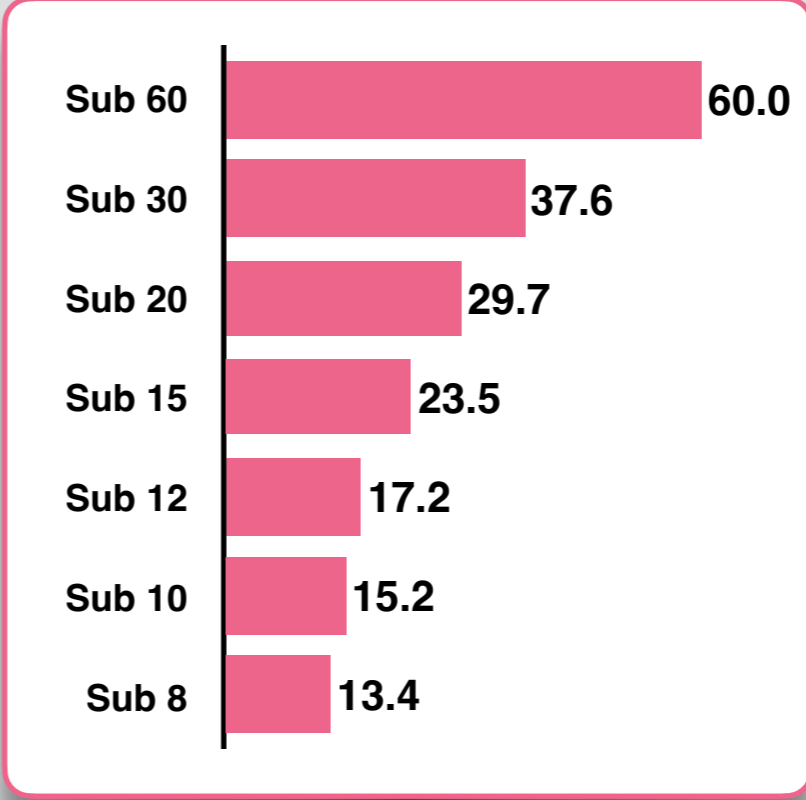| Puzzle	Value
4x4 AO12	1m 3s
Mega AO12	1m 58s
5x5 AO12	2m
6x6 AO12	3m 33s
7x7 AO12	5m 47s

SUB 10 IS THE MAIN GOAL FOR MANY OF US. IN GENERAL WE AIM AT REDUCING OUR CURRENT TIMES BY ONE THIRD. BUT AS SOON AS WE PROGRESS WE START AIMING LOWER

## WHAT WOULD YOU LIKE YOUR 3X3 GLOBAL AVERAGE TO BE, ULTIMATELY?

Category	Percentage
I don't care	3%
Sub 60	1%
Sub 30	3%
Sub 20	8%
Sub 15	11%
Sub 12	6%
Sub 10	31%
Sub 8	12%
As fast as I can be	26%

Fun fact : after 2 years of cubing, only 1 in 9 people will become Sub10

CURRENT 3X3 AVERAGE BY DESIRED TARGET

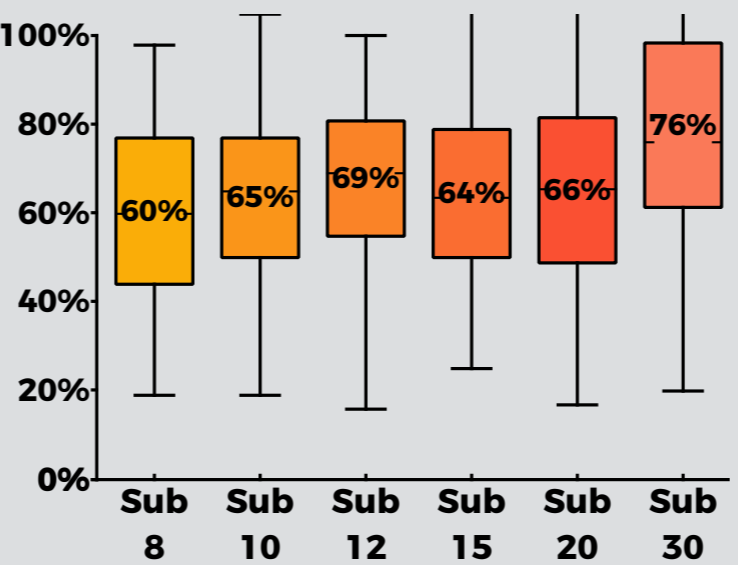| Target	Average
Sub 60	60.0
Sub 30	37.6
Sub 20	29.7
Sub 15	23.5
Sub 12	17.2
Sub 10	15.2
Sub 8	13.4

We tend to set as goal the 2nd threshold below our current times : "I average 23s; I'll probably get to sub20 soon, so I'll aim for sub15!"

GAP BETWEEN CURRENT AVERAGE AND TARGET

Sub 8	Sub 10	Sub 12	Sub 15	Sub 20	Sub 30	Sub 60
5.4	5.2	5.2	8.5	9.7	7.6	0.0
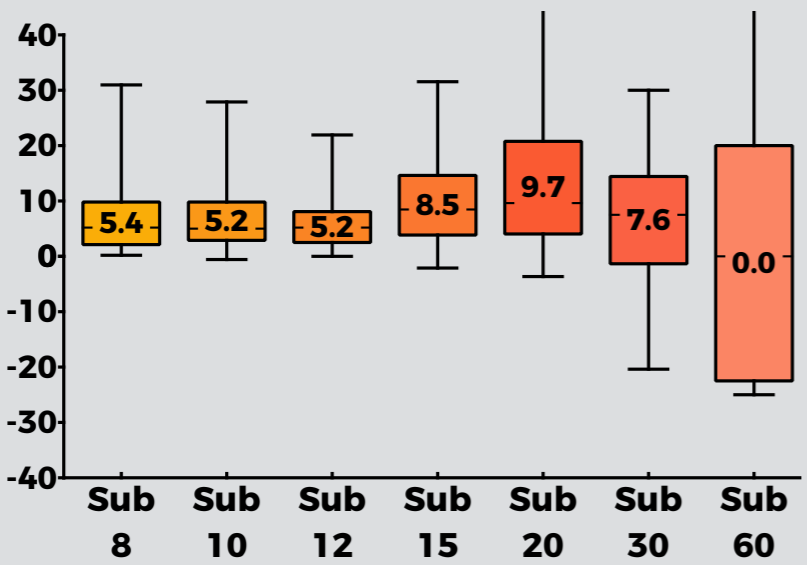
TARGET AS % OF CURRENT SPEED

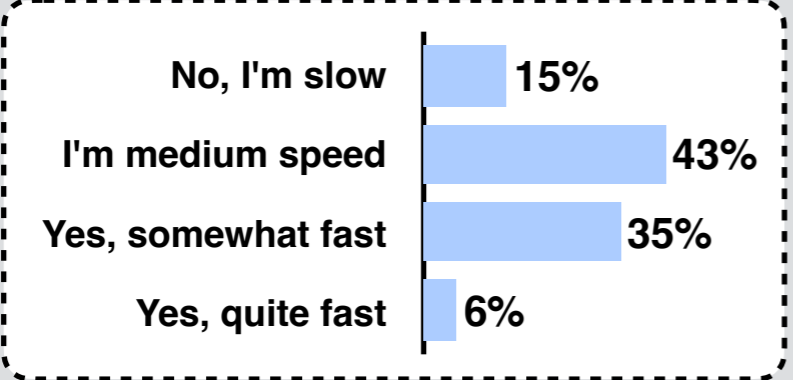| Sub 8	Sub 10	Sub 12	Sub 15	Sub 20	Sub 30
60%	65%	69%	64%	66%	76%

AVERAGE TARGET
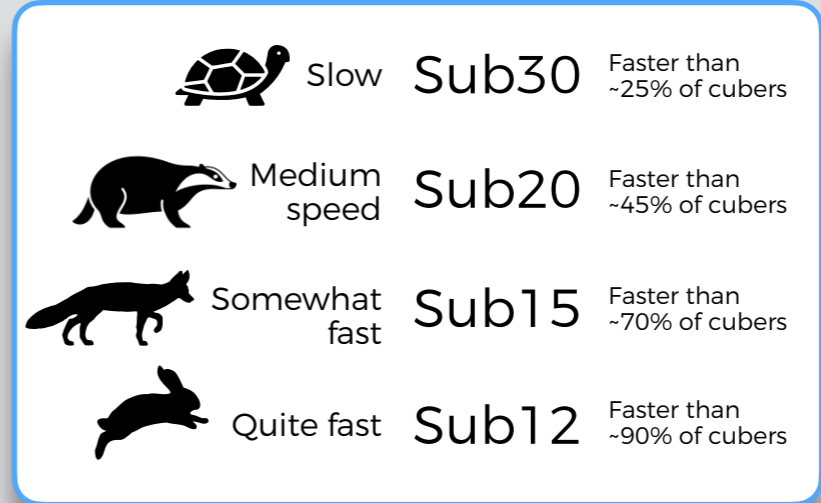
68%

of current times

28

SUB 10 IS THE MAIN GOAL FOR MANY OF US. IN GENERAL WE AIM AT REDUCING OUR CURRENT TIMES BY ONE THIRD. BUT AS SOON AS WE PROGRESS WE START AIMING LOWER
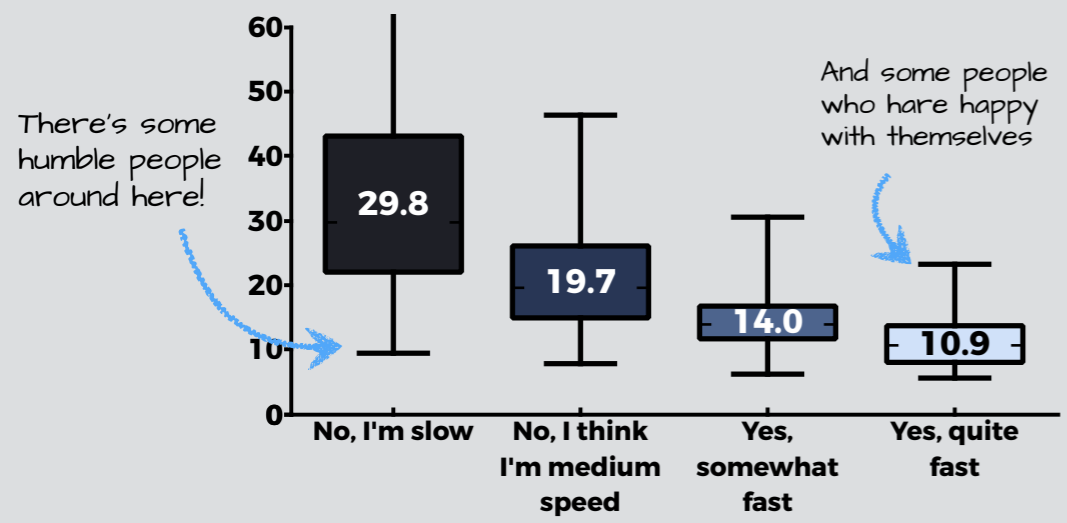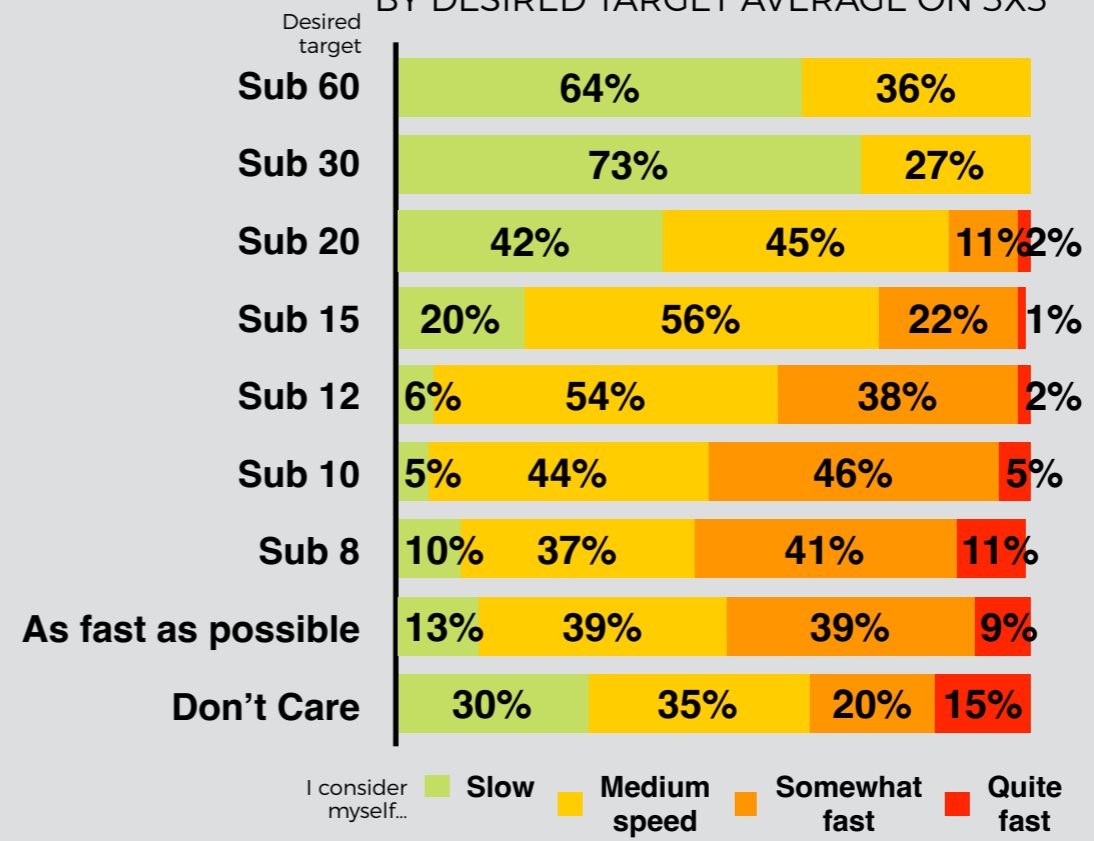
DO YOU CONSIDER YOURSELF FAST?

- No, I'm slow — 15%
- I'm medium speed — 43%
- Yes, somewhat fast — 35%
- Yes, quite fast — 6%

WHAT IS FAST
(ACCORDING TO THE CUBING COMMUNITY)

Slow	Sub30	Faster than ~25% of cubers	
Medium speed	Sub20	Faster than ~45% of cubers	
Somewhat fast	Sub15	Faster than ~70% of cubers	
Quite fast	Sub12	Faster than ~90% of cubers	

HOW FAST ARE THE FAST ONES?

There's some humble people around here!

And some people who hare happy with themselves

- No, I'm slow — 29.8
- No, I think I'm medium speed — 19.7
- Yes, somewhat fast — 14.0
- Yes, quite fast — 10.9

HOW DO WE CONSIDER OURSELVES, BY DESIRED TARGET AVERAGE ON 3X3

Desired target

	Slow	Medium speed	Somewhat fast	Quite fast
Sub 60	64%	36%		
Sub 30	73%	27%		
Sub 20	42%	45%	11%	2%
Sub 15	20%	56%	22%	1%
Sub 12	6%	54%	38%	2%
Sub 10	5%	44%	46%	5%
Sub 8	10%	37%	41%	11%
As fast as possible	13%	39%	39%	9%
Don't Care	30%	35%	20%	15%

I consider myself... **Slow** | **Medium speed** | **Somewhat fast** | **Quite fast**
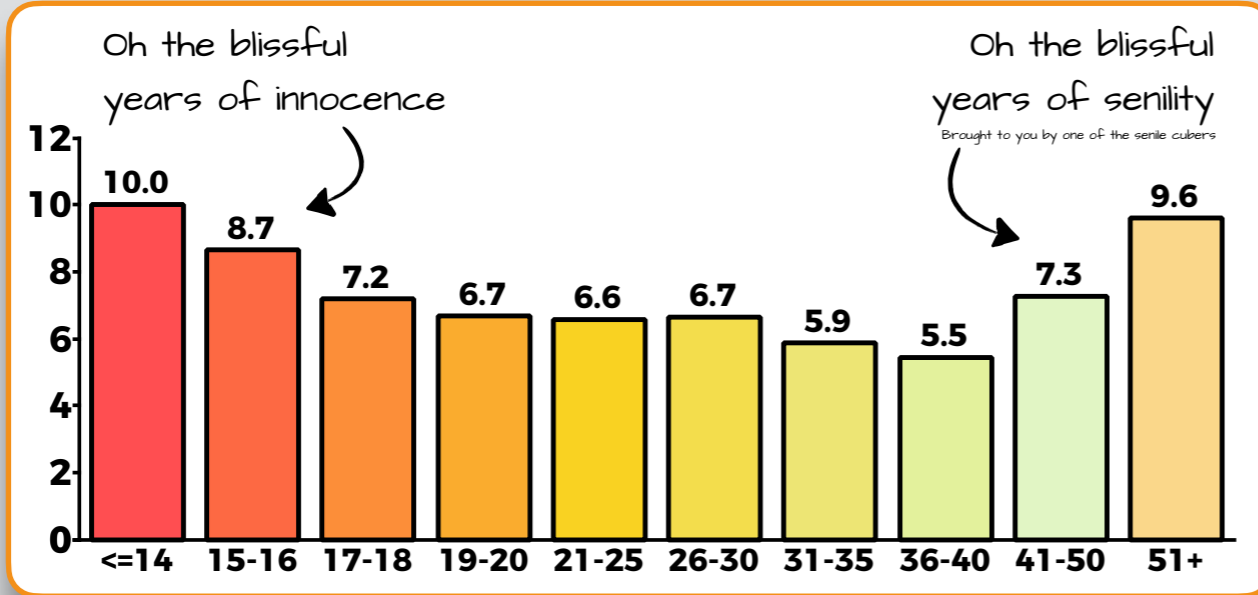
29

AGE MATTERS : THE YOUNGER WE START, THE FASTER WE IMPROVE! AND FROM 25 ON SPEED STARTS DIPPING EVER SO SLOWLY (AND THEN NOT SO SLOWLY ANYMORE)
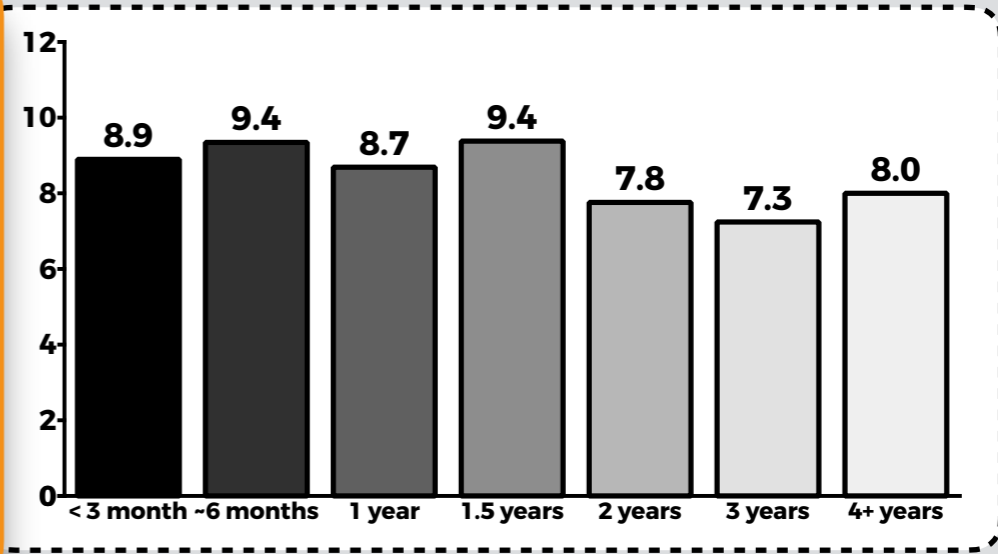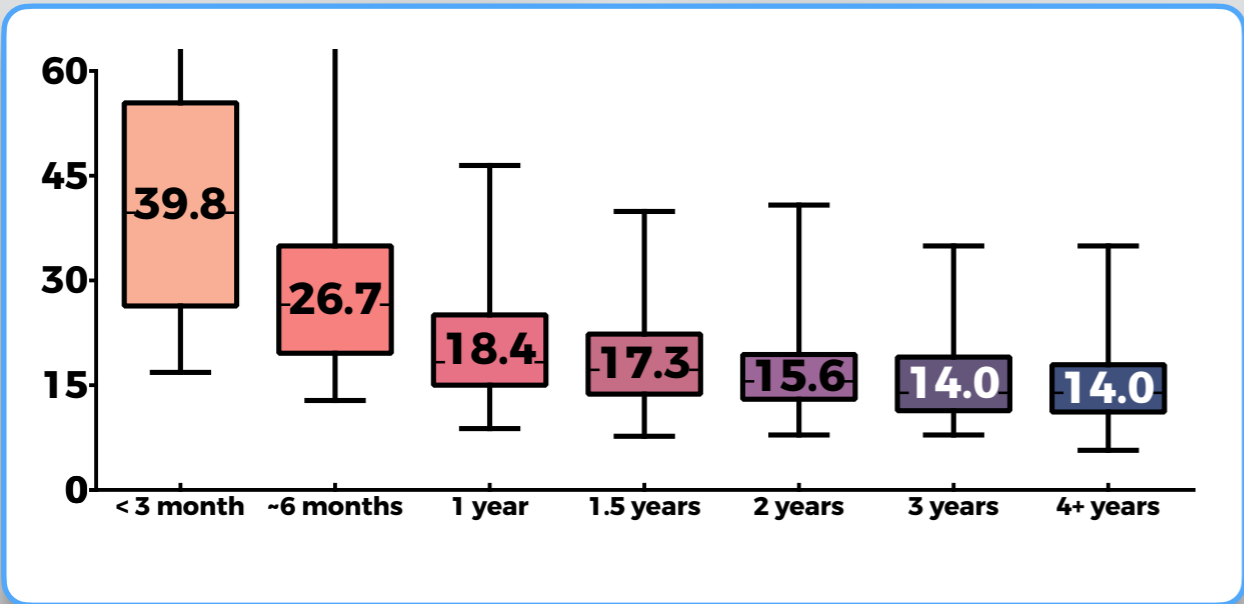
3X3 GLOBAL AVERAGE BY AGE GROUP

The youngest people simply haven't had enough time yet to become as fast as the others

Adults with a job and a life don't have as much time to practice, and remain slower

If you're 45 and still cubing, you probably dedicate more time and effort to it than if you were younger, which explains the gap

Box plot values by age group:
- <=14: 19.3
- 15-16: 15.0
- 17-18: 15.0
- 19-20: 14.5
- 21-25: 14.9
- 26-30: 17.7
- 31-35: 27.2
- 36-40: 32.7
- 41-50: 27.3
- 51+: 33.3

AVERAGE WEEKLY HOURS OF CUBING BY AGE GROUP

Oh the blissful years of innocence

Oh the blissful years of senility

Brought to you by one of the senile cubers

- <=14: 10.0
- 15-16: 8.7
- 17-18: 7.2
- 19-20: 6.7
- 21-25: 6.6
- 26-30: 6.7
- 31-35: 5.9
- 36-40: 5.5
- 41-50: 7.3
- 51+: 9.6

AVERAGE WEEKLY HOURS OF CUBING BY HOW LONG WE'VE BEEN PRACTICING 3X3

- < 3 month: 8.9
- ~6 months: 9.4
- 1 year: 8.7
- 1.5 years: 9.4
- 2 years: 7.8
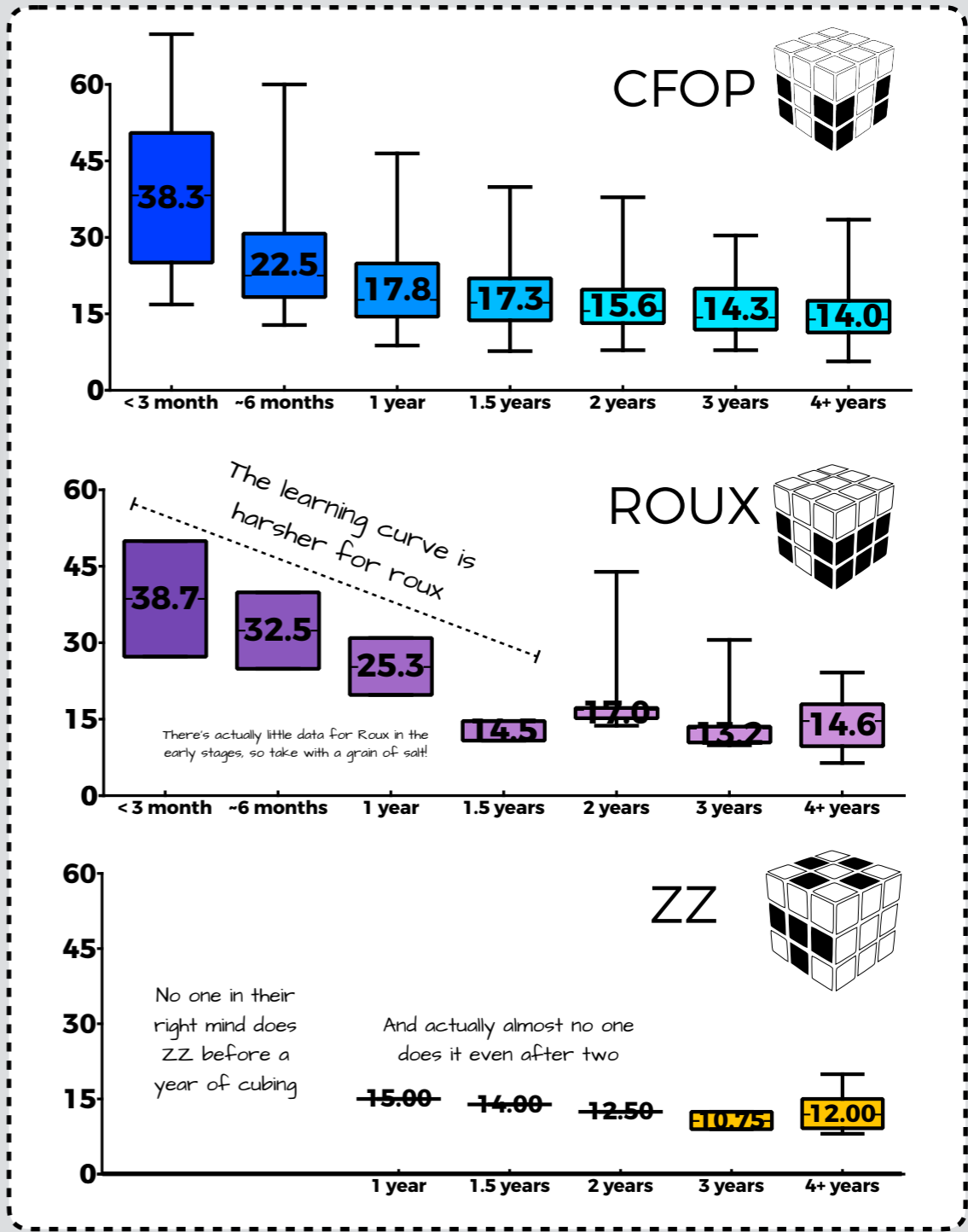- 3 years: 7.3
- 4+ years: 8.0

WE START TO HIT SERIOUS DIMINISHING RETURNS AFTER 2 YEARS. ALSO, IT'S OFFICIAL : ROUX IS FASTER THAN CFOP BUT IT TAKES LONGER TO MASTER IT

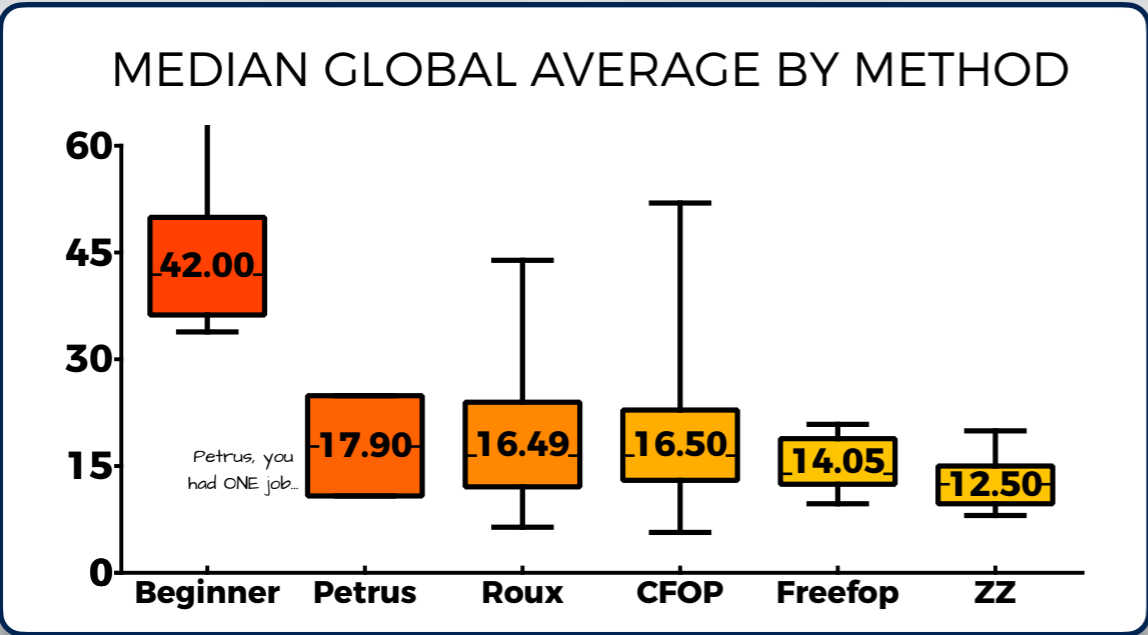## 3X3 GLOBAL AVERAGE BY CUBING EXPERIENCE

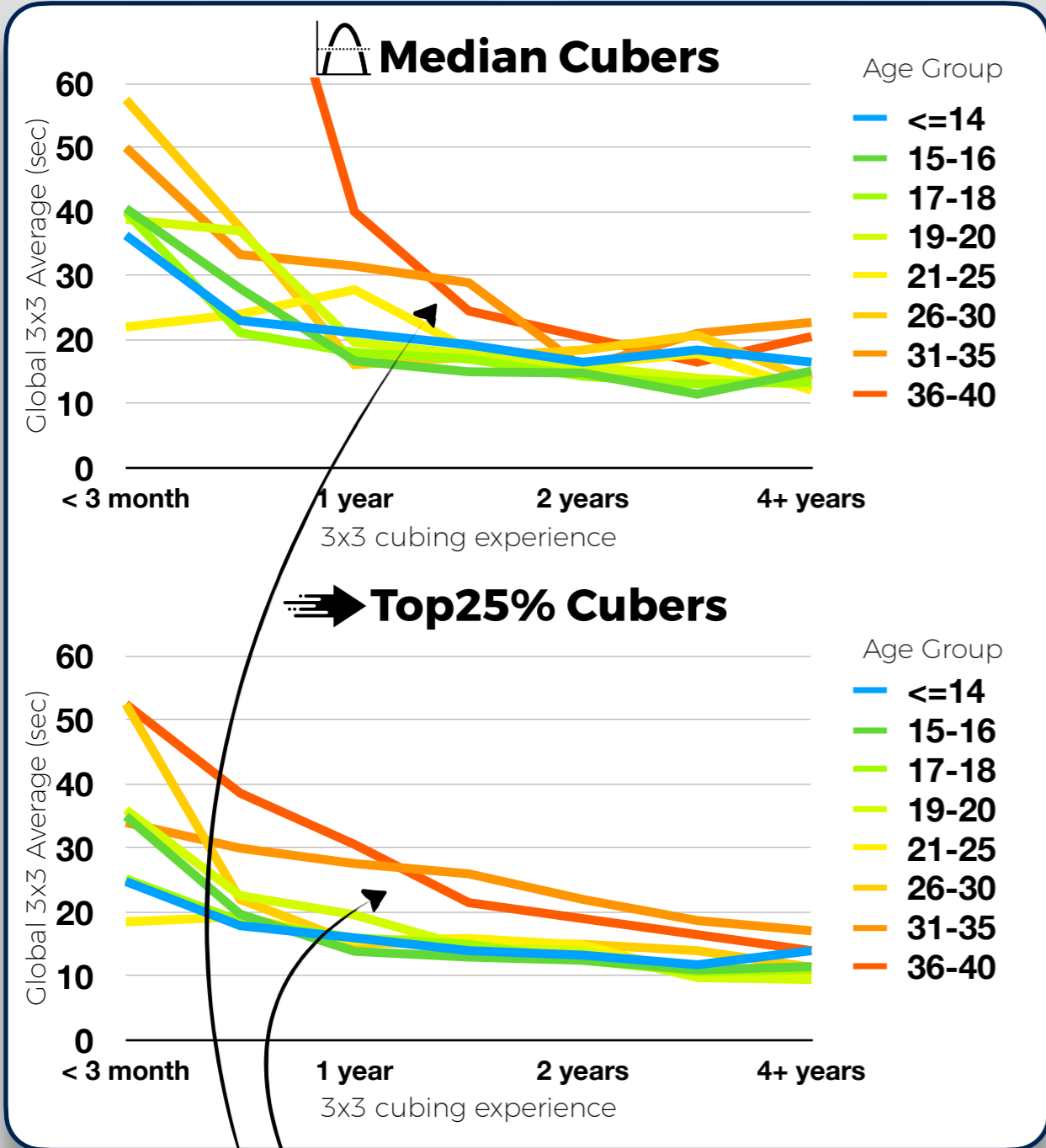Box plot with values: 39.8 (< 3 month), 26.7 (~6 months), 18.4 (1 year), 17.3 (1.5 years), 15.6 (2 years), 14.0 (3 years), 14.0 (4+ years)

MEDIAN GLOBAL AVERAGE BY METHOD

Box plot with values: 42.00 (Beginner), 17.90 (Petrus), 16.49 (Roux), 16.50 (CFOP), 14.05 (Freefop), 12.50 (ZZ)

Petrus, you had ONE job...

IMPACT OF CUBING EXPERIENCE BY METHOD

CFOP

Box plot with values: 38.3 (< 3 month), 22.5 (~6 months), 17.8 (1 year), 17.3 (1.5 years), 15.6 (2 years), 14.3 (3 years), 14.0 (4+ years)

ROUX

The learning curve is harsher for roux

Box plot with values: 38.7 (< 3 month), 32.5 (~6 months), 25.3 (1 year), 14.5 (1.5 years), 17.0 (2 years), 13.7 (3 years), 14.6 (4+ years)

There's actually little data for Roux in the early stages, so take with a grain of salt!

ZZ

No one in their right mind does ZZ before a year of cubing

And actually almost no one does it even after two

Box plot with values: 15.00 (1 year), 14.00 (1.5 years), 12.50 (2 years), 10.75 (3 years), 12.00 (4+ years)

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YOUNGER CUBERS IMPROVE 3.5X FASTER THAN THOSE WHO ALREADY HIT THEIR TWENTIES. GET CLOSER TO 40 AND IT TAKES A WHILE TO IMPROVE (BUT WE DO GET THERE EVENTUALLY!)
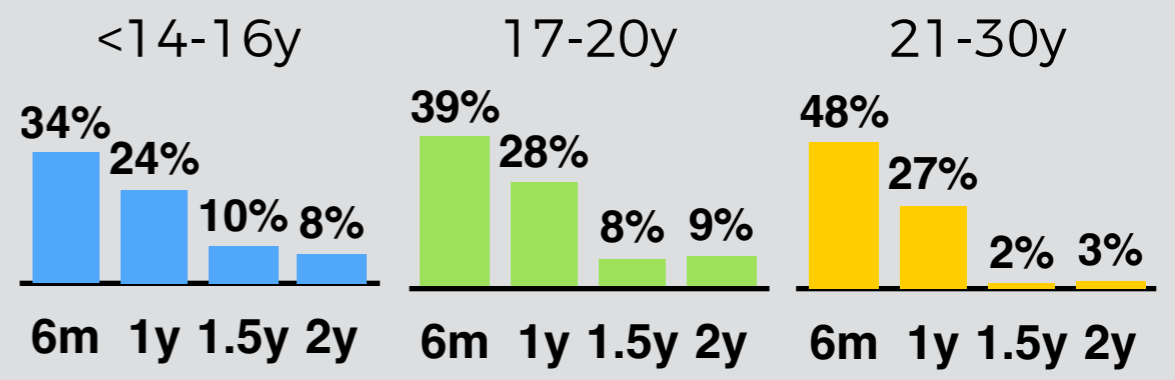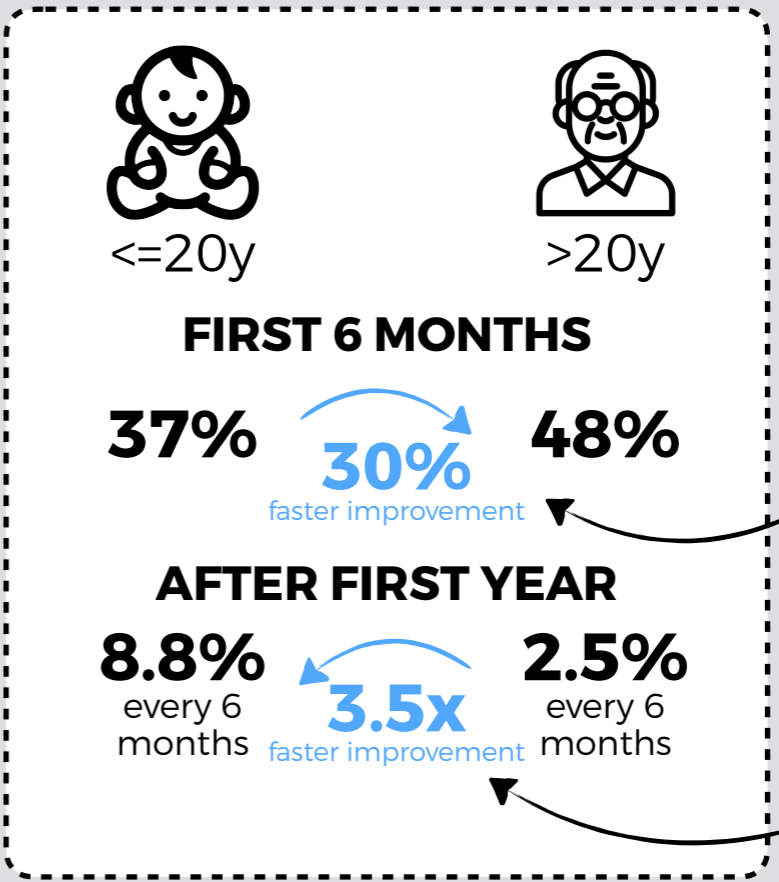
IMPROVEMENT OF GLOBAL AVERAGE BY AGE GROUP

Median Cubers

Age Group
- <=14
- 15-16
- 17-18
- 19-20
- 21-25
- 26-30
- 31-35
- 36-40

Global 3x3 Average (sec)

60 · 50 · 40 · 30 · 20 · 10 · 0

< 3 month · 1 year · 2 years · 4+ years

3x3 cubing experience

Top25% Cubers

Age Group
- <=14
- 15-16
- 17-18
- 19-20
- 21-25
- 26-30
- 31-35
- 36-40

Global 3x3 Average (sec)

60 · 50 · 40 · 30 · 20 · 10 · 0

< 3 month · 1 year · 2 years · 4+ years

3x3 cubing experience

Older adults progress much more slowly, and need 1.5 years to get to the speed that most 14-16y olds reach in 6 months. The same holds true when we only look at the fastest 25% for each age group
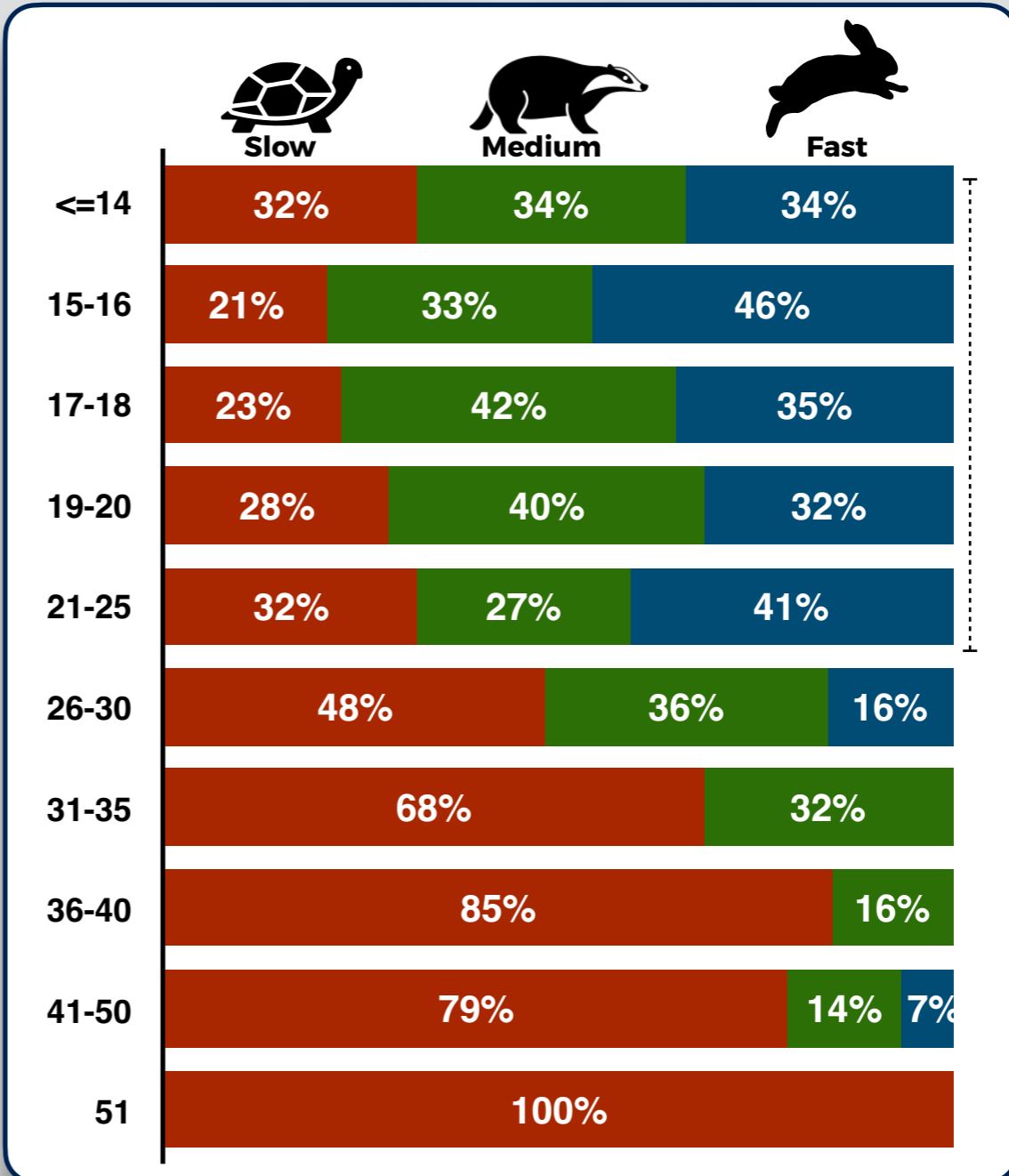
PROGRESS RATE BY AGE GROUP*

*Fewer data for older cubers, comparing progression is not really reliable

% of reduction of global average every 6 months

<14-16y
- 34% — 6m
- 24% — 1y
- 10% — 1.5y
- 8% — 2y

17-20y
- 39% — 6m
- 28% — 1y
- 8% — 1.5y
- 9% — 2y

21-30y
- 48% — 6m
- 27% — 1y
- 2% — 1.5y
- 3% — 2y

PROGRESS RATE FOR AGE GROUPS

<=20y   >20y

FIRST 6 MONTHS

37%   →30% faster improvement→   48%

AFTER FIRST YEAR

8.8% every 6 months   →3.5x faster improvement→   2.5% every 6 months

Progress the first six months is actually faster for older cubers : training is likely more structured, with better mental tools on "how to learn"

Then the advantage of brain plasticity overtake the positives of structured training

FAST LEARNERS REMAIN 2 TO 3 TIMES FASTER THAN SLOWER ONES; AND AGE DOESN'T HELP : QUICK LEARNERS ARE VANISHINGLY RARE AFTER 25

3X3 GLOBAL AVERAGE RATIO VS FAST LEARNERS

How much slower are times for slow learners compared to faster ones after the same amount of experience?

Y-axis: Ratio of global average vs fast learners (0.5 to 3.5)

X-axis: 3x3 speedcubing experience

Red (turtle/Slow): 3.2, 2.5, 2.3, 2.2, 2.2, 2.6, 2.4
Green (badger/Medium): 1.8, 1.6, 1.4, 1.4, 1.3, 1.5, 1.4
Blue (rabbit/Fast): 1.0 throughout

X categories: < 3 month, ~6 months, 1 year, 1.5 years, 2 years, 3 years, 4+ years
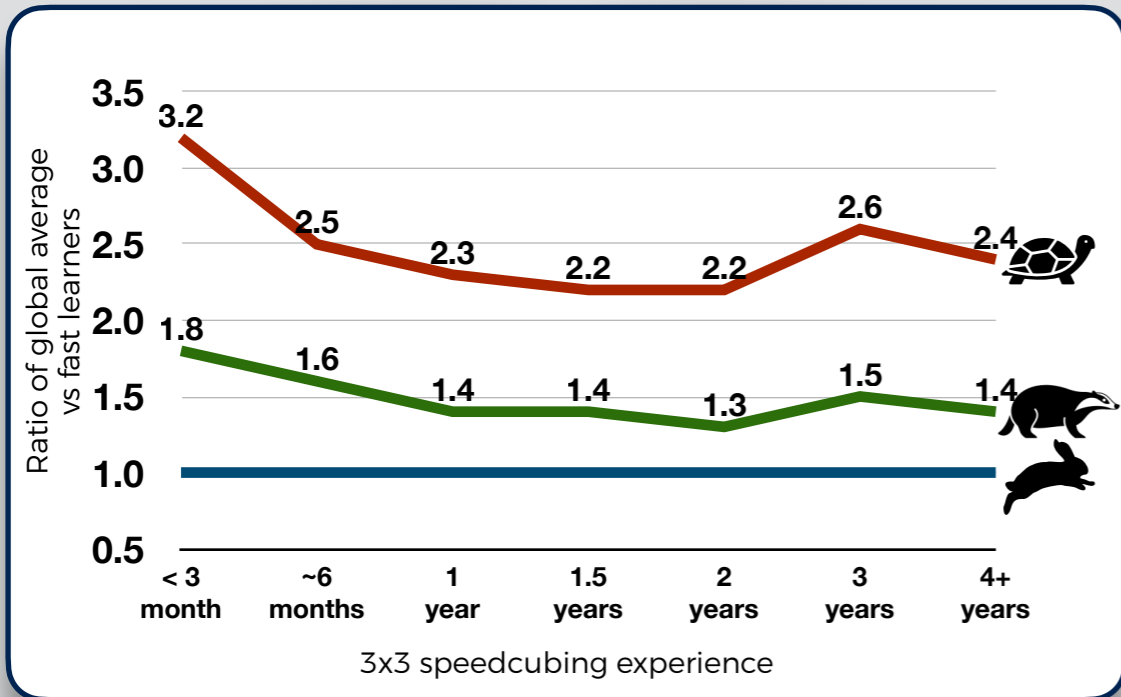
After 3 months slow learners take 3x longer than fast ones to solve the cube. They catch up, getting to approx 2x their counterparts after 1.5-2 years

Medium learners start out approx twice as slow as fast ones, but get closer quickly and remain so

DISTRIBUTION OF LEARNER TYPES BY AGE

	Slow	Medium	Fast
<=14	32%	34%	34%
15-16	21%	33%	46%
17-18	23%	42%	35%
19-20	28%	40%	32%
21-25	32%	27%	41%
26-30	48%	36%	16%
31-35	68%	32%	
36-40	85%	16%	
41-50	79%	14%	7%
51	100%		

Almost all fast learners are under 25y old

33

MOST EVENTS ARE CORRELATED AT LEAST PARTLY (NOT SURPRISING). BUT SOME EVENTS ARE MORE TIED TOGETHER THAN OTHERS (E.G. IF YOU DO BIG CUBES, YOU DO ALL OF THEM)
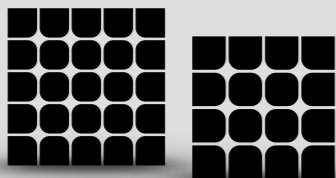
Big cubes go well together : learn one and you'll get faster at the others too

Turns out, if you can do it well with one hand, you can do it well with two of them!

Being good at Mega usually also means being good at most events

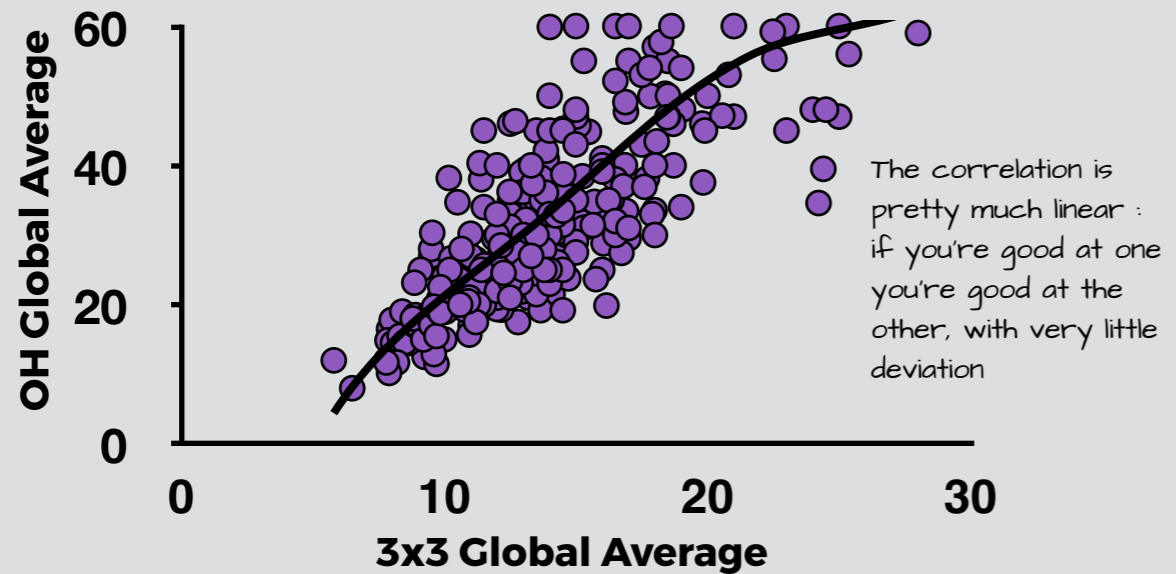Clock and FMC are lonely events : low correlations to all other events
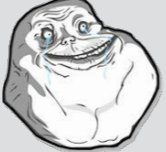
CORRELATION ACROSS EVENTS

	2x2	3x3	4x4	5x5	6x6	7x7	OH	3BLD	Pyra	Skewb	Sq1	Mega	Clock	FMC
2x2														
3x3	74%													
4x4	66%	77%												
5x5	55%	72%	88%											
6x6	66%		85%	93%										
7x7	61%	64%	68%	88%	90%									
OH		78%	69%	86%	72%	51%								
3BLD	38%	18%	39%	41%	22%	29%	33%							
Pyra	54%	55%	71%	74%	44%	39%	60%	27%						
Skewb	69%	47%	55%	55%	51%	51%	58%	33%	62%					
Sq1	51%	38%	46%	43%	52%	47%	57%	43%	43%	51%				
Mega	81%	75%	84%	76%	93%	67%	70%	50%	59%	66%	66%			
Clock	41%	33%	51%	42%	31%	–	35%	45%	38%	46%	53%			
FMC	27%	31%	36%	33%	27%	38%	31%	36%	22%	31%	33%	–		

34

SINCE WE'RE TALKING ABOUT CORRELATIONS : HERE'S HOW SOME PUZZLES RELATE TO EACH OTHER; IN GENERAL BEING FAST AT ONE MEANS BEING FAST AT THE OTHERS
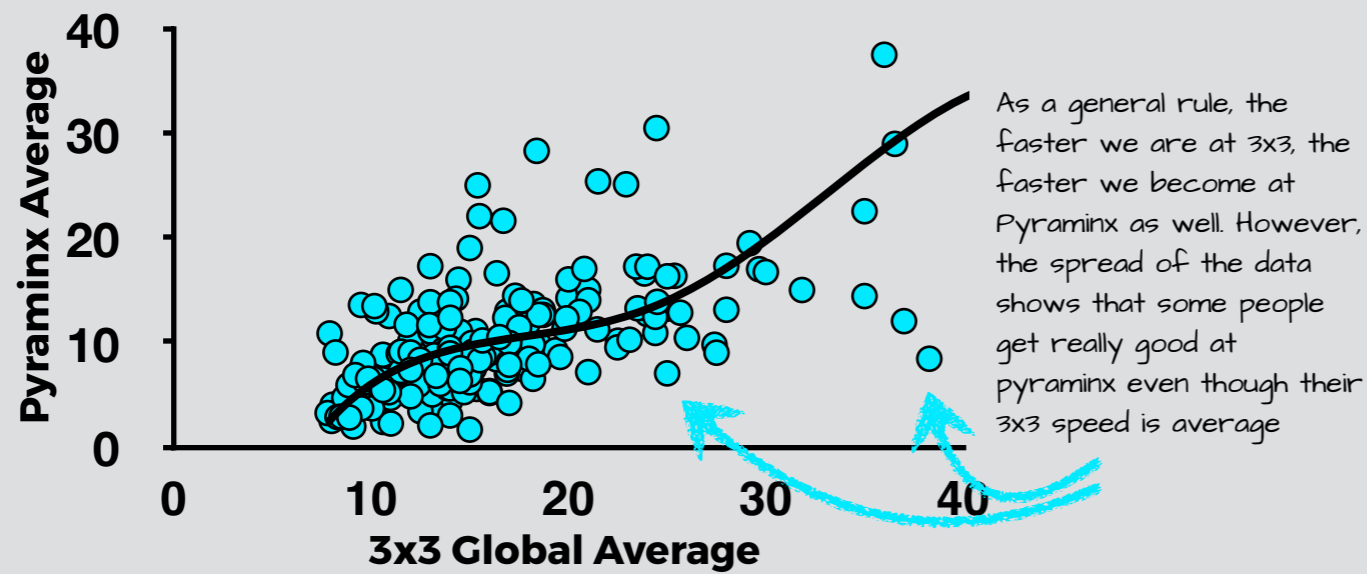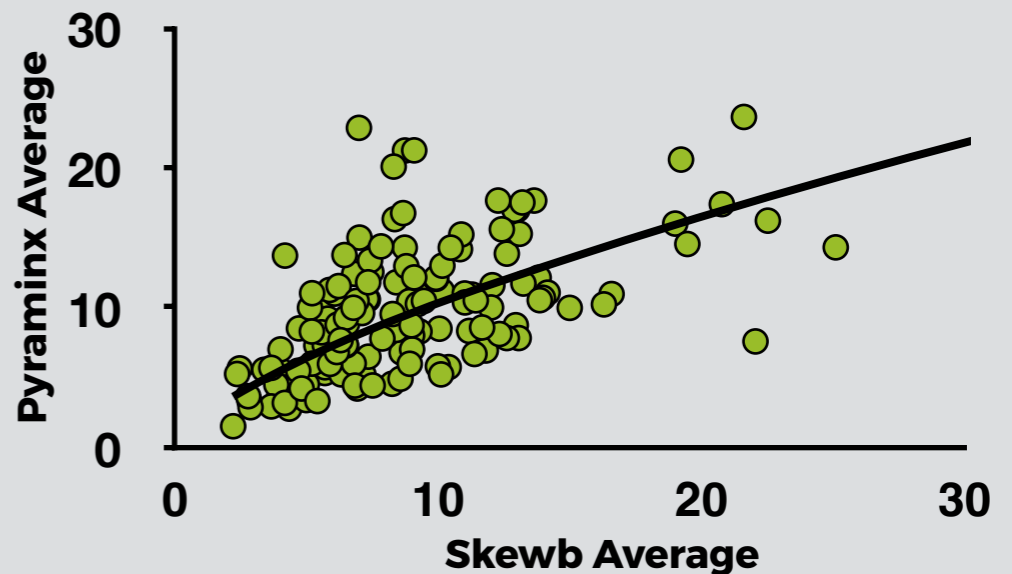

3X3 VS OH PERFORMANCE

The correlation is pretty much linear : if you're good at one you're good at the other, with very little deviation

MEGA VS 2X2 PERFORMANCE

3X3 VS PYRA PERFORMANCE
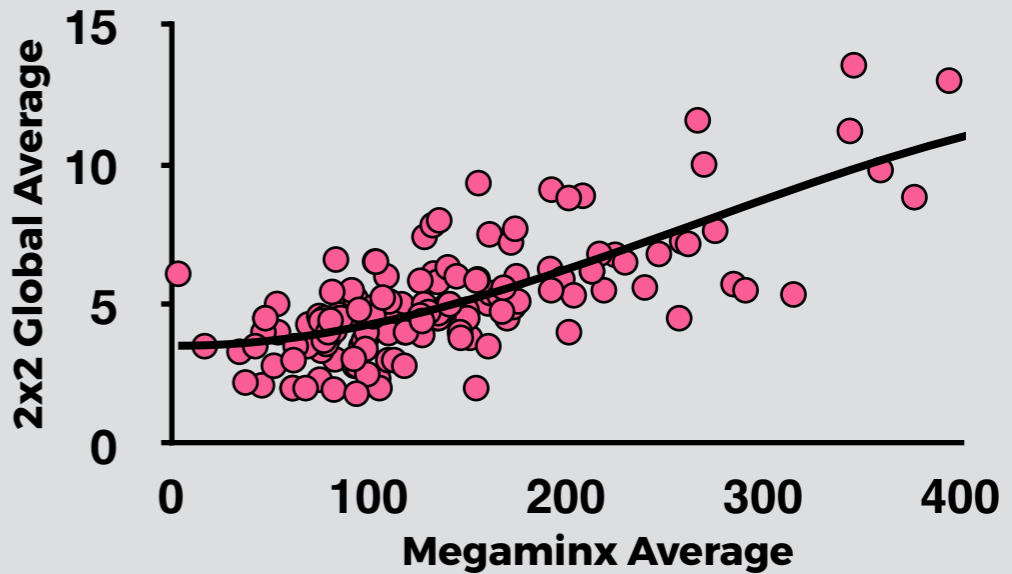
As a general rule, the faster we are at 3x3, the faster we become at Pyraminx as well. However, the spread of the data shows that some people get really good at pyraminx even though their 3x3 speed is average

SKEWB VS PYRA PERFORMANCE

Chapter 4 :

OTHER EVENTS

FOR 2X2, CLL AND PBL ARE THE FASTER ALGSETS, WITH CLL AVERAGING MORE THAN A SECOND FASTER THAN OTHER ALGSETS/METHODS. ALL OF THEM ALLOW TO SOLVE TWICE AS FAST AS WITHOUT ANY ALGS
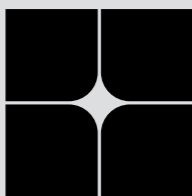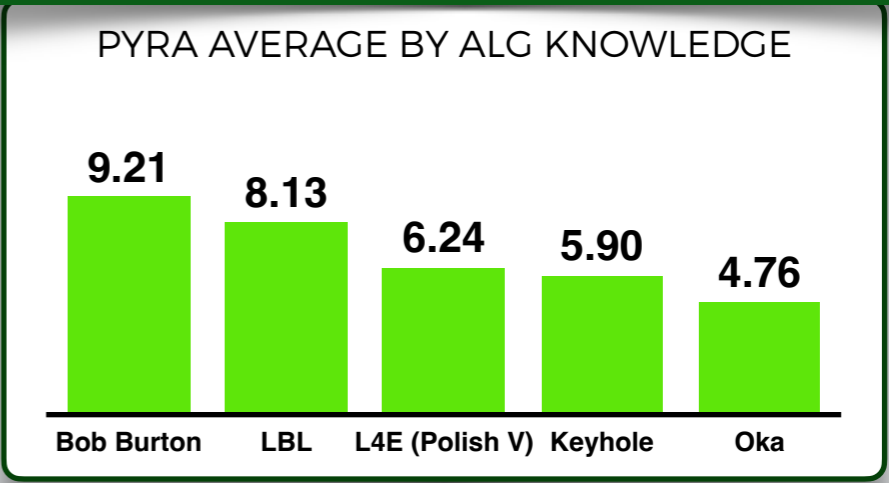
GLOBAL 2X2 AVERAGE
39% of all cubers practice this

Cubers regularly practicing 2x2

GLOBAL AVERAGE
5.47

AO5	AO12
3.94	**4.70**
-28% of global	-14% of AO12

Distribution is rather well spread : performance varies quite a bit across people

25% 50% 75%

0 2 4 6 8 10 12 14 16 18 20

RESULTS BY AGE

<=14	15-16	17-18	19-20	21-25	26-30	31-35	36-40	41-50	51+
5.8	5.0	5.2	5.0	5.0	5.5	7.4	13.0	7.0	13.0

RESULTS BY TIME PRACTICED

< 3m	~6m	1y	1.5y	2y	3y	4+y
8.0	6.2	5.5	4.9	5.0	4.5	4.5
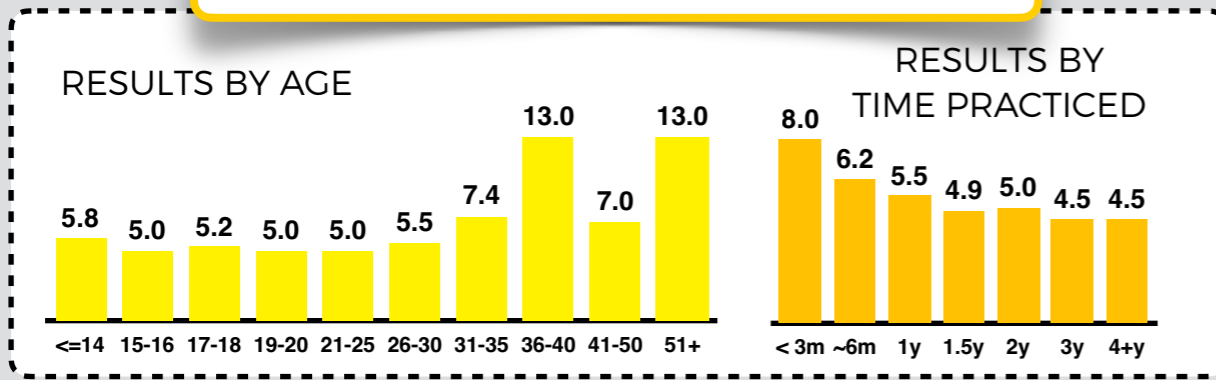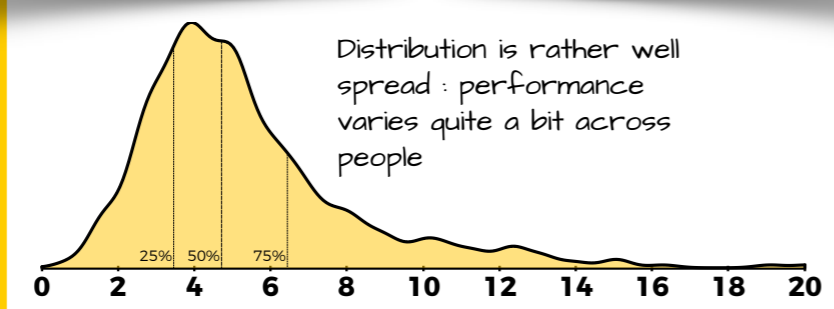
Age doesn't really play much of a role in performance : however, how long we've been practicing does, with the best results coming in after 3y of practice

WHAT 2X2 ALGSETS DO YOU KNOW & USE?

Algset	%
OLL/PLL	62%
Ortega / PBL	51%
CLL	17%
EG	4%

2X2 GLOBAL AVERAGE BY ALG KNOWLEDGE

None	EG	OLL/PLL	Ortega/PBL	CLL
11.60	5.50	5.10	4.90	3.90
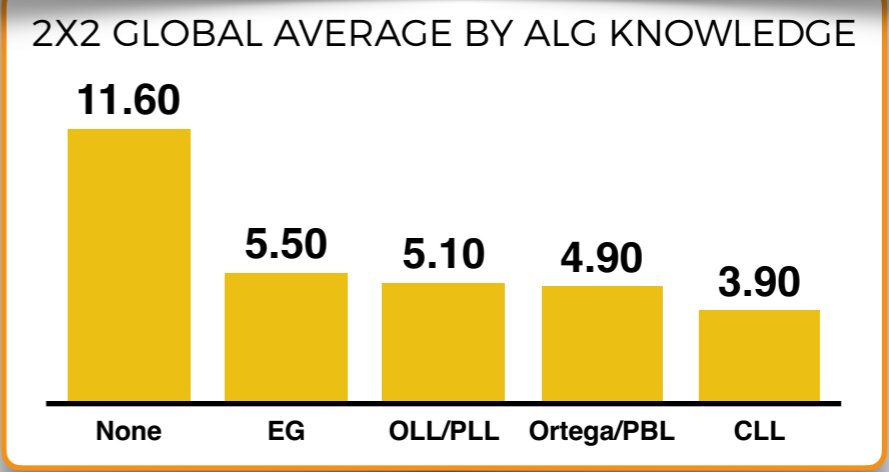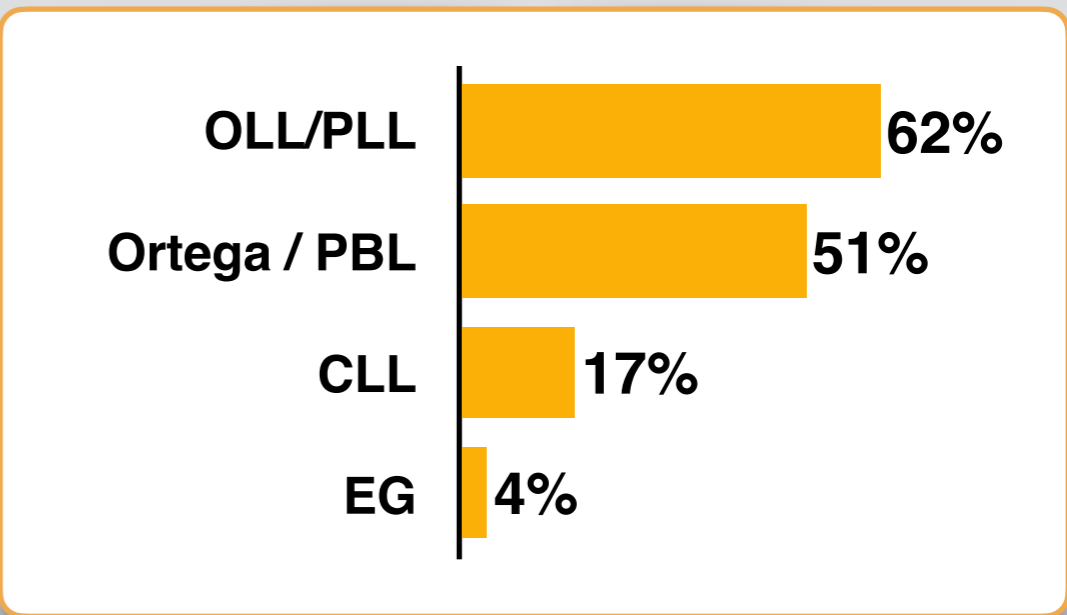
PYRA IS AN EVENT FOR THE YOUNGER ONES, AND WHICH METHOD YOU CHOOSE INFLUENCES PRETTY HEAVILY THE RESULTS YOU'LL OBTAIN (ON AVERAGE)
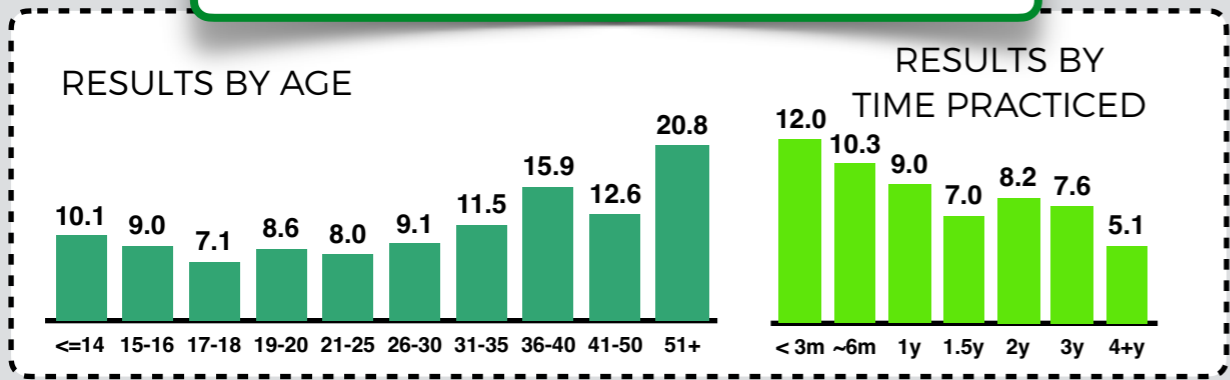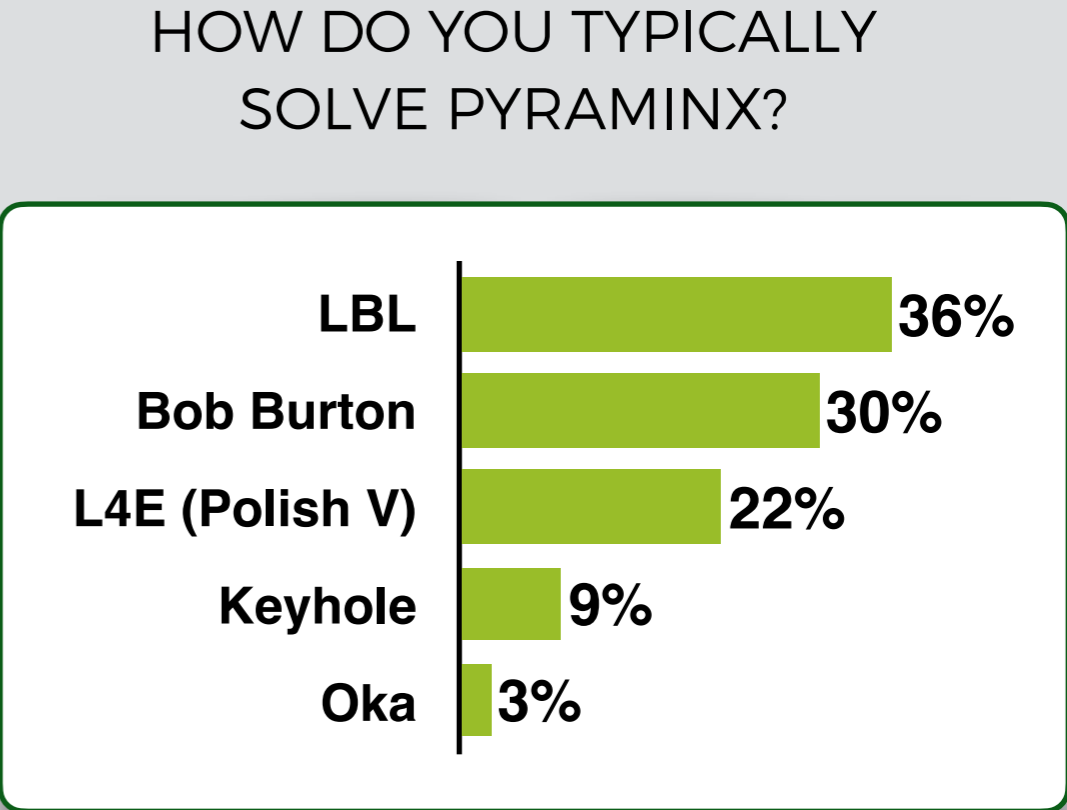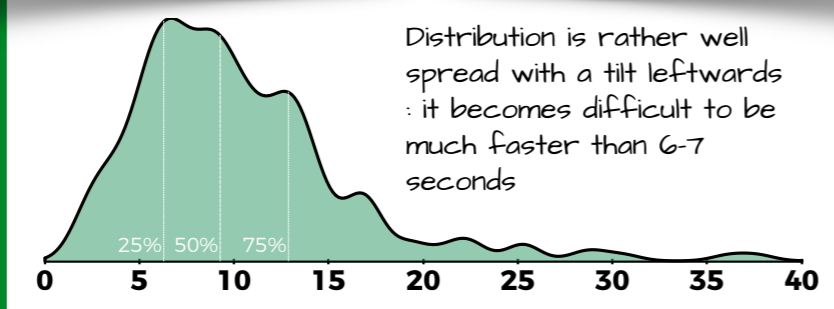
PYRAMINX AVERAGE
19% of all cubers practice this

Cubers regularly practicing Pyraminx

PB AO12
9.04

Single	AO5
4.28	**8.25**
47% of AO12	91% of AO12

Distribution is rather well spread with a tilt leftwards : it becomes difficult to be much faster than 6-7 seconds

25% 50% 75%

0   5   10   15   20   25   30   35   40

RESULTS BY AGE

10.1	9.0	7.1	8.6	8.0	9.1	11.5	15.9	12.6	20.8
<=14	15-16	17-18	19-20	21-25	26-30	31-35	36-40	41-50	51+

RESULTS BY TIME PRACTICED

12.0	10.3	9.0	7.0	8.2	7.6	5.1
< 3m	~6m	1y	1.5y	2y	3y	4+y

Pyraminx is an event for the young: people hitting their twenties already start to be slower than the younger ones

We could say that the more time we invest in the event, the faster we become. Another way of seeing it is that only the most ambitious people stick to Pyraminx for 4 years!

HOW DO YOU TYPICALLY SOLVE PYRAMINX?

LBL	36%
Bob Burton	30%
L4E (Polish V)	22%
Keyhole	9%
Oka	3%

PYRA AVERAGE BY ALG KNOWLEDGE

9.21	8.13	6.24	5.90	4.76
Bob Burton	LBL	L4E (Polish V)	Keyhole	Oka

MOST PEOPLE WHO PRACTICE SKEWB ALSO PRACTICE PYRAMINX, AND THEY'RE ALMOST EXACTLY AS FAST IN ONE AS THEY ARE IN THE OTHER
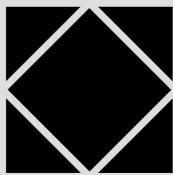
SKEWB AVERAGE

16% of all cubers practice this
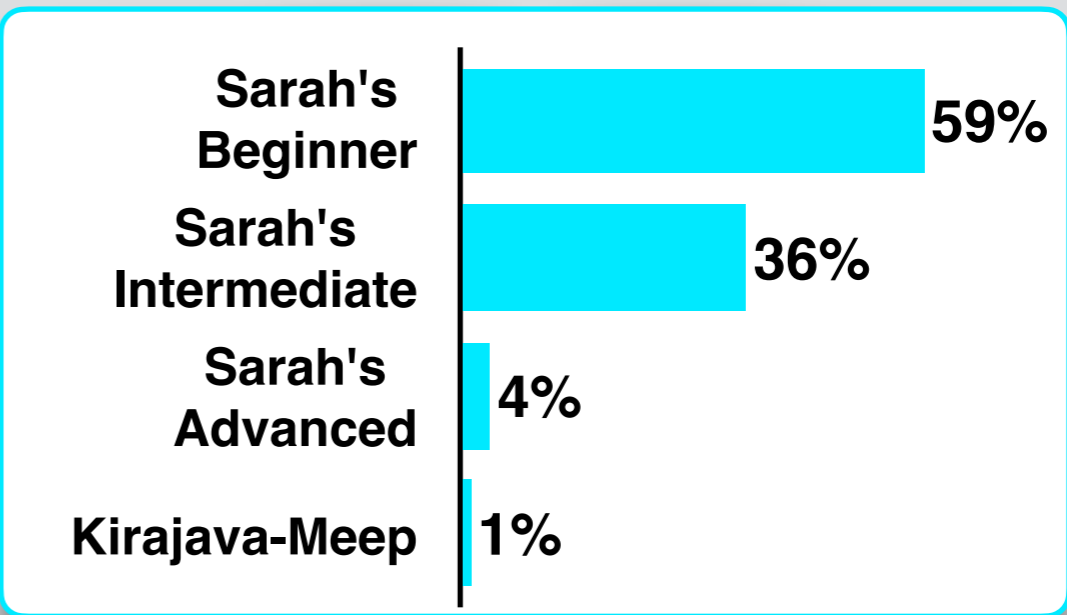
Cubers regularly practicing Skewb
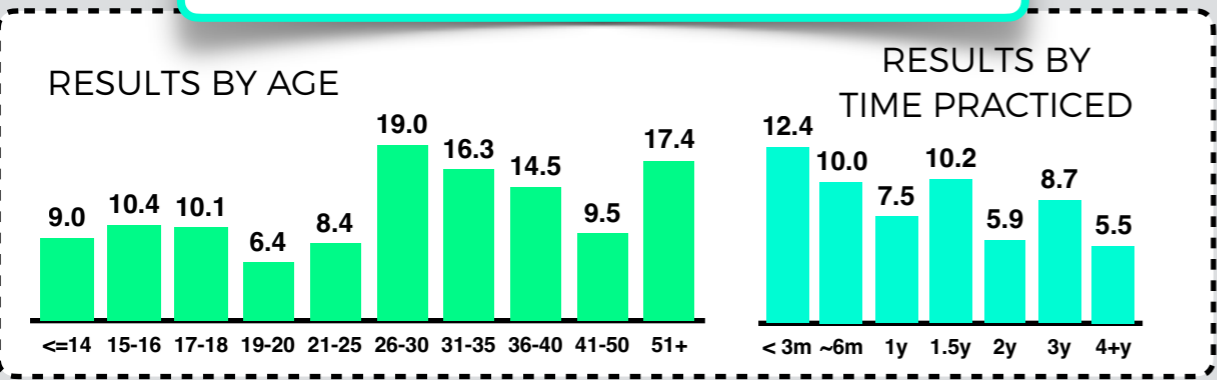
PB AO12
9.43

Single	AO5
4.42	**8.21**
47% of AO12	91% of AO12

Distribution is quite flat and wide: there are almost as many sub5 people as there are who average 10-15

25% 50% 75%

0   5   10   15   20   25   30   35   40

RESULTS BY AGE

9.0	10.4	10.1	6.4	8.4	19.0	16.3	14.5	9.5	17.4
<=14	15-16	17-18	19-20	21-25	26-30	31-35	36-40	41-50	51+

RESULTS BY TIME PRACTICED

12.4	10.0	7.5	10.2	5.9	8.7	5.5
< 3m	~6m	1y	1.5y	2y	3y	4+y

Times by age are all over the place, the fact that almost nobody above 25y tends to practice the event is the likely culprit

Mostly putting in more time means getting faster, but the data is very bumpy!

HOW DO YOU TYPICALLY SOLVE SKEWB?

Sarah's Beginner	**59%**
Sarah's Intermediate	**36%**
Sarah's Advanced	**4%**
Kirajava-Meep	**1%**

OVERLAP BETWEEN PRACTICING OF THE TWO EVENTS

33% **45%** **22%**

Only Pyraminx Both **Only Skewb**

Let us take a quick moment to appreciate what a legend Sarah Strong has been for the community !
https://sarah.cubing.net

WHEN WE GET FAST ENOUGH, SOLVING ONE-HANDED TAKES TWICE AS LONG AS TWO-HANDED... AND OUR HANDEDNESS DOESN'T REALLY MATTER

OH — ONE HANDED AVERAGE

28% of all cubers practice this

GLOBAL AVERAGE
30.0

25% 50% 75%

0 10 20 30 40 50 60 70 80 90
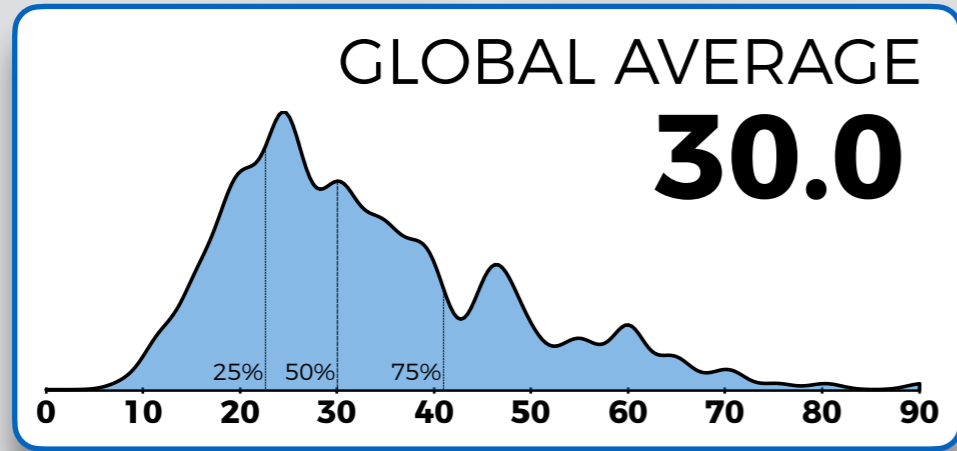
OH VS 2H RATIO

Sub10 solvers	Sub30 solvers	Sup30 solvers
1.9x	**2.2x**	**2.7x**
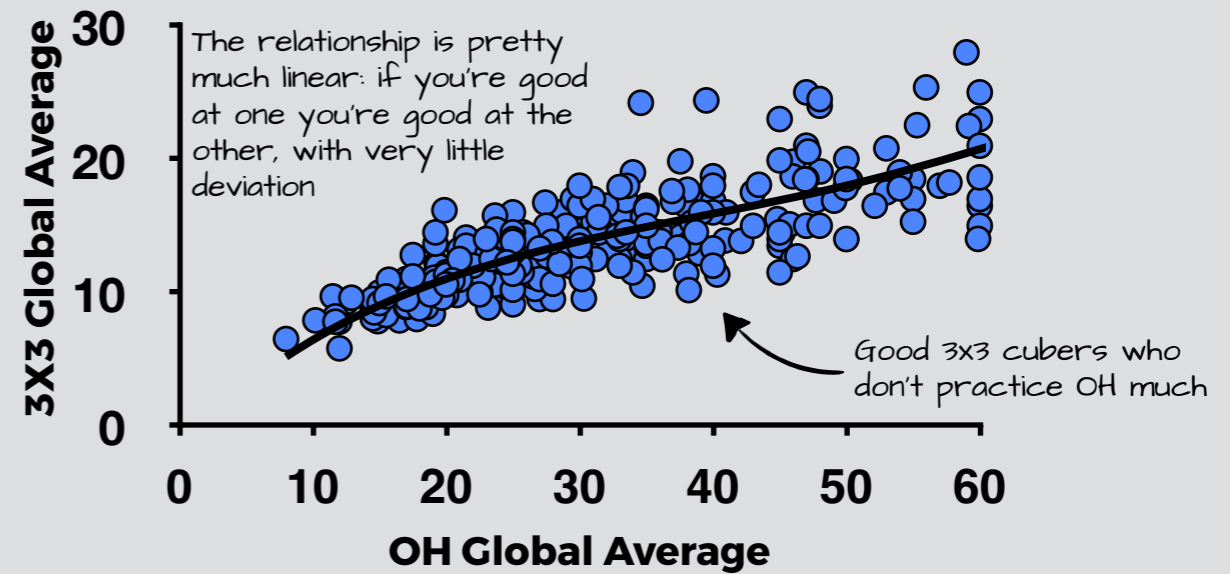
TIME GAP BETWEEN PBS AND GLOBAL AVERAGE

	PB Single	PB AO5	PB AO12	Global
	20.2	25.8	28.1	30.0
Median cuber	**67%**	**86%**	**94%**	**100%**
Top25%	61%	82%	88%	100%

OH VS 3X3 PERFORMANCE

The relationship is pretty much linear: if you're good at one you're good at the other, with very little deviation

Good 3x3 cubers who don't practice OH much

PREFERRED HAND FOR OH

SOLVES WITH LEFT	
Median cuber	**29.5**
Top25%	22.7

Left **76%** Both **4%** Right **20%**

SOLVES WITH RIGHT	
Median cuber	**26.7**
Top25%	18.3

	Left handed	Ambidextrous	Right handed
Median cuber	**30.6**	**30.2**	**30.0**
Top25%	21.0	21.1	22.9
Uses left hand	73%	80%	76%

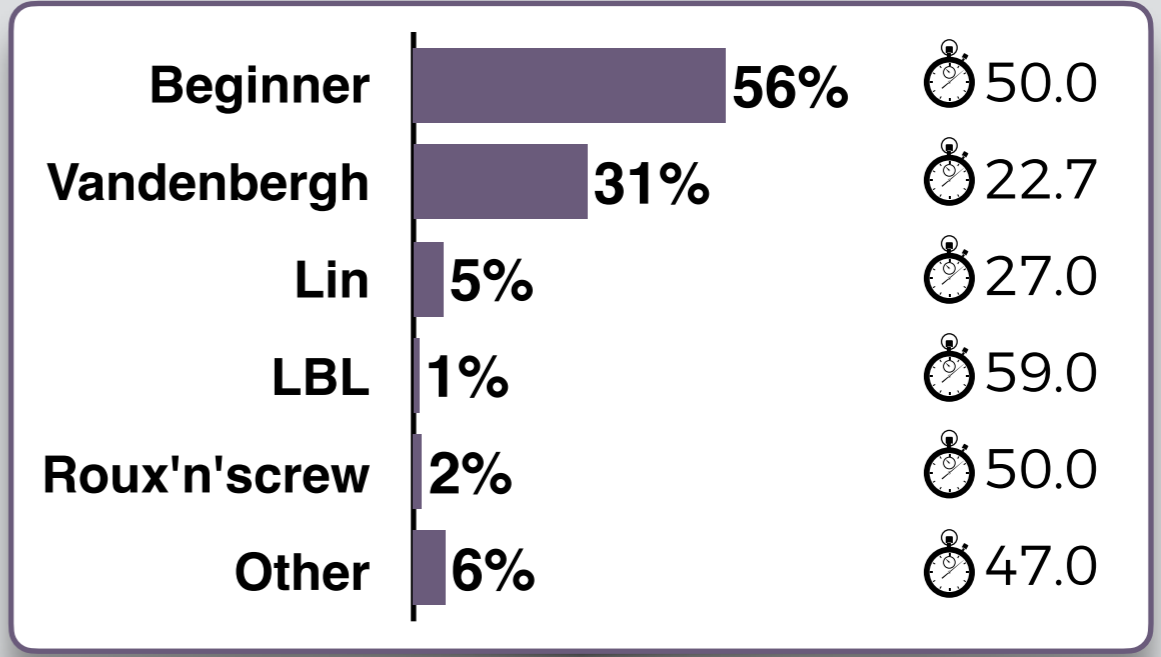Right or left handed, it doesn't really matter, we use the left for OH!

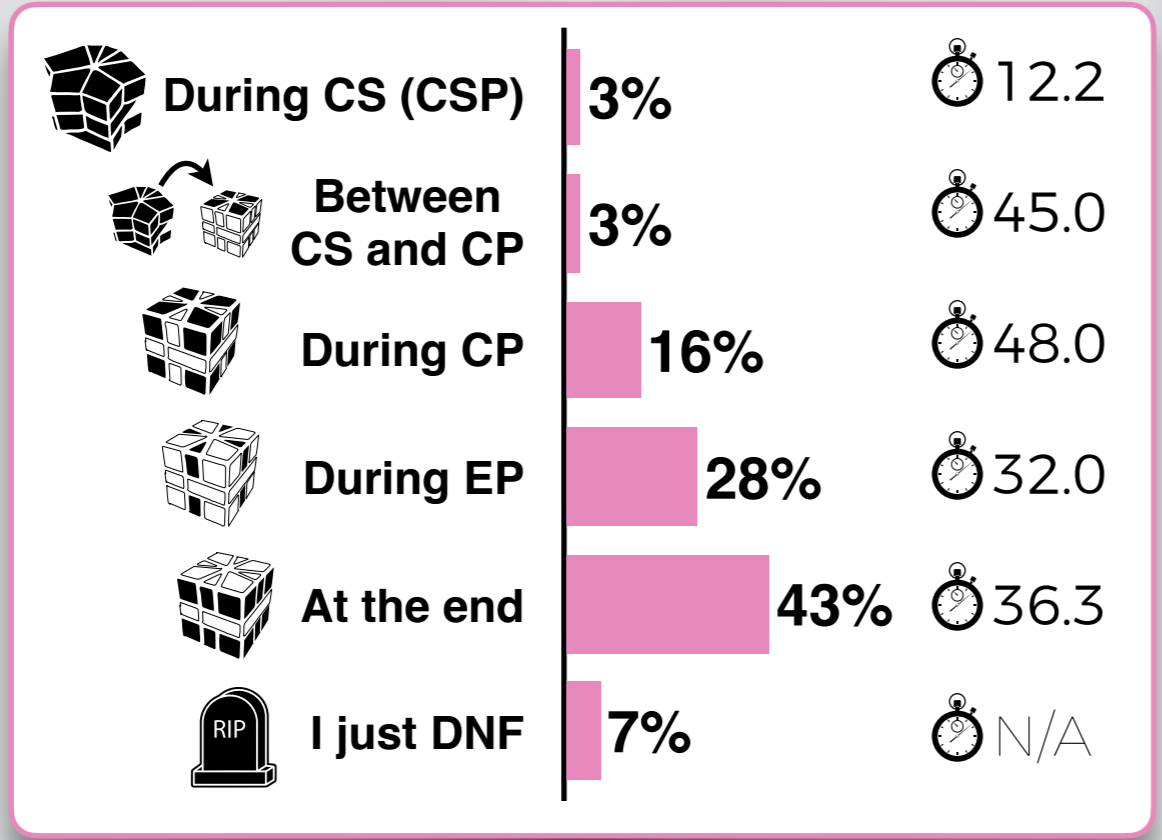# SQUAN : CSP IS A REAL GAME CHANGER, TOO BAD NOT A LOT ARE DOING IT (YET?)

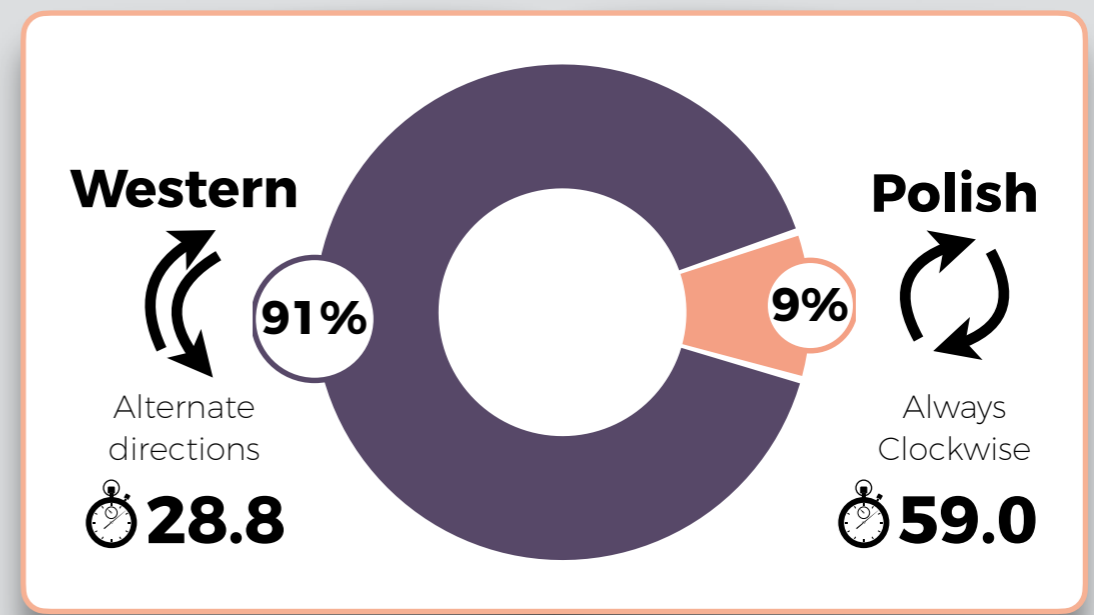## SQUARE-1 AVERAGE

16% of all cubers practice this

Cubers regularly practicing Square-1

GLOBAL AVERAGE

35.5

Single	AO5	AO12
20.3	**30.6**	**31.6**
57% of global average	86% of global average	89% of global average

WHEN DO YOU DO PARITY?

During CS (CSP)	3%	12.2
Between CS and CP	3%	45.0
During CP	16%	48.0
During EP	28%	32.0
At the end	43%	36.3
I just DNF	7%	N/A

HOW DO YOU TYPICALLY SOLVE SQUAN?

Beginner	56%	50.0
Vandenbergh	31%	22.7
Lin	5%	27.0
LBL	1%	59.0
Roux'n'screw	2%	50.0
Other	6%	47.0

HOW DO YOU SLICE?

Western — 91% — Alternate directions — 28.8

Polish — 9% — Always Clockwise — 59.0
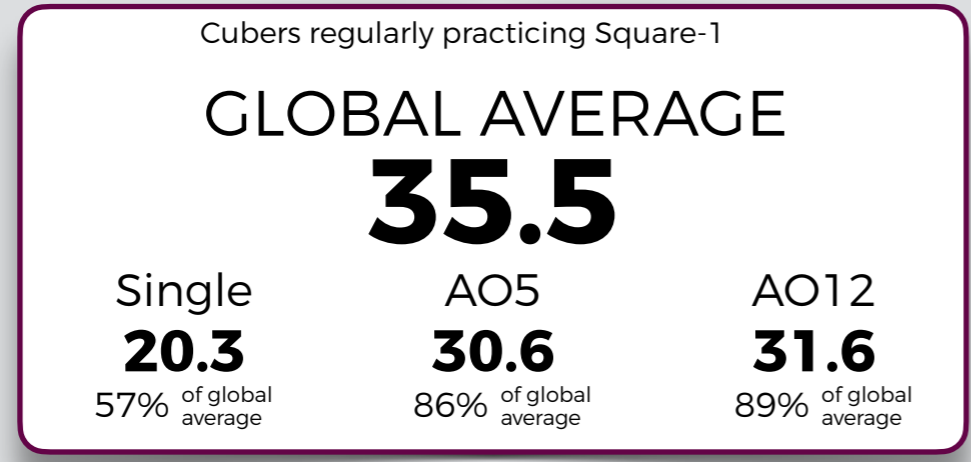
2021	2022	Polish style slices are a bit of a dying breed
20%	**9%**	

WE ALL USE YAU, AND UNLESS WE USE HOYA, WE'RE TYPICALLY FASTER USING WITH IT THAN WITH OTHER METHODS
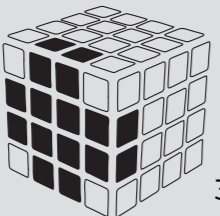
4X4 AVERAGE
39% of all cubers practice this
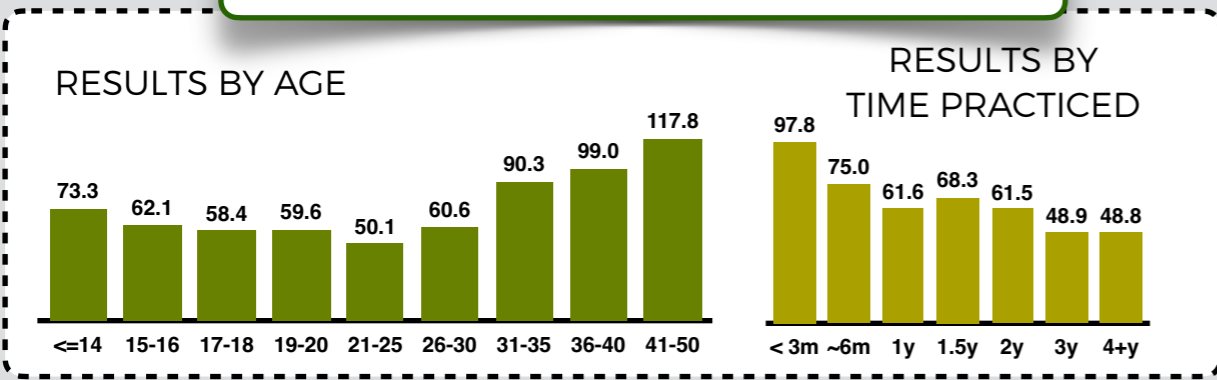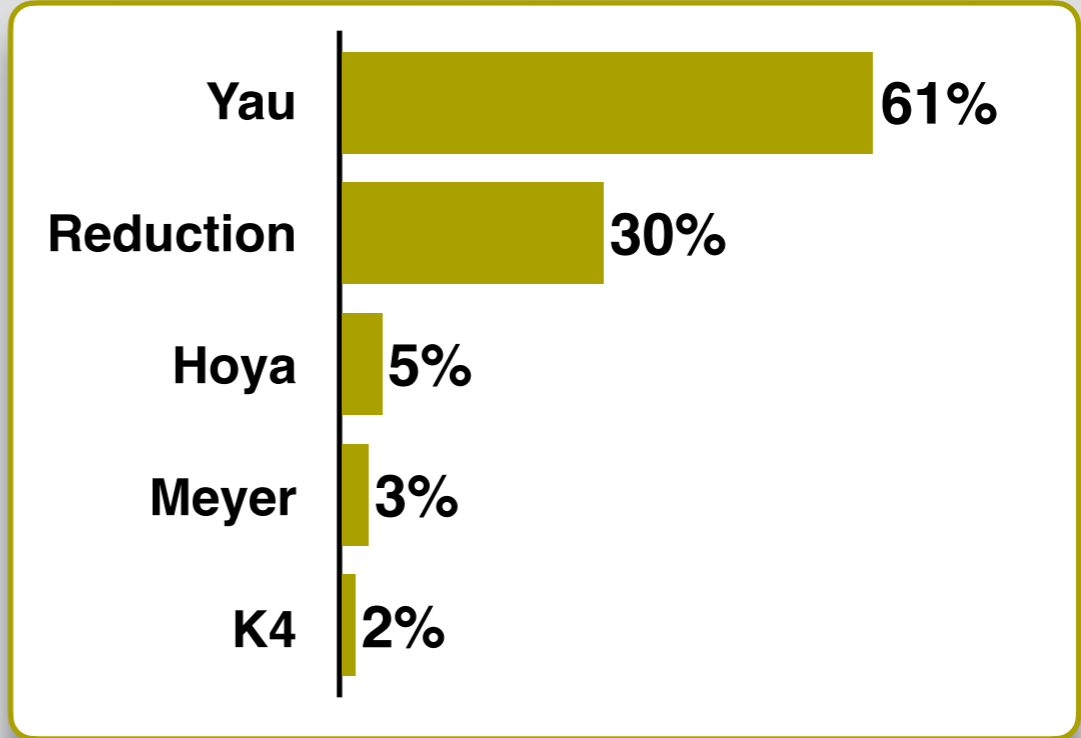
Cubers regularly practicing 4x4

PB AO12
63.3

Single	AO5
54.9	**61.2**
87% of AO12	97% of AO12

Distribution is large and very long tailed : many of us play around with 4x4 but don't necessarily commit fully to it

25% 50% 75%

0s   30s   1m   1m 30s   2m   2m 30s   3m

RESULTS BY AGE

73.3, 62.1, 58.4, 59.6, 50.1, 60.6, 90.3, 99.0, 117.8

<=14, 15-16, 17-18, 19-20, 21-25, 26-30, 31-35, 36-40, 41-50
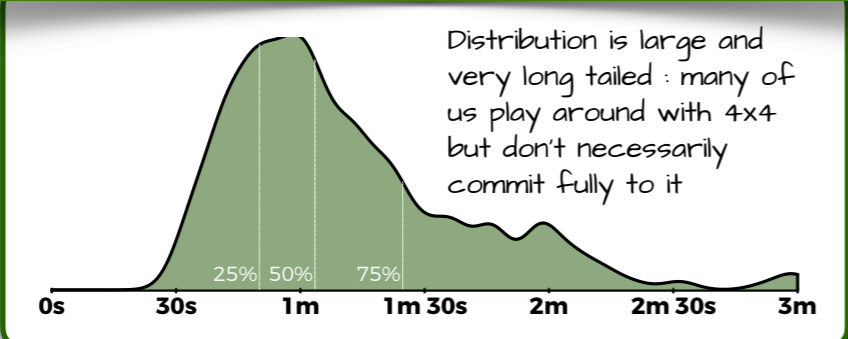
The sweet spot for 4x4 is the early twenties. As we get older we struggle at getting faster

RESULTS BY TIME PRACTICED

97.8, 75.0, 61.6, 68.3, 61.5, 48.9, 48.8

< 3m, ~6m, 1y, 1.5y, 2y, 3y, 4+y

The more you do it, the better you get. 3-4 years are necessary to get the most out of our 4x4s

HOW DO YOU TYPICALLY SOLVE 4X4?

Method	Percentage
Yau	61%
Reduction	30%
Hoya	5%
Meyer	3%
K4	2%

4X4 AVERAGE BY METHOD USED

None	Redux	Meyer	K4	Yau	Hoya
95.8	79.4	73.9	65.0	60.1	50.7
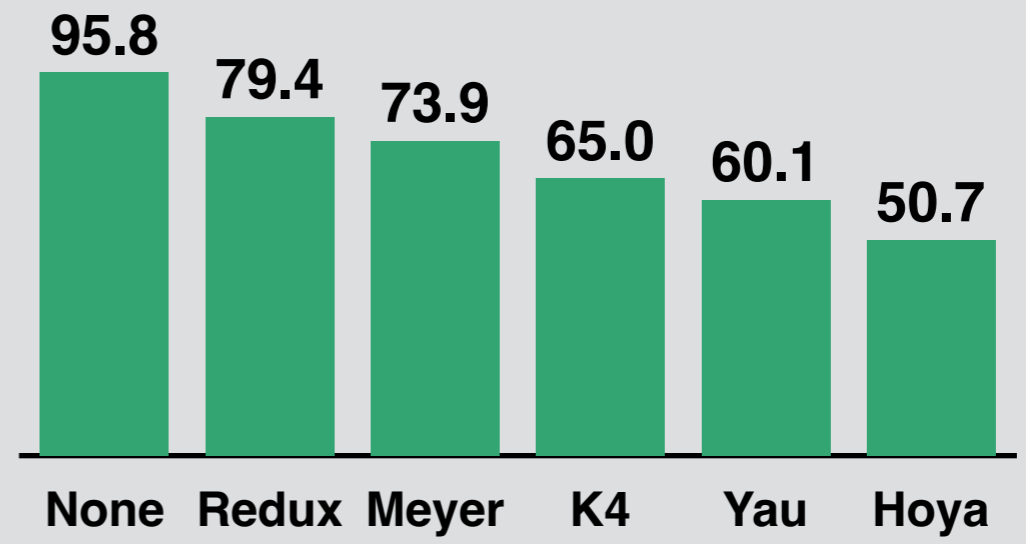
ON 5X5 MORE PEOPLE ARE USING REDUCTION, BUT YAU AND HOYA PROVE TO BE FASTER ON AVERAGE. YAU5 THOUGH... IS NICHE AND NOT GREAT!
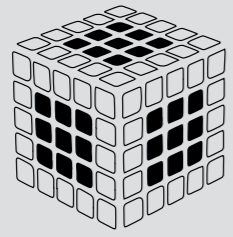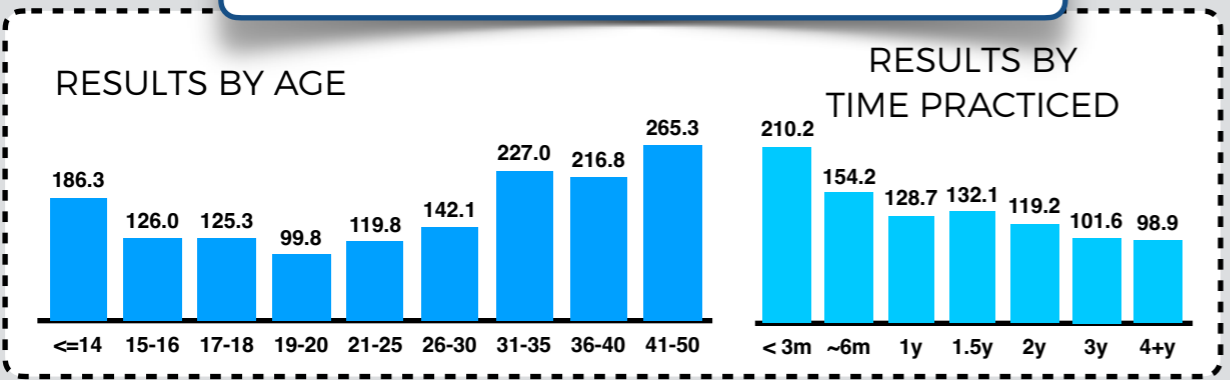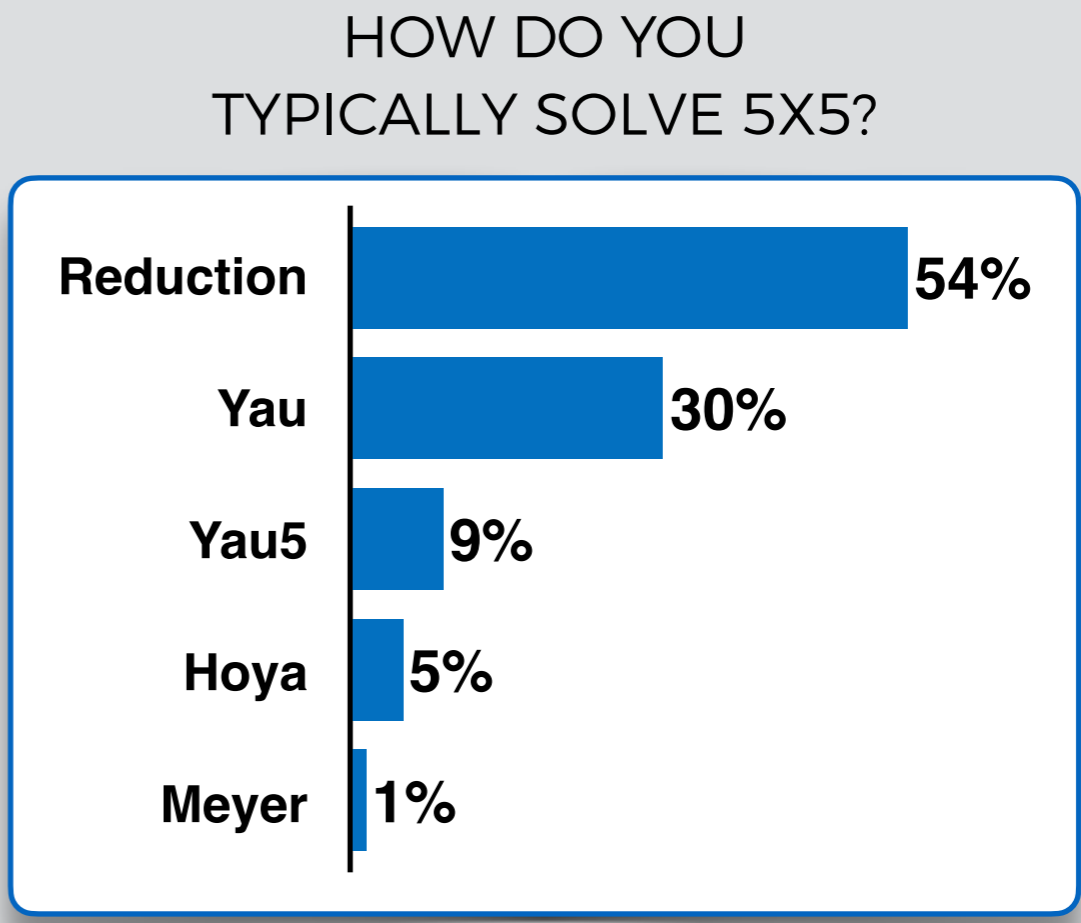
5X5 AVERAGE
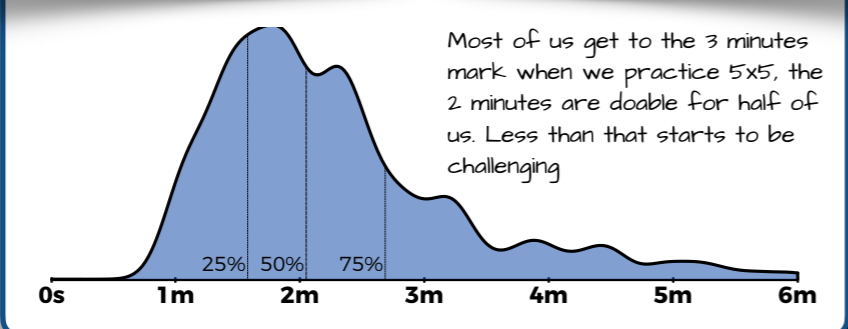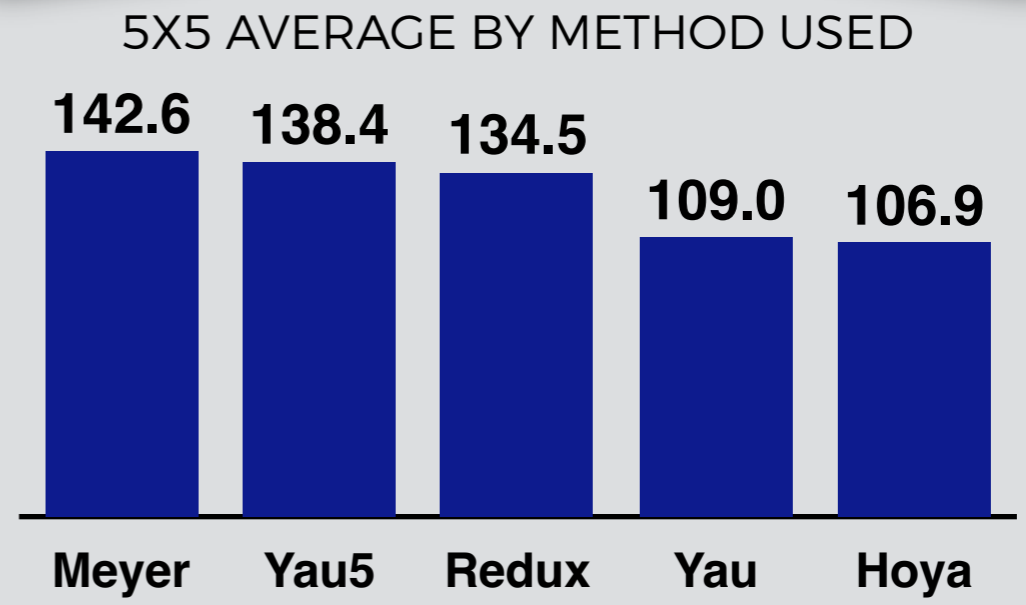26% of all cubers practice this

Cubers regularly practicing 5x5

PB AO12
120.6

Single	AO5
113.1	**120.1**
94% of AO12	99% of AO12

Most of us get to the 3 minutes mark when we practice 5x5, the 2 minutes are doable for half of us. Less than that starts to be challenging

25% 50% 75%

0s 1m 2m 3m 4m 5m 6m

RESULTS BY AGE

186.3 126.0 125.3 99.8 119.8 142.1 227.0 216.8 265.3

<=14 15-16 17-18 19-20 21-25 26-30 31-35 36-40 41-50

RESULTS BY TIME PRACTICED

210.2 154.2 128.7 132.1 119.2 101.6 98.9

< 3m ~6m 1y 1.5y 2y 3y 4+y

5x5 becomes difficult to be good at once we hit our thirties. At the same time, it requires a lot of time to get good at, with cubers getting really good at it only after 3 yers of practice

HOW DO YOU TYPICALLY SOLVE 5X5?

Method	Percentage
Reduction	**54%**
Yau	**30%**
Yau5	**9%**
Hoya	**5%**
Meyer	**1%**

5X5 AVERAGE BY METHOD USED

Meyer	Yau5	Redux	Yau	Hoya
142.6	**138.4**	**134.5**	**109.0**	**106.9**

BIGGER CUBES FOLLOW THE SAME TREND AS 5X5, BUT THE AGE BARRIER BECOMES EVEN STRONGER

6x6
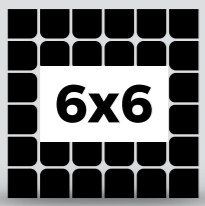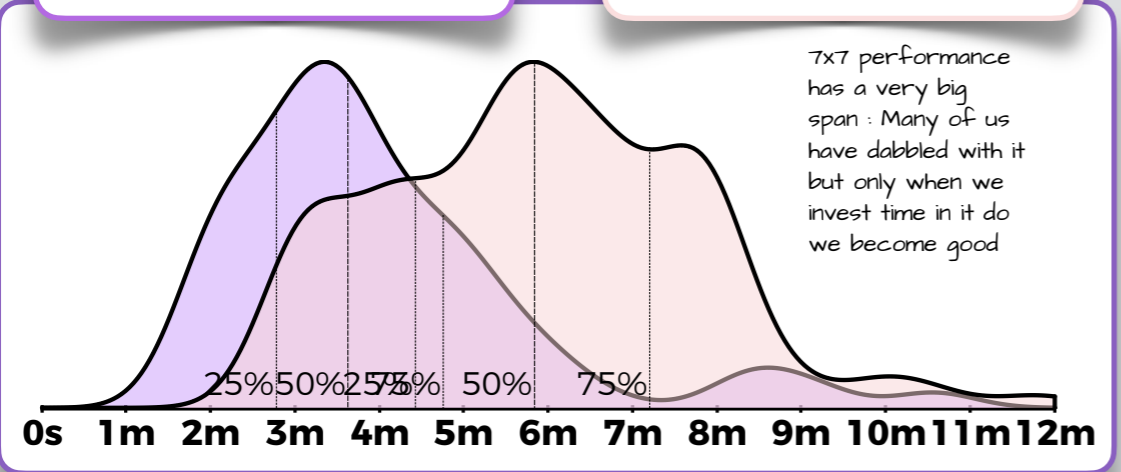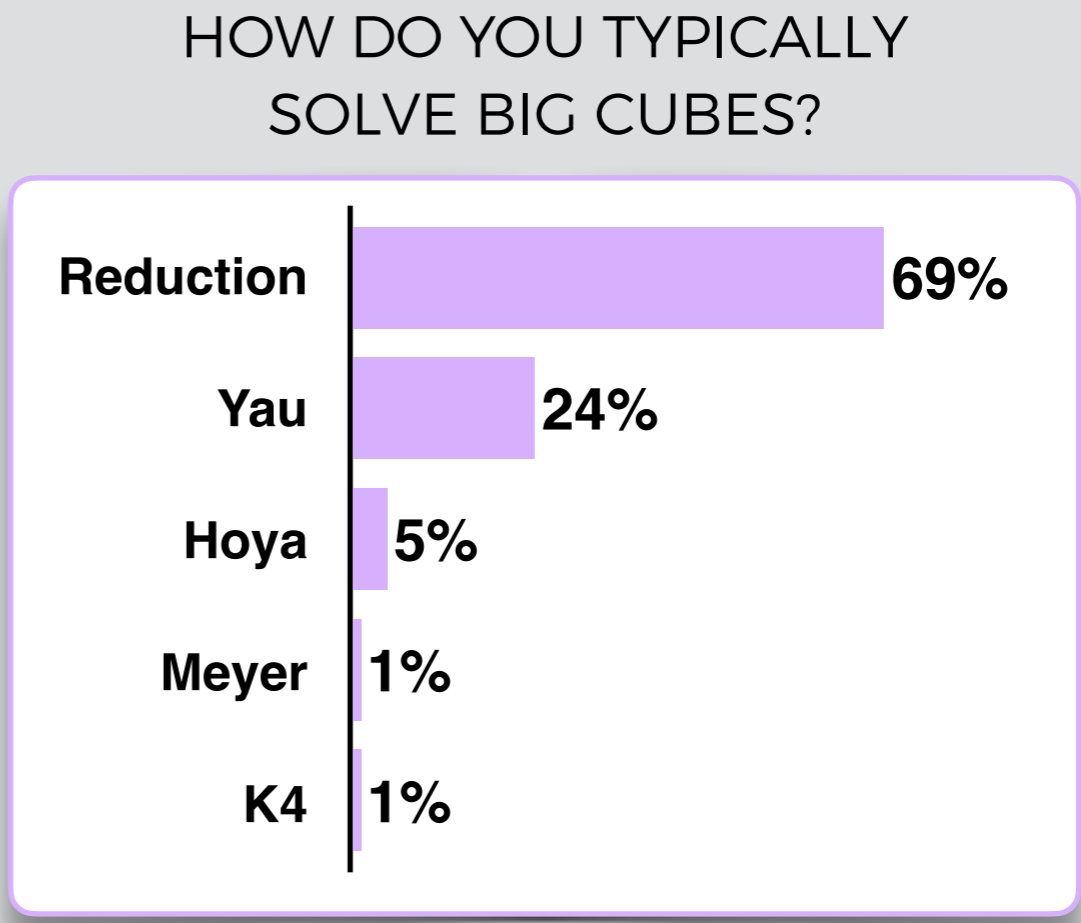
BIG CUBES AVERAGE
10% of all cubers practice this

7x7

AO12
213.2

Single	AO5
207.9	**212.6**
98% of AO12	99% of AO12

AO12
347.1

Single	AO5
345.7	**345.9**
99% of AO12	99% of AO12

7x7 performance has a very big span : Many of us have dabbled with it but only when we invest time in it do we become good

25% 50% 25% 75% 50% 75%

0s 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m

HOW DO YOU TYPICALLY SOLVE BIG CUBES?

Method	%
Reduction	69%
Yau	24%
Hoya	5%
Meyer	1%
K4	1%

BIG CUBES AVERAGE BY METHOD USED

	6x6	7x7
Redux	217	362
K4/Meyer	215	341
Hoya	199	341
Yau	193	330

6X6 RESULTS BY AGE
Note: 7x7 results have a big correlation to 6x6 results and follow the same trend for age

<=14	15-16	17-18	19-20	21-25	26-30	31-35	36-40	41-50
244.3	213.5	213.1	165.7	178.6	221.3	442.9	552.9	517.0

6X6 RESULTS BY TIME PRACTICED

< 3m	~6m	1y	1.5y	2y	3y	4+y
239.5	237.0	204.9	238.8	206.6	213.1	151.0
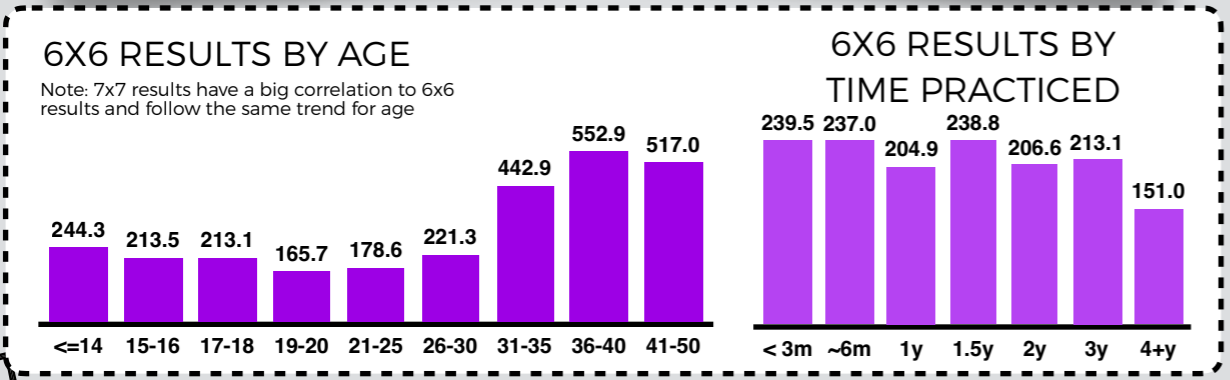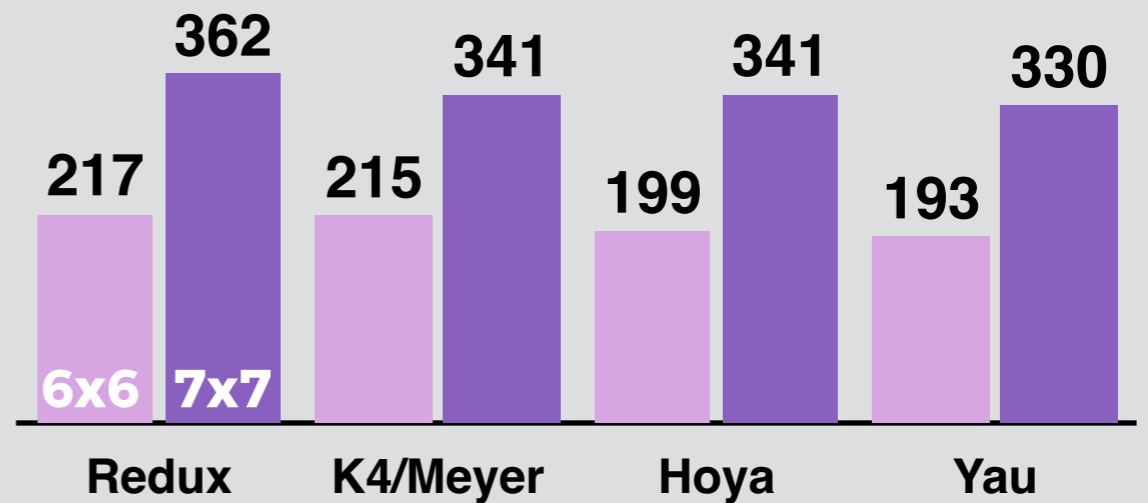
Large cubes are similar to 5x5 : they need time investment, which is a challenge for older adults, but the effect is amplified further

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MOST OF US DON'T USE A PARTICULAR METHOD FOR MEGAMINX S2L, BUT WE REALLY SHOULD : ON AVERAGE WE'RE MORE THAN 1/3 FASTER WHEN WE DO!*
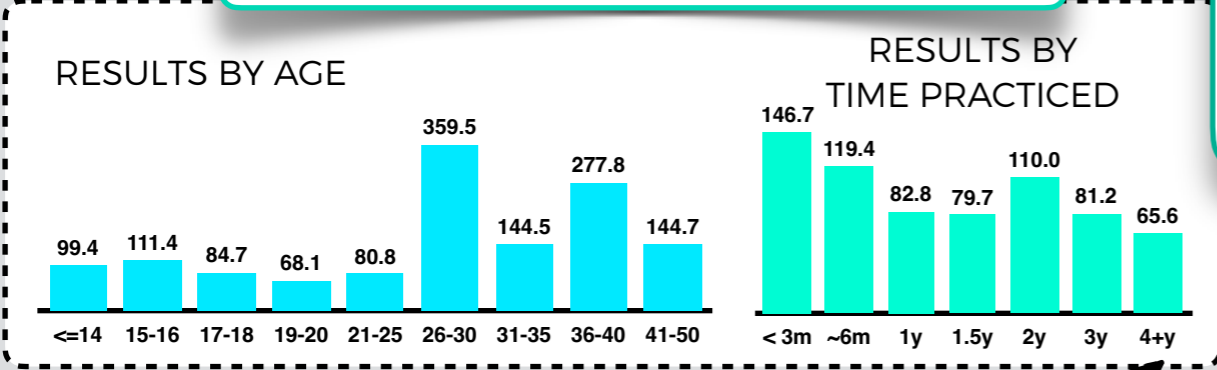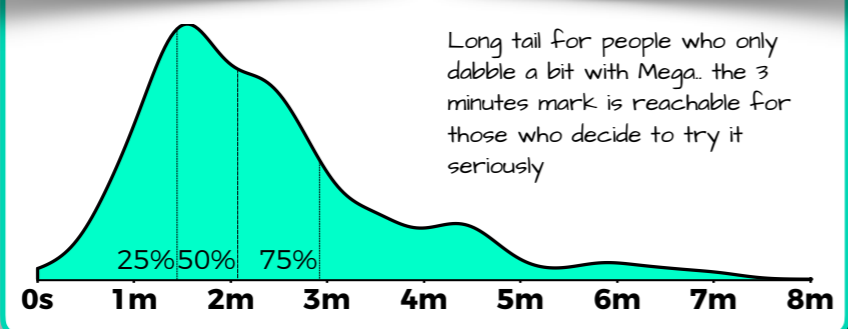
MEGAMINX AVERAGE
15% of all cubers practice this

Cubers regularly practicing Megaminx

PB AO12
126.2

Single	AO5
117.2	**118.1**
93% of AO12	94% of AO12

Long tail for people who only dabble a bit with Mega.. the 3 minutes mark is reachable for those who decide to try it seriously

25% 50% 75%

0s   1m   2m   3m   4m   5m   6m   7m   8m

RESULTS BY AGE

99.4	111.4	84.7	68.1	80.8	359.5	144.5	277.8	144.7
<=14	15-16	17-18	19-20	21-25	26-30	31-35	36-40	41-50

RESULTS BY TIME PRACTICED

146.7	119.4	82.8	79.7	110.0	81.2	65.6
< 3m	~6m	1y	1.5y	2y	3y	4+y

If you want to do Mega, start young. That 26y mark is a tough barrier to crack afterwards!

Mega is an event where keeping the interest up can be challenging : many of us lose interest after 2 years and stop investing time in it

HOW DO YOU SOLVE...

S2L

No method	68%
Westlund	23%
Yu Da-Hyun	2%
ZZ-Spike	1%
Bálint	1%
Other	5%

LAST LAYER

Beginner	61%
4 Look LL	30%
2 Look LL	1%
Other	8%

NO S2L METHOD	ANY S2L METHOD
2m 32s	**1m 33s**
	-39%

*Learning a method improves times by leaps and bounds. But careful with correlation : people who invest time in Mega are more likely o learn a method anyway.

45

IT TAKES US ~2 MINUTES TO SOLVE THE CUBE BLINDFOLDED, BUT THE METHOD WE USE ALSO TELLS A LOT ABOUT HOW LONG WE'VE BEEN PRACTICING
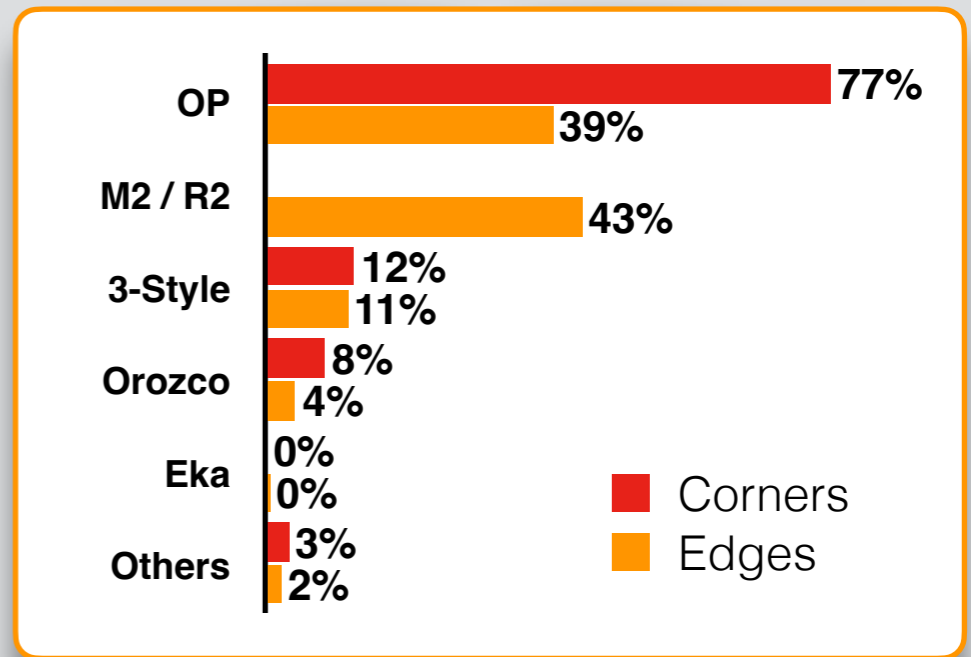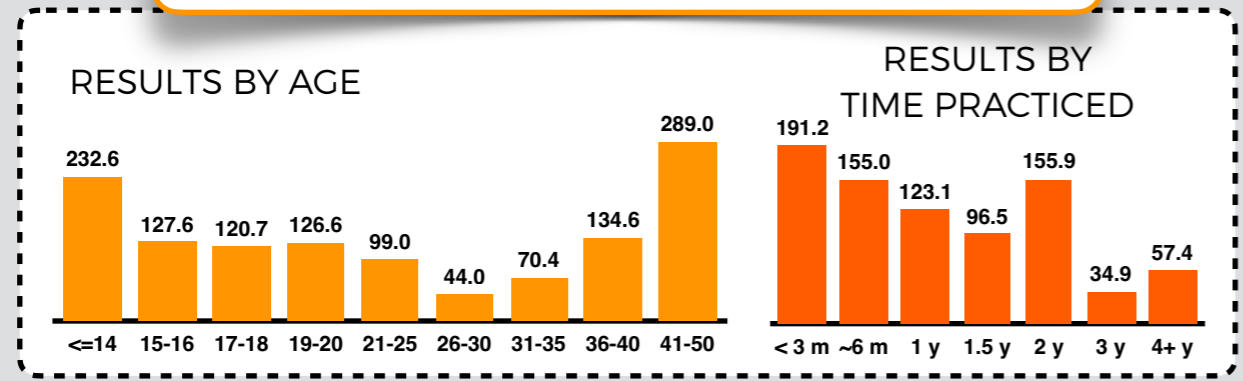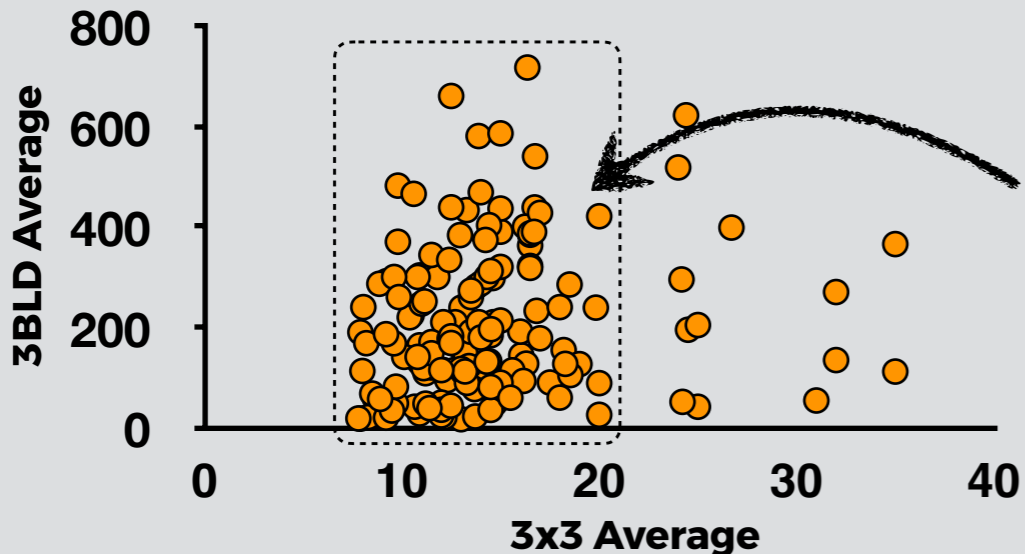
3BLD AVERAGE

Cubers regularly practicing 3BLD

Average Time
⏱ **2m 7s**

Average Accuracy
🎯 **39%**

RESULTS BY AGE

Age	Value
<=14	232.6
15-16	127.6
17-18	120.7
19-20	126.6
21-25	99.0
26-30	44.0
31-35	70.4
36-40	134.6
41-50	289.0

RESULTS BY TIME PRACTICED

Time	Value
< 3 m	191.2
~6 m	155.0
1 y	123.1
1.5 y	96.5
2 y	155.9
3 y	34.9
4+ y	57.4

3BLD VS 3X3 PERFORMANCE

(scatter plot: 3BLD Average (y-axis, 0–800) vs 3x3 Average (x-axis, 0–40))

A bit all over the place : Being good at 3x3 doesn't translate to great 3BLD times nor vice versa

WHICH METHOD DO YOU USE?

Method	Corners	Edges
OP	77%	39%
M2 / R2		43%
3-Style	12%	11%
Orozco	8%	4%
Eka	0%	0%
Others	3%	2%

■ Corners
■ Edges

(box plot: OP = 4m 41s, M2 / R2 = 2m 15s, Orozco = 1m 25s, 3-Style = ?s)

M2 for edges, OP for corners!

WHICH PARITY ALG DO YOU LIKE BEST?

Alg	Value
D' L2 D M2 D' L2 D	51%
Memo swapped edges	19%
R perm	16%
MU	9%
UrM or UFM	1%
Other	4%
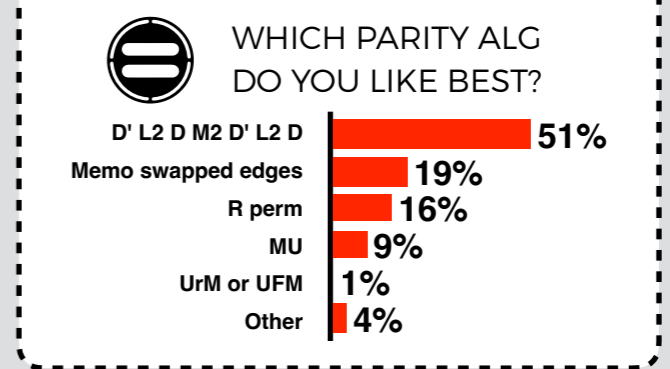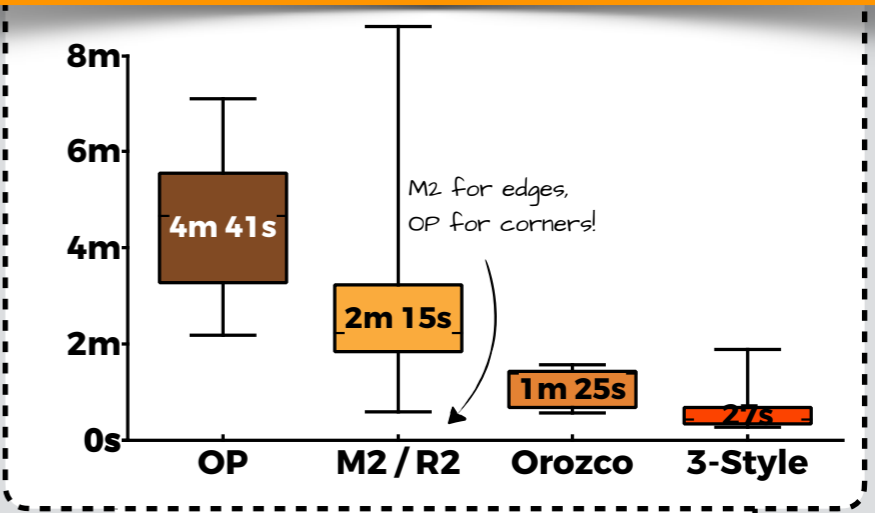
WE START MEMORISING CORNERS BUT SWITCH FOR EXECUTION. WE TEND TO LIKE AUDIO FOR EDGES AND SENTENCES FOR CORNERS (OR BOTH)
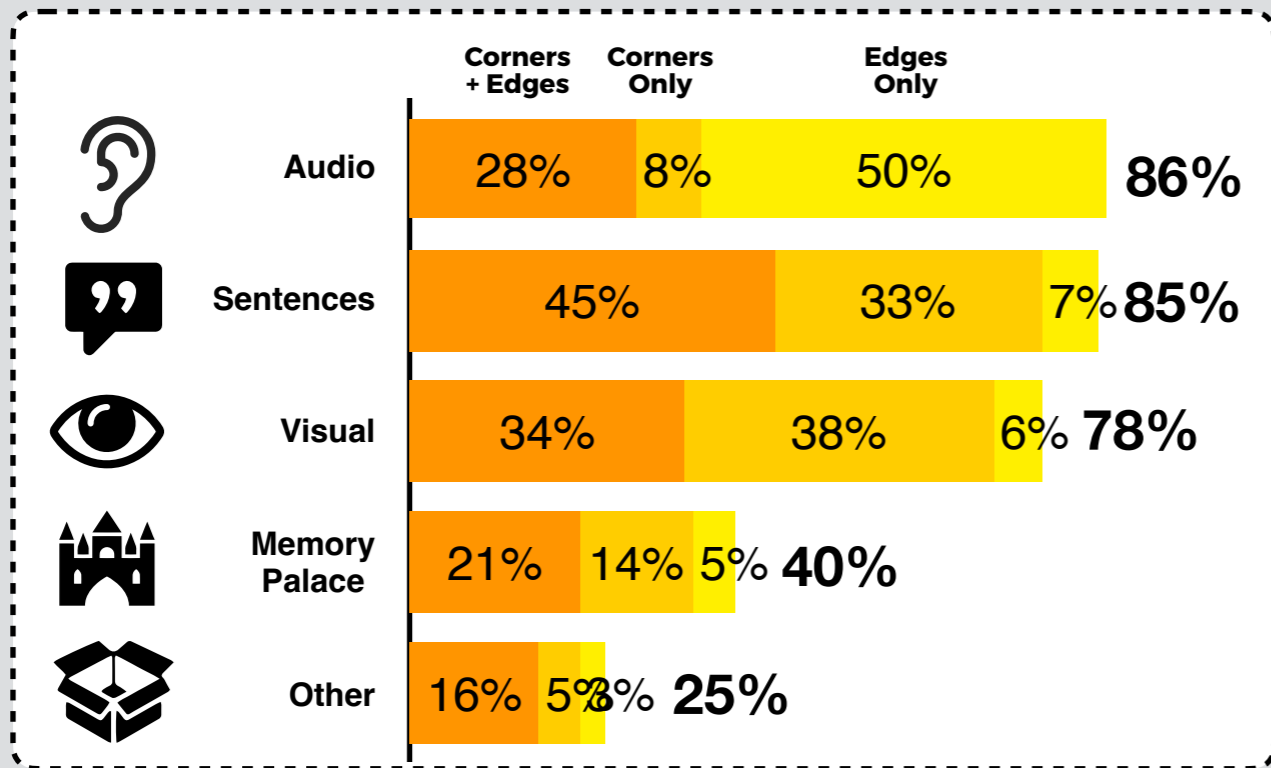
MEMORISATION ORDER

Edges First
33%

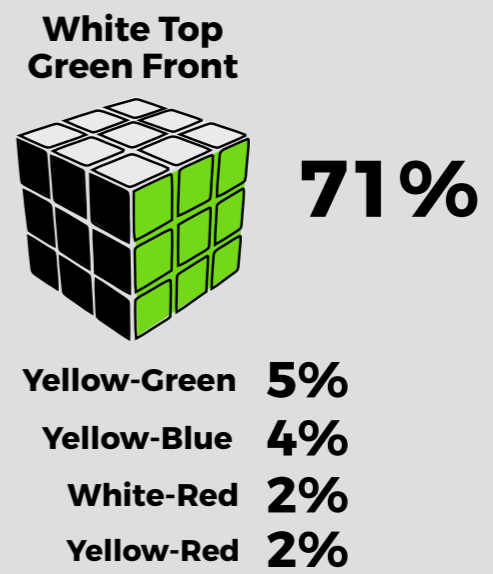**Corners First**
67%

EXECUTION ORDER

Edges First
88%

Corners First
12%

LETTER SCHEME

Speffz	60%
Speffz Modified	30%
Other	11%
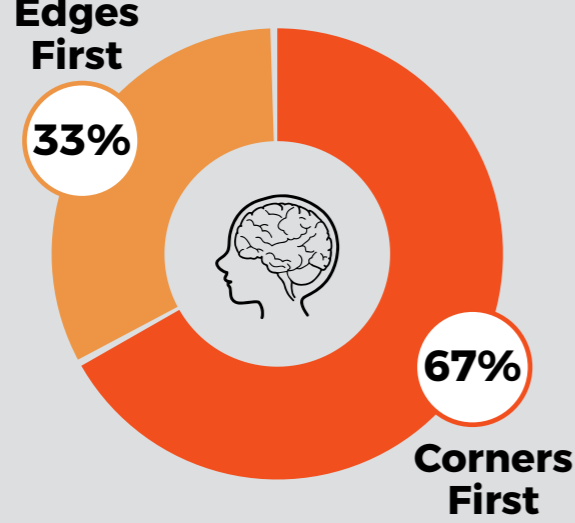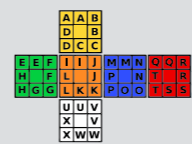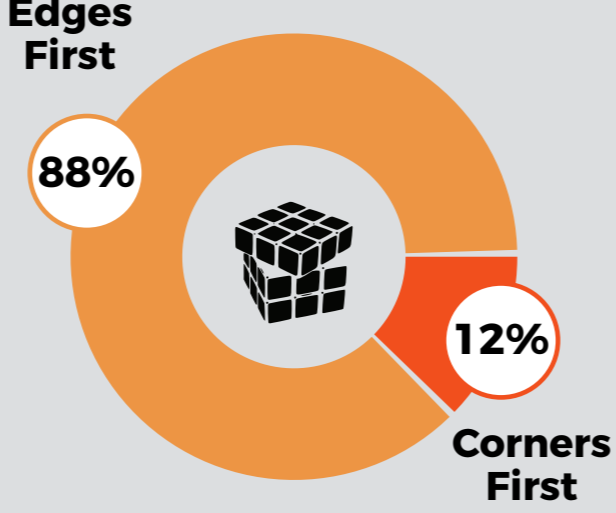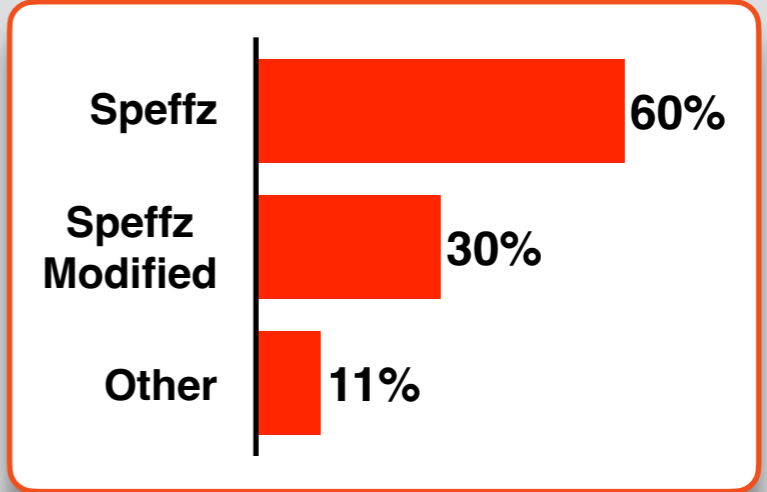
MEMORISATION TECHNIQUE

	Corners + Edges	Corners Only	Edges Only	
Audio	28%	8%	50%	86%
Sentences	45%	33%	7%	85%
Visual	34%	38%	6%	78%
Memory Palace	21%	14%	5%	40%
Other	16%	5%	3%	25%

Most of us mix and match different techniques

MOST USED COLOR ORIENTATIONS

White Top Green Front
71%

Yellow-Green	5%
Yellow-Blue	4%
White-Red	2%
Yellow-Red	2%

WE ARE OPTIMISTIC THAT SOME BIG MILESTONES WILL BE BROKEN IN THE NEAR FUTURE; 100 POINTS IN MULTI BLIND REMAINS A BIT OF A CHIMERA

WHEN (IF EVER) DO YOU THINK THE FOLLOWING THINGS WILL HAPPEN?

3BLD
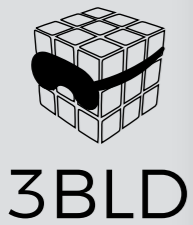
	In 2023	Next 2-3 years	More than 3 years	Never
BREAK CURRENT WR **Jan 28 2023 : 12.78**	**82%** ✔	**17%**	**1%**	**0%**
SUB12 WR	**38%**	**55%**	**7%**	**0%**
SUB10 WR	2%	**40%**	**54%**	4%

MBLD

	In 2023	Next 2-3 years	More than 3 years	Never
BREAK CURRENT WR	**53%**	**39%**	**7%**	**1%**
> 60 POINTS WR **Current WR is 59 (62/65)**	**50%**	**37%**	12%	1%
> 80 POINTS WR	2%	**20%**	**63%**	**15%**
> 100 POINTS WR	1%	4%	**48%**	**47%**

Wanna bet we'll be revisiting this in one or two years?

WHILE ACCURACY DROPS LINEARLY WITH THE COMPLEXITY OF THE CUBE, 5BLD ONLY TAKES ~TWICE AS LONG COMPARED TO 4BLD (WHICH IN TURN IS ALMOST 4X LONGER THAN 3BLD)
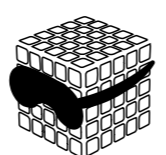
4BLD
3.6% of all cubers

Cubers regularly practicing 4BLD

Average Time
🕑 **7m 42s**

Average Accuracy
🎯 **27.5%**

5BLD
2.6% of all cubers

Cubers regularly practicing 5BLD

Average Time
🕑 **13m 47s**

Average Accuracy
🎯 **20%**

MBLD
3.1% of all cubers

Cubers regularly practicing MBLD

Average Score
9 pts

Average Target
11 cubes

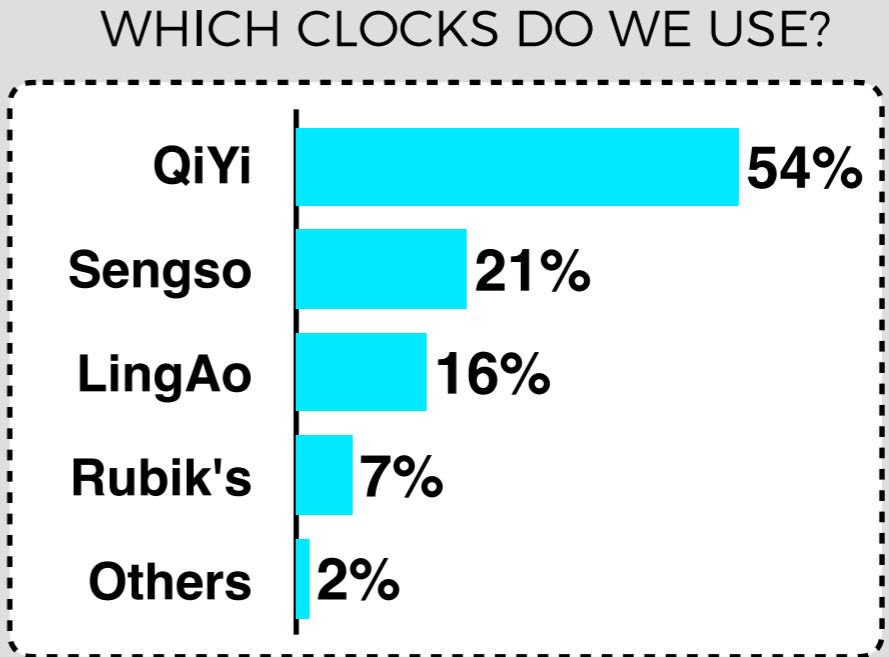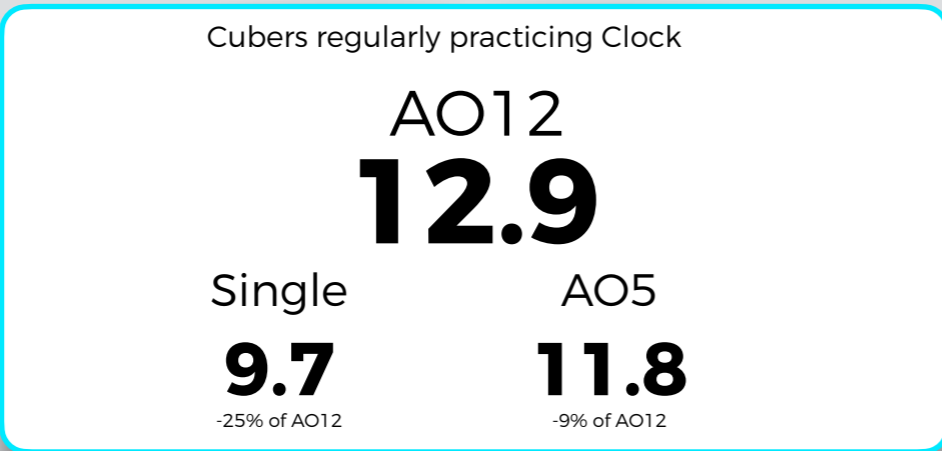## HOW MUCH MORE TIME DOES IT TAKE TO MOVE UP ONE SIZE IN BLD?

3BLD → 4BLD → 5BLD

Times **3.6x** 🕑 **1.8x**

Accuracy **0.7x** 🎯 **0.7x**

Accuracy drops by the same amount every time we go up one level

WHICH OTHER EVENTS HAVE YOU SUCCESSFULLY SOLVED BLINDFOLDED?

Event	Percentage
2x2	58.1%
4x4	16.9%
5x5	9.9%
Skewb	5.4%
6,7BLD	5.1%
9x9	1.1%
8x8	0.5%
Megaminx	0.5%
Square-1	0.5%
10x10	0.3%
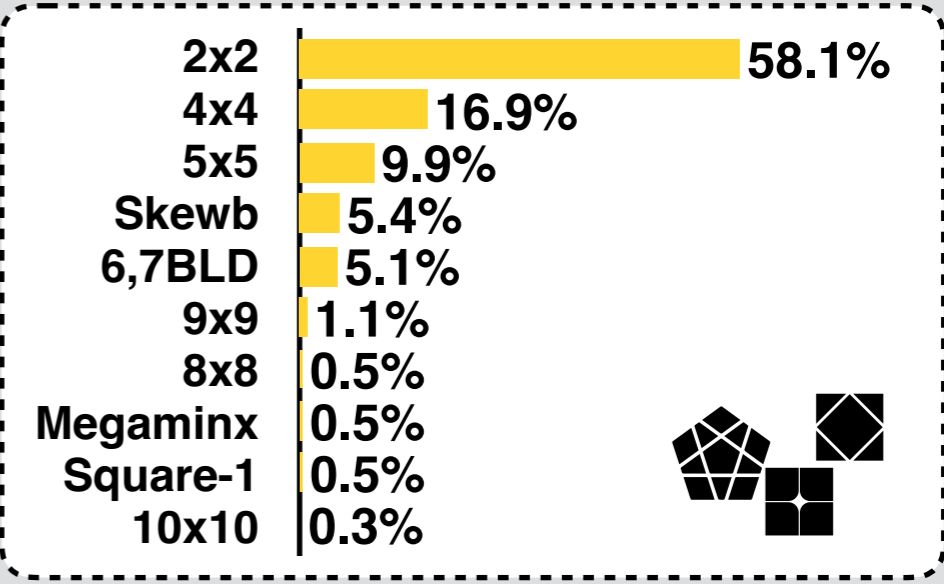
CLOCK IS SOMEWHAT IMPACTED BY AGE, BUT NOT THAT MUCH : 40+ YEARS OLDS ARE AS FAST AS 14Y OLDS, AND MOST PEOPLE ARE ABLE TO GET TO SUB20

CLOCK
11% of all cubers practice this

Cubers regularly practicing Clock

AO12
12.9

Single
9.7
-25% of AO12

AO5
11.8
-9% of AO12

Most people who practice clock manage to get sub20

25% 50% 75%

0   10   20   30   40   50   60

CLOCK RESULTS BY AGE

13.5	11.4	13.1	10.4	12.1	13.6	17.5	15.0	13.0
<=14	15-16	17-18	19-20	21-25	26-30	31-35	36-40	41-50
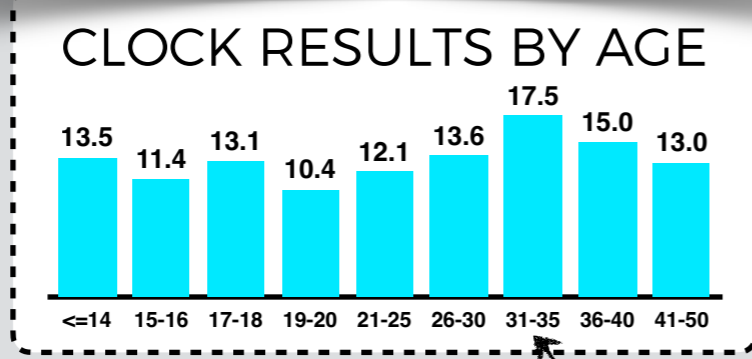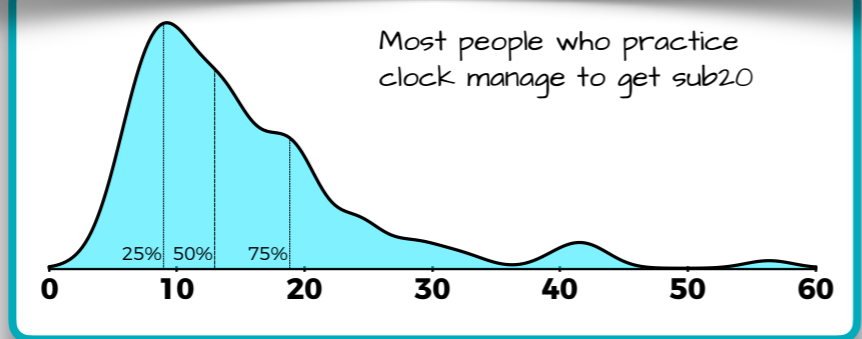
This demonstrates that adults have better things to do than clock...

WHICH CLOCKS DO WE USE?

QiYi	54%
Sengso	21%
LingAo	16%
Rubik's	7%
Others	2%

THE MORE NICHE EVENTS HAVE QUITE A BIT OF NUANCE, WITH AGE AND GENDER HAVING SOMEWHAT OF AN INFLUENCE ON THEM
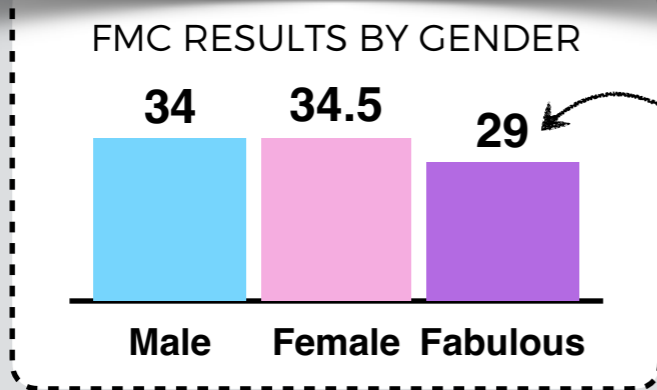
FMC
3.6% of all cubers practice this

Cubers regularly practicing FMC

SINGLE
34

Mo3 39
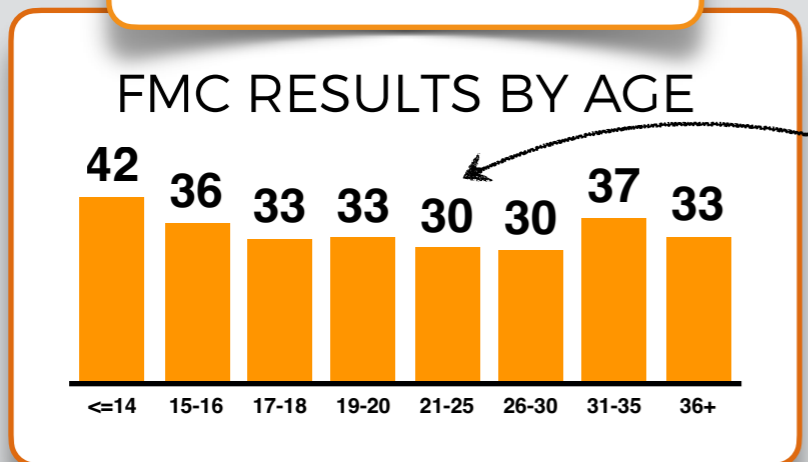
It takes a lot of patience to get good at FMC. This proves people under 20 have no patience

FMC RESULTS BY AGE

42	**36**	**33**	**33**	**30**	**30**	**37**	**33**
<=14	15-16	17-18	19-20	21-25	26-30	31-35	36+

FMC RESULTS BY GENDER

34	**34.5**	**29**
Male	Female	Fabulous

Being fabs makes you good at FMC!

HOW PECULIAR ARE FMC PEOPLE?

cubers doing **FMC**

cubers NOT doing ~~FMC~~

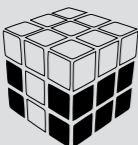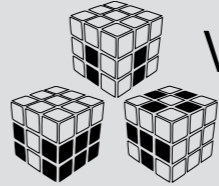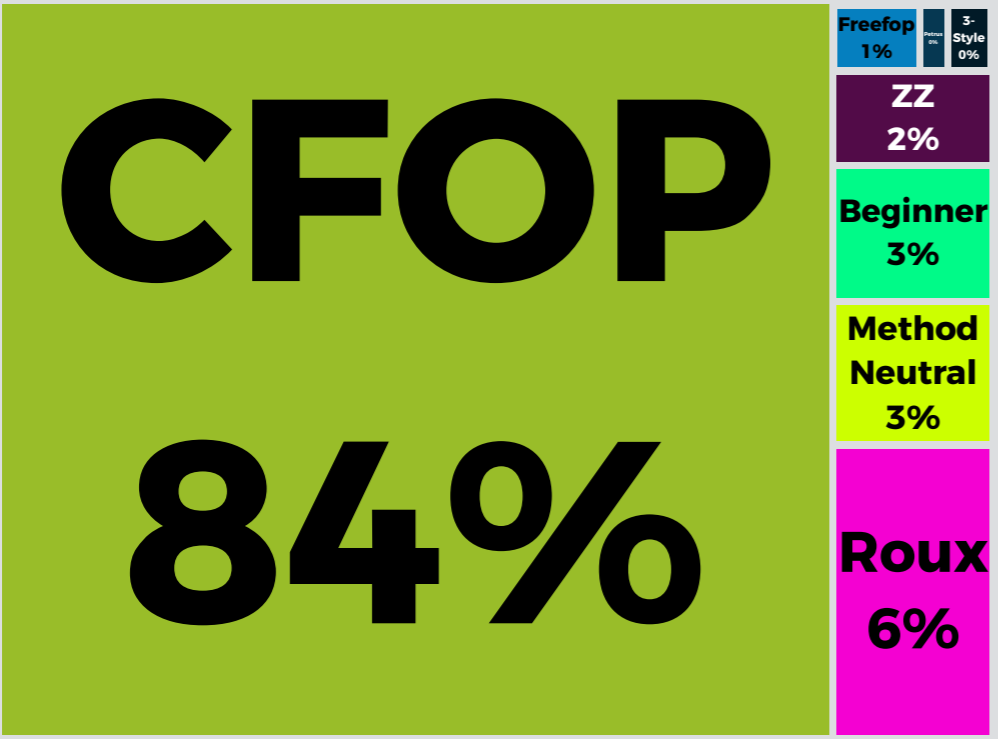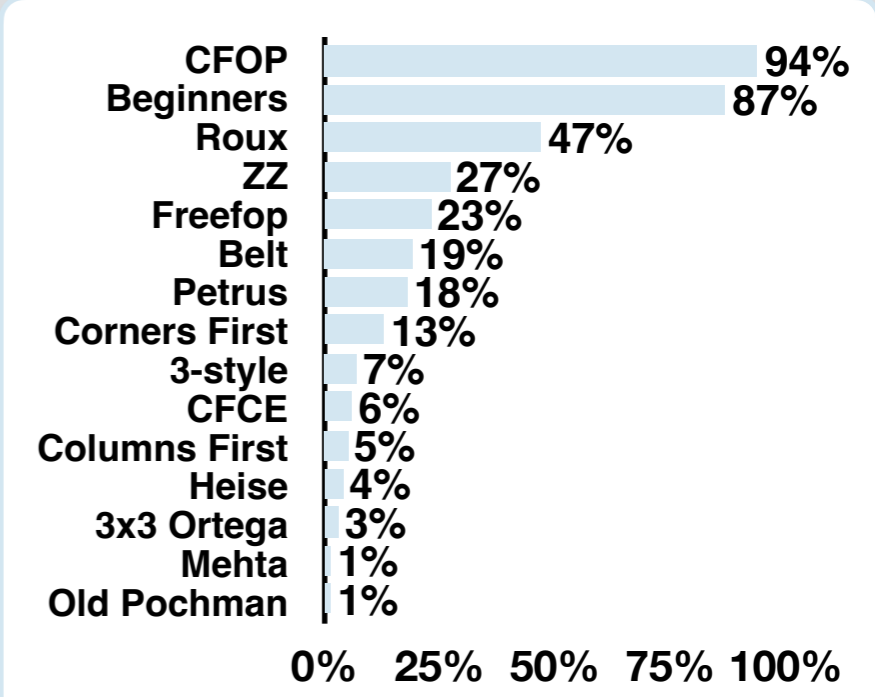| cubers doing FMC		cubers NOT doing FMC
56%	Like to study the efficiency of different methods	**44%**
72%	Like to talk about algorithms with friends	**55%**
63%	Knows complex 3x3 algsets	**33%**
7.1	3x3 methods known	**3.8**
9.9	WCA events practiced	**3.2**

ALGS KNOWLEDGE
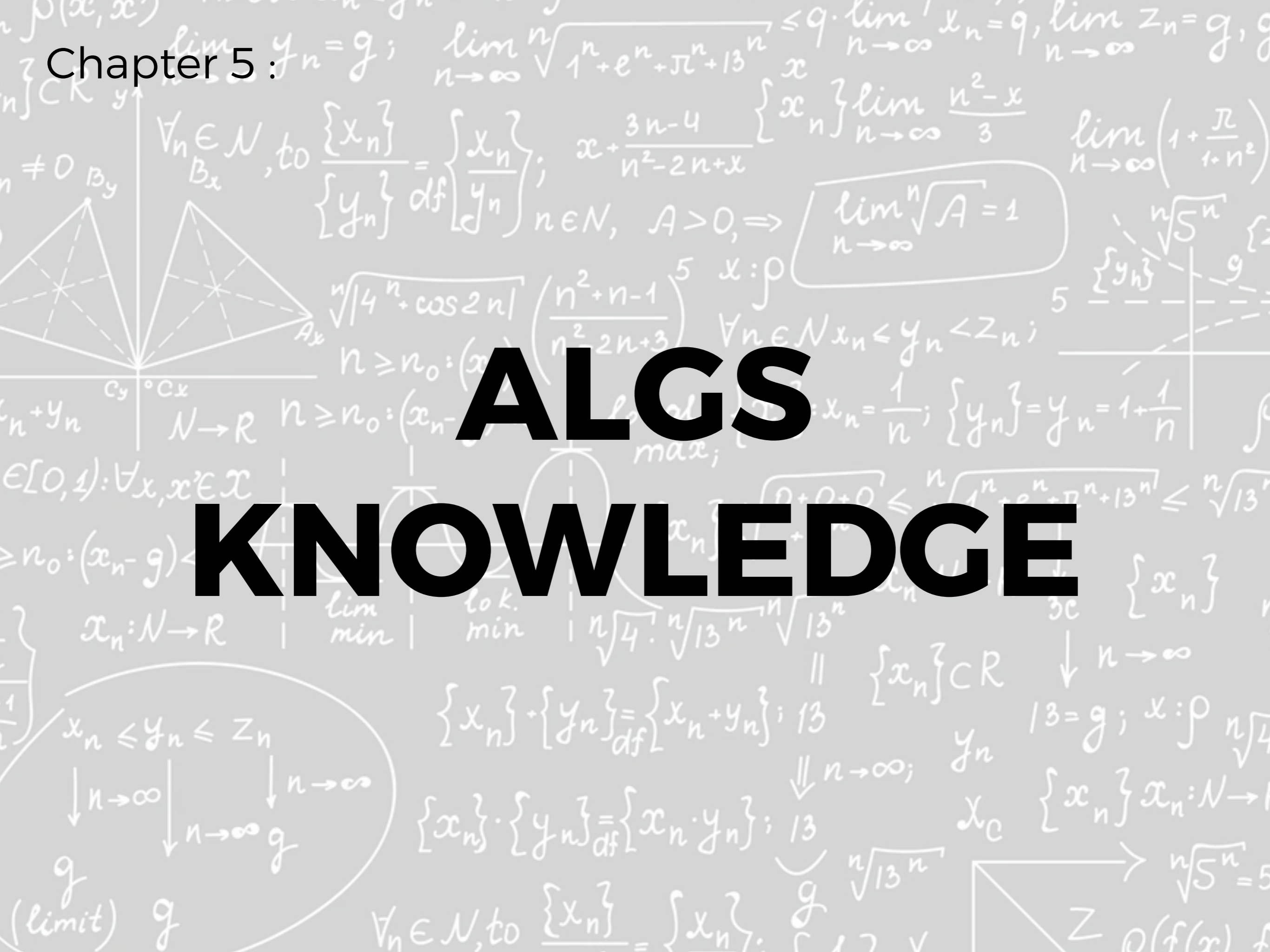
MANY OF US DABBLE IN SEVERAL METHODS, BUT END UP MAINING CFOP; IT'S NOT THE FASTEST METHOD ON AVERAGE, BUT IT REMAINS THE FASTEST AT THE TOP
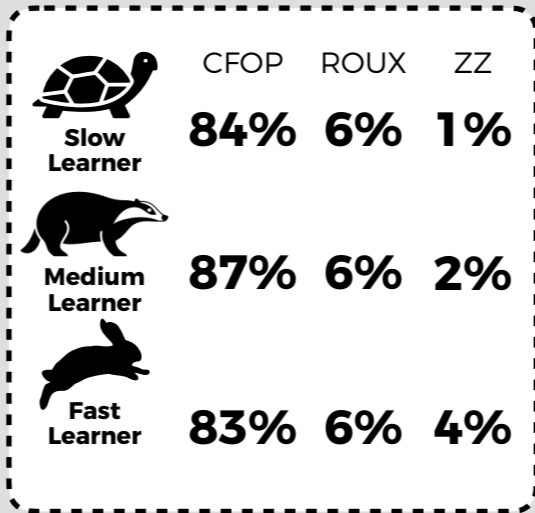
WHAT IS YOUR MAIN 3X3 METHOD?

CFOP 84%

Freefop 1%
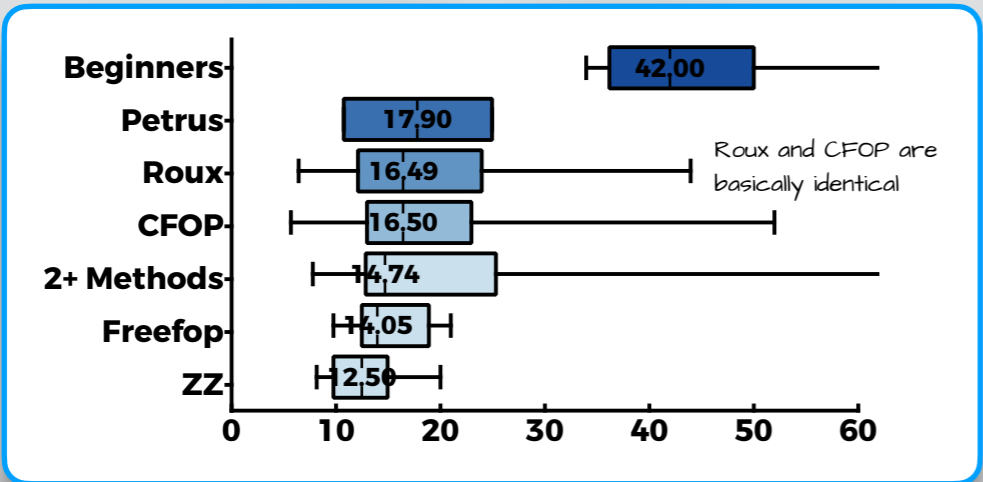Petrus 0%
3-Style 0%
ZZ 2%
Beginner 3%
Method Neutral 3%
Roux 6%

MAIN METHOD BY TYPE OF LEARNER

	CFOP	ROUX	ZZ
Slow Learner	84%	6%	1%
Medium Learner	87%	6%	2%
Fast Learner	83%	6%	4%

Fast learners tend to favour slightly non-CFOP methods

WHAT 3X3 METHODS DO YOU KNOW?

Method	%
CFOP	94%
Beginners	87%
Roux	47%
ZZ	27%
Freefop	23%
Belt	19%
Petrus	18%
Corners First	13%
3-style	7%
CFCE	6%
Columns First	5%
Heise	4%
3x3 Ortega	3%
Mehta	1%
Old Pochman	1%

0% 25% 50% 75% 100%

3X3 GLOBAL AVERAGE BY MAIN METHOD

| Method	Value
Beginners	42,00
Petrus	17,90
Roux	16,49
CFOP	16,50
2+ Methods	14,74
Freefop	14,05
ZZ	12,50

Roux and CFOP are basically identical

Note: It is not surprising that the averages for niche methods is lower than CFOP, (people only branch out after they've been cubing for a while). It's just Petrus that should stop eating donuts and start exercising again

OF METHODS KNOWN
Excluding Beginner

1	2	3	4	5	6	7	8+
22%	24%	16%	11%	6%	6%	3%	11%

Having a grasp of the mechanics of multiple methods helps improving faster
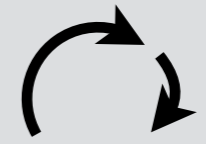
1.7 methods   **2.8** methods   **4.1** methods

ALMOST HALF OF US STILL DO 3 STEPS FOR F2L, BUT AS WE GET FASTER WE REDUCE THE NUMBER OF STEPS, AND BY SUB20 ALMOST HALF OF US HAVE IT IN MUSCLE MEMORY

TYPE OF F2L EXECUTION

All cubers
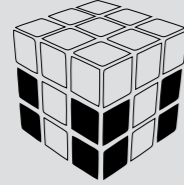
- 3-steps **47%**
- 2-steps **40%**
- 1-steps **13%**
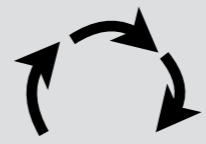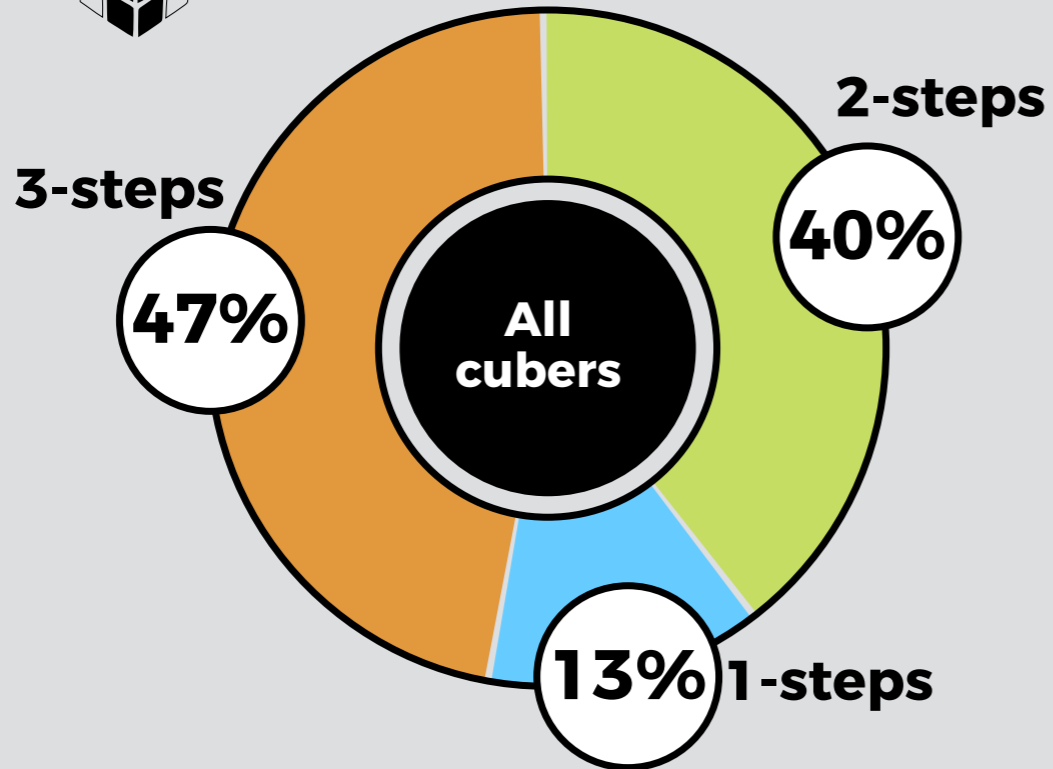
3-steps
Take pieces out + set them up + Insert

2-steps
Take pieces out already set-up + Insert

1-steps
Full Muscle Memory

3X3 GLOBAL AVERAGE BY F2L TYPE

	3-steps	2-steps	1-step
value	31.0	20.1	13.5

Note : it's not just f2l that makes us faster. As we get good at f2l we also get good at the rest

F2L EXECUTION TYPE BY GLOBAL AVERAGE

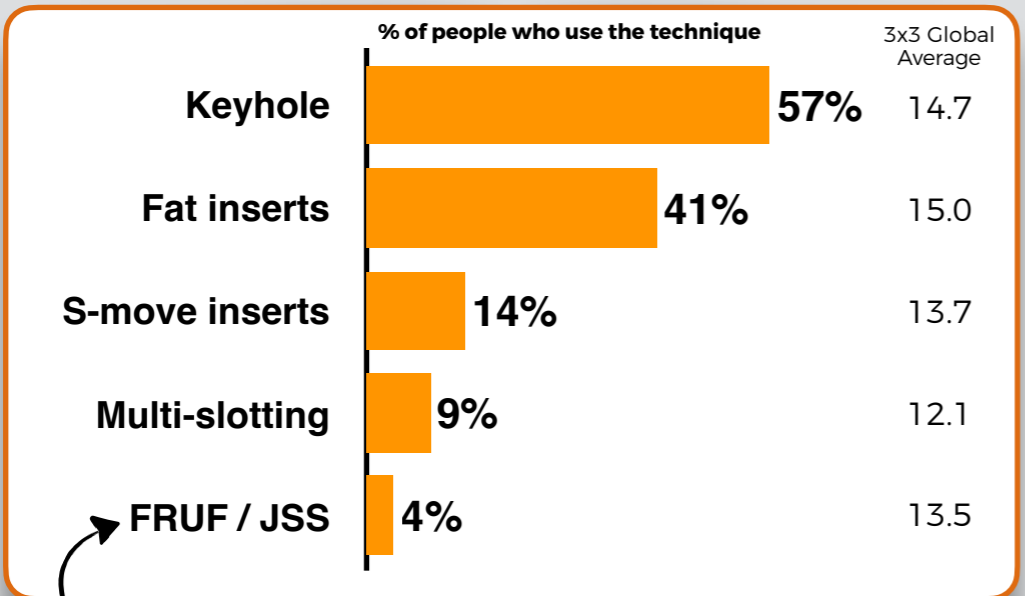|	3-steps	2-steps	1-steps
Sub120	100%		
Sub90	40%	60%	
Sub60	33%	50%	17%
Sub50	44%	43%	14%
Sub40	26%	63%	11%
Sub30	17%	67%	17%
Sub25	14%	56%	30%
Sub20	5%	48%	48%
Sub19	15%	36%	49%
Sub18	6%	43%	51%
Sub17		41%	59%
Sub16		41%	59%
Sub15		33%	67%
Sub14		39%	61%
Sub13		33%	67%
Sub12		27%	73%
Sub11		18%	82%
Sub10		9%	91%
Sub9			100%
Sub8			100%
Sub7			100%
Sub6			100%

Note some cleanup was necessary here, some of the data you left me was eeeewwww

THE FASTER WE GET, THE MORE LIKELY WE ARE TO USE KEYHOLE AND FAT INSERTS IN THE BACK. THE OTHER TECHNIQUES ARE USUALLY INTRODUCED ONLY AT THE FASTEST LEVELS
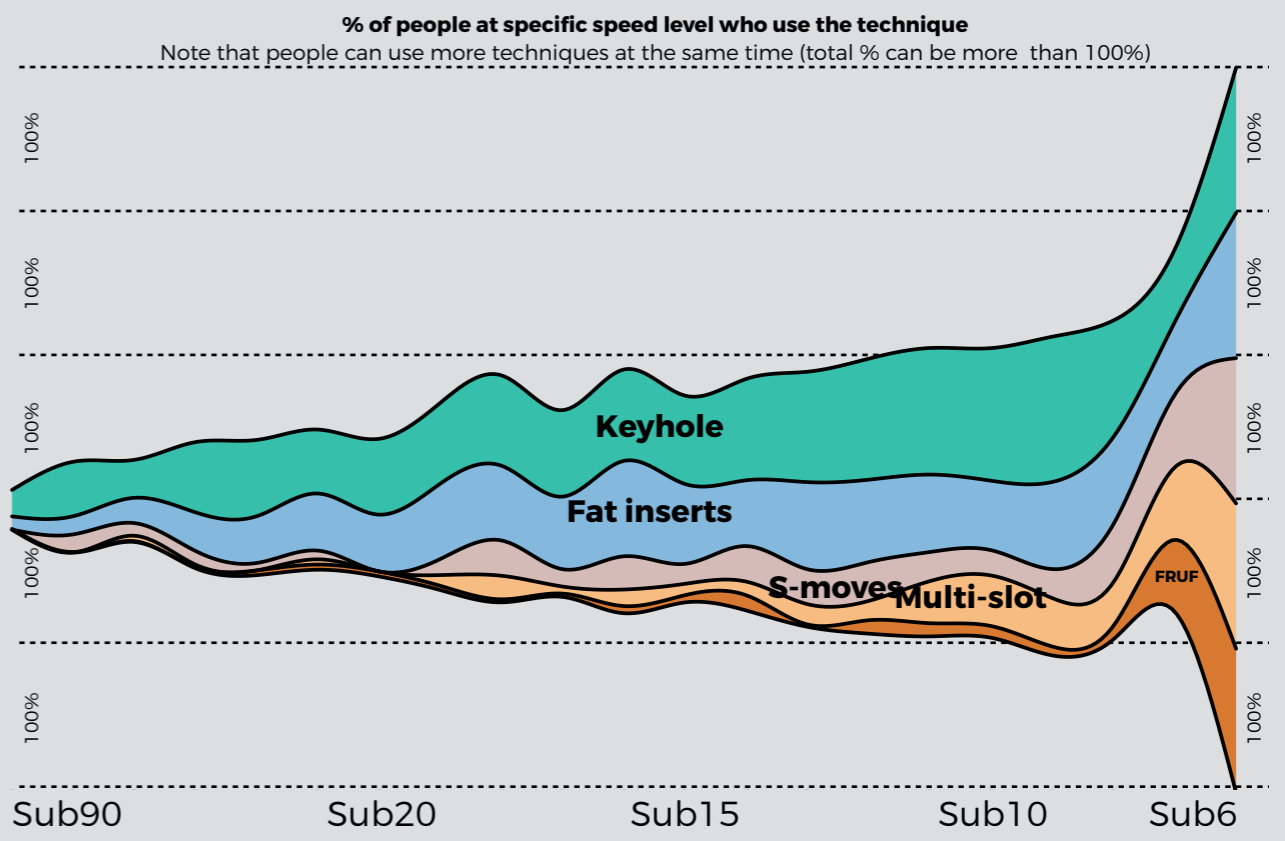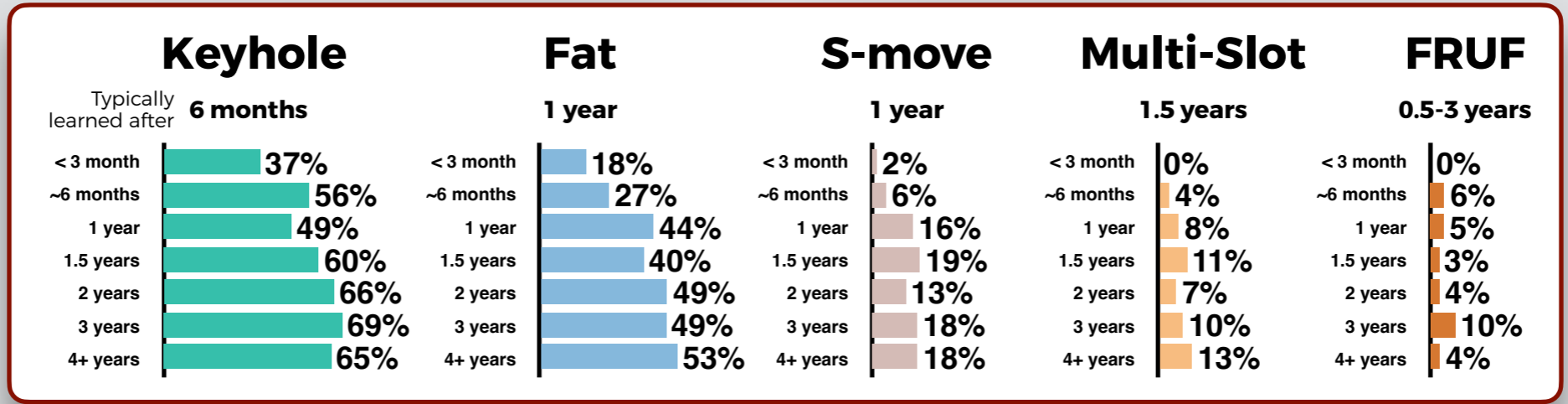
WHICH TECHNIQUES DO YOU USE IN YOUR F2L

% of people who use the technique

	%	3x3 Global Average
Keyhole	57%	14.7
Fat inserts	41%	15.0
S-move inserts	14%	13.7
Multi-slotting	9%	12.1
FRUF / JSS	4%	13.5

Good thing google and the YouTube search engine can help you if you don't know what that is

PREVALENCE OF TECHNIQUES BY 3X3 GLOBAL AVERAGE

% of people at specific speed level who use the technique
Note that people can use more techniques at the same time (total % can be more than 100%)

Keyhole
Fat inserts
S-moves
Multi-slot
FRUF

Sub90 · Sub20 · Sub15 · Sub10 · Sub6

USE OF TECHNIQUE BY 3X3 EXPERIENCE

|	Keyhole	Fat	S-move	Multi-Slot	FRUF
Typically learned after	6 months	1 year	1 year	1.5 years	0.5-3 years
< 3 month	37%	18%	2%	0%	0%
~6 months	56%	27%	6%	4%	6%
1 year	49%	44%	16%	8%	5%
1.5 years	60%	40%	19%	11%	3%
2 years	66%	49%	13%	7%	4%
3 years	69%	49%	18%	10%	10%
4+ years	65%	53%	18%	13%	4%

55

MOST FAST LEARNERS TAKE THEIR TIME DURING INSPECTION; BY SUB20 ALL OF US CAN PLAN THE ENTIRE CROSS, FIRST PAIR HAS TO WAIT UNTIL SUB10, AND CONSISTENT XCROSSES EVEN FURTHER

LEVEL OF PLANNING FOR CFOP SOLVES

% of cubers who during inspection plan Always or Most of the time

Entire Cross

First Pair

XCross

Sub90 · Sub20 · Sub15 · Sub10 · Sub7
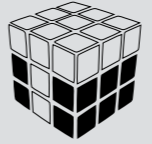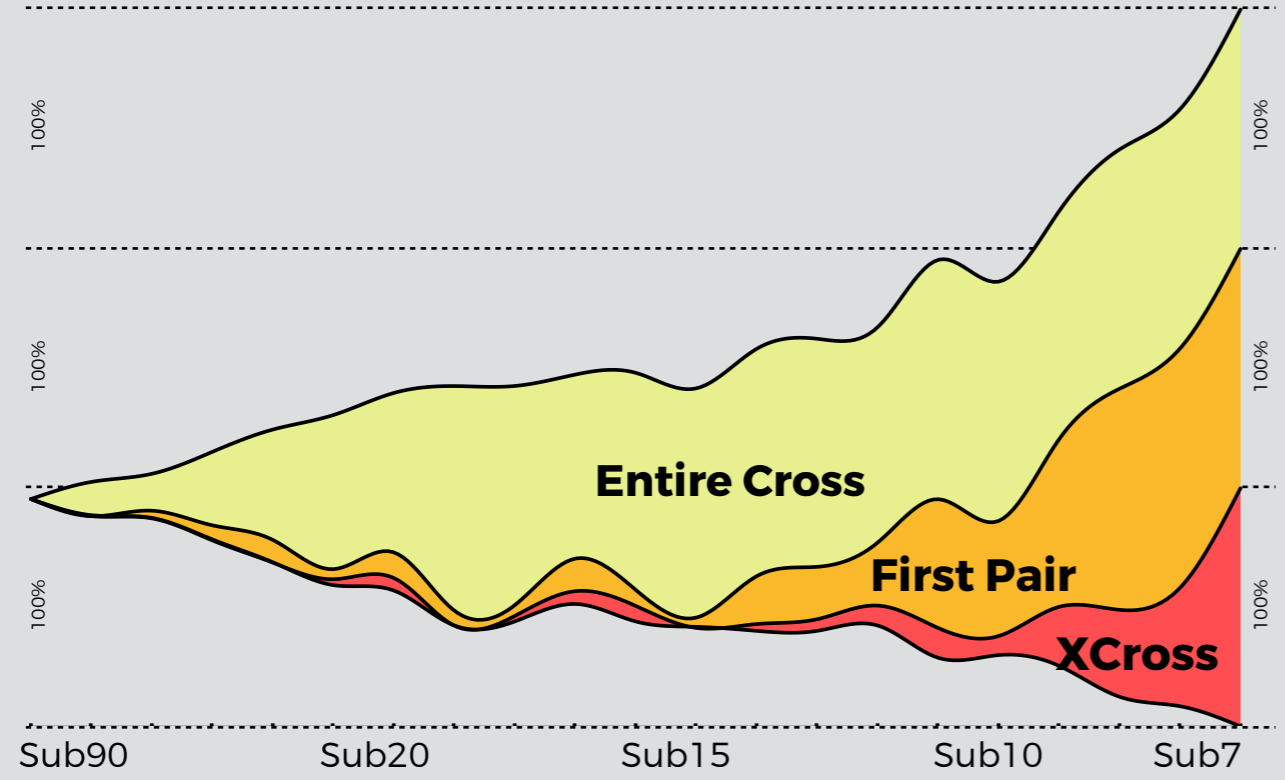
LEVEL OF PLANNING FOR ROUX SOLVES*

	Always	Mostly	Only if easy
FS / Line	65%	23%	13%
Full FB	16%	37%	47%
FB + SS	5% 5%		91%
FB + SB	3% 5%		93%

* Unfortunately we don't have that many Roux solvers, so we don't get the same amount of juicy data

CFOP LEVEL OF PLANNING BY AMOUNT OF EXPERIENCE

	Entire Cross	First Pair	X-Crosses
Typically learned after	**1.5 years**	**1.5 years**	**N/A**
< 3 month	43%	10%	14%
~6 months	70%	3%	5%
1 year	70%	18%	11%
1.5 years	91%	33%	9%
2 years	81%	16%	7%
3 years	92%	33%	16%
4+ years	87%	32%	11%

DO YOU USE A STRICT 15S INSPECTION?

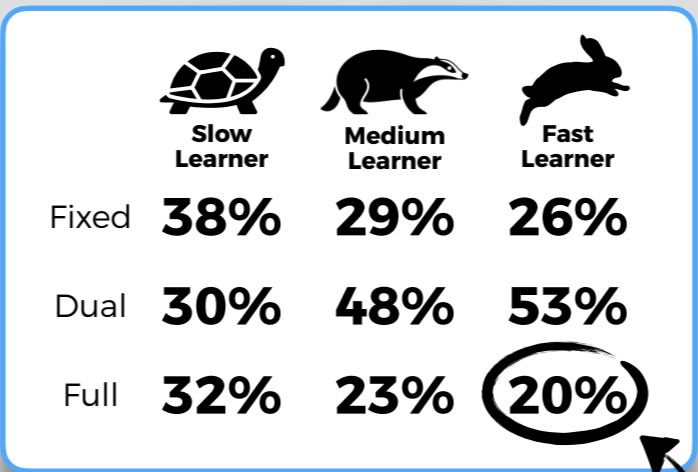|	Slow Learners	Medium Learners	Fast Learners
Yes or mostly	**43%**	**41%**	**30%**
No or only before comps	**57%** → 11%	**59%** 19%	**70%** 35%

IF YOU WANT TO IMPROVE FASTER, STICK TO DUAL COLOR NEUTRALITY (AND, MOSTLY, ALSO IF YOU WANT TO BE FASTER IN GENERAL)
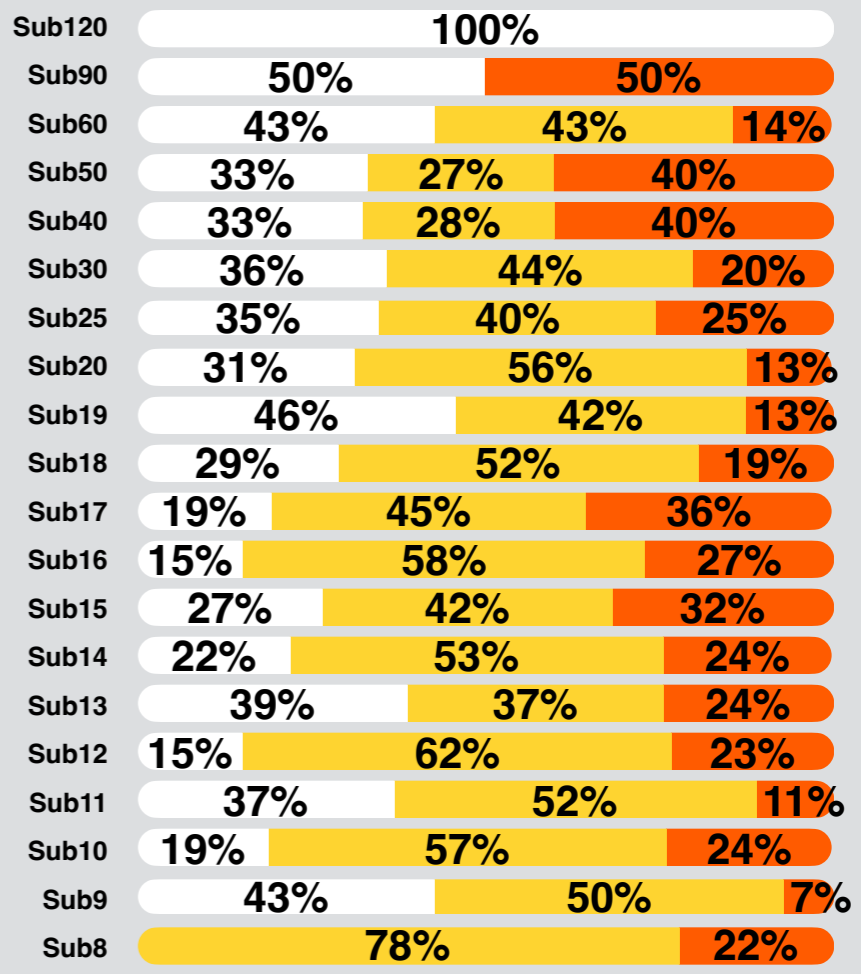
COLOR NEUTRALITY

Fixed
30%
vs 2021 36%

Dual
44%
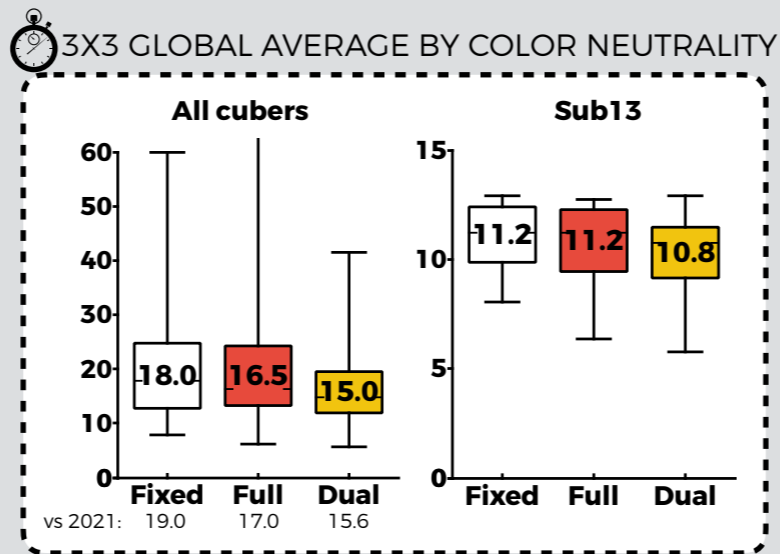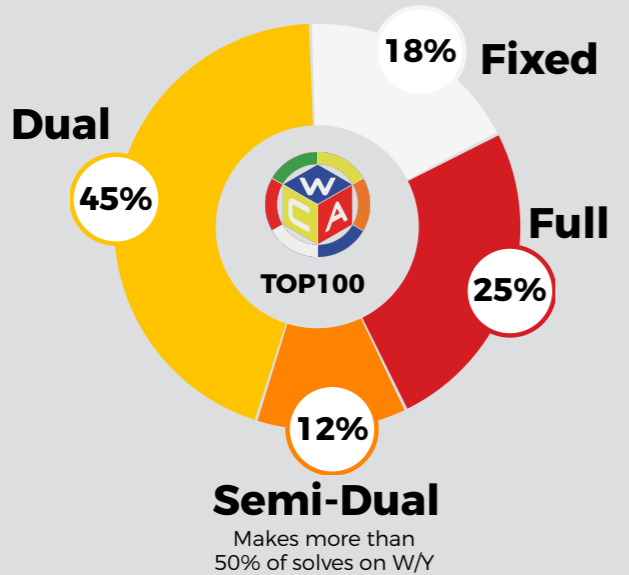vs 2021 35%

All Cubers
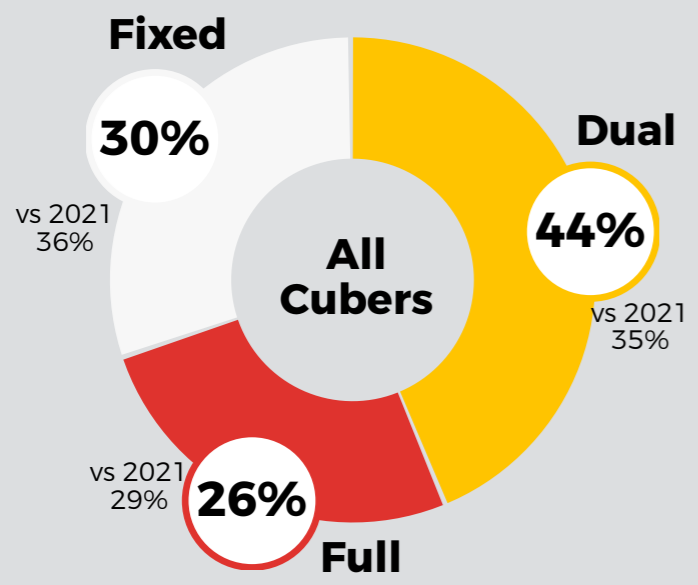
Full
26%
vs 2021 29%

COLOR NEUTRALITY BY LEARNING SPEED

	Slow Learner	Medium Learner	Fast Learner
Fixed	38%	29%	26%
Dual	30%	48%	53%
Full	32%	23%	20%

If you're a fast learner you're less likely to be fully color neutral. This suggests that being fully color neutral slows you down

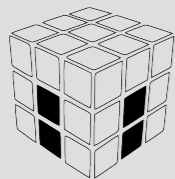## PREVALENCE OF COLOR NEUTRALITY BY 3X3 GLOBAL AVERAGE

Sub120	100%		
Sub90	50%	50%	
Sub60	43%	43%	14%
Sub50	33%	27%	40%
Sub40	33%	28%	40%
Sub30	36%	44%	20%
Sub25	35%	40%	25%
Sub20	31%	56%	13%
Sub19	46%	42%	13%
Sub18	29%	52%	19%
Sub17	19%	45%	36%
Sub16	15%	58%	27%
Sub15	27%	42%	32%
Sub14	22%	53%	24%
Sub13	39%	37%	24%
Sub12	15%	62%	23%
Sub11	37%	52%	11%
Sub10	19%	57%	24%
Sub9	43%	50%	7%
Sub8	78%	22%	

AMONG THE TOP 100 CUBERS IN THE WORLD

Dual
45%

Fixed
18%

TOP100

Full
25%

Semi-Dual
12%
Makes more than 50% of solves on W/Y

3X3 GLOBAL AVERAGE BY COLOR NEUTRALITY

All cubers
Fixed 18.0
Full 16.5
Dual 15.0
vs 2021: Fixed 19.0 Full 17.0 Dual 15.6
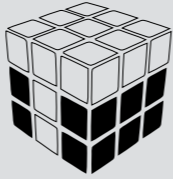
Sub13
Fixed 11.2
Full 11.2
Dual 10.8

We've tried to turn it every which way, and the result is the same: full color neutrality is slower, in progress, in overall speed.
Note that about 1/3 of "fully color-neutral" world-class solvers, in reality solve most of the time in Dual only (i.e. more than 50% of solves on White or Yellow, but typically 60% or more of their solves)
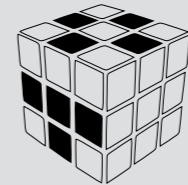
57

WE START BECOMING COLOR NEUTRAL AT AROUND SUB60, BY SUB18 MORE THAN HALF OF US ARE DUAL OR FULLY CN
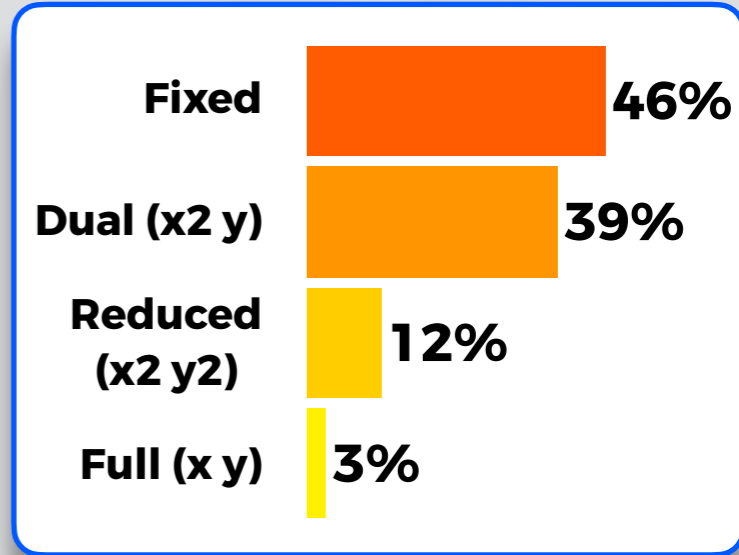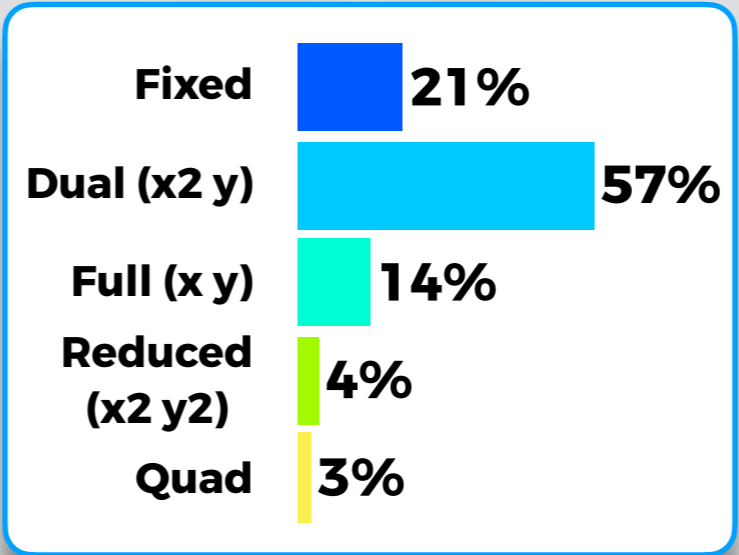
CFOP CROSS COLOR

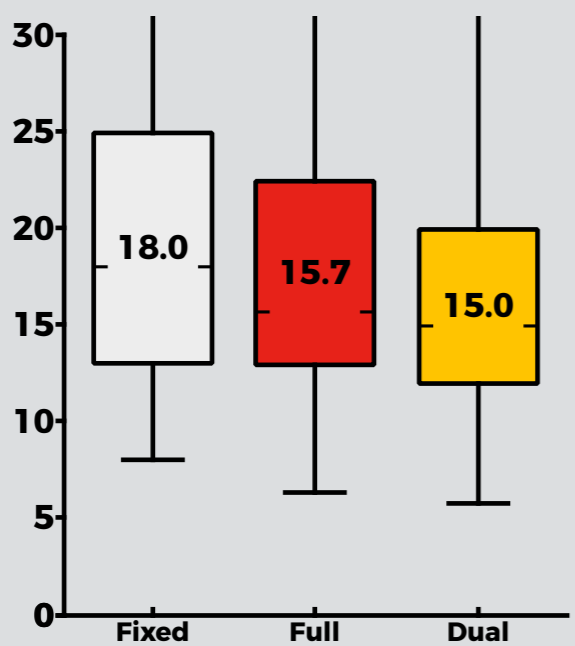|	
White	91%
Yellow	67%
Green	28%
Blue	28%
Red	27%
Orange	26%

ROUX NEUTRALITY

Fixed	21%
Dual (x2 y)	57%
Full (x y)	14%
Reduced (x2 y2)	4%
Quad	3%

ZZ NEUTRALITY

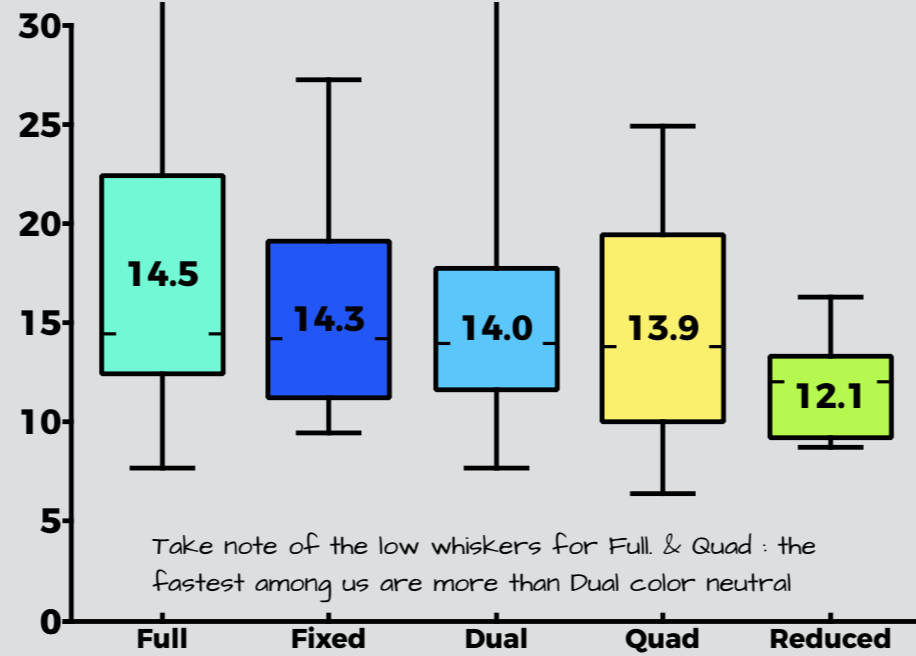|	
Fixed	46%
Dual (x2 y)	39%
Reduced (x2 y2)	12%
Full (x y)	3%

CFOP GLOBAL AVERAGE BY COLOR NEUTRALITY
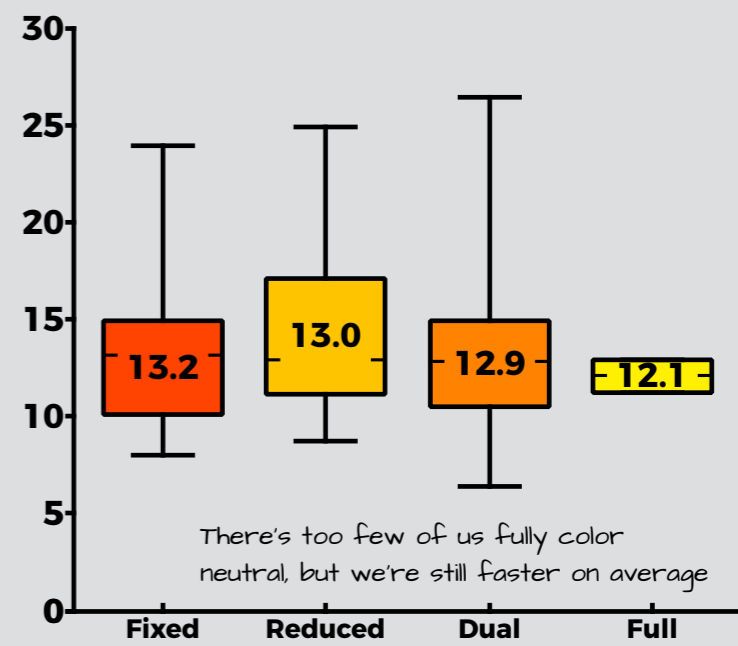
Fixed: 18.0
Full: 15.7
Dual: 15.0
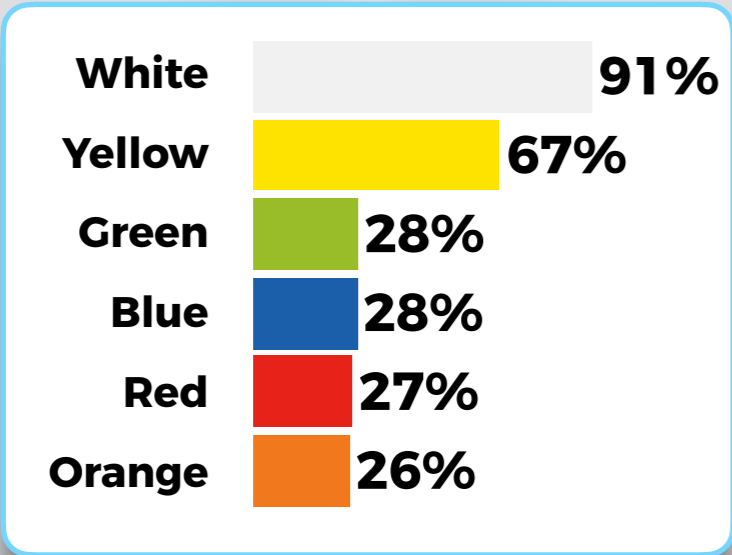
BTW, we checked older vs younger cubers to see if Dual is a new thing. It isn't, it's faster than Full for older cubers too.
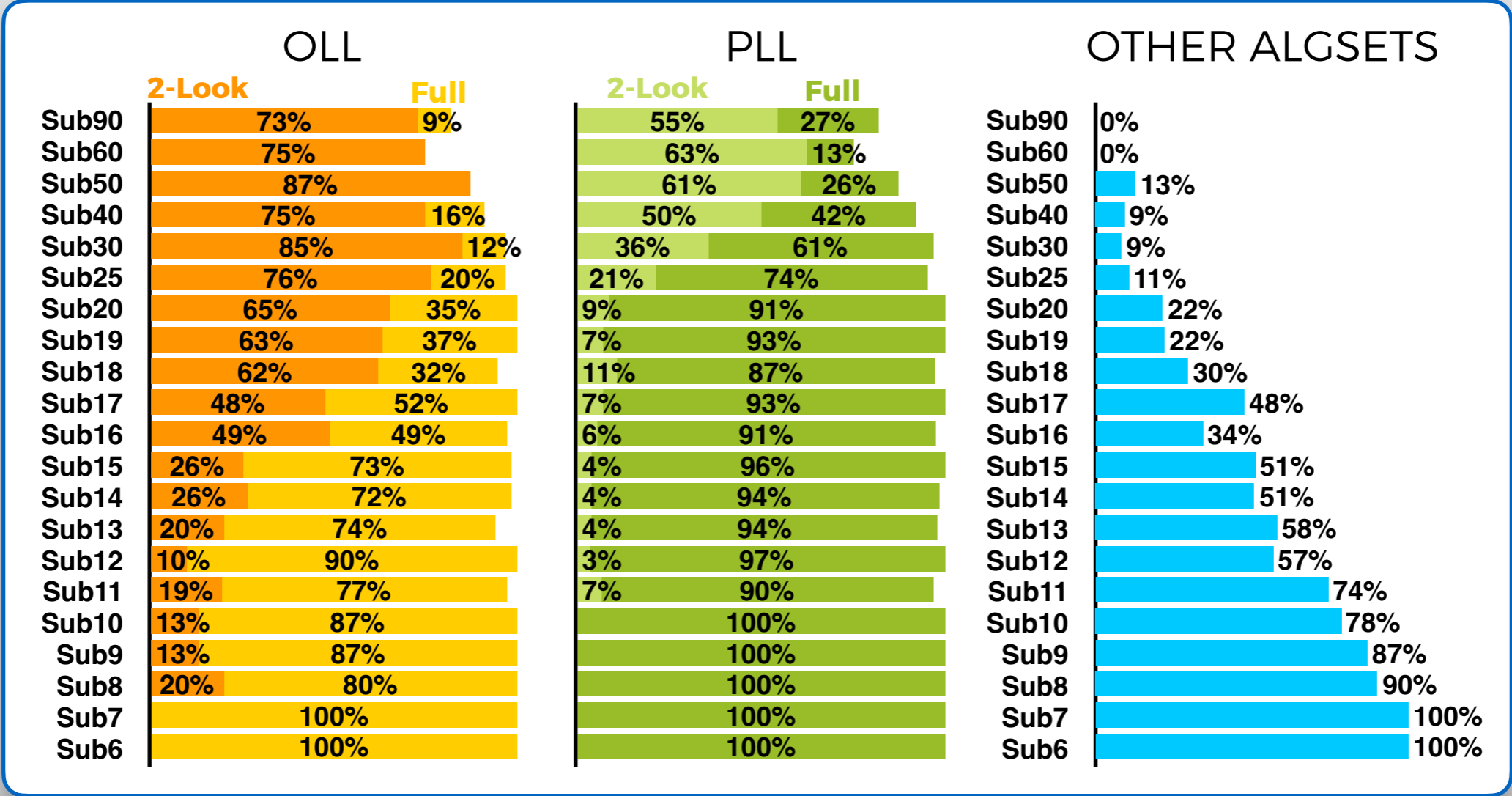
ROUX GLOBAL AVERAGE BY COLOR NEUTRALITY

Full: 14.5
Fixed: 14.3
Dual: 14.0
Quad: 13.9
Reduced: 12.1

Take note of the low whiskers for Full. & Quad : the fastest among us are more than Dual color neutral

ZZ GLOBAL AVERAGE BY COLOR NEUTRALITY

Fixed: 13.2
Reduced: 13.0
Dual: 12.9
Full: 12.1

There's too few of us fully color neutral, but we're still faster on average

MANY OF US ARE 2-LOOKING OLL EVEN AT SUB15 AND LOWER; BUT WE ALL (OR ALMOST) LEARNED FULL PLL BY THE TIME WE HIT SUB20; MOST OF US START LEARNING OTHER ALGSETS AFTER SUB15

2-LOOK VS FULL ALGSETS BY 3X3 AVERAGE

OLL

	2-Look	Full
Sub90	73%	9%
Sub60	75%	
Sub50	87%	
Sub40	75%	16%
Sub30	85%	12%
Sub25	76%	20%
Sub20	65%	35%
Sub19	63%	37%
Sub18	62%	32%
Sub17	48%	52%
Sub16	49%	49%
Sub15	26%	73%
Sub14	26%	72%
Sub13	20%	74%
Sub12	10%	90%
Sub11	19%	77%
Sub10	13%	87%
Sub9	13%	87%
Sub8	20%	80%
Sub7		100%
Sub6		100%

PLL

	2-Look	Full
Sub90	55%	27%
Sub60	63%	13%
Sub50	61%	26%
Sub40	50%	42%
Sub30	36%	61%
Sub25	21%	74%
Sub20	9%	91%
Sub19	7%	93%
Sub18	11%	87%
Sub17	7%	93%
Sub16	6%	91%
Sub15	4%	96%
Sub14	4%	94%
Sub13	4%	94%
Sub12	3%	97%
Sub11	7%	90%
Sub10		100%
Sub9		100%
Sub8		100%
Sub7		100%
Sub6		100%

OTHER ALGSETS

Sub90	0%
Sub60	0%
Sub50	13%
Sub40	9%
Sub30	9%
Sub25	11%
Sub20	22%
Sub19	22%
Sub18	30%
Sub17	48%
Sub16	34%
Sub15	51%
Sub14	51%
Sub13	58%
Sub12	57%
Sub11	74%
Sub10	78%
Sub9	87%
Sub8	90%
Sub7	100%
Sub6	100%

> 50% LEARN FULL OLL AFTER

Slow Learner	Medium Learner	Fast Learner
Never	2 years	6 months

>50% LEARNS FULL PLL AFTER

Slow Learner	Medium Learner	Fast Learner
1.5 years	6 months	3 months

>50% LEARNS (ANY) OTHER ALGSETS AFTER

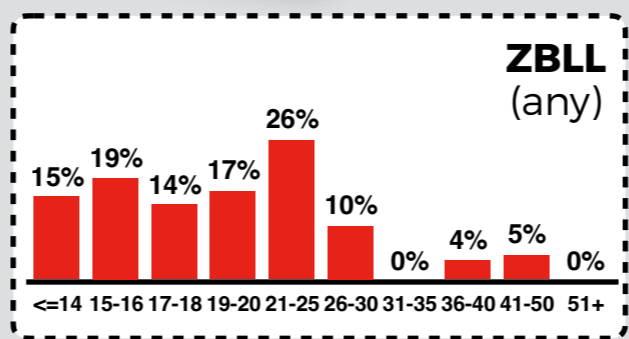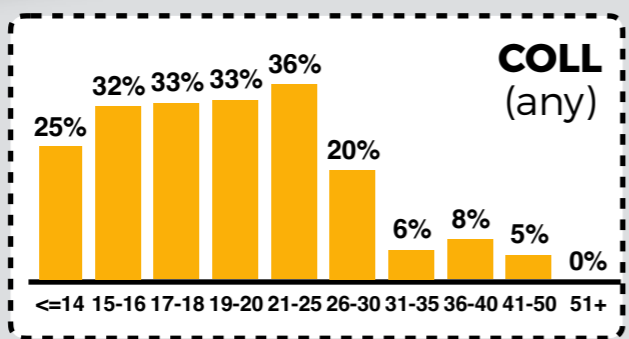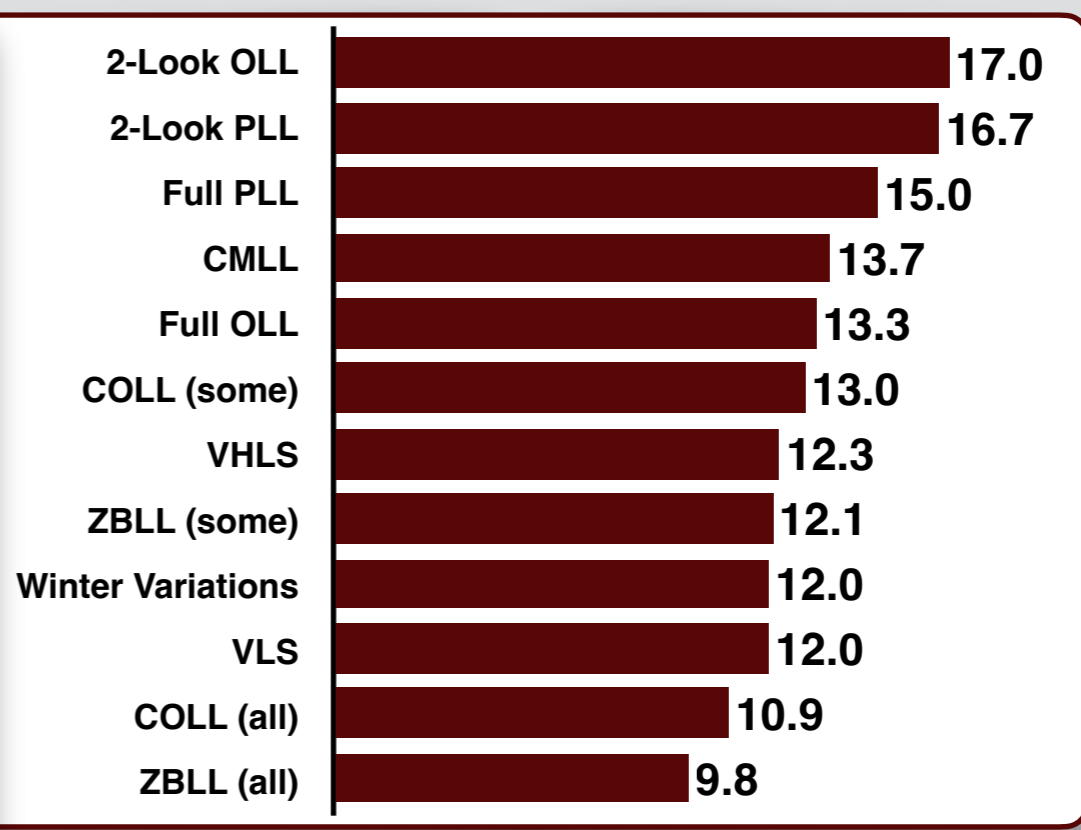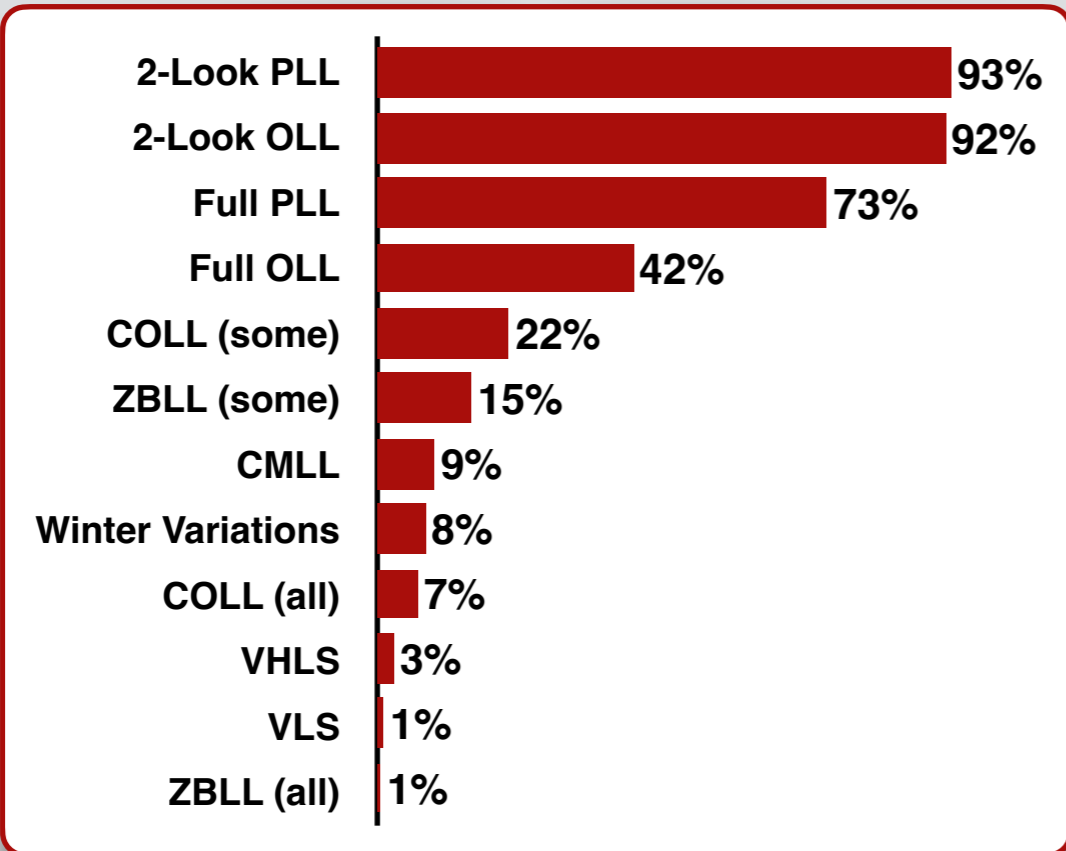| Slow Learner	Medium Learner	Fast Learner
Never	3 years	1 years

COLL, ZBLL, CMLL, WV, ...

Fast learners are indeed faster at learning!

WHILE MOST OF US LEARN PLL AND OLL, OTHER ALGSETS ARE ONLY KNOWN BY A SMALL AMOUNT OF PEOPLE, AND AGE SEEMS TO INFLUENCE WHICH ONES WE LEARN

WHAT 3X3 ALGSETS DO YOU KNOW?

Algset	Percentage
2-Look PLL	93%
2-Look OLL	92%
Full PLL	73%
Full OLL	42%
COLL (some)	22%
ZBLL (some)	15%
CMLL	9%
Winter Variations	8%
COLL (all)	7%
VHLS	3%
VLS	1%
ZBLL (all)	1%

3X3 GLOBAL AVERAGE BY ALGSETS KNOWN

Algset	Average
2-Look OLL	17.0
2-Look PLL	16.7
Full PLL	15.0
CMLL	13.7
Full OLL	13.3
COLL (some)	13.0
VHLS	12.3
ZBLL (some)	12.1
Winter Variations	12.0
VLS	12.0
COLL (all)	10.9
ZBLL (all)	9.8

COLL (any)

<=14	15-16	17-18	19-20	21-25	26-30	31-35	36-40	41-50	51+
25%	32%	33%	33%	36%	20%	6%	8%	5%	0%

ZBLL (any)

<=14	15-16	17-18	19-20	21-25	26-30	31-35	36-40	41-50	51+
15%	19%	14%	17%	26%	10%	0%	4%	5%	0%

CMLL

<=14	15-16	17-18	19-20	21-25	26-30	31-35	36-40	41-50	51+
4%	9%	10%	8%	18%	10%	18%	4%	25%	33%

Aaaah I knew that some algsets are only for a mature audience

COLL AND ZBLL ARE THE PURVIEW OF OUR FASTER SOLVERS; PEOPLE ARE LEARNING DIFFERENT CASES FOR BOTH, BUT HEADLIGHTS (U) REMAIN NEAR THE TOP

COLL CASES KNOWN
Among cubers who know some COLL

H (DblSune)	U (Headlights)
74%	63%

Pi	L (Bowtie)
60%	53%

T (Chameleon)	S (Sune)
51%	32%

AS (Antisune)	
31%	
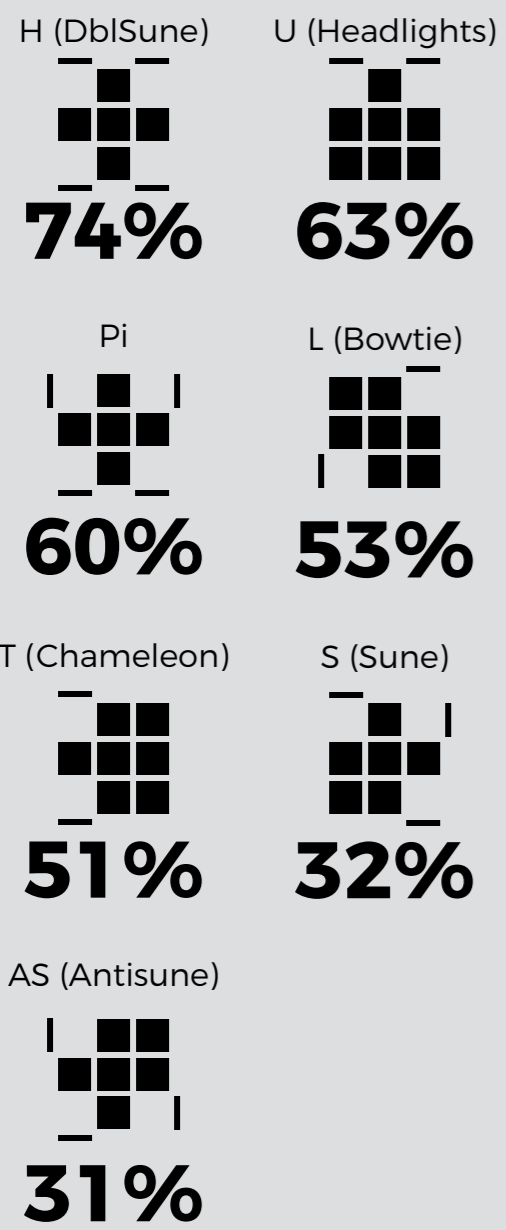
ZBLL CASES KNOWN
Among cubers who know some ZBLL

U (Headlights)	T (Chameleon)
56%	43%

H (DblSune)	S (Sune)
23%	18%

AS (Antisune)	Pi
17%	14%

	L (Bowtie)
	16%

	COLL	ZBLL
	29% of cubers	**16%** of cubers

COLL

	Some	All
Sub120		
Sub90		
Sub60		
Sub50	4%	
Sub40	5%	2%
Sub30	2%	
Sub25	1%	2%
Sub20	17%	
Sub19	7%	
Sub18	16%	3%
Sub17	31%	5%
Sub16	23%	3%
Sub15	35%	10%
Sub14	43%	2%
Sub13	44%	10%
Sub12	37%	20%
Sub11	58%	23%
Sub10	52%	26%
Sub9	47%	33%
Sub8	40%	50%
Sub7	50%	50%
Sub6	100%	

ZBLL

Sub120	
Sub90	
Sub60	
Sub50	4%
Sub40	2%
Sub30	2%
Sub25	2%
Sub20	4%
Sub19	15%
Sub18	8%
Sub17	17%
Sub16	20%
Sub15	18%
Sub14	15%
Sub13	32%
Sub12	33%
Sub11	42%
Sub10	61%
Sub9	60%
Sub8	60%
Sub7	100%
Sub6	100%

We don't have a lot of data here, so it's getting sketchy

LEARN EIDO, RING F, DISJOINTED U2 AND ROLLED R3 : YOU'LL BE GLAD YOU DID!

FINGERTRICKS WE UTILISE
(% OF CUBERS USING FINGER TRICK)

Finger Trick	%	Category
Double-flick for U/U'	81%	**Bread and Butter**
Index-push for U/U'	74%	
Thumb F/F'	73%	
Index-pinch for U/U'	62%	**Second Wave**
Double-flick for D/D'	62%	
Index-pinch for F/F'	58%	
Ring-pinch/push for F/F'	27%	**Niche**
Rolled R3	19%	
Homegrip B	15%	
Thumb u/u'	14%	
Disjointed U2'	13%	
Eido / Beido	12%	
Thumb U/U'	8%	
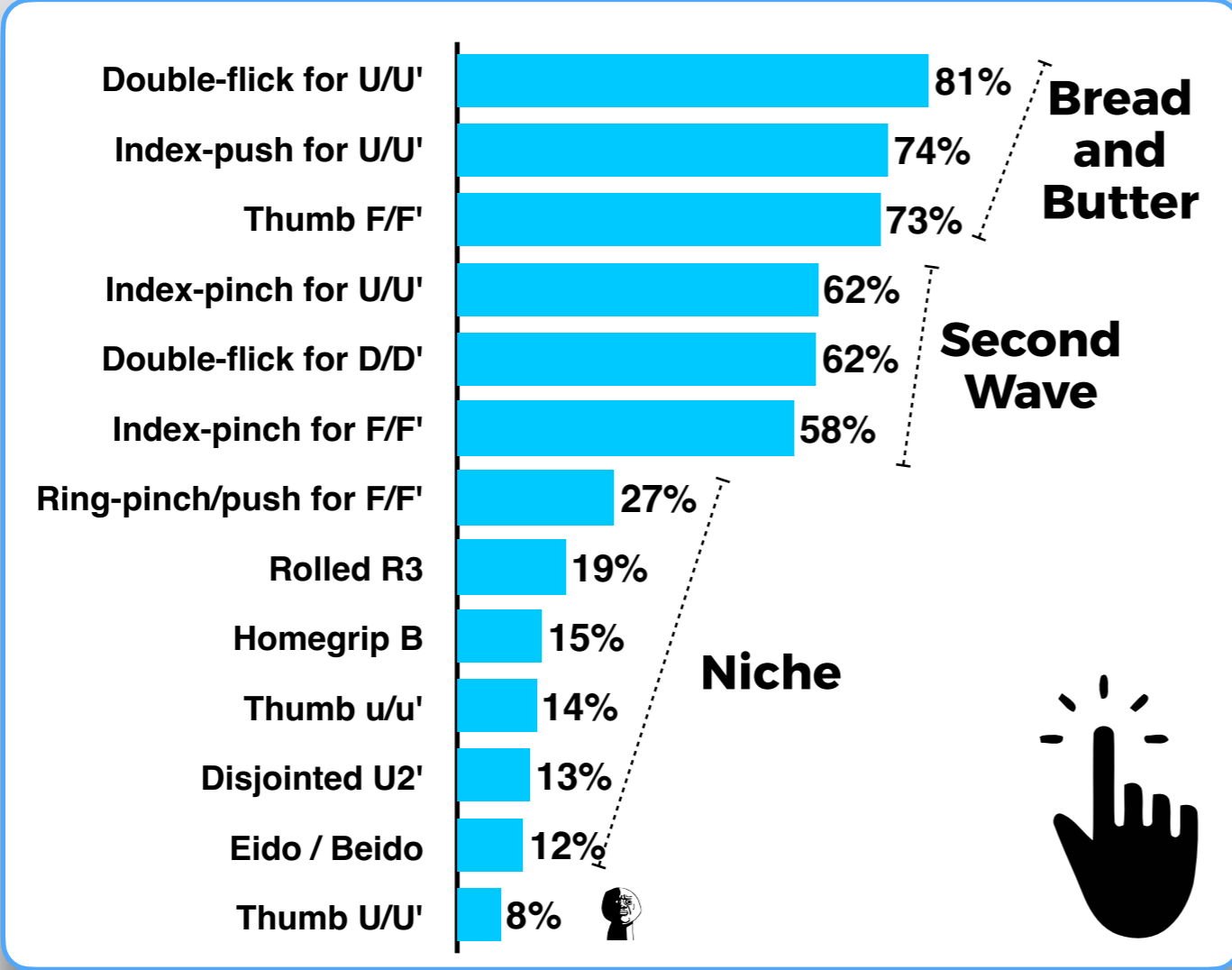
3X3 GLOBAL AVERAGE GAINS FOR CUBERS WHO USE FINGER TRICK VS THOSE WHO DON'T

Finger Trick	Gain
Eido / Beido	41%
Double-flick for U/U'	38%
Index-pinch for F/F'	31%
Rolled R3	31%
Ring F/F'	30%
Index-push for U/U'	29%
Thumb F/F'	29%
Index-pinch for U/U'	28%
Double-flick for D/D'	27%
Disjointed U2'	27%
Thumb U/U'	17%
Homegrip B	14%
Thumb u/u'	7%

Cubers who use Eido/Beido are on average 41% faster than those who don't

THE "FASTEST" FINGERTRICKS : 3X3 GLOBAL AVERAGE FOR FINGER TRICK USERS

Finger Trick	Average
Eido / Beido	12.9
Rolled R3	15.1
Disjointed U2'	15.6
Ring-pinch/push for F/F'	15.8
Thumb U/U'	17.2
Index-pinch for F/F'	17.5

% OF FINGER TRICK USAGE FOR FASTER AND SLOWER SOLVER

	top15% of cubers **Sub13**	VS.	**Sup13**
Eido / Beido	19%	**+169%**	7%
Ring F/F'	35%	**+51%**	23%
Disjointed U2'	16%	**+48%**	11%
Rolled R3	23%	**+38%**	17%
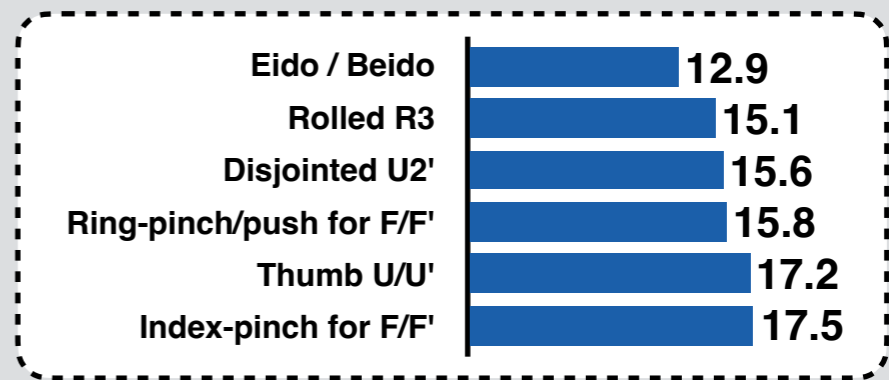
As we get faster, we introduce more fingertricks to our toolkit, with some of the more niche fingertricks used only by the fastest cubers

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WHEN DO WE LEARN TO DO WHAT? IT'S PRETTY GRADUAL FOR MOST THINGS : THERE ISN'T A SINGLE "WINNER" TOOL; WE HAVE TO IMPROVE BY LEARNING ALL OF THE TOOLS

SUB120
- **86%** have been practicing < 3 months
- **50%** know 2-Look OLL & PLL
- **100%** use 3 steps for F2L
- **100%** Plan partial cross most of the time

SUB90
- **50%** have been practicing < 3 months
- **64%** know 4-Look Last Layer
- **60%** Take out f2l pieces already paired
- **14%** Plan full cross most of the time

SUB60
- **45%** have been practicing < 3 months
- **13%** know 3-Look Last Layer
- **43%** Are Dual Color Neutral
- **41%** Take out f2l pieces already paired
- **57%** Plan full cross most of the time

SUB30
- **30%** have been practicing for 6m or less
- **12%** know 2-Look Last Layer
- **64%** Are Dual Color Neutral or Fully CN
- **84%** Take out f2l pieces already paired
- **64%** Plan full cross most of the time

SUB20
- **17%** have been practicing for 6m or less
- **35%** know 2-Look Last Layer
- **69%** Are Dual Color Neutral or Fully CN
- **48%** Do F2L with full muscle memory
- **94%** Plan full cross most of the time

SUB17
- **21%** have been practicing for 1y or less
- **52%** know 2-Look Last Layer
- **81%** Are Dual Color Neutral or Fully CN
- **48%** Do F2L with full muscle memory
- **7%** Plan first pair most of the time
- **36%** Know some COLL

SUB15
- **13%** have been practicing for 1y or less
- **73%** know 2-Look Last Layer
- **18%** Know some ZBLL
- **67%** Do F2L with full muscle memory
- **21%** Plan first pair most of the time
- **45%** Know some COLL

SUB13
- **10%** have been practicing for 1y or less
- **74%** know 2-Look Last Layer
- **32%** Know some ZBLL
- **96%** Do F2L with full muscle memory
- **26%** Plan first pair most of the time
- **54%** Know some COLL

SUB10
- **8%** have been practicing for 1.5y or less
- **87%** know 2-Look Last Layer
- **61%** Know some ZBLL
- **70%** Plan first pair most of the time
- **25%** Plan X-Cross most of the time
- **78%** Know some COLL

SUB9
- **6%** have been practicing for 2y or less
- **87%** know 2-Look Last Layer
- **60%** Know some ZBLL
- **92%** Plan first pair most of the time
- **35%** Plan X-Cross most of the time
- **80%** Know some COLL

Note : as speed progresses, some of the items change a bit (e.g. partial cross becomes full cross)

THE FASTER LEARNERS AMONG US TEND TO LEARN IN BULK MORE THAN THE SLOWER ONES. AND WE'VE BECOME MORE RELIANT ON EXISTING RESOURCES RATHER THAN MAKING OUR OWN

HOW DO WE LEARN NEW ALGORITHMS

One or two algs every day and drill them until I know them	27%
I learn a whole case-set at once and repeat it over multiple days	14%
A bit of both	16%
I just learn some algs that look nice and practice them	22%
Haven't really learned new algs in a long time	20%

LEARNING STRATEGY FOR FASTER AND SLOWER LEARNERS
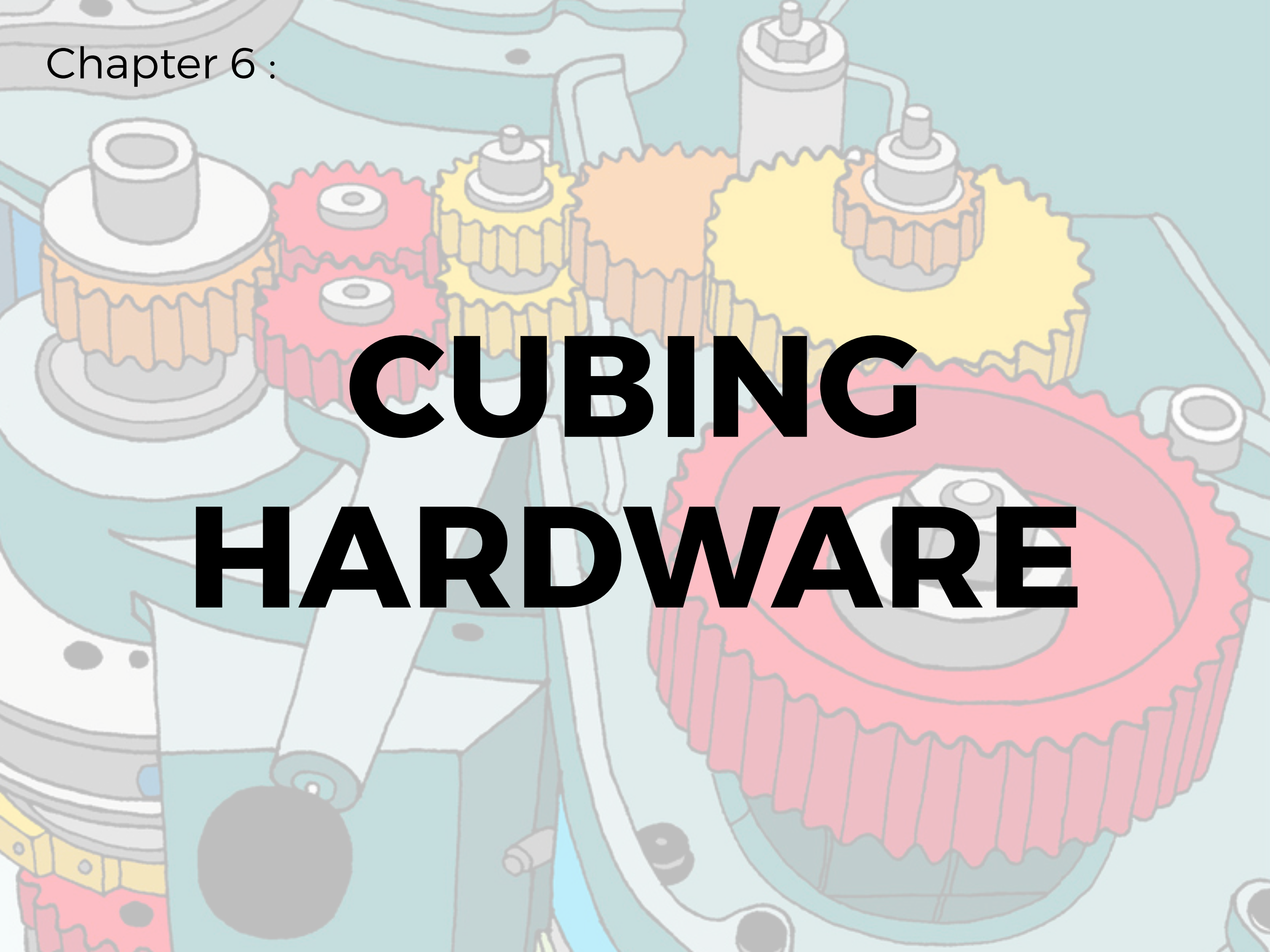
	Slow Learners	Medium Learners	Fast Learners
Learn a whole case/set and repeat	11%	13%	23%
One or two algs a day	32%	31%	18%
A bit of both	11%	18%	20%

WHAT TOOLS DO YOU USE TO HELP YOU LEARN NEW ALGS?

		vs. 2021
I look at algsheets on my computer/smartphone	71%	62% ↗
I look at youtube videos with algs	55%	38% ↗
I use an alg-trainer (software / website)	52%	36% ↗
I use algsheets made by other cubers	42%	31% ↗
I make my own algsheets	16%	29% ↘
I print out algsheets, make flipcards	16%	23% ↘
I use a smart-cube & trainer	7%	17% ↘

HAVE YOU EVER COME UP WITH AN ALGORITHM OF YOUR OWN?
or modified an existing one you already knew

Yes
I used tools to help me **11%**

No **39%**

Yes
Without using any tools **50%**
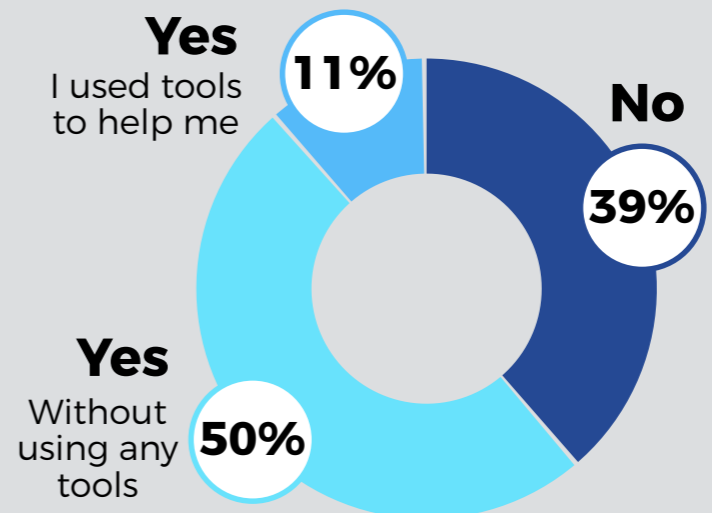
CUBING HARDWARE

ADJUSTABLE MAGNETS HAVE BECOME THE NORM; FOR CUBE-SHAPED EVENTS WE LIKE THEM A LOT, BUT IT'S THE OTHER EVENTS WHERE WE'RE LEARNING HOW GOOD MAGNETS CAN BE

DO YOU OWN A MAGNETIC CUBE?

Not Magnetic **2%**

Magnetised it myself **1%**

Adjustable Magnets **77%**

Non-Adjustable Magnets **21%**

3X3 GLOBAL AVG BY TYPE OF MAGNETS
Cubers who only possess one type of cube

Not Magnetic	Magnetized myself	Non-Adjust. Magnets	Adjustable Magnets
25.0	24.5	18.4	15.2

It might be O.G. to have non magnetic cubes, but they're just not as good as the new generations of cubes
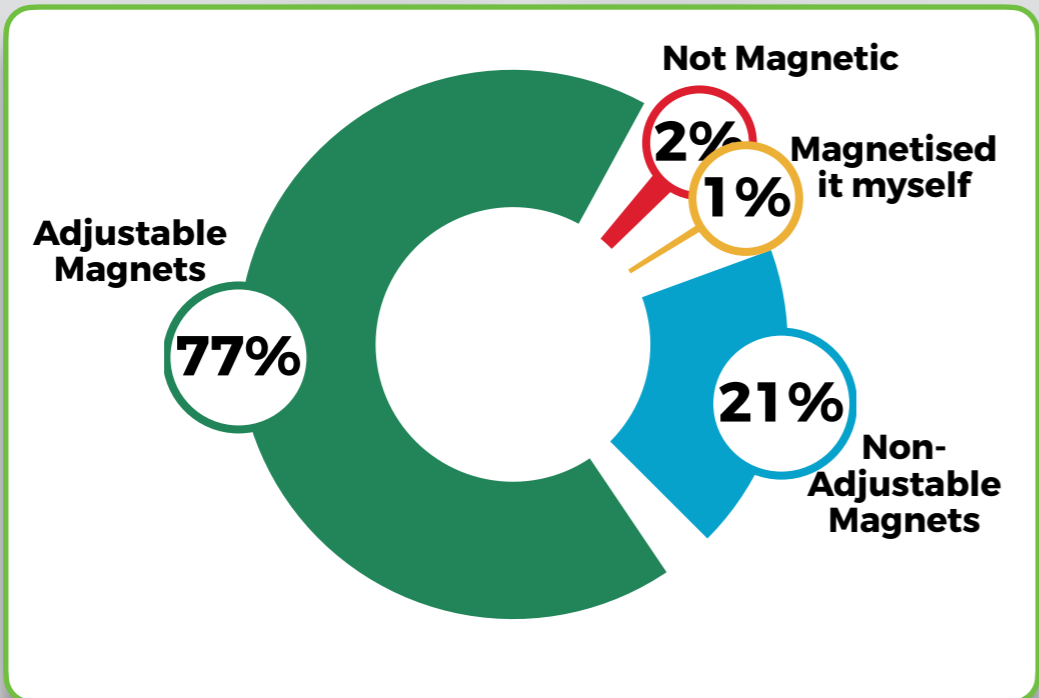
DO YOU LIKE THE FEELING OF MAGNETIC CUBES??

	3x3	Big Cubes	Pyraminx	Square-1	Clock
Can't solve without them	78%	72%	39%	46%	34%
Makes no difference to me	20%	14%	36%	21%	11%
No/Never tried	2%	14%	25%	33%	56%
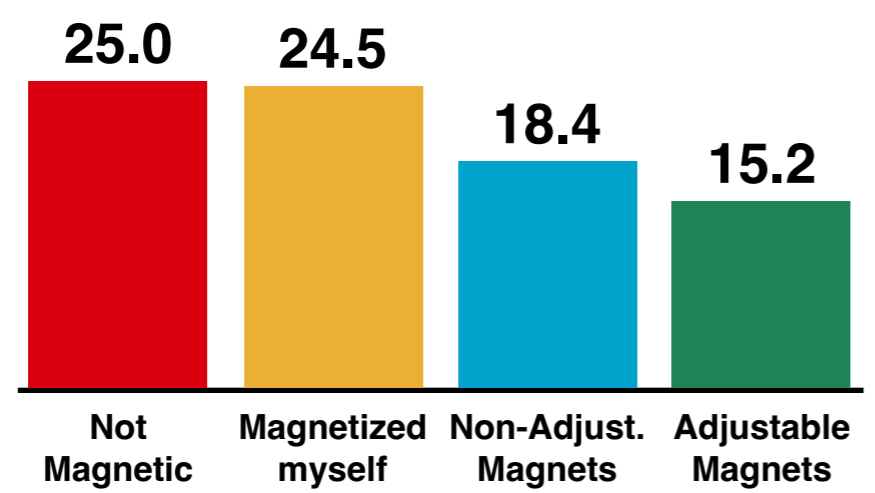
AVERAGE TIMES BY ATTITUDE TOWARDS MAGNETS

Can't solve without them		Makes no difference to me
16.4s	3x3	16.5s
120s 5x5	5x5	120s 5x5
8.4s	Pyraminx	9.3s
28.5s	Square-1	35.0s
11.0s	Clock	18.0s

For cube-shaped events, it really doesn't make a difference to them!

For non-cube events magnet-agnostic solvers are significantly slower than the others

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AS WE GET FASTER, OUR TURNING TENDS TO BECOME LIGHT AND ACCURATE; AND YET OUR PREFERENCE FOR STRONG MAGNETS HAS INCREASED SINCE LAST YEAR

HOW WOULD YOU DESCRIBE YOUR TURNING STYLE?

Accurate
42%

Imprecise
34%

23%

19%

I don't have one
22%

17%

17%

Rough
40%

Light
36%

3X3 GLOBAL AVG BY TURNING STYLE

17.30	16.80	16.50	16.40	14.50
Don't have one	Rough & imprecise	Rough but accurate	Light but imprecise	Light & accurate

HOW DO YOU LIKE YOUR MAGNETS?

34% **51%** **15%** Rough but accurate

24% **50%** **26%** Light & accurate

41% **48%** **12%** Rough & imprecise

28% **47%** **26%** Light but imprecise
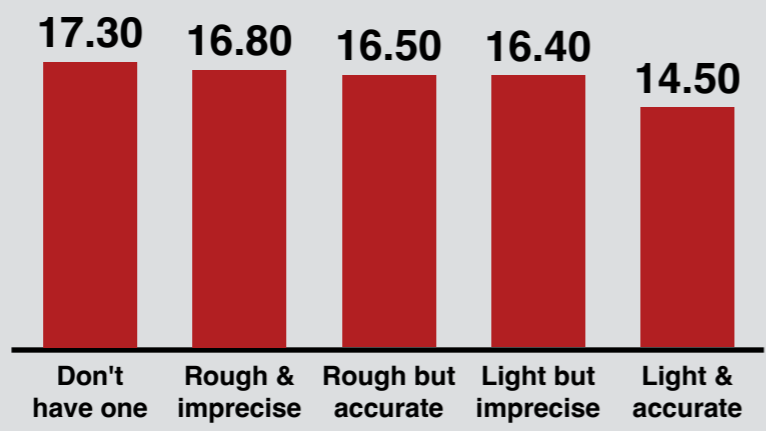
Strong
Medium
Weak

2021		2022
23%	Strong	**32%** ↗
60%	Medium	**50%** ↘
15%	Weak	**18%** →

67

STICKERED CUBES ARE BECOMING A RARE BREED, WITH MORE AND MORE OF US PREFERRING STICKER LESS. PRIMARY INTERNALS HAVE EXPLODED INTO THE MARKET THIS YEAR

HOW DO YOU LIKE YOUR (WCA) CUBES?

Stickerless
93%
vs. 2021
86%

Stickered
3%
vs. 2021
11%

Tiled
1%
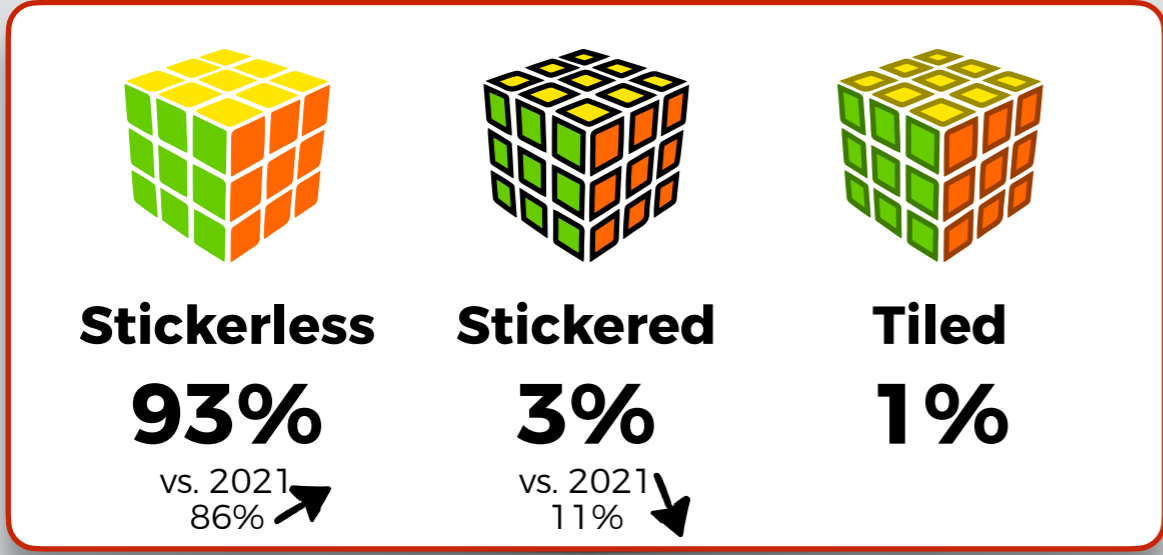
HOW DO YOU LIKE YOUR NON-WCA PUZZLES?

Stickerless
80%

Stickered
16%

Tiled
3%
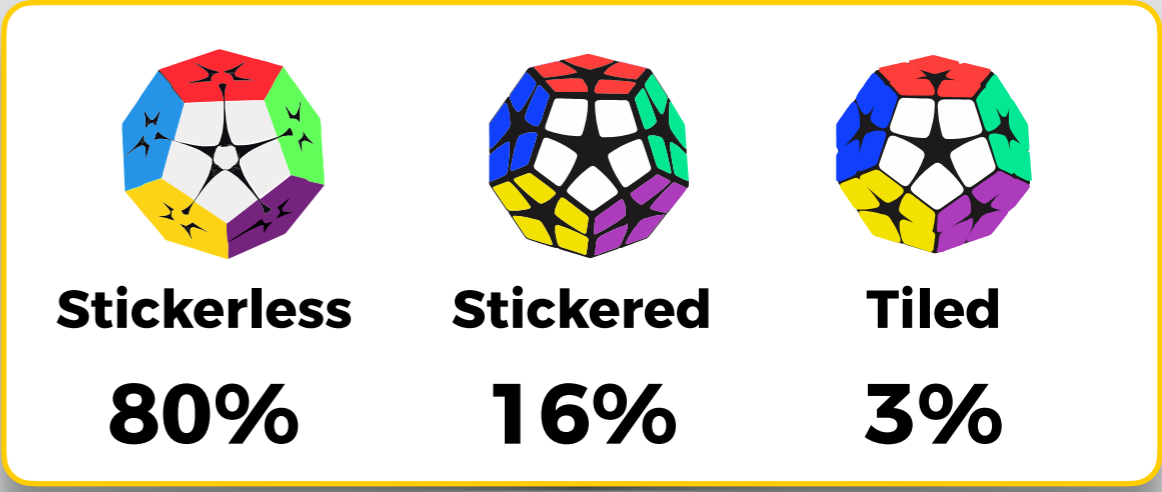
3X3 GLOBAL AVG BY TYPE OF CUBE

Stickered: 13.2
Stickerless: 17.0
Other: 18.0
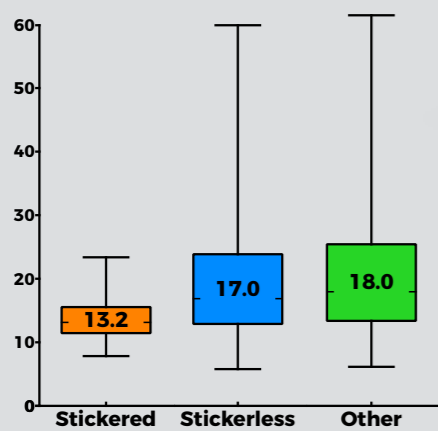
Stickered cubes are a bit of an old-school thing, and old-school cubers tend to be faster

WHAT TYPE OF FINISH DO YOU PREFER?

UV 53%
Glossy 19%
Frosted 21%
Soft 5%
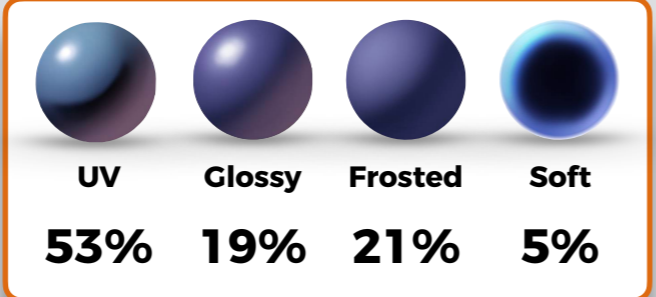
See, can you please stop with the frosted surfaces?

AND THE INTERNALS?

Colored
32%
vs. 2021
59%

Black
26%
vs. 2021
39%

Primary/ White
42%
vs. 2021
2%
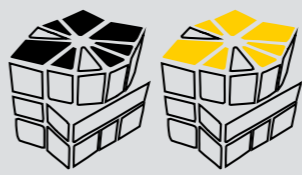
YOU PREFER YOUR FOR SQUAN...

White / Yellow 29%
With Black 45%
Once you go black
No preference 27%

68
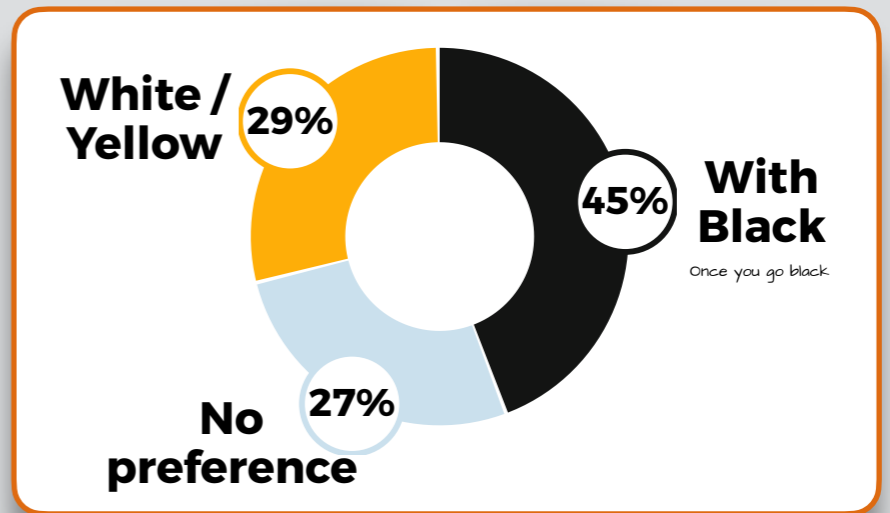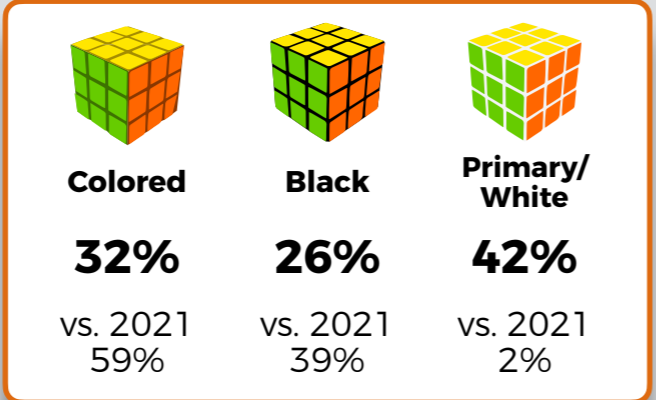
THE AMOUNT OF US WITH A 3D PRINTED CUBE HAS GONE UP BY 50% SINCE LAST YEAR. IT'S A QUIET REVOLUTION, BUT ONE TO KEEP AN EYE ON!

DO YOU OWN A HAND-MADE OR 3D PRINTED CUBE?

Yes, bought	5%
Yes, made it myself	8%
Yes, other	2%
I plan on getting one	5%
I plan on making one	5%
No	76%

15% vs. 2021 10%
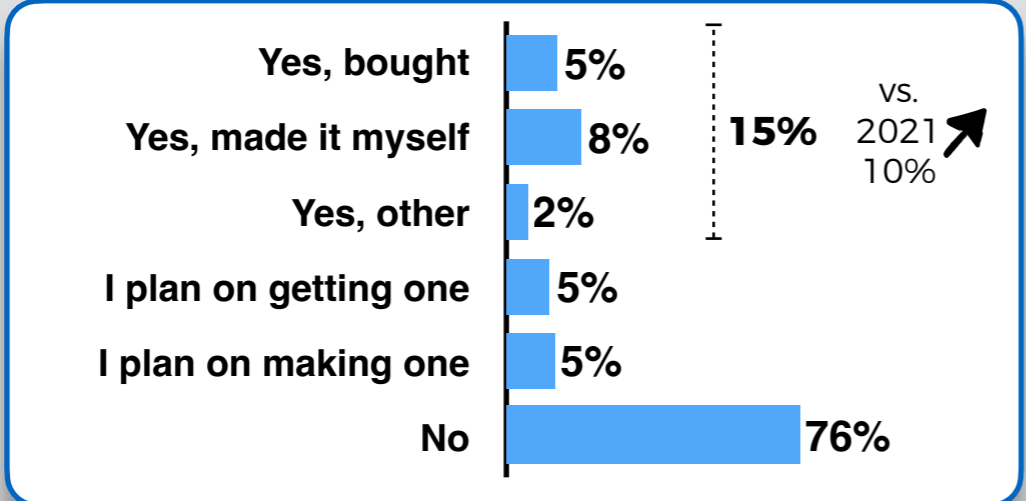
HAVE YOU EVER DONE SOME MODDING?

Yes **12%**

vs. 2021 11%

MOST FREQUENT MODS

Bandaged Cube

Siamese Cubes

Picture Cubes

AGE OF MODDERS

Modder
21.2 years old

Non-Modder
20.7 years old

HAVE YOU MAGNETISED A CUBE BY YOURSELF?

Modder
22%

Non-Modder
13%
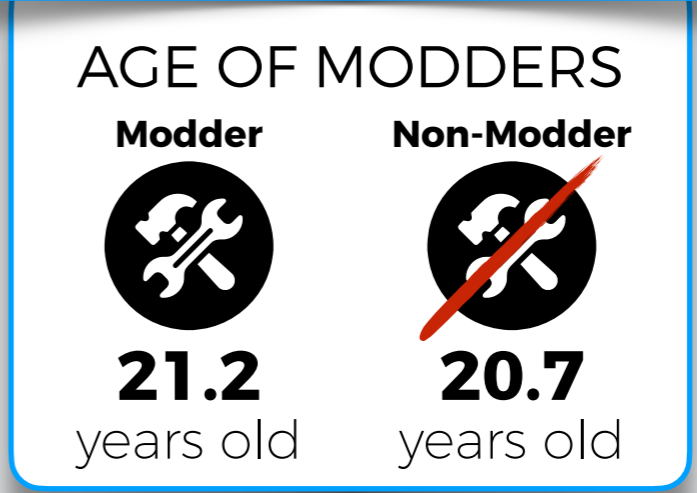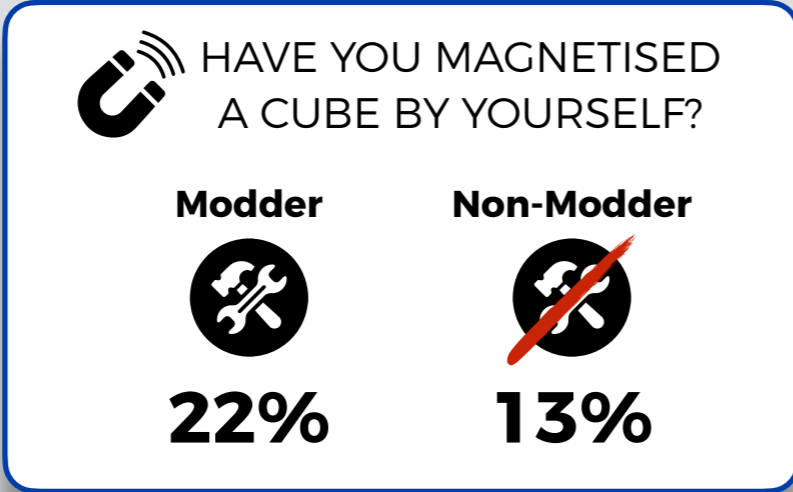
You start with a couple of magnets and glue, you end up sawing panes of metal in two to "make a big cube"

SPRING AND MAGNET ADJUSTMENTS HAVE BECOME THE NORM FOR ALMOST EVERYONE, EVEN IF MOST OF US ONLY PLAY A BIT AT THE BEGINNING AND LEAVE IT AT THAT

DO YOU OWN A PUZZLE WITH ADJUSTABLE HARDWARE?

Adjustable tension and magnets	**77%** vs. 2021 54%
Adjustable tension	**45%** vs. 2021 30%
No, but I sometimes swap out the springs	5%
No	6%
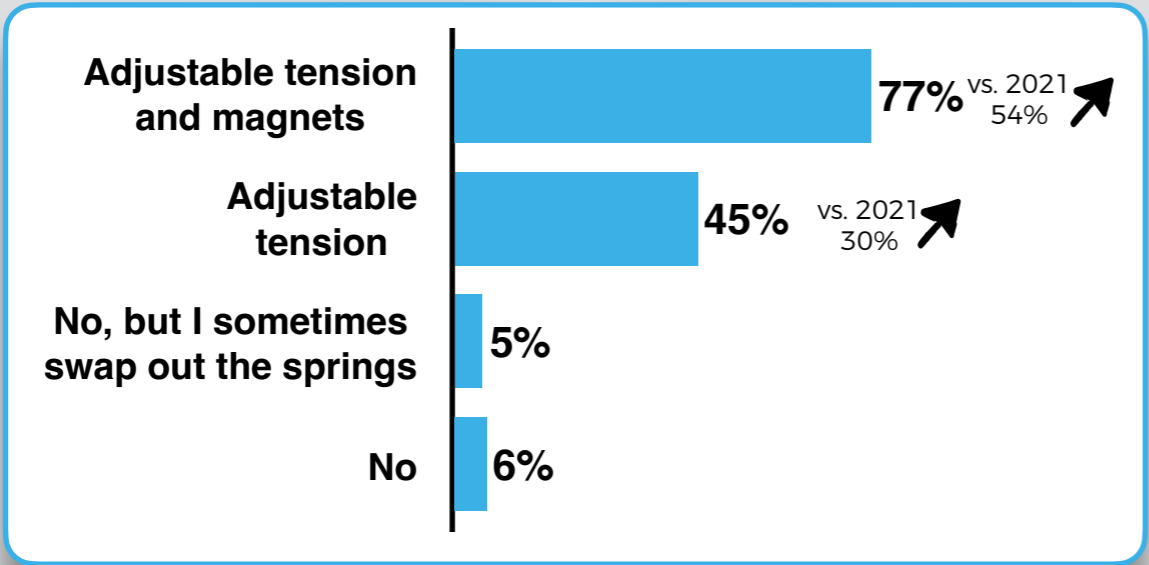
DOES INTERCHANGEABLE HARDWARE MAKE YOU MORE OR LESS LIKELY TO BUY A CUBE?

Less Likely	Neutral	More Likely	I only buy adjustable
1%	**21%**	**62%**	**16%**
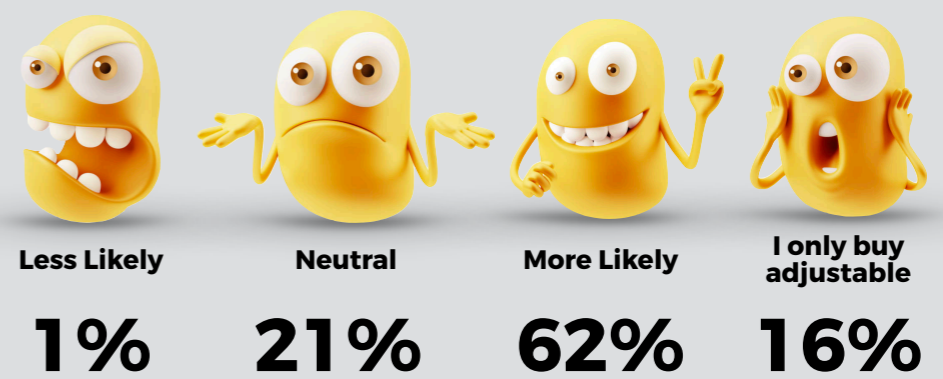
HOW MUCH DO YOU USUALLY TINKER WITH YOUR CUBE SETTINGS/ADJUSTMENTS?

I keep it on default settings	7%
A little at the beginning	**52%**
I spend some time testing everything	31%
I constantly adjust it	10%
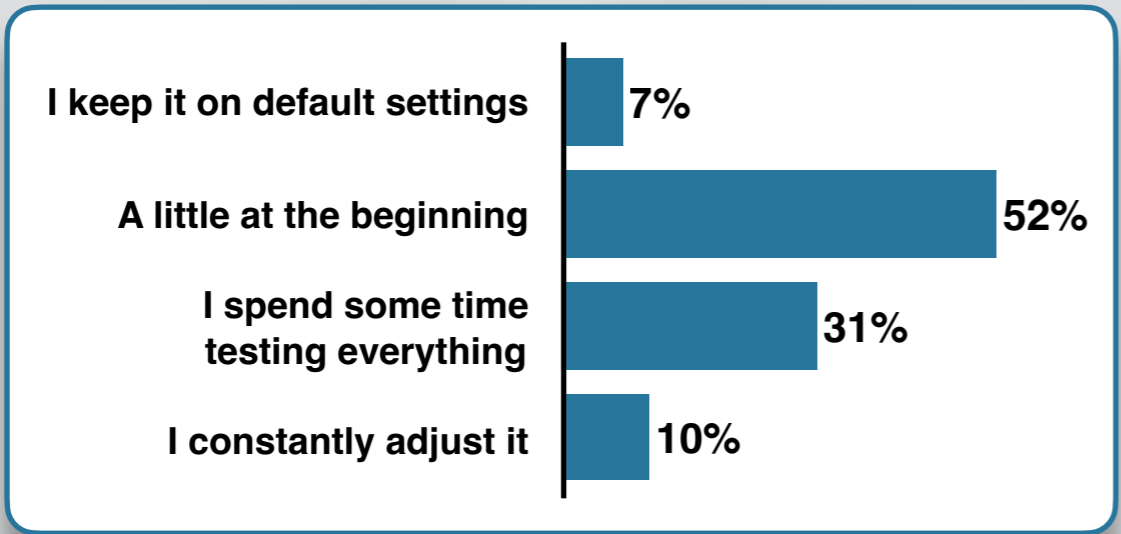
HAVE YOU EVER PURCHASED A CUBE THAT HAS BEEN PROFESSIONALLY SET UP?

Yes 28%

No 40%

32%

I prefer to set up the cube myself

70
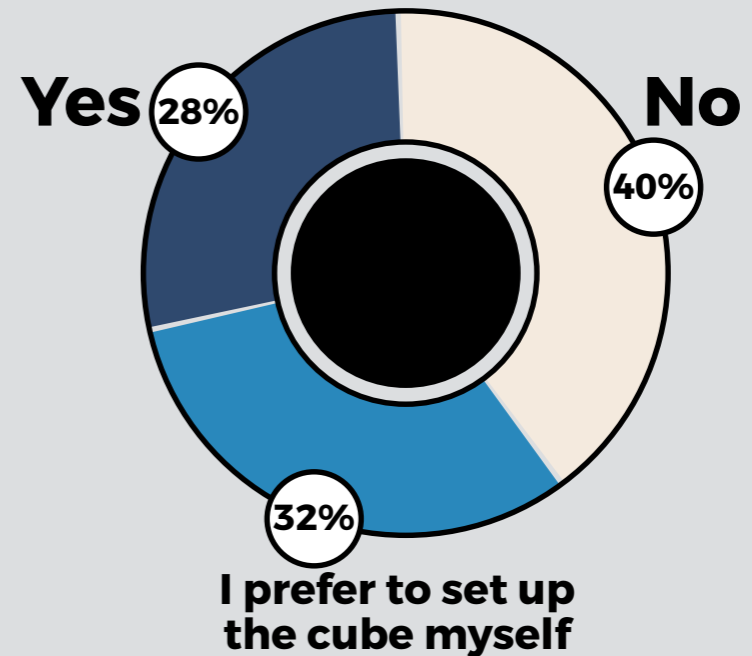
CORE-CORNER MAGNETS AND NO-TOOL ADJUSTMENTS ARE GENERALLY VERY LIKED. MAGLEV IS CONSIDERED AN OK DEVELOPMENT AND CORE-EDGE MAGNETS IS IN DEEP MEH TERRITORY

WHAT DO YOU THINK OF THESE RECENT TECHNOLOGICAL DEVELOPMENTS?

	Adds complexity with zero gain	Makes no difference	Improves the cube a bit	Improves the cube a lot
Core-Corner magnets	3%	7%	48%	42%
No-Tool-Required adjustments	6%	25%	33%	36%
Maglev springs	10%	20%	50%	20%
Core-Edge magnets (repelling)	19%	31%	38%	13%

3X3 GLOBAL AVERAGE BY OPINION ON TECH
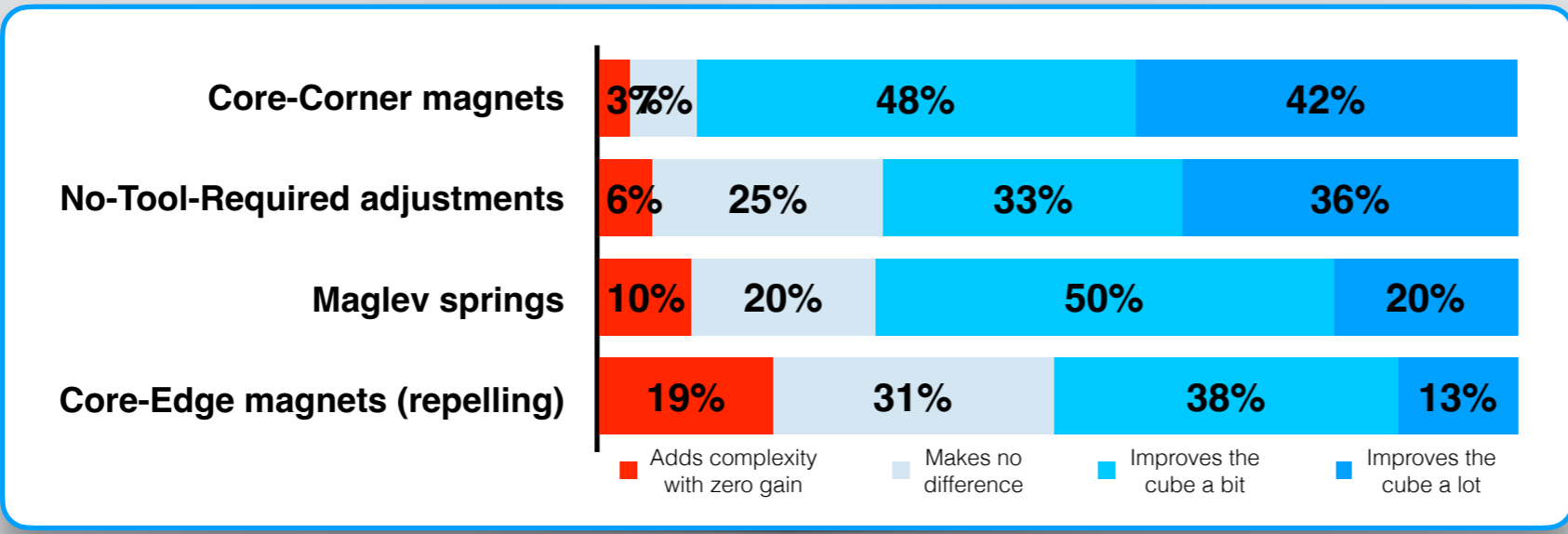
Improves a lot		Zero gain
16.5s	Core-magnets	16.0s
16.5s	No-Tool Adjust.	14.5s
18.5s	Maglev	13.2s
21.0s	Core-Edge	15.2s

Faster cubers tend to have a more lukewarm opinion of the new changes. They also tend to have been cubing for longer, which usually brings a reticence to change.

Core-Corner magnets seem to be universally liked though

WHAT DO YOU THINK ABOUT HAVING 3 SLIGHTLY DIFFERENT VERSIONS OF THE SAME CUBE?

I like having a less expensive version	51%
Just give me a single cube please	37%
It's confusing, don't know what's best for me	34%
Stop it!	7%
I'll buy all of them anyway	5%
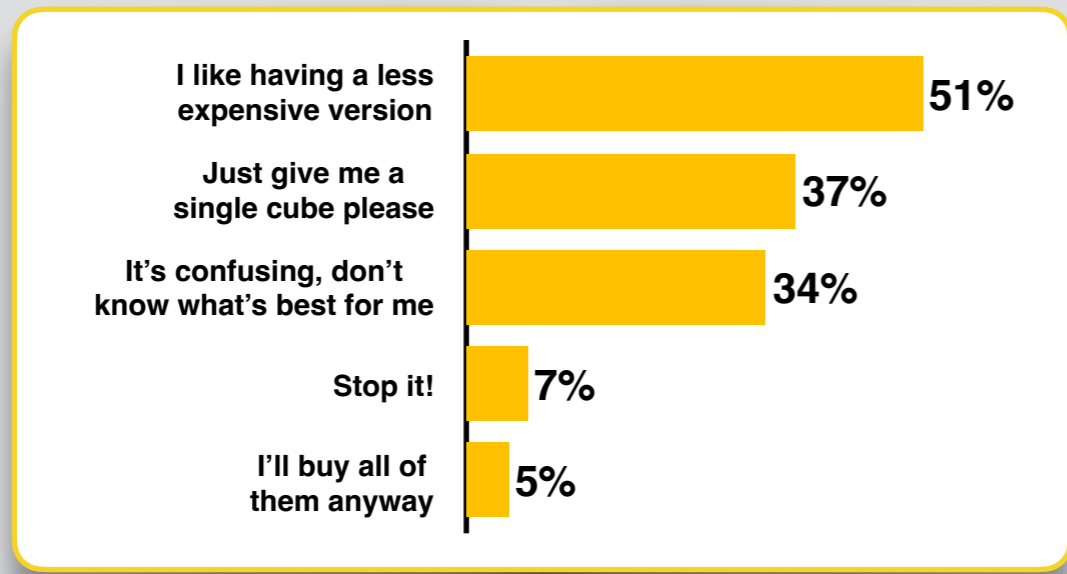
Having a lower-price "light" version is appreciated by many, but there is often a lack of clarity about what the differences are

WHEN CHOOSING A NEW CUBE, THE OPINION OF THE COMMUNITY PLAYS A KEY ROLE, BUT SO DO THE LOOK OF THE CUBE AND ITS PRICE (HINT TO BRANDS : KEEP SENDING THOSE TEST VERSION TO YOUTUBERS!)

IMPORTANT FACTORS WHEN CHOOSING A NEW CUBE

Factor	%
Reviews / recommendations from content creators	67%
Cube Design	63%
Price	63%
Amount of customisation	46%
Recommended from friend	45%
Used by world-class cuber	45%
Availability	40%
Experience with prev. versions	40%
Reviews from cubing store	34%
Brand	20%
The fact that it is a new cube	15%
Packaging design	4%
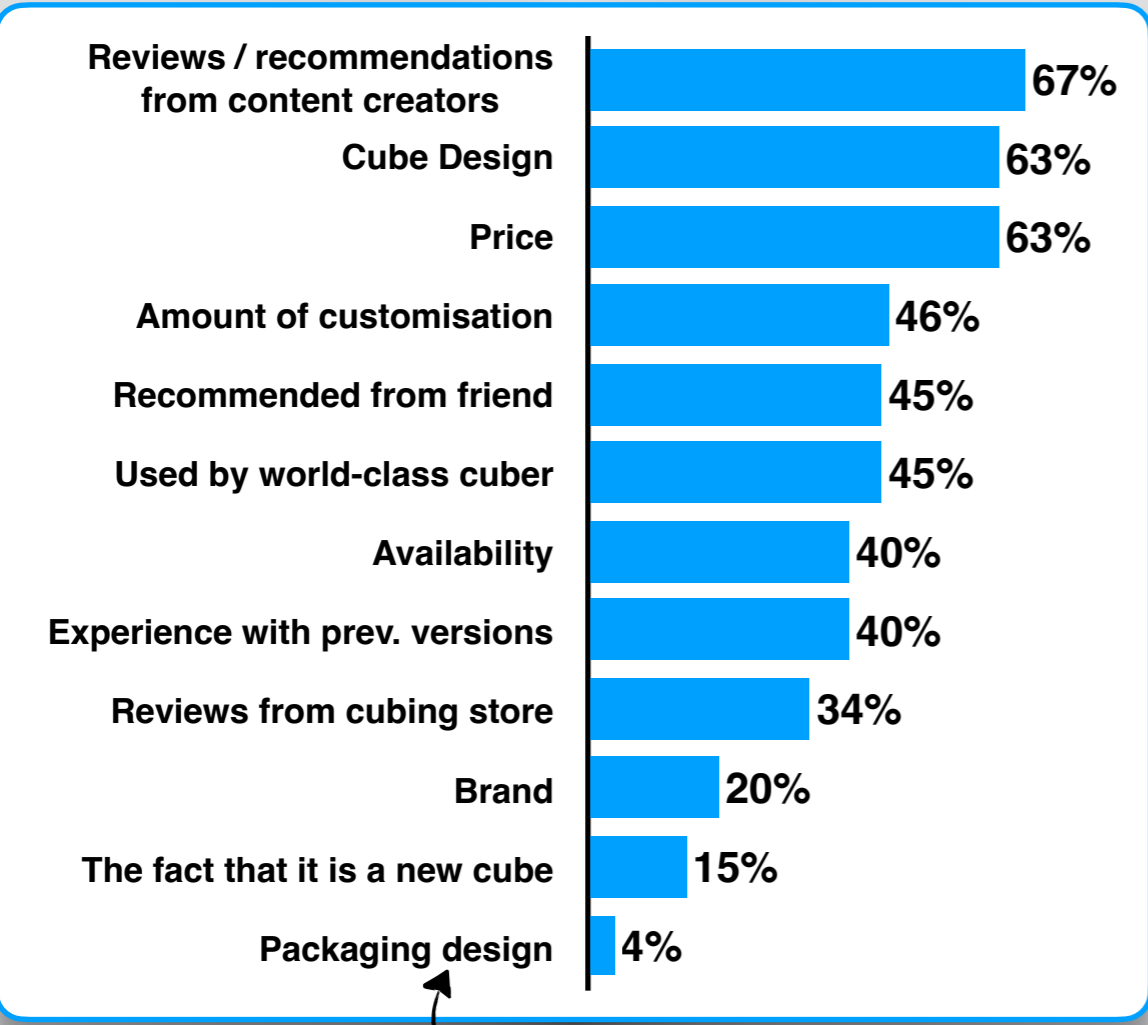
The manufacturers marketing team will not be too happy about this...

KEY CRITERIA FOR CHOOSING A CUBE

Cube Design

Reviews

Price

2 1 3
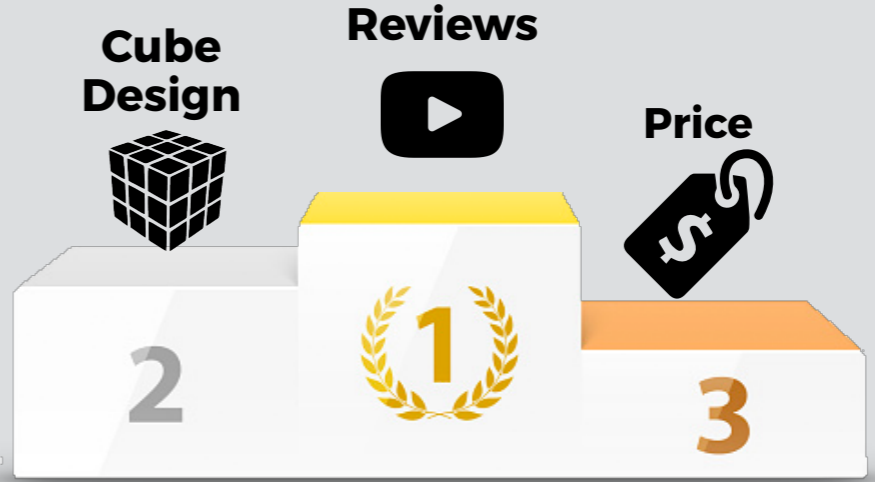
DO YOU FOLLOW ANY CUBER / MANUFACTURER SOCIAL MEDIA ACCOUNT?

Youtube Channels — 58% / 42%

Fast Cubers — 47% / 53%

Manufacturers — 36% / 64%

Stores — 25% / 75%
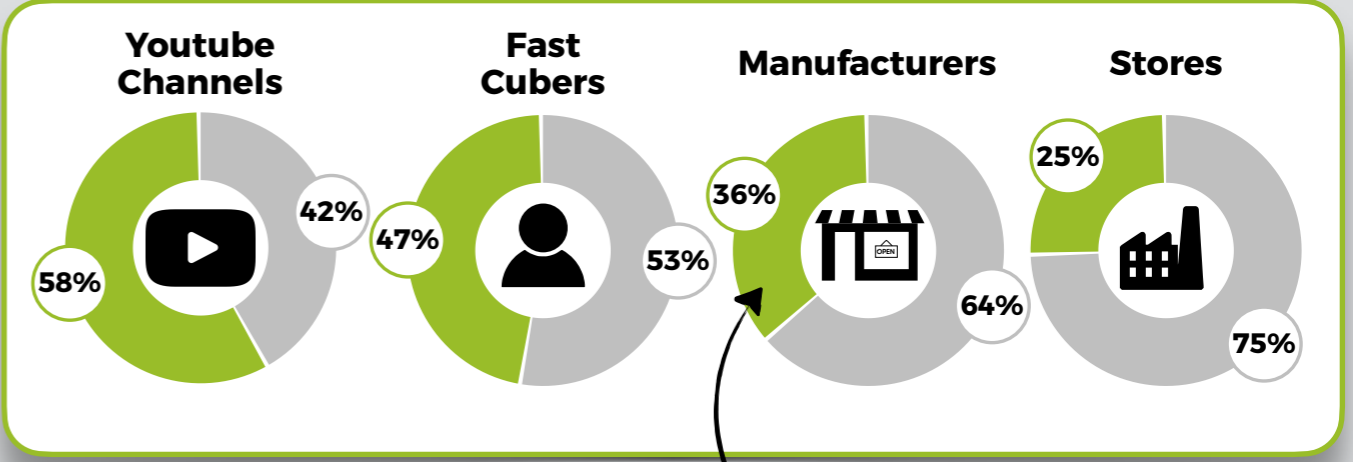
...but hopefully they'll be happier to hear that 1/3 of cubers actually look at what they say. (You're welcome)

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MOST OF US TRY OUT DIFFERENT MANUFACTURERS; GAN OWNERS GIVE THE MOST IMPORTANCE TO BRAND, WHILE MOYU CUBERS ARE THE MOST BRAND-AGNOSTIC

OF DIFFERENT CUBE BRANDS OWNED

3x3 only, only cubers who own 2+ cubes

- 1 **6%**
- 2 **26%**
- 3 **25%**
- 4 **23%**
- 5 **20%**

CUBERS WHO FIND BRAND IMPORTANT WHEN CHOOSING A NEW CUBE

% finding Brand Important or Very Important, only cubers who own a single brand

- Gan **41%**
- QiYi **33%**
- Dayan **30%**
- Rubik's **25%**
- Moyu **15%**

BRAND MIX FOR THE 3 MAJOR BRANDS
3x3 only, only cubers who own 2+ cubes

MoYu

12%

11%

18%

43%

8%

6%

2%
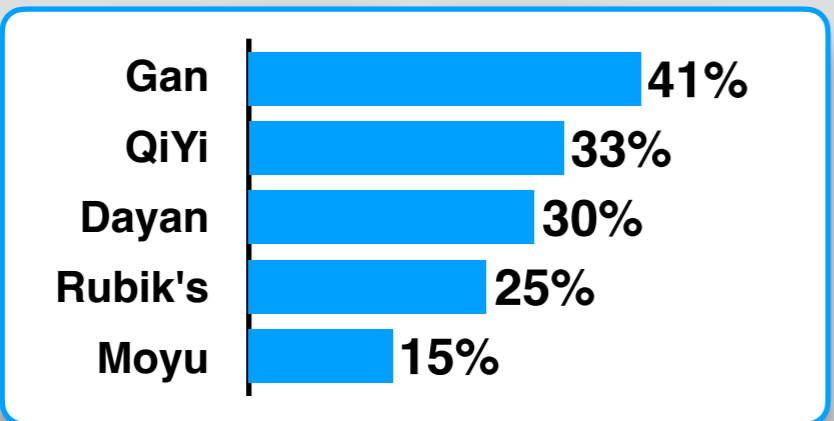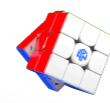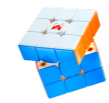
Ganboys give a bit more importance to the brand, than owners of other brands. Not surprising given the price point of most of its products. Moyu owners are more likely to be beginners, so they haven't built up brand preference yet

Note: only the 3 top brands for 3x3 have been presented here, more on what brands we buy later!

"IT'S NOT THE CUBE" : YOU CAN GET WORLD RECORD RESULTS WITH PRETTY MUCH ANY BRAND, AND PEOPLE OF ALL AGES ARE USING ALL KINDS OF CUBES

GAN

Median 3x3 Global Average
16.00s
12.50s
7.71s

MoYu

Median 3x3 Global Average
16.50s
13.00s
6.50s

QYTOYS
X-MAN DESIGN

Median 3x3 Global Average
16.44s
12.50s
6.50s

Median Cubers
Top25% Cubers
Top1% Cubers

Gan 12 Pro
WR Average
WR2 Average

Moyu GTS2M
WR Single

Moyu RS3M Super
WR3 Single
WR3 Average

XMD Tornado V3
WR2 Single
WR2 Average

BRAND OWNERSHIP BY AGE GROUP

QiYi — 26%, 22%, 31%, 39%, 45%, 50%

MoYu — 26%, 31%, 37%, 52%, 61%, 50%

GAN — 27%, 20%, 28%, 39%, 49%, 50%

<=14y 15-16 17-18 19-20 21-25 26-30 31-35 36-40 41-50 51+
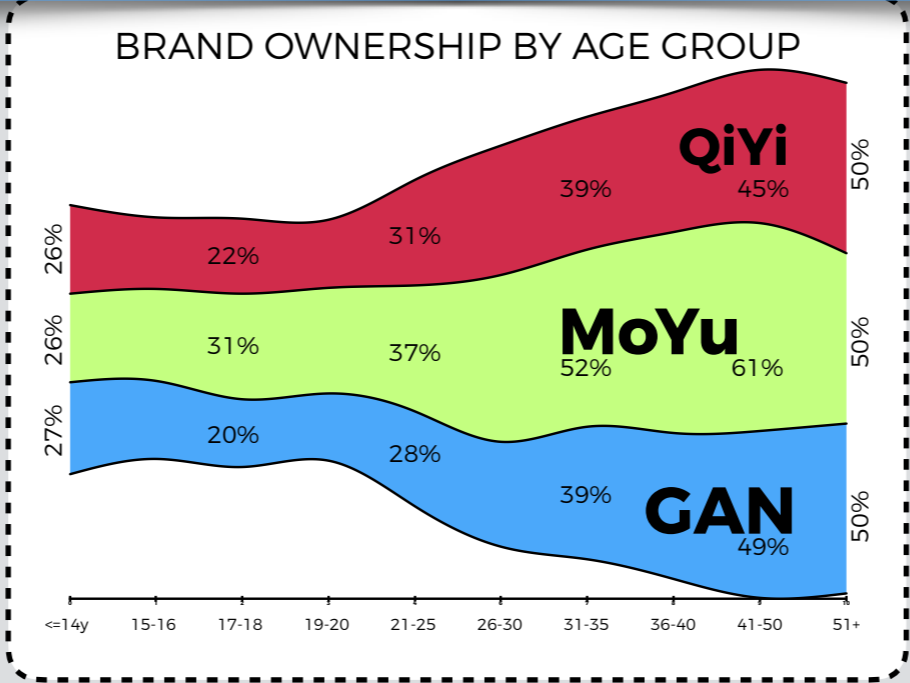
The older we get, the less cubes start to cost relative to purchasing power : we start owning several cubes of multiple brands

OWNERSHIP OF SMART CUBES HASN'T REALLY MOVED IN 1 YEAR, BUT THE INTEREST FOR SOLVES ANALYSIS AND STATISTICS IS GROWING QUITE A BIT!

DO YOU OWN A SMART CUBE?

- No, but it would be useful — **35%**
- No, not useful — **32%**
- I have one, and it's great! — **11%**
- I have one, but I stopped using it — **17%**
- I have multiple ones! — **5%**

33% vs. 2021 33% →
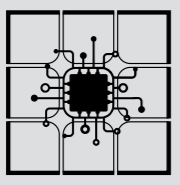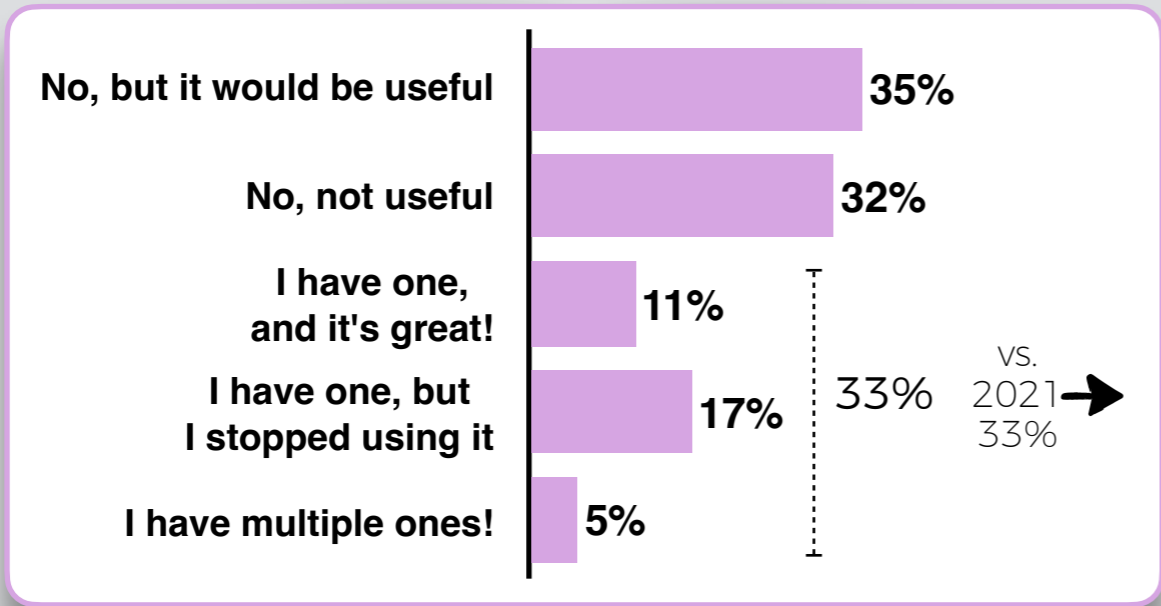
WHAT DO YOU THINK A SMART CUBE IS GOOD FOR?

	vs. 2021	
Analysing my solves, look at time splits and statistics — **79%**	67%	↗
Competing with other people online — **51%**	56%	↘
Solving without needing to start/end a timer — **43%**	45%	→
Using alg-trainers — **37%**	42%	↘
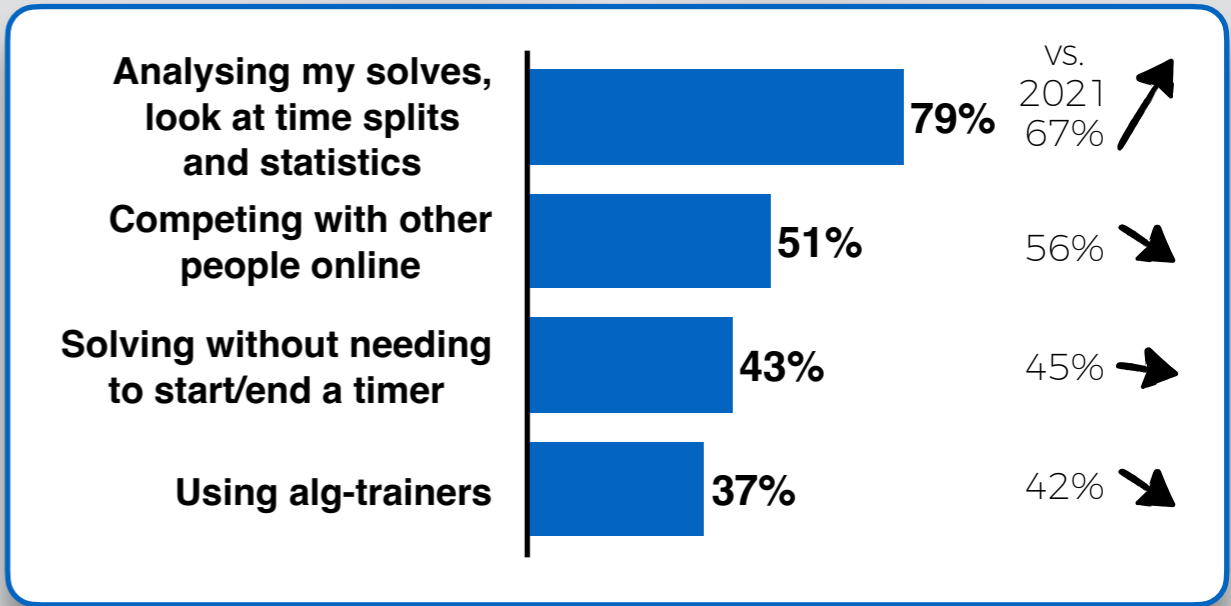
Analysis of solves has increased by 12pp, this is pretty significant. In contrast interest for competition has gone down slightly

WHAT ARE THE DRAWBACKS OF SMART CUBES?

	vs. 2021	
The cube performance — **55%**	53%	→
Having to use app — **50%**	N/A	→
The battery life — **46%**	44%	→
Connection Issues — **43%**	N/A	
Its weight — **37%**	28%	↗
Price — **4%**		
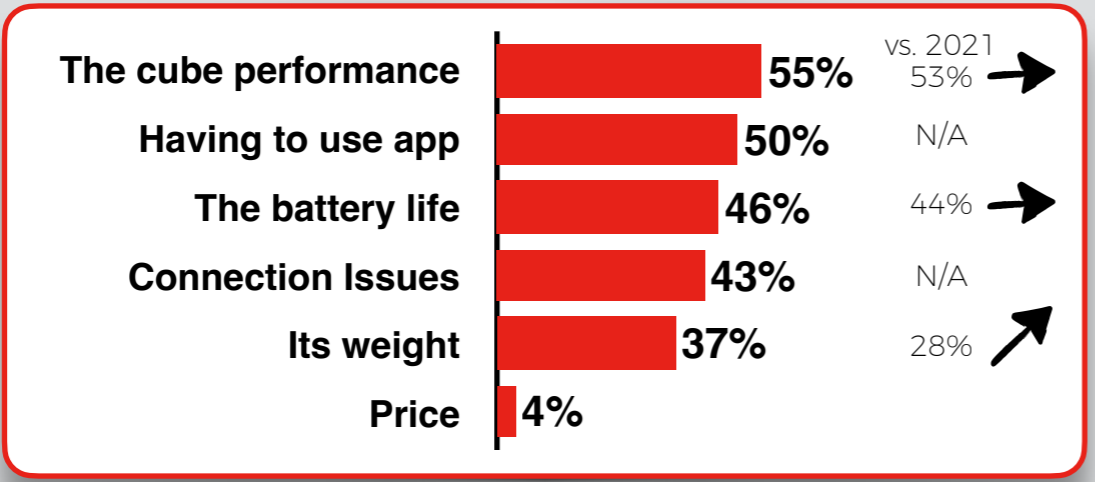
Concerns have mostly remained the same except for weight, where the trend towards lighter speed cubes exacerbates the difference from those of the smart kind

Dear Smart cube software developers, please put more effort in your analytics !

OUR PUZZLE COLLECTION

ON AVERAGE WE HAVE THE SAME AMOUNT OF PUZZLES AS LAST YEAR. ALSO, WE DEMONSTRATE ONCE AGAIN THAT HAVING MORE PUZZLES MAKES US FASTER*

DO YOU CONSIDER YOURSELF...

- a Speedcuber — **66%**
- a Collector — **8%** (vs. 2021 4%)
- Both — **26%** (vs. 2021 36%)
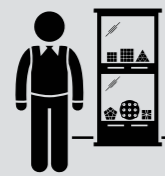
2022

HOW MANY TWISTY PUZZLES DO YOU OWN?

Puzzles	Percentage
0	2%
1	1%
2	2%
3-5	7%
6-10	12%
11-20	24%
21-50	34%
51-99	10%
100-199	5%
200+	3%

8% (vs. 2021 4%)

The amount of people who are nuts is increasing !
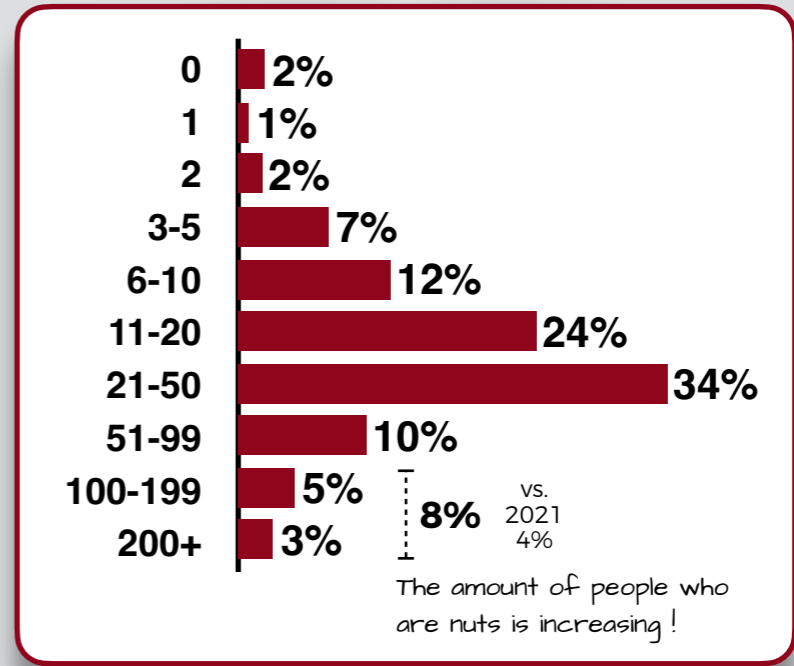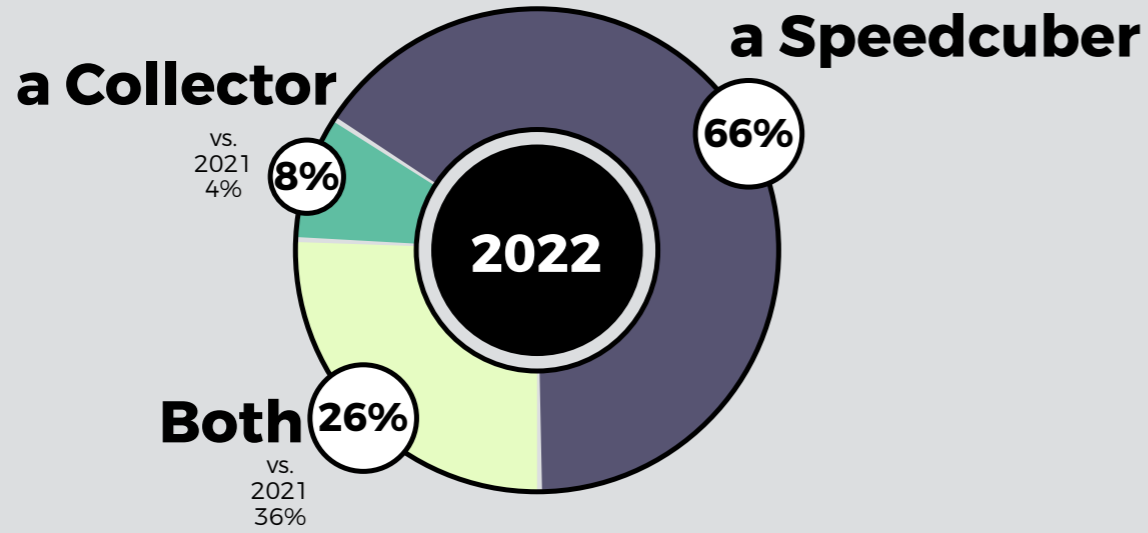
MEDIAN AMOUNT OF PUZZLES OWNED

2021
20 puzzles

2022
20 puzzles

Note to wife : See? We haven't gotten any more cubes this year!

GLOBAL 3X3 AVERAGE BY SIZE OF COLLECTION

Collection	Value
1-2	45.0
3-5	28.5
6-10	19.3
11-20	18.0
21-50	15.6
>50	3.7

0 10 20 30 40 50 60 70 80

*Note: obviously this just shows that those of us who have been cubing the longest, tend to have the most puzzles and also tend to be faster on average

MOST OF US CAN WORK OUR WAY AROUND NEW PUZZLES, AND EVEN WHEN WE TEND TO LOOK UP SOLUTIONS, WE'VE STILL HAD SUCCESS MORE THAN HALF OF THE TIME!
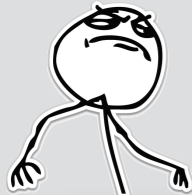
HOW CONFIDENT ARE YOU THAT YOU COULD SOLVE ANY RANDOM TWISTY PUZZLE?

I can do them all!	**9%**
Shapemods? Pfff Easy. Bandaged or jumbled? Ouch.	**31%**
Mostly ok, sometimes need tutorial	**31%**
I'll definitely need a tutorial	**18%**
I can only do a couple	**8%**
It's not a 3x3? RIP.	**3%**

29%
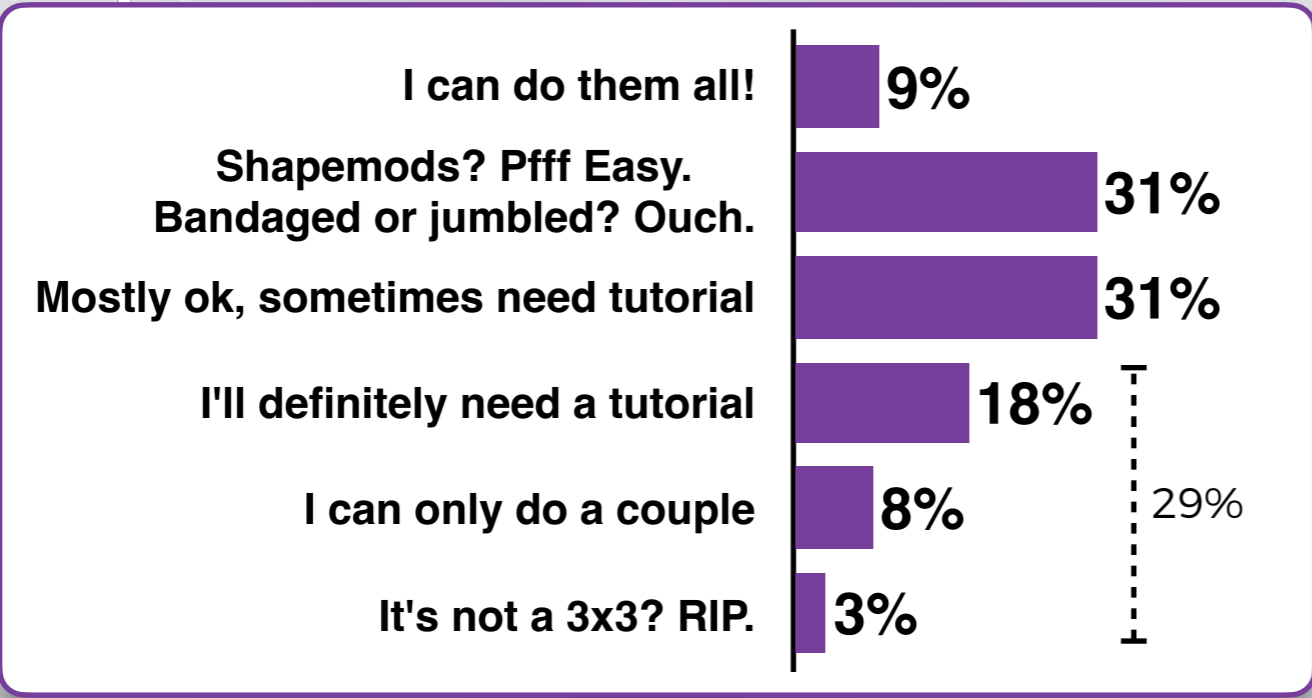
IN GENERAL, WHEN FACED WITH A NEW PUZZLE, WHICH DO YOU DO FIRST?

Look up a solution
52% of them have already succeeded on their own at least once

23%

77%

Figure it out on my own
86% of them have already succeeded at least once
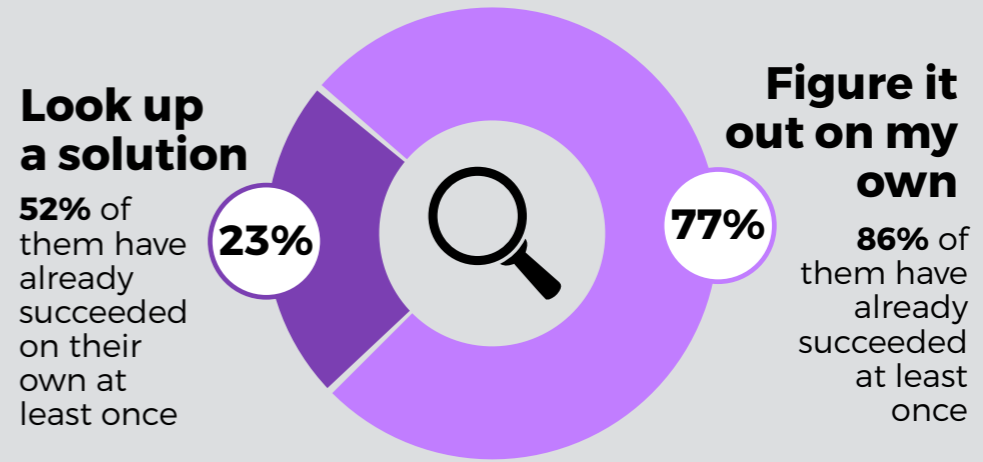
HAVE YOU EVER SOLVED A PUZZLE COMPLETELY ON YOUR OWN WITHOUT ANY HELP OR TUTORIALS?

No **22%**

Yes **78%**
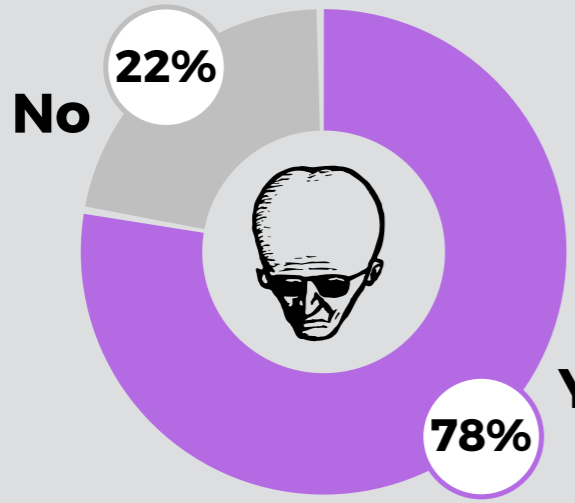
Without daring to put into doubt the answers here, the fact that 3/4 of us learned by looking up a tutorial makes this feel flaky at best…

WHAT IS THE MOST DIFFICULT PUZZLE YOU'VE SOLVED BY YOURSELF, IF ANY?

Pyraminx	**11%**
Megaminx	**10%**
2x2	**7%**
Ghost Cube	**7%**
7x7	**7%**
Windmill Cube	**6%**
Axis Cube	**6%**
Mastermorphix	**5%**
6x6	**5%**
Square-1	**5%**
Gigaminx	**5%**
5x5	**5%**
Skewb	**4%**
4x4	**4%**
9x9	**4%**
3x3	**3%**
8x8	**3%**
10x10	**2%**
FTO	**1%**
Clock	**1%**
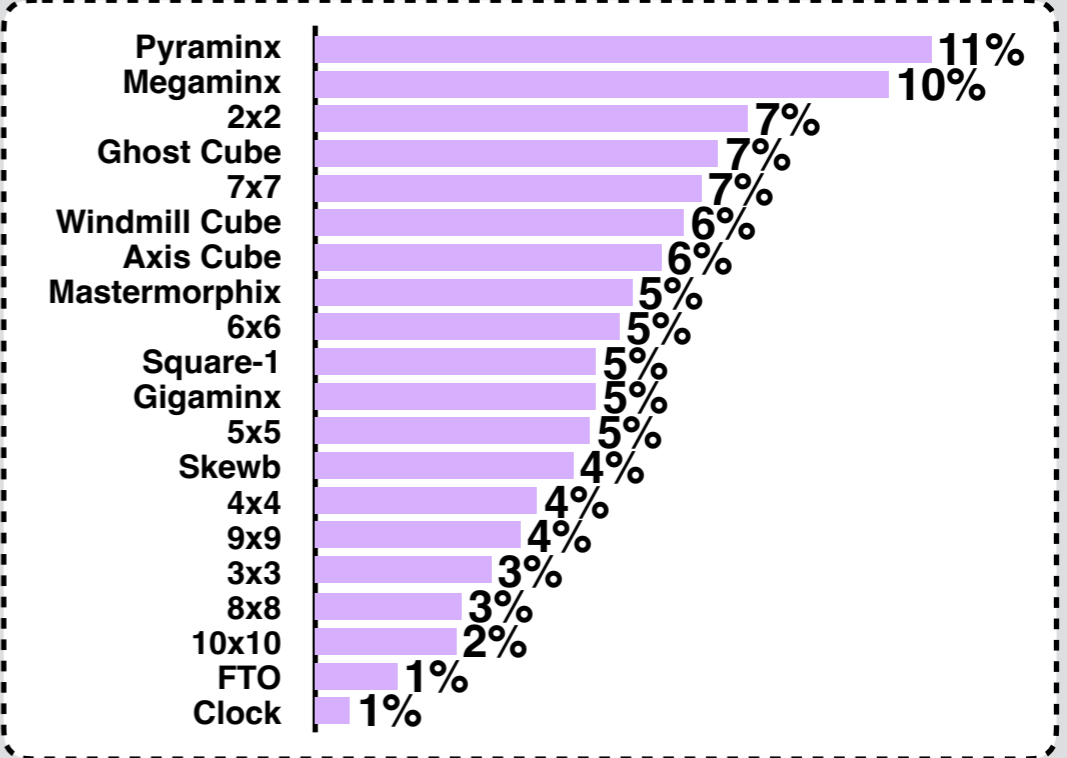
RELAYS REMAIN THE TOP CHOICE FOR A NEW WCA EVENT, BUT MIRROR BLOCKS IS FOLLOWING CLOSELY; KEEP A LOOK ON FTO, AS IT'S CLIMBING THE LADDER VERY FAST

WHICH EVENTS WOULD YOU LIKE TO SEE BECOME WCA EVENTS?

Event	%	vs. 2021
Relays (any)	39%	35%
Mirror blocks	37%	21%
Kilominx	26%	13%
Team BLD	25%	12%
Mirror blocks BLD	21%	12%
FTO	19%	7%
2x2 BLD	14%	19%
3x3 with Feet	13%	12%
2x2 OH	11%	13%
8x8	6%	6%
Have a 2-tier system	25%	13%
Add Nothing!	4%	11%

Among people who regularly go to WCA comps
"Add nothing!"
9.4%

WHICH EVENTS DO YOU FEEL SHOULD NOT BE WCA EVENTS?

Event	%
Clock	28.7%
7x7	13.3%
5BLD	12.4%
6x6	5.5%
FMC	5.0%
4BLD	4.6%
MBLD	2.8%
Skewb	2.5%
Square-1	1.5%
2x2	1.3%
Pyraminx	1.3%
Megaminx	0.8%
OH	0.7%
4x4	0.5%
5x5	0.3%
3x3	0.2%
3BLD	0.2%
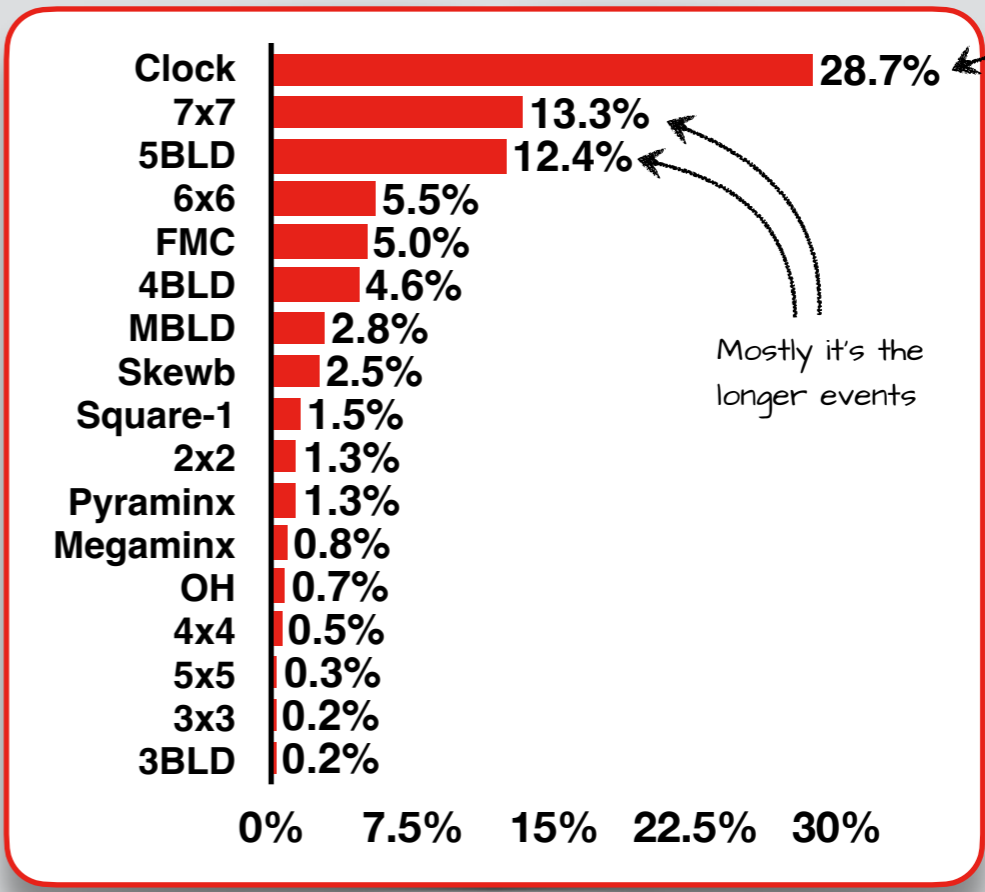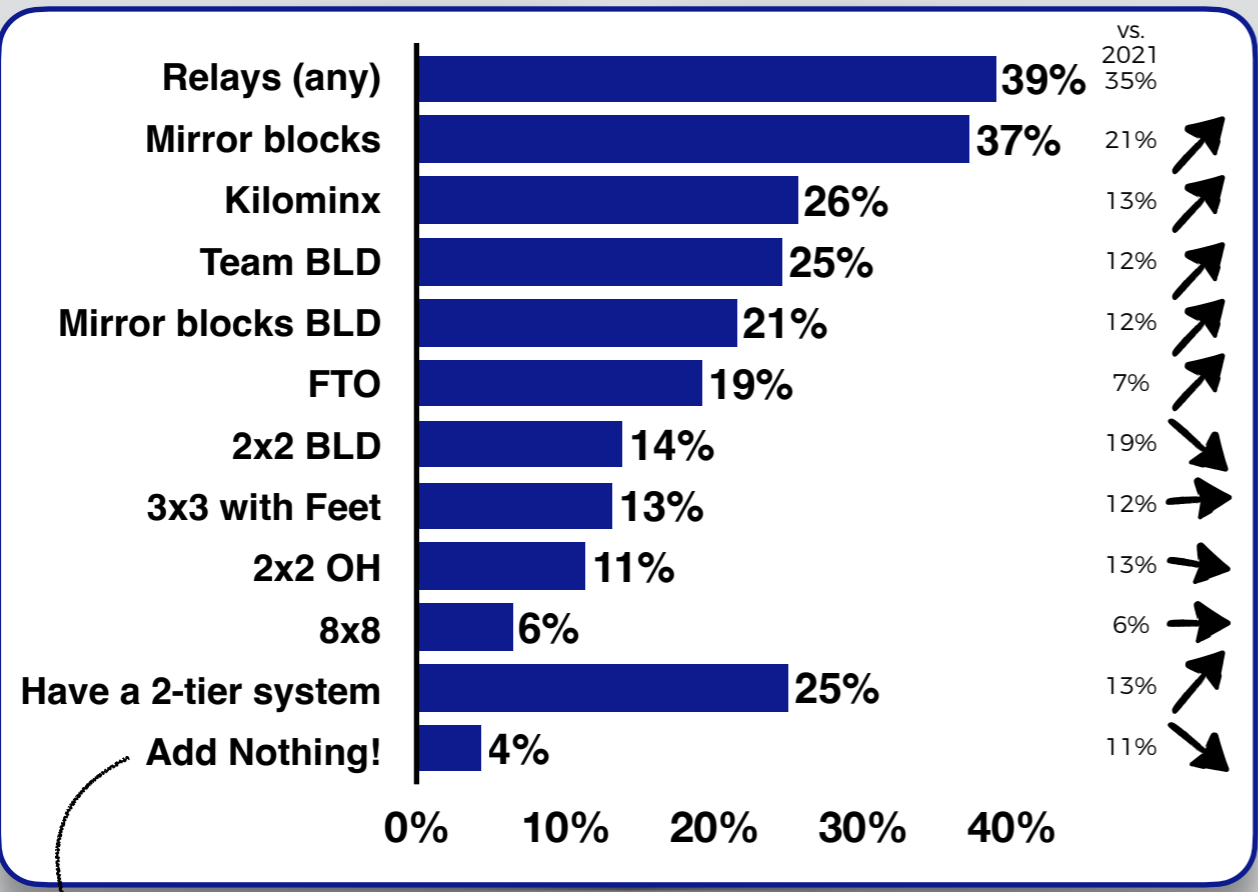
The love for Clock remains as strong as ever

Mostly it's the longer events

TOP10 NON-WCA EVENTS FOR SPEED SOLVING

Event	%
Mirror Blocks	26%
Kilominx	7%
Redi cube	5%
Gigaminx	4%
9x9	3%
8x8	3%
2BLD	3%
Axis cube	2%
FTO	2%
Windmill Cube	2%
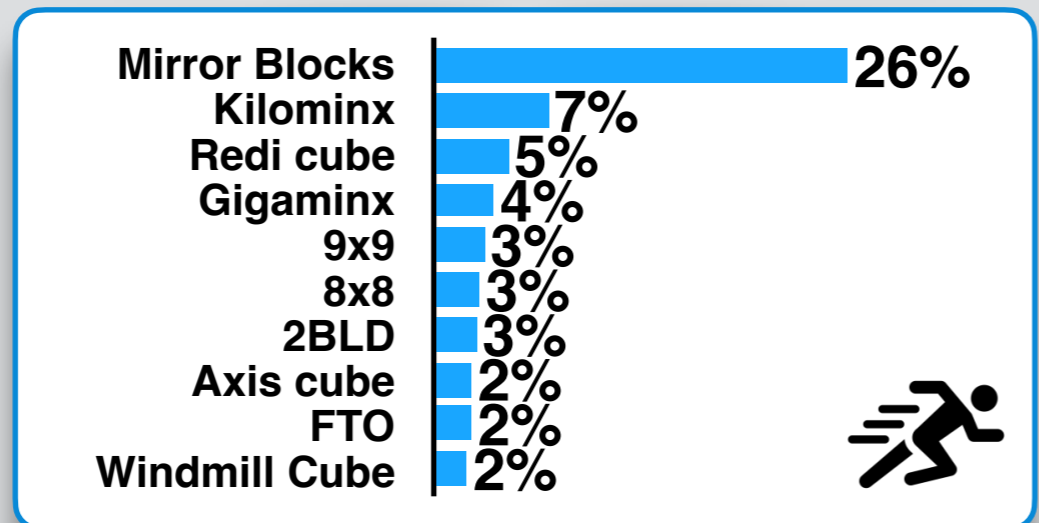
TOP10 NON-WCA EVENTS IN GENERAL

Event	%
Mirror Blocks	32%
Kilominx	7%
FTO	5%
Gigaminx	5%
Ghost Cube	3%
Redi Cube	3%
Curvy Copter	2%
Mastermorphix	2%
15-puzzle	2%
9x9	2%
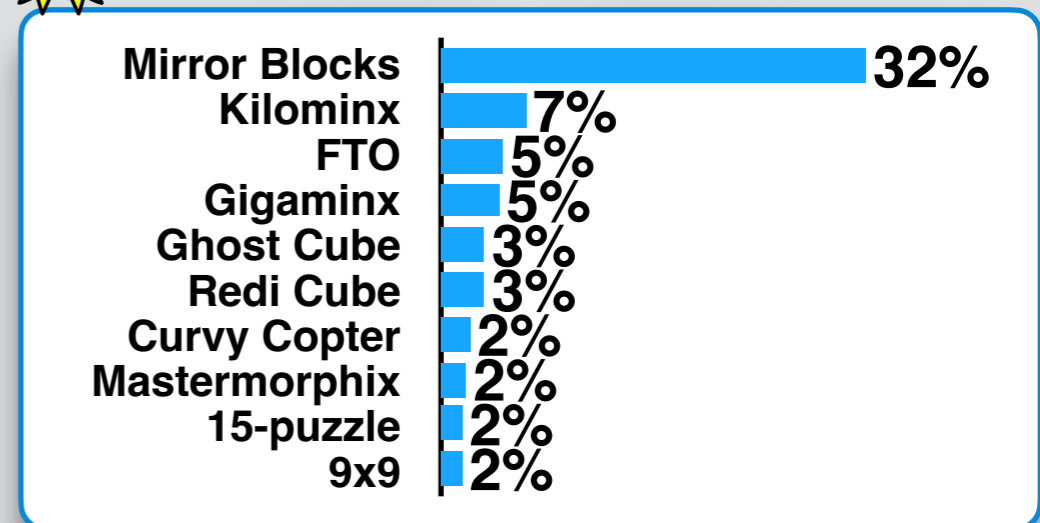
THE SINGLE MOST OWNED CUBE REMAINS THE ORIGINAL RUBIK'S, BUT THE RS3M IS CATCHING UP, AND THE TORNADO V3 HAS EXPLODED IN SUCH A SHORT TIME

THE MOST OWNED SINGLE 3X3 MODEL

MoYu RS3M 2020
5.7%

Rubik's Cube (Old)
6.0%

X-Man Tornado V3
4.0%

MoYu WRM 2021 Maglev
3.1

Gan 11M Pro
3.1

4th (tied)

2 — 1 — 3
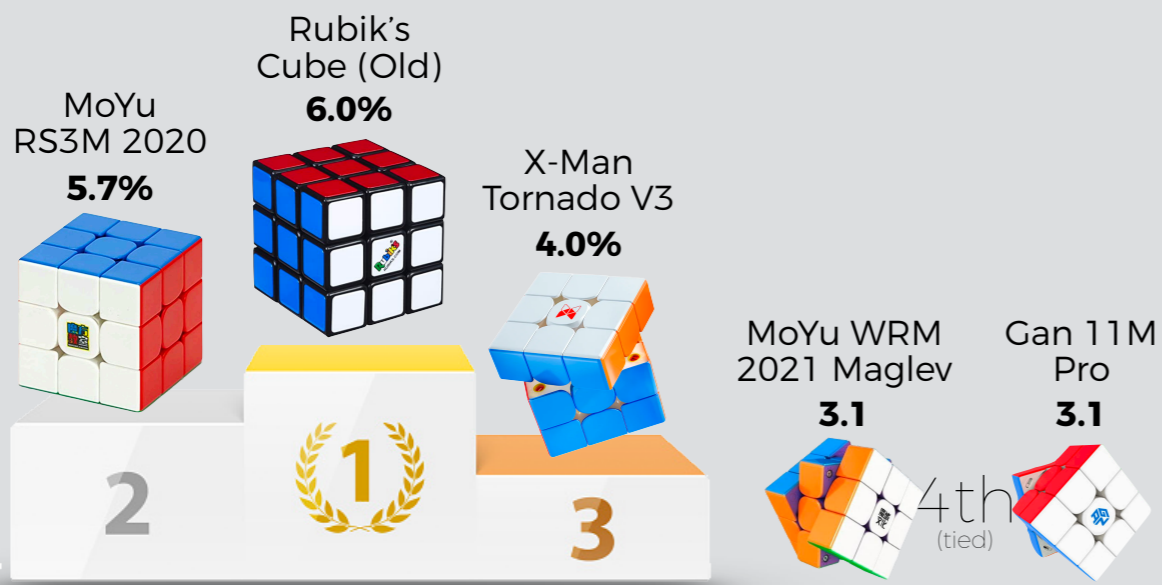
WE COLLECTIVELY NOTED DOWN OUR COLLECTION OF

14'487 Cubes

3X3 GLOBAL AVERAGE BY MODEL OWNED

A word of caution : having the cube doesn't mean that we're still maining it!

BATTLE OF THE WORMS

WRM 19	WRM 20	WRM 21	WRM 21 Purplev
12.5s	13.7s	13.9s	16.1s

BATTLE OF THE GANS

Gan X	Gan XS	Gan 11M Pro	Gan 12M Pro	Gan 13M Pro
12.3s	13.5s	14.5s	14.8s	17.5s

BATTLE OF THE QIYIS

Valk 3	Valk Elite	X-Man Tornado V2	X-Man Tornado V3
12.8s	12.5s	15.0s	16.5s

What this shows is mostly that people who started a while back when the older cubes were available, are faster on average than the people who started recently

THE MOST OWNED BRANDS
(3X3 ONLY)

YJ **5%**

Yuxin **3%**

ShengShou 1%

GoCube 0%

MoreTry 1%

PengFei 0%

Cyclone Boys 1%

MoCube 1%

MonsterGo 1%

Other 0%

MoYu 31%

DaYan 8%

Rubik's 12%

GAN 18%

QiYi 18%

3X3 GLOBAL AVERAGE BY BRAND OWNED

Rubik's	QiYi	MoYu	Gan	Dayan
16.5	16.4	16.4	16.0	14.0
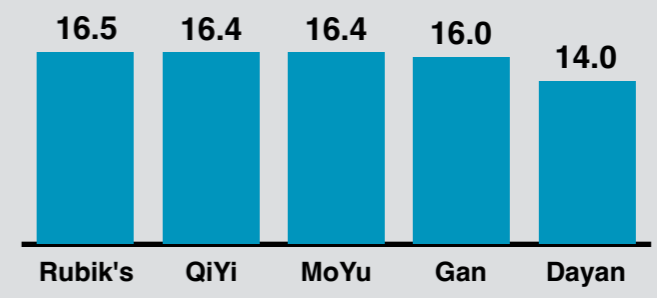
YJ IS THE FAVORITE BRAND OVERALL FOR NON-3X3 PUZZLES, WITH THE MGC REPLACING THE X-MAN FROM LAST YEAR AS THE FIRST CHOICE FOR MORE THAN HALF OF ALL EVENTS

BEST CUBE SERIES OF 2022

2022

YJ MGC

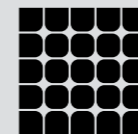Most owned puzzle for **6 out of 10** events

2021
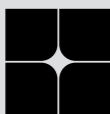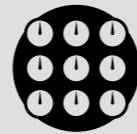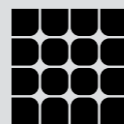
X-MAN
Most owned puzzle for **6 out of 10** events

YJ MGC
Most owned puzzle for **1 out of 10** events

THE MOST OWNED BRANDS
All Puzzles except 3x3

YJ 27%

QiYi 24%

Yuxin 8%

GAN 6%

MoYu 19%

Cyclone Boys 1%

Angstrom 1%

QiFa 0%

BeiTai 0%

GuoGuan 1%

PiCube 0%

DaYan 3%

Rubik's 4%

ShengShou 5%
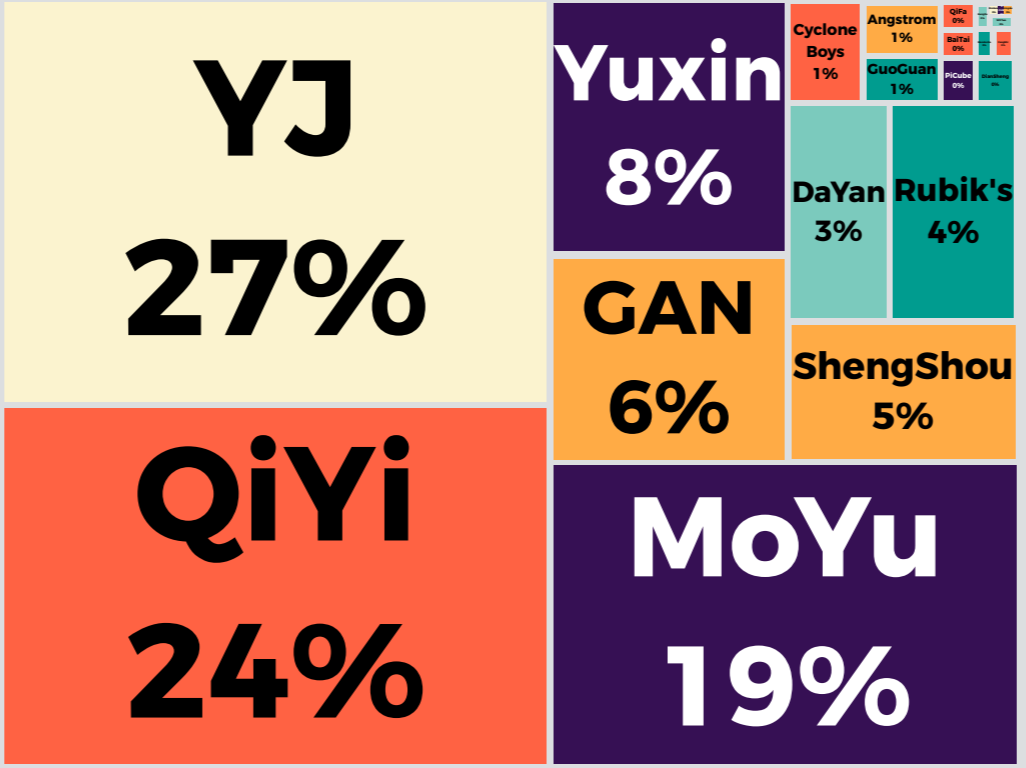
HOW MANY DIFFERENT PUZZLES OF THE SAME TYPE DO WE OWN ON AVERAGE?

7.9 puzzles
2.6 puzzles
2.3 puzzles
1.9 puzzles
1.5 puzzles
1.5 puzzles
1.5 puzzles
1.5 puzzles
1.5 puzzles
1.5 puzzles
1.4 puzzles

	2x2	Pyra	Skewb	Squan	Clock	4x4	5x5	6x6	7x7	Mega
1st	YJ MGC	X-Man Bell	X-Man Wingy	YJ MGC	QiYi	YJ MGC	YJ MGC	YJ MGC	YJ MGC	YJ YuHu V2M
2nd	YJ MGC Elite	Gan M	Gan M	Yuxin Little Magic	ShengShou	Rubik's	QiYi Valk 5 M	MoYu AoShi WRM	YJ YuFu V2M	DaYan (v1 or v2)
3rd	QiYi MS	QiYi MS	MoYu RS M	X-Man Volt V2	LingAo	Moyu MFJS Meilong	MoYu Aochuang WR M	X-Man Shadow M	MoYu AoFu WR M	X-Man Galaxy V2

Interesting how YJ is dominating the non-3x3 world, but doesn't even make Top5 for 3x3. Engineering cubes is not trivial, so maybe spreading the effort across many events means that it's difficult to shine in the "main" one.
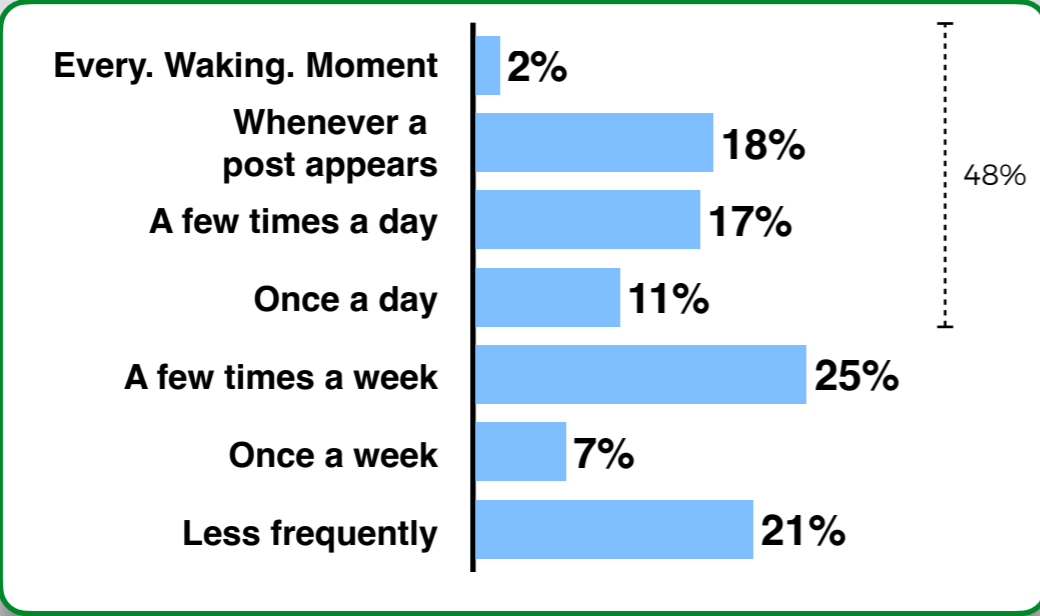
When in doubt, get the MGC...

OUR ONLINE COMMUNITY~~Y~~IES

HALF OF US COME EVERY DAY, AND WE'VE BEEN AT IT FOR QUITE A WHILE

HOW OFTEN DO YOU VISIT OUR COMMUNITY?

Every. Waking. Moment	2%
Whenever a post appears	18%
A few times a day	17%
Once a day	11%
A few times a week	25%
Once a week	7%
Less frequently	21%

48%

WHEN DID YOU FIRST DISCOVER OUR ONLINE COMMUNITY?

This week	3%
This month	4%
Last 3 months	11%
Last 6 months	11%
Last year	23%
~2 years ago	17%
~3 years ago	11%
~4 years ago	6%
~5 years ago	3%
5+ years ago	11%
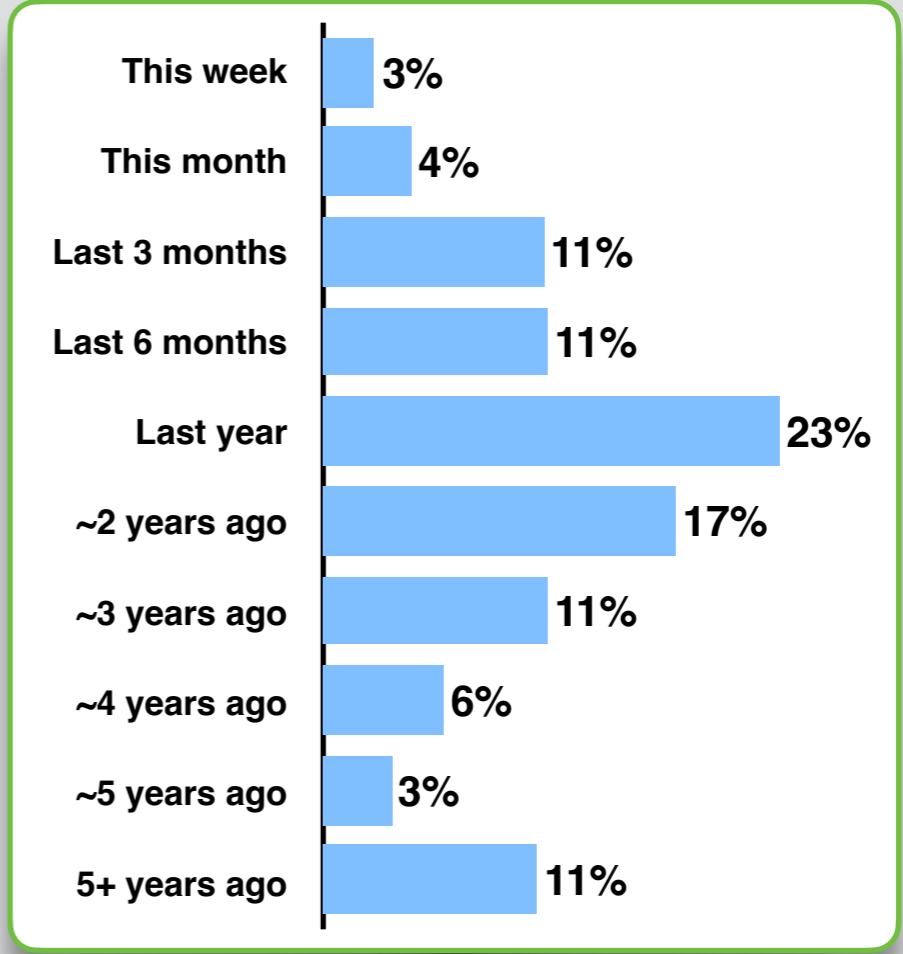
WHAT CUBING COMMUNITIES DO YOU VISIT?

/r/Cubers	74%
/r/Cubers Discord	36%
SpeedSolving Forums	19%
Other subreddits	19%
My town/region's community	10%
Facebook groups	5%
TwistyPuzzles	3%
RMS Discord	1%
Other	4%
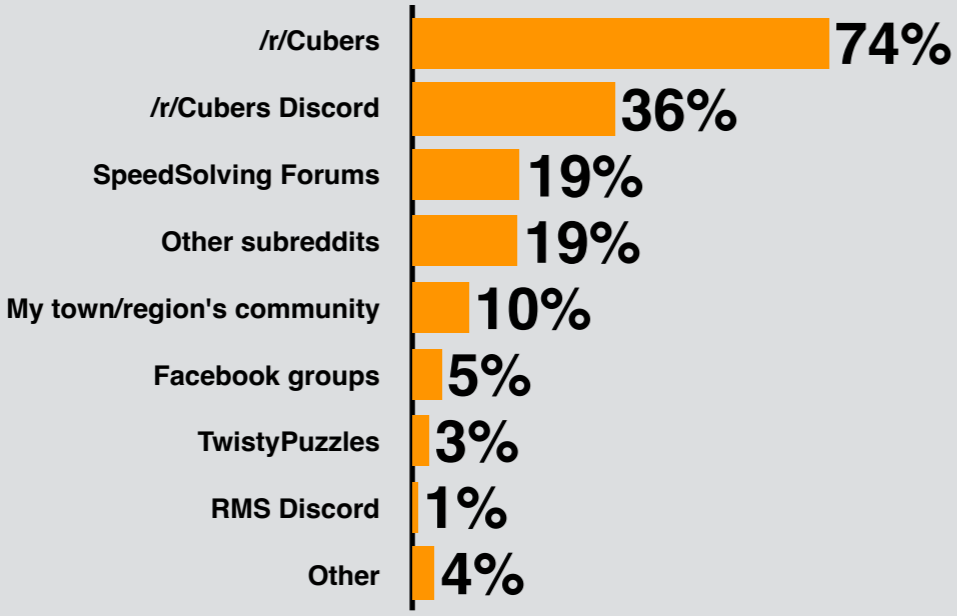
ONLINE COMPS ARE GAINING IN POPULARITY AND PARTICIPANTS ARE GETTING YOUNGER

DO YOU PARTICIPATE TO ONLINE COMPS?

- No — **70%**
- cubers.io — **12%**
- One-off comps from friends — **4%**
- speedsolving.com — **3%**
- Roux Weekly Comp on Facebook — **3%**
- Other — **9%**

AGE OF ONLINE COMP PARTICIPANTS

2021	2022
19.5 years old	**18.6** years old

Don't participate to online comps

2021	2022
84%	70%

WHAT MULTIPLAYER TIMER DO YOU PREFER?

Common Scramble tool

- csTimer — **55%**
- LetsCube — **17%**
- Cubestation — **11%**
- cubers.io — **6%**
- Cubingtime — **5%**
- Cubedesk.io — **2%**
- cubewithme.com — **1%**
- Cuberslive — **0%**
- Other — **7%**

(SINCE WE'RE HERE, WHAT CUBE TIMER DO YOU USE FOR YOUR NORMAL SOLVES?)

- csTimer — **58%**
- Twisty timer — **17%**
- CubeTimer — **5%**
- Gan Cube Station — **4%**
- ChaoTimer — **3%**
- CubeDesk — **2%**
- Cubeast — **2%**
- qqTimer — **1%**
- Stackmat timer (no app) — **1%**
- CubeTime — **1%**
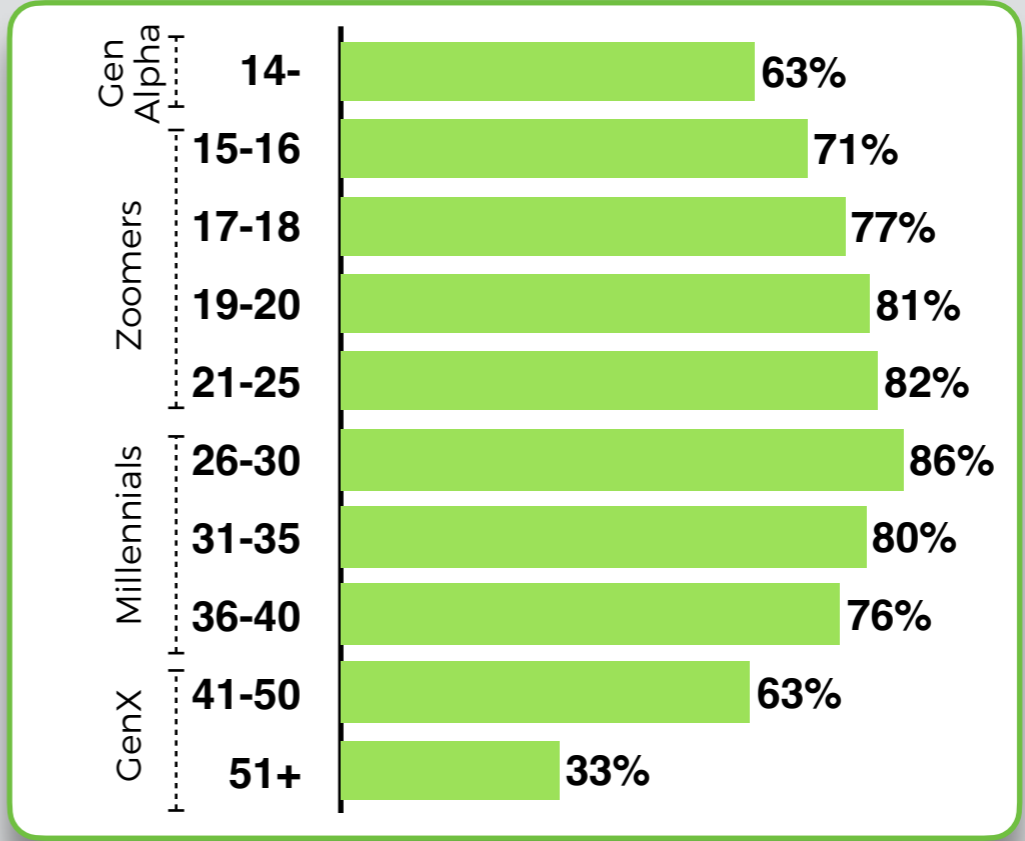- Other timers — **7%**
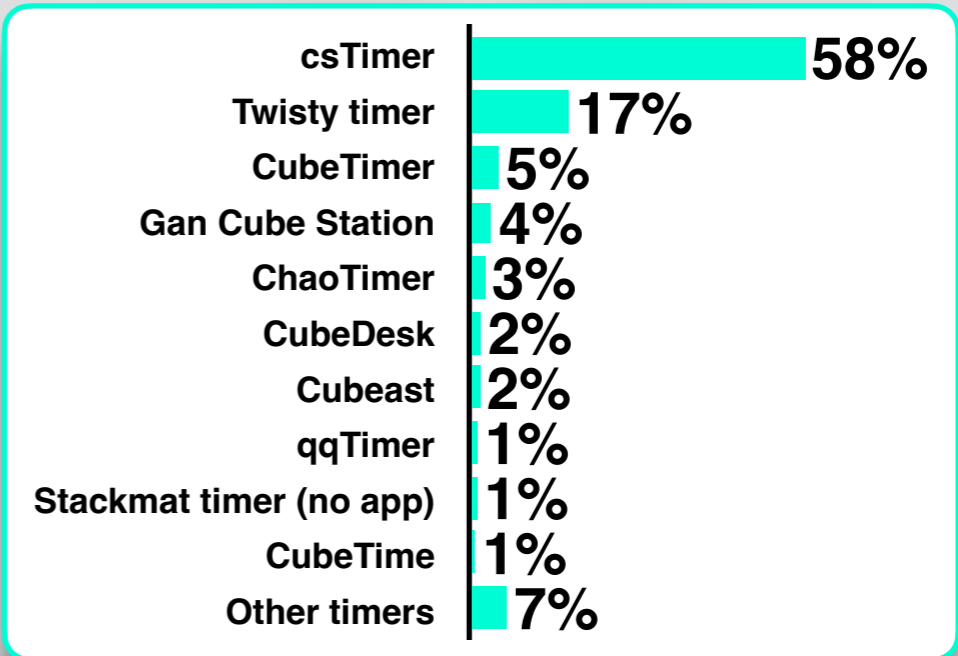
CONTRARY TO WHAT PEOPLE THINK, THE "NEW GENERATION" IS NOT ON MOBILE, IT PEAKED WITH MILLENNIALS, AND THE NEW GENERATIONS ARE GOING BACK TO OLDER DEVICES
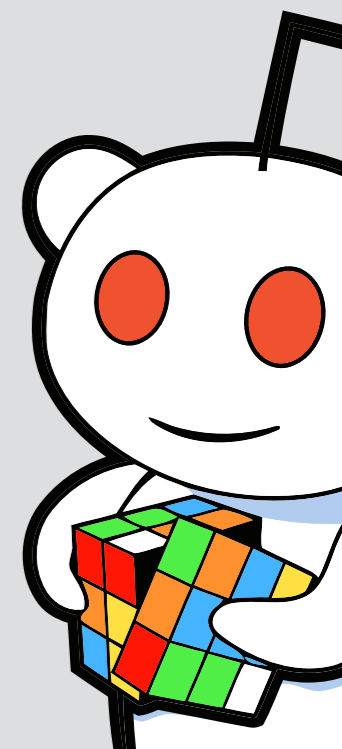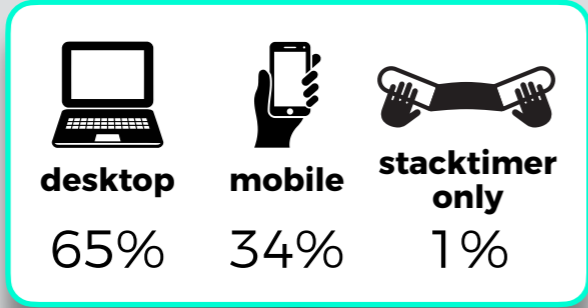
HOW DO YOU NORMALLY BROWSE REDDIT?

52%
vs. 2021 : -4pts

75%
vs. 2021 : -7pts

Computer	52%
Mobile App	53% Official app / 12% 3rd party = 65%
Mobile Web	12%
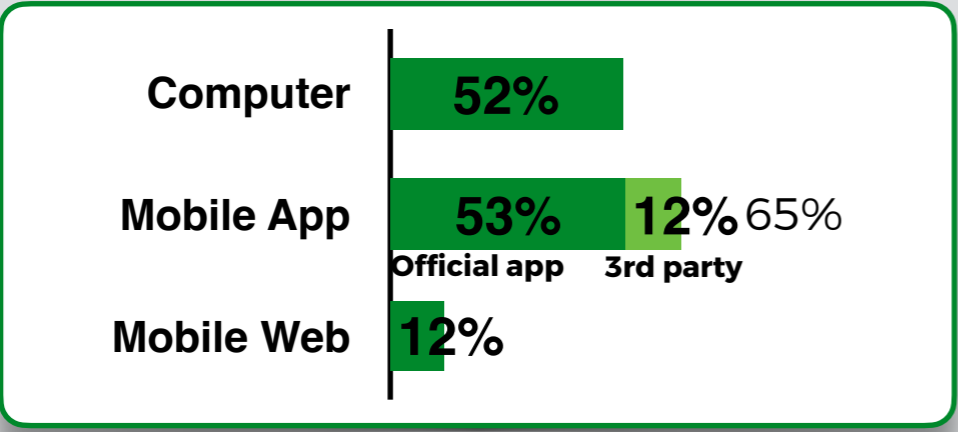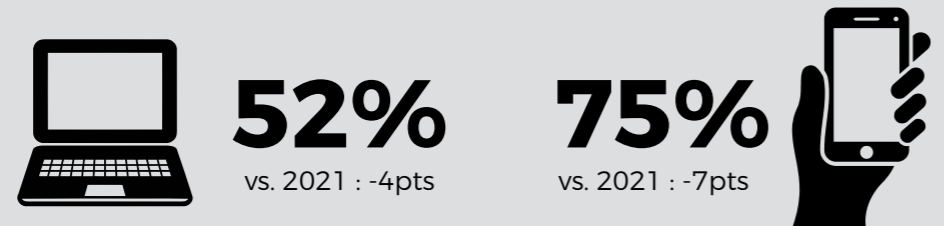
AND WHAT DO YOU USE TO TIME YOUR SOLVES?

desktop	mobile	stacktimer only
65%	34%	1%

MOBILE USAGE BY AGE

Generation	Age	%
Gen Alpha	14-	63%
Zoomers	15-16	71%
	17-18	77%
	19-20	81%
	21-25	82%
Millennials	26-30	86%
	31-35	80%
	36-40	76%
GenX	41-50	63%
	51+	33%

MANY TOPICS HAVE GAINED INTEREST IN THE PAST YEAR: RECORDS AND RECONS, ADVICES AND GUIDES, ANALYSIS AND THEORY. ALSO, MEMES...

DO YOU EVER VISIT THE /R/CUBERS DISCORD GROUP?

All the time	9%
Frequently	8%
Sporadically	19%
Rarely	23%
Are you mad?	17%
The what?	25%
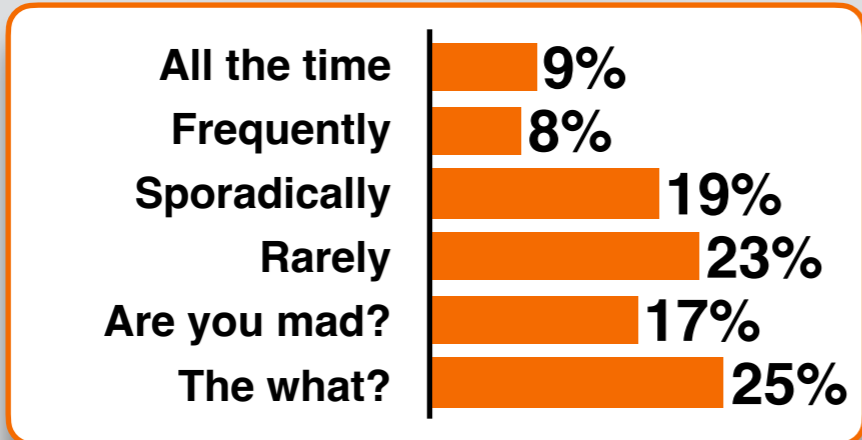
HOW MANY CUBING DISCORD SERVERS ARE YOU A MEMBER OF?

3.4 servers on average

Just in case, we're here: https://discord.gg/cubers

2021	2022
4.4	3.4

HAVE YOU EVER EDITED THE /R/CUBERS WIKI?

Yes	3%
Minor changes	3%
No	74%
Wait, what?	20%

Just in case, it's here:
https://www.reddit.com/r/Cubers/wiki/index/
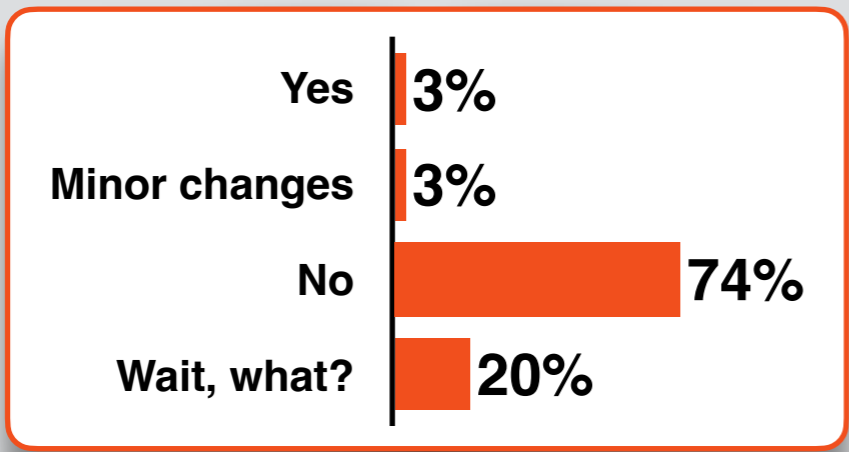
WHAT'S YOUR FAVORITE TYPE OF CONTENT ON R/CUBERS?

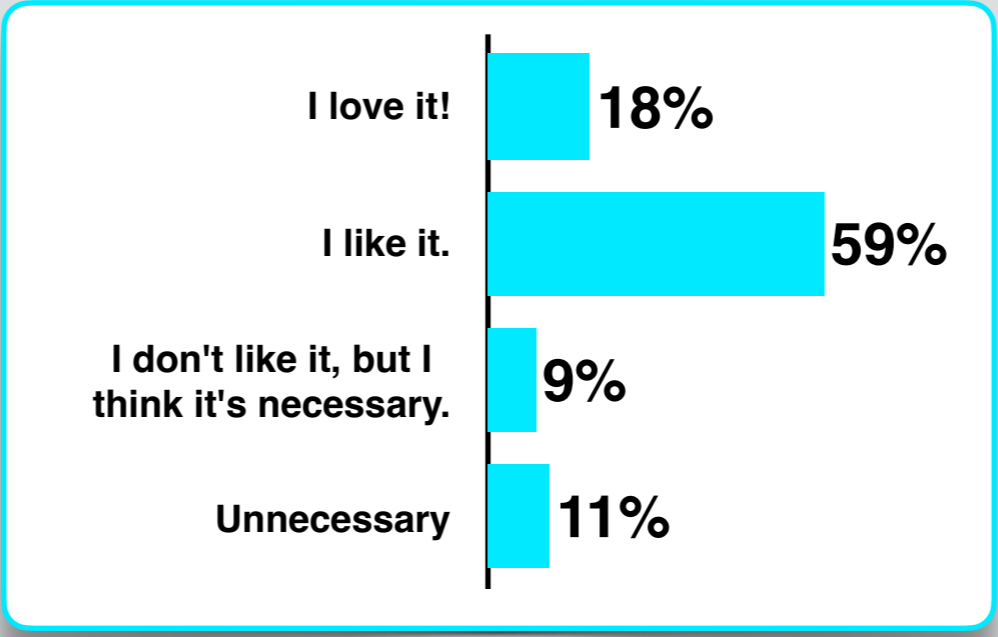|		vs 2021
Daily Discussion Thread (DDT)	23%	+1%
Memes	21%	+7%
Cube Reviews	11%	+1%
Records & Reconstructions	11%	+5%
Improvement Advice & Guides	9%	+3%
Collections & Mail Day	9%	=
Analysis and Theory	7%	+3%
Algs & Methods	6%	=
Mods & Non-WCA	6%	=
PBs	5%	=
Discussions	5%	=
Cubeography & Patterns	3%	-2%

Memes

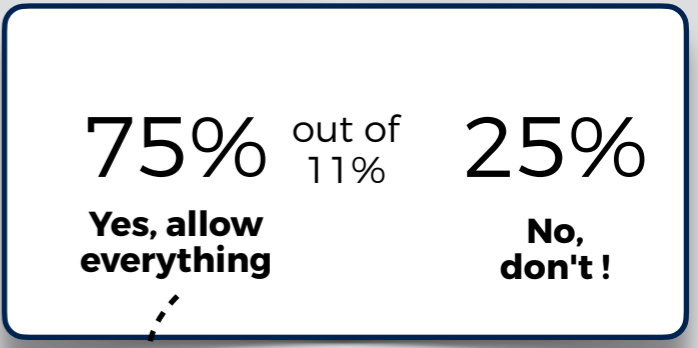| 2021	2022
14%	21%

Oh s*it...
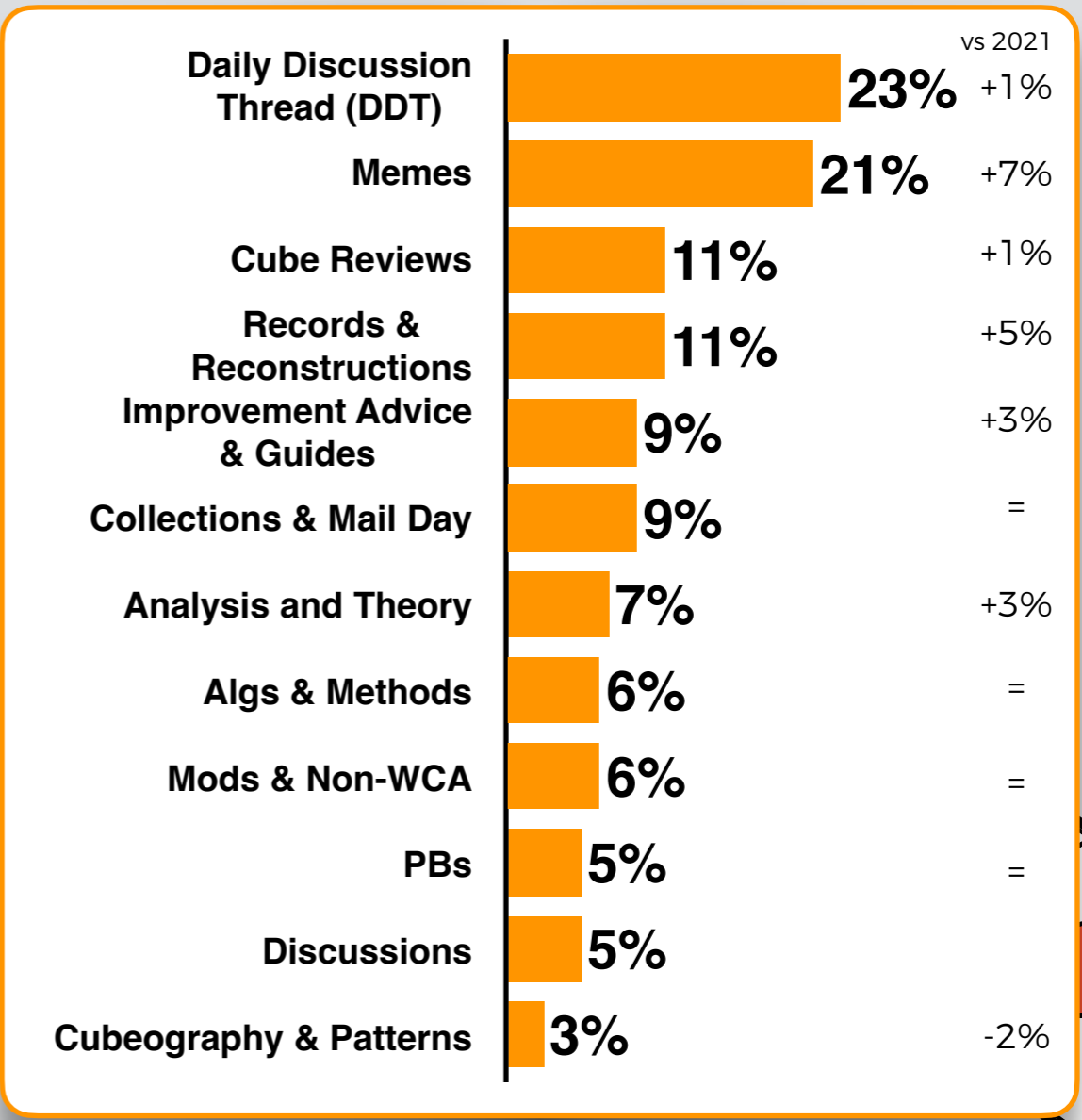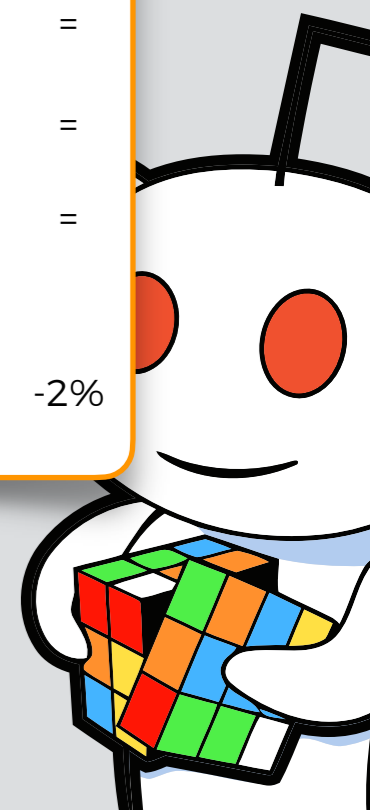
MOST OF US LIKE THE DDT, EVEN THOUGH WE'RE NOT ALL AWARE THAT IT HAS SOME VERY NICE FEATURES!
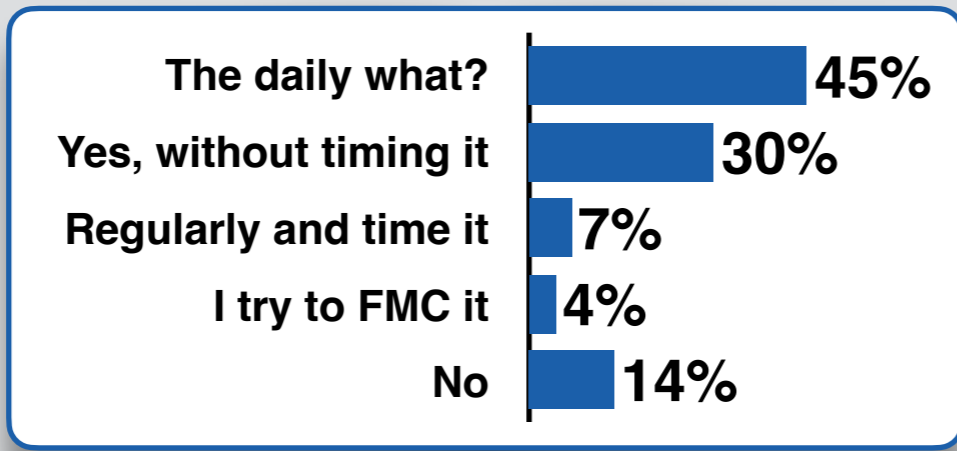
WHAT DO YOU THINK OF THE DAILY DISCUSSION THREAD?

- I love it! **18%**
- I like it. **59%**
- I don't like it, but I think it's necessary. **9%**
- Unnecessary **11%**

OK YOU DON'T LIKE IT, BUT SHOULD ALL CONTENT BE ALLOWED ON THE SUBREDDIT?

75% out of 11% **25%**

Yes, allow everything

No, don't !

2021	2022
69%	**75%**

Haters gonna haterer

DO YOU LOOK AT THE DDT DAILY SCRAMBLE?

- The daily what? **45%**
- Yes, without timing it **30%**
- Regularly and time it **7%**
- I try to FMC it **4%**
- No **14%**

% who have no idea what the DDT Daily Scramble is

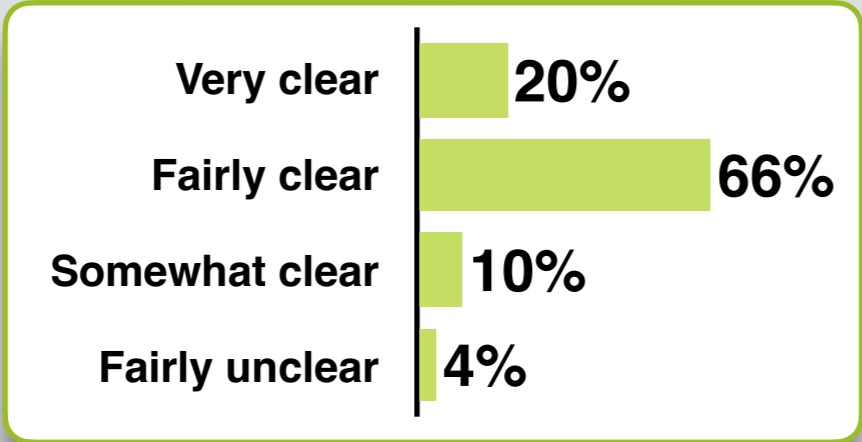| 2021	2022
55%	**45%**
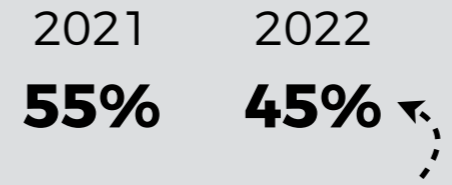
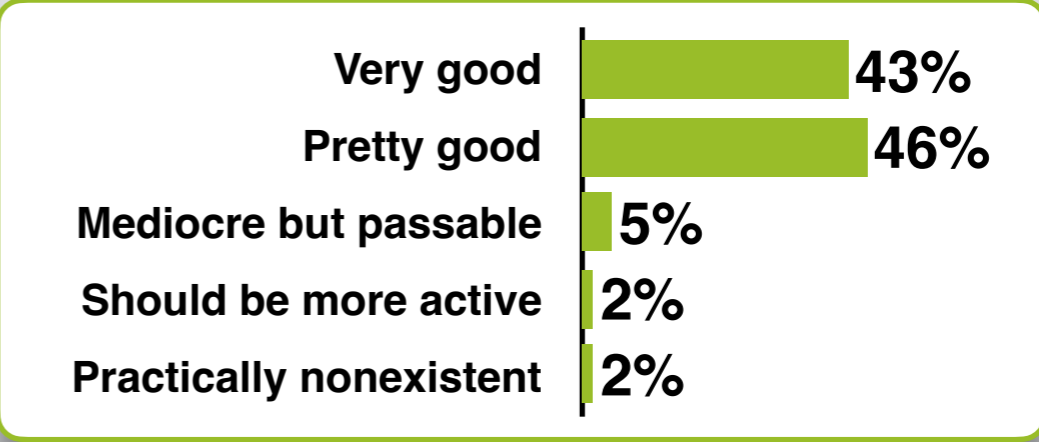Slowly but steadily, more people are scrolling down to the bottom of the DDT
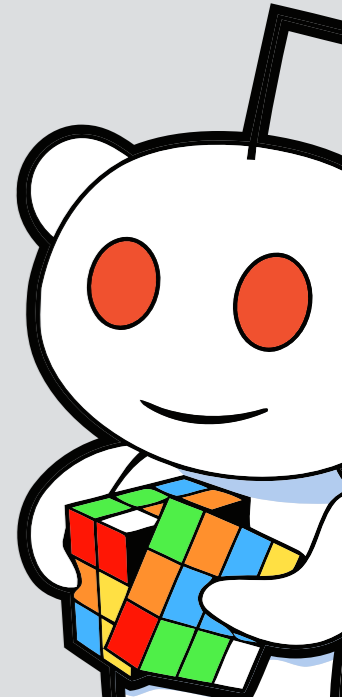
THE CURRENT REDDIT RULES ARE MOSTLY CLEAR TO EVERYONE, AND MODS SEEM TO BE, BY AND LARGE, DOING THEIR JOB! AND AS FAR AS THE CHANGES WERE NOTICED, THEY ARE CONSIDERED POSITIVELY
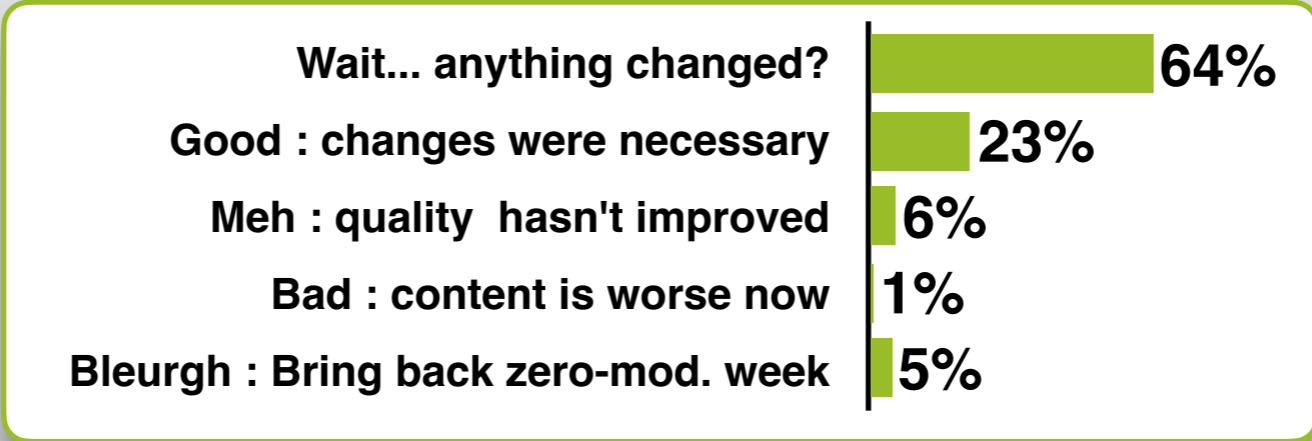
HOW CLEAR DO YOU PERCEIVE THE RULES OF /R/CUBERS TO BE?

- Very clear **20%**
- Fairly clear **66%**
- Somewhat clear **10%**
- Fairly unclear **4%**

WHAT DO YOU THINK OF QUALITY OF MODERATION ON THE SUBREDDIT?

- Very good **43%**
- Pretty good **46%**
- Mediocre but passable **5%**
- Should be more active **2%**
- Practically nonexistent **2%**

WHAT DO YOU THINK ABOUT THE RECENT CHANGE TO THE SUBREDDIT MODERATION APPROACH?

- Wait... anything changed? **64%**
- Good : changes were necessary **23%**
- Meh : quality hasn't improved **6%**
- Bad : content is worse now **1%**
- Bleurgh : Bring back zero-mod. week **5%**

CONTRARY TO EXPECTATIONS, ACTUALLY PLAYING MEANS THAT SOMETIMES YOU WIN!

HAVE YOU EVER WON A GIFT CARD / GIVEAWAY?

- Yes, once **11%**
- Yes, more than once **6%**
- No, bad luck **24%**
- I don't participate **59%**

AND AMONG PEOPLE WHO PARTICIPATE...
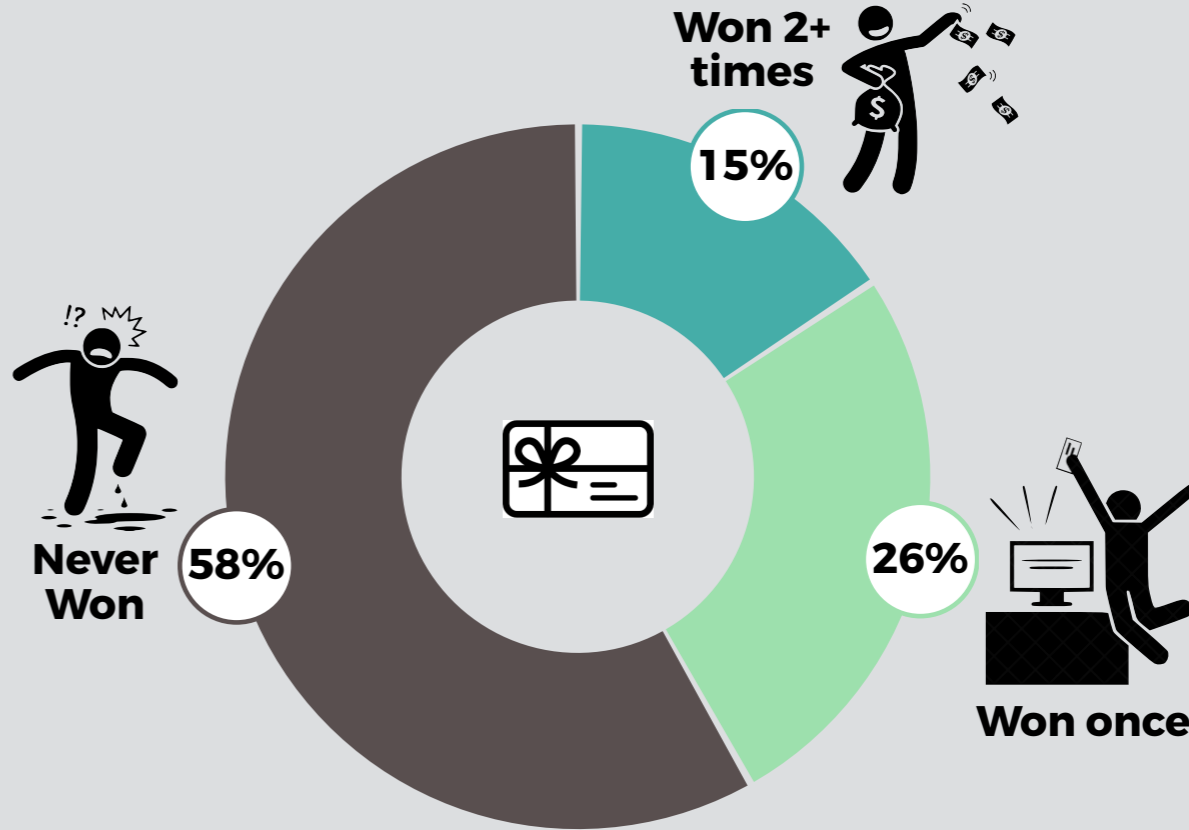
Won 2+ times **15%**

Never Won **58%**

Won once **26%**

We've seriously gotten this far in this document without any images of a cat?

89

SUMMARY AND TAKE HOME MESSAGE

WHAT HAVE WE LEARNED HERE?

- **There's a lot of diversity**
  - While many of us skew younger, the range of ages of people interested in cubing and speed-cubing is very broad and wide
  - The younger among us learn faster, but the fastest among us are not all young
  - Some events are liked more by our youngest, others are more for the more mature, but we find something to fill our time and passion nonetheless
- **We're optimists**
  - Our most sought after time target is Sub10, even though only 5% of us have actually achieved it, and 80% of us are stuck above 13
- **We are much more social than normies might think**
  - Cubing has allowed us to know people, make friends and discuss, both online and offline (even if some of our discussion remain a bit obscure for the people around us)
- **We love to try out things and learn**
  - Most of us practice several events, and have dabbled in many others
  - We learn many methods and algsets, even if in the end most of us opt for the same tried and true solutions (CFOP and 2LLL)
- **We can be satisfied with two colors**
  - Dual color neutrality seems to present some key advantages to full neutrality, and those of us who stick to dual learn faster and become faster on average

CONGRATULATIONS FOR MAKING IT THIS FAR!

This was a very long survey (have I mentioned how awesome you are if you were one of the heroes who filled it in?) leading to an even longer document. I hope you were sane enough to consume it in manageable doses. If you have questions, comments or just want to have a chat, find me on the r/Cubers subreddit or the Discord.

Be nice to the ones around you,

Basilio