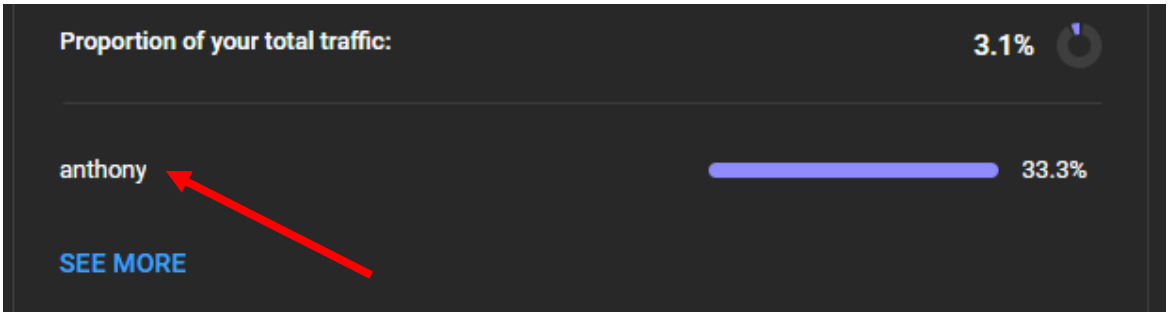
LESSONS FROM YOUTUBE ANALYTICS AND STUDENTS EDUCATIONAL CONTENT CONSUMPTION

A self-study into the creation of learning content on 'free-to-access' web-based platforms (YouTube in this case), and analysis of what drives students educational content consumption

(The "internet sensation" (not really, but we can all dream) can be viewed here - https://www.youtube.com/watch?v=-EHDFDaVdhs&ab_channel=AnthonyBoetcher-Mined)

(Oh don't look at me like that, shameless self-promotion is a very important part of everyone's social media marketing campaign. Everyone does it, even for content far less significant to our collective benefit)

By



Boetcher

By the way, all analytics are entirely private and anonymous – I have no access to personal data outside of what Youtube provides to all FREE accounts. You might think I have too much access or too little access, and these topics of user privacy have been very controversial of late. I will show that a reasonable amount of private metrics is vital to 'proof of concept' stages during product development. If you are a student who unknowingly participated in this experiment, thank you for giving insights into how to further educational content value.

I like to say "who's watching who" … because I have spent hours studying these statistics, and watching viewers as they watch me speaking, whilst videos climbed past 100 views and 50hrs watched channel time, 31hrs in the last week alone – Social media 'validation' is totally intoxicating, please consume responsibly.

Note : content is relevant ONLY until 21/08/23 – as of time of writing these stats are consistently changing. After reading this you might be prompted to go view content, and further skew the data – and I'm not stopping you! :)

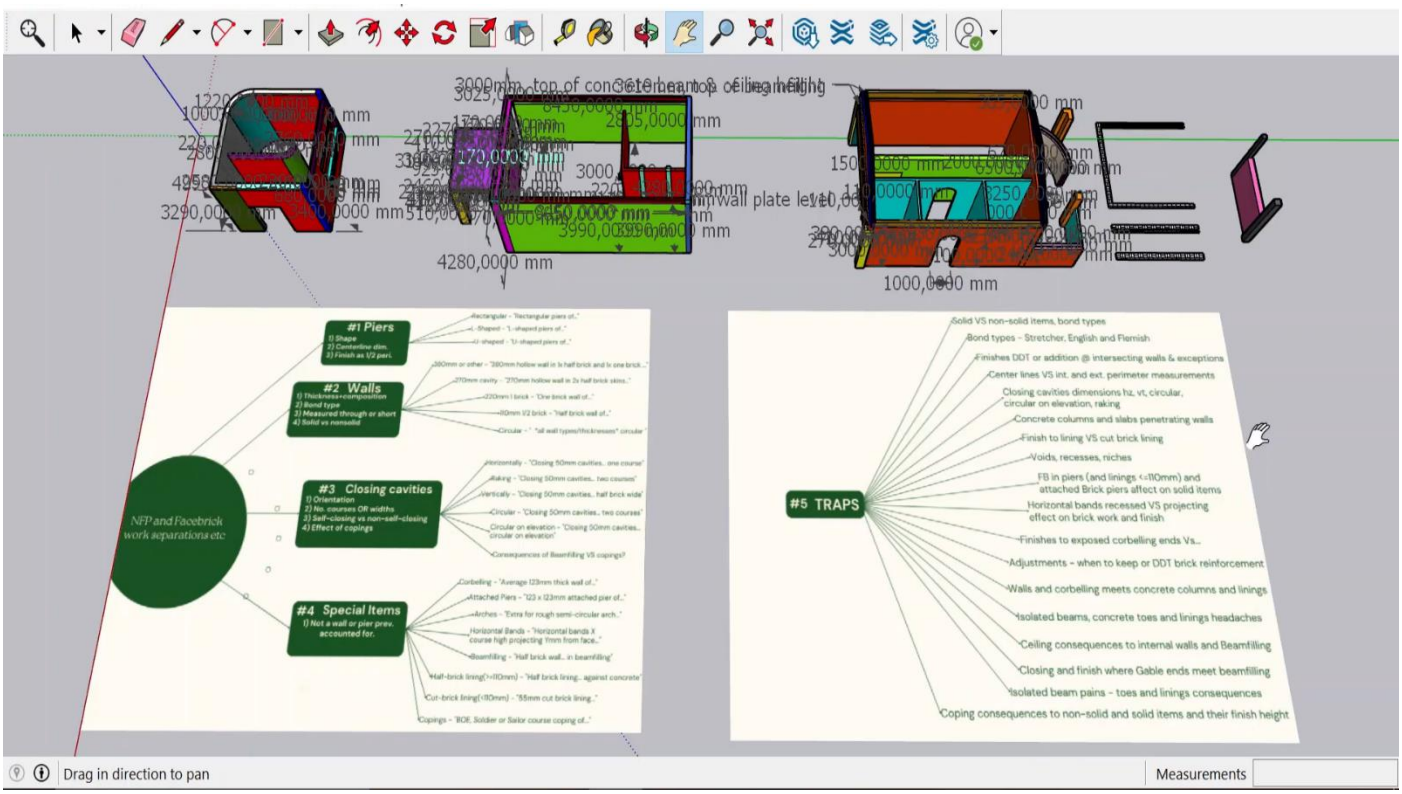
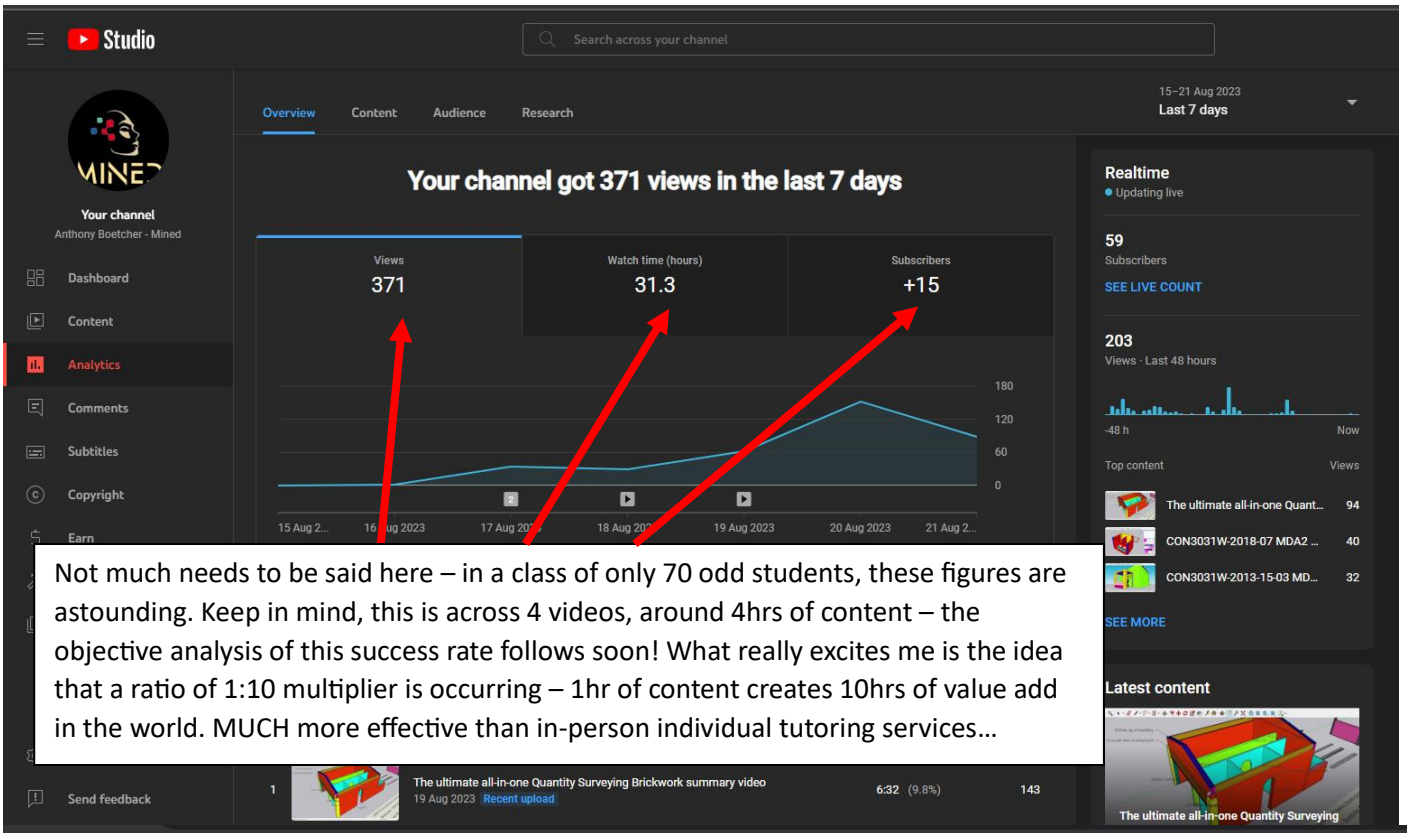
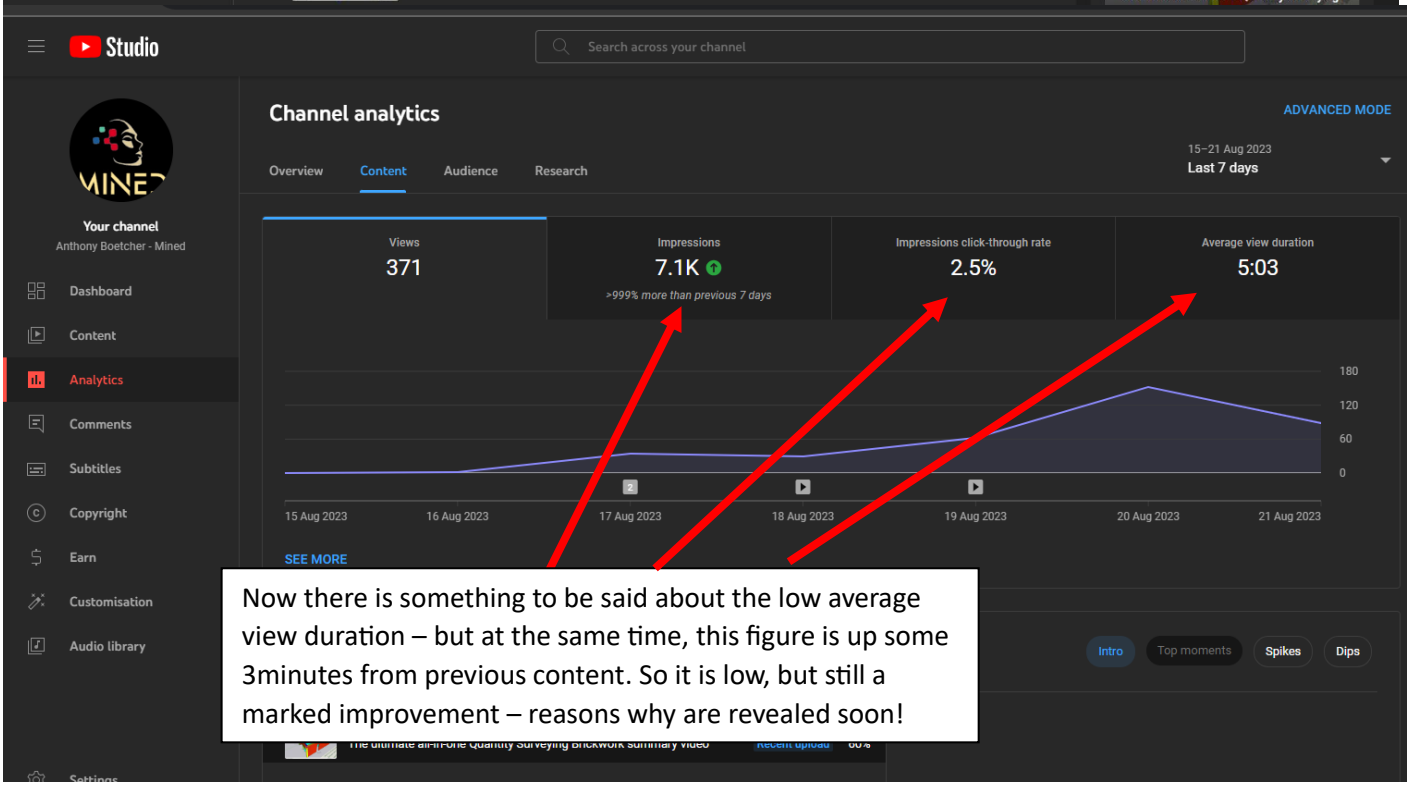


Figure 1 It's difficult to ignore the allure of merging PDF and JPG images, with colourful 3D models, as a new tool for learning

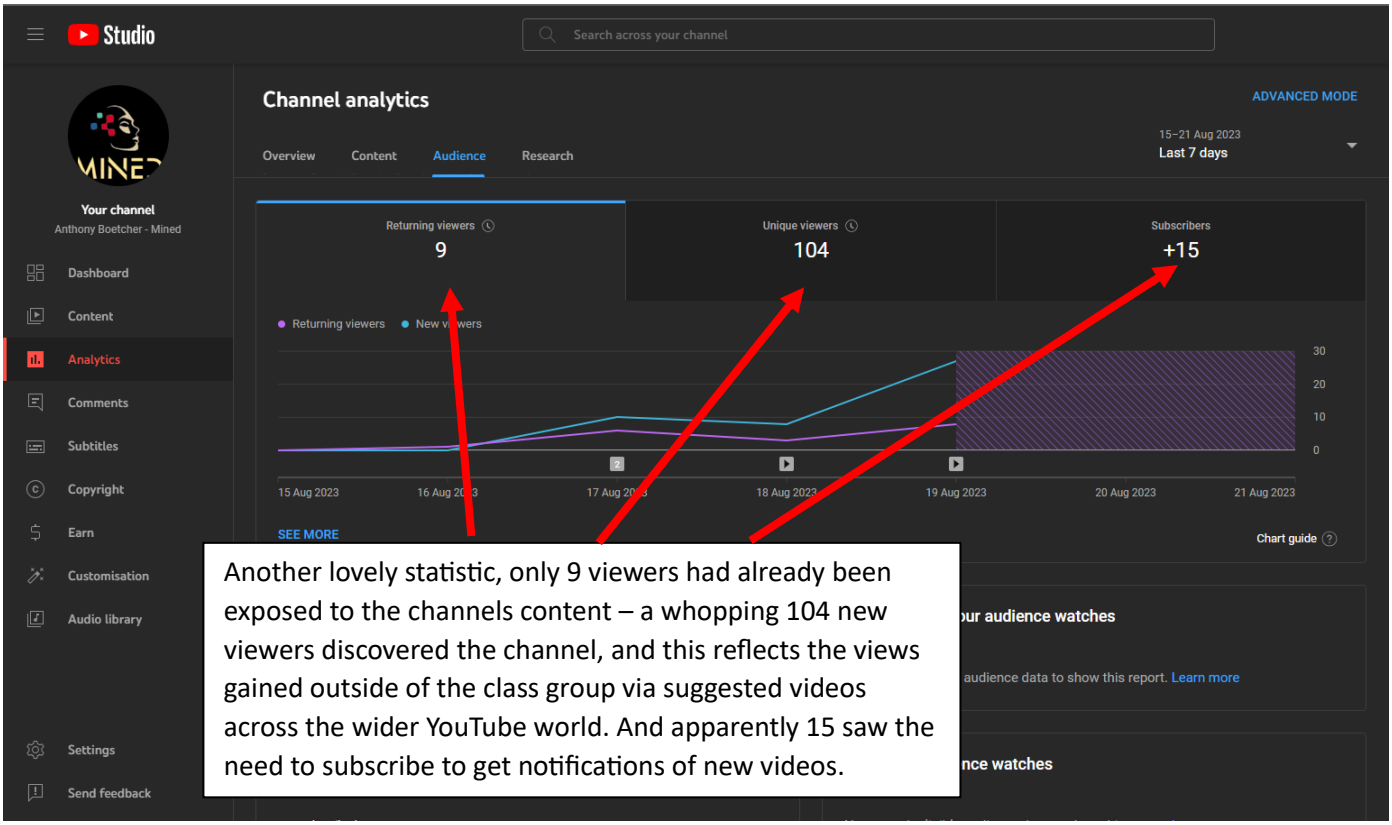
WHATS ALL THE FUSS ABOUT? – SOME FORESHADOWING



Not much needs to be said here – in a class of only 70 odd students, these figures are astounding. Keep in mind, this is across 4 videos, around 4hrs of content – the objective analysis of this success rate follows soon! What really excites me is the idea that a ratio of 1:10 multiplier is occurring – 1hr of content creates 10hrs of value add in the world. MUCH more effective than in-person individual tutoring services…



Now there is something to be said about the low average view duration – but at the same time, this figure is up some 3minutes from previous content. So it is low, but still a marked improvement – reasons why are revealed soon!



Another lovely statistic, only 9 viewers had already been exposed to the channels content – a whopping 104 new viewers discovered the channel, and this reflects the views gained outside of the class group via suggested videos across the wider YouTube world. And apparently 15 saw the need to subscribe to get notifications of new videos.

FINDINGS

1) Organic reach is very much limited to individual's immediate circles of influence, if you really want good content reach you need to use social media – social media promotes social media. They exist for each other.
   a) Engagement is contingent on exposure, but once 'exposed' and users are aware, repeated views and even further sharing is expected.
   b) This repeat viewership continues right up until the last hour before assessment, and some of the highest peaks in viewing occurred in the last 24hrs before assessment, and even as close as 2hrs before assessment. It might be so that students are prepared, and enjoy the summary videos or audio-visual content to refresh their memory. Or simply students cramming at the last minute.

2) Quite phenomenally, it would appear that my time invested in learning, modelling, recording, editing and uploading (which is about 6hrs work per 1hour usable and uploaded content) not only matches in terms of information sharing (ie 1hr created content leads to 1hr taught and consumed ie like traditional in-person forms of education) but FAR exceeded all expectations, with a watch time of 25 hours up to the day before assessment. This is an information sharing/value multiplier of as much as 8x the input effort of myself – certainly an indication of a need for the content and the scalability of reach. This the a phenomenal use case for Youtube as a collaborative tutoring tool, and it does beg the question why students employ personal tutors, as opposed to crowd funding, at a slightly higher upfront cost, a recorded tutorial that will have far reaching benefits long into the future. Why this doesn't happen more often is a mystery to me. I can only think that nobody is prepared to sacrifice the time and effort to produce content, as well as the HUGE daunting thought that you and your voice will be on the internet for everyone to view. But these barriers need to be eliminated, this case study should be enough to convince you.

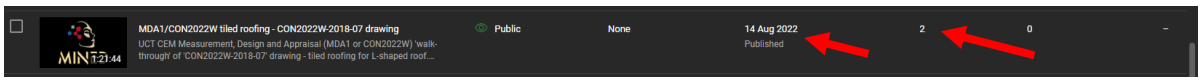
3) Content view duration and engagement is directly correlated to the degree of 'interaction' a viewer has whilst watching your content – this includes degrees of novelty, changes in perspectives and perhaps even personal touches such as audio-visual effects and humor.
   a) Being a new method of explaining learning techniques through visualization and colours, users are better equipped to understand more complex topics. This is reflective of the viewership of previous VS current tutorials (boring, non-visual based videos previously offered on the channel, VS current 3D modelled versions)
   b) Personal touches, including insights into how one can relate content across various examples, as well as the use of humor and summarized decision trees, are highly appreciated by learners. Why?

i) Where large amounts of information is expected to be learnt, tertiary education is at best ambivalent in terms of giving end-users the tools to encode and retrieve their learning content.

ii) As such, providing services where this massive challenge is addressed appears valuable to learners, indicated by the more successful performance of 'Summary videos'.

iii) Included in this insight are remarks from students that the tree diagrams, colour coding, 3D visualizing and even humour, was in fact a welcomed reprise from the morbid and mundane status quo. Further, the sharing of personal difficulties apparently made learners less alone in their struggles and less inclined to be despondent.

c) Don't believe me? Check out this ridiculous video I made almost exactly 1 year ago Notice how many views it has?



i) TWO VIEWS. Yes. Quite incredible. But for all the wrong reasons! Not interesting, too long, no 3D model or colors – say it with me folks, "ITS BORING LEARNING CONTENT". That's the truth, plain and simple (pun intended)

4) It is not clear whether typical learner management systems (LMS) provide educators with meaningful end-user analytics regarding times content is consumed, viewer retention, content peaks and troughs of popularity in viewing and which devices are used to access the content – these are important metrics in understanding when, what, how and on what device your end users are consuming your content, and are vital in the evolution of producing targeted, meaningful user centric solutions to learning.

a) Youtube analytics, an entirely free service for Youtube creators, is invaluable in terms of observing which content is being consumed the most – if you care at all for your end users, these kinds of analytics should be the backbone of course development.

b) Furthermore, not just the popularity of specific videos, but the precise 'most viewed' timeframes in those videos, offers the creator a unique opportunity to capitalize on a sort of indirect feedback channel.

c) Other metrics like whether viewers are using phones, laptops or even TV's allows the creators to consider the ease of use per device, including clarity and comprehensibility on smaller screens.

d) Some interesting findings from "Mined's" channel – close to 35% of CHANNEL tutorial videos are viewed through mobile devices. This may be due to originally sharing through WhatsApp, leading to phone views at first (to test the waters of this new crazy content), and then crossing over to PC once it has been validated as worthwhile. But even with that explanation, it doesn't justify the consistently high

mobile phone usage – initially it made sense, but there are far more pertinent questions that seem to be worth asking.

5) The knock-on effects seem to be widespread, as views trickled down into older videos that weren't even relevant to the assessment at hand.

6) The key take-aways going forward (quite obviously) are:
   a) Content must be user-centric and consider the encoding and retrieval processes of memory generation
   b) This may include 3D modelling, colors, humor, memorization tricks
   c) Content should focus on where user metrics show repeated views, either per video or within video footage.
   d) Sharing of content to social media should follow immediately after posting – this would appear to be a view multiplier, once there is awareness, it is the gift that keeps on giving, as viewers return over the days building up to the assessment and possibly share content further amongst themselves. The term viral, as the exponential spreading from one organism to another, was certainly felt during the 2 days building up to assessment.

7) What I've found really interesting our world of likes, shares, subscribes – VERY few people are prepared to hit the like button, despite clearly consuming the free content and enjoying benefit from it.

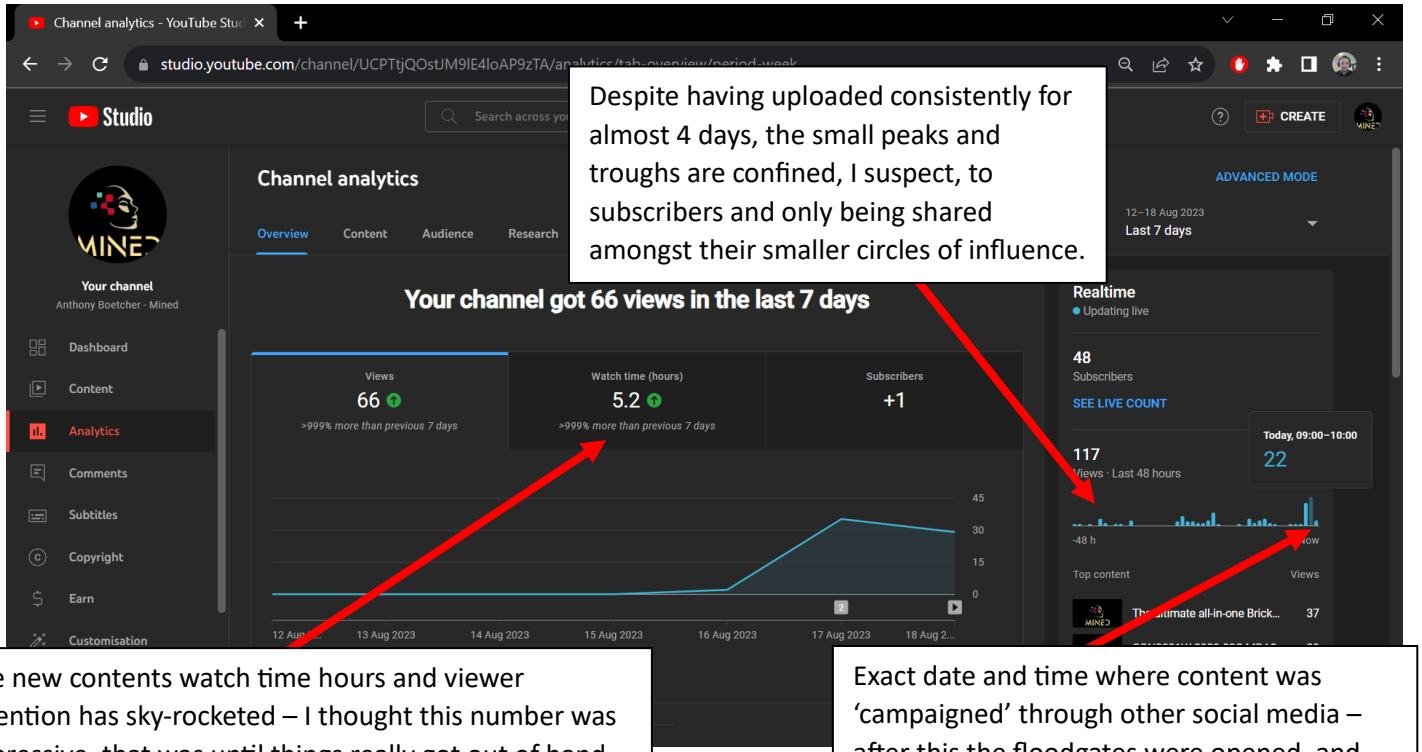
   In fact this phenomenon crossed over to comments – the only people commenting are those within the immediate circle of friends, and those outside this circle seem to avoid showing any sign of validation of the content – this is of course not the reason content creators (particularly educational content) do what they do, but I find this quite contrary to what you would expect.

   Free content. Taking many hours to produce. And very little viewer engagement or signs of appreciation. Now I've been doing this for long enough to recognize humans are more self-centered than we give credit – and this is fine, the real gift of view numbers and watched hours indicates enough of a 'proof of concept' to keep making the content in this manner.

   But it does show, if you create content and want to test the waters, it is not clear to me whether viewers will actually express their liking or disliking of what you've made – before really utilizing YouTube analytics I would say on face value your target market doesn't actually like your content, but this is not true. This is where you need to substitute human response with machine analytics – and thank goodness we have overcome this barrier, otherwise we would exist with absolutely no idea if all the

work we do to create the content was worthwhile to anyone. Some might be tempted to give up. And I wouldn't blame them.

Chapter 1 – Analysis of 72 hours before D-day

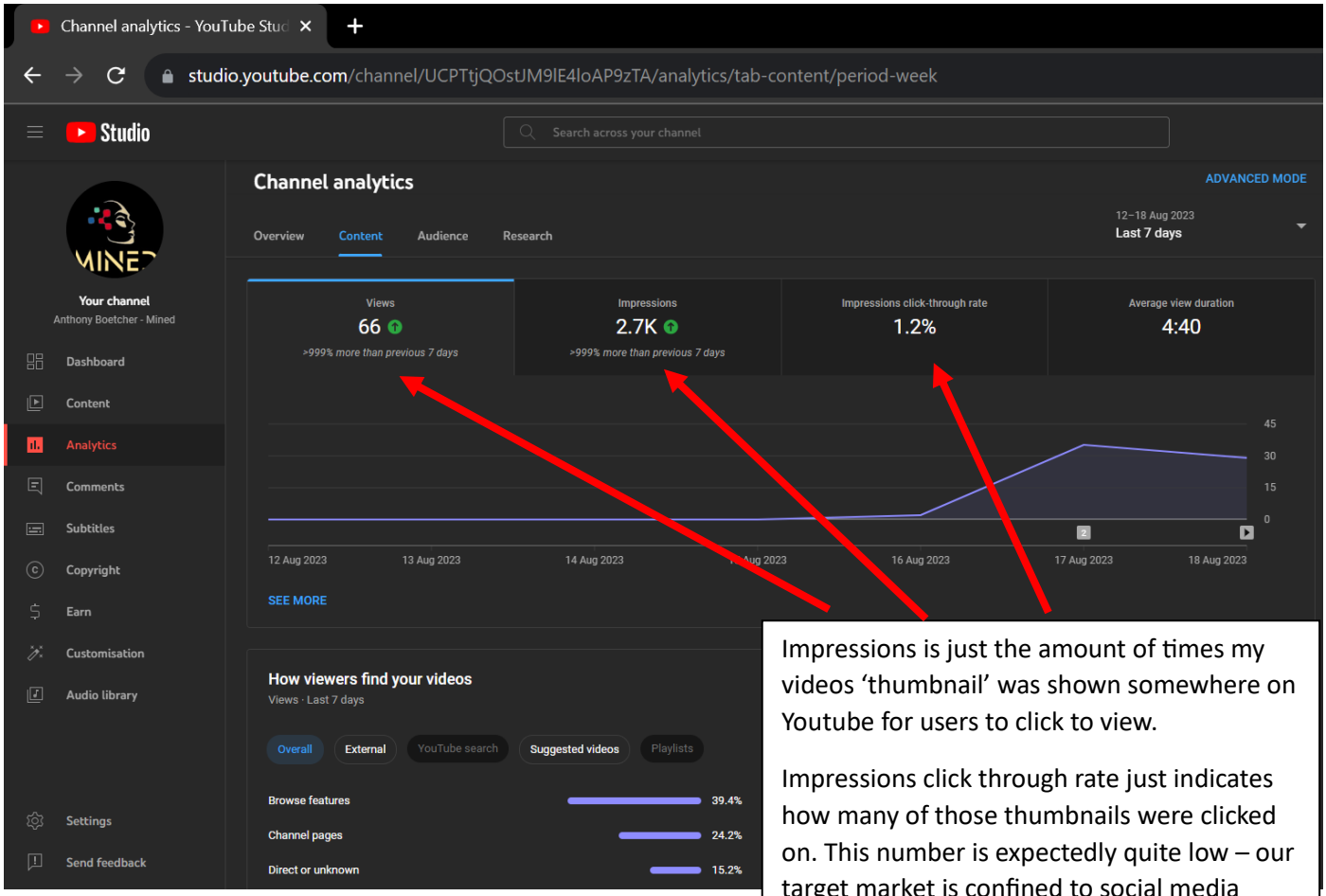


Despite having uploaded consistently for almost 4 days, the small peaks and troughs are confined, I suspect, to subscribers and only being shared amongst their smaller circles of influence.

The new contents watch time hours and viewer retention has sky-rocketed – I thought this number was impressive, that was until things really got out of hand. The growth is attributed to two factors:

a) The content IS difficult, hence me identifying a need and benefit for producing the videos. The difficulty is directly reflected in the upticks in viewership and watch time.
b) The new video content is MUCH more user centric – My attempts to make content more visually stimulating through 3D modelling, colors and of-course my awesome DJ skills, all seem to be a step in the right direction.

Exact date and time where content was 'campaigned' through other social media – after this the floodgates were opened, and statistics indicate that despite only marketing one 'summary' video, all the 4 preceding videos uploaded continue to benefited via 'suggested videos' or directly through channel views.

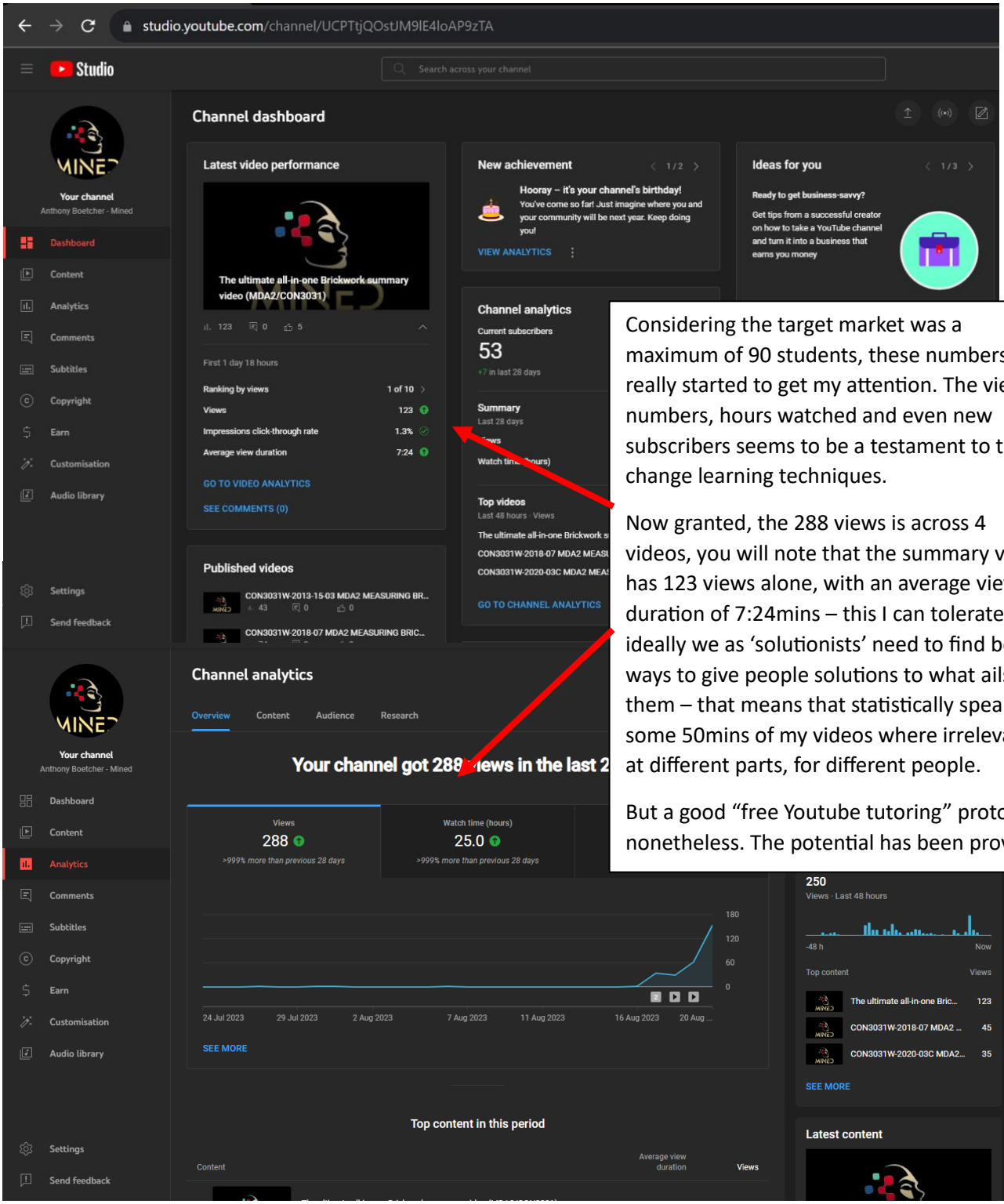


Impressions is just the amount of times my videos 'thumbnail' was shown somewhere on Youtube for users to click to view.

Impressions click through rate just indicates how many of those thumbnails were clicked on. This number is expectedly quite low – our target market is confined to social media circles, not so much the wider public.

Average view durations were initially quite disappointing – my conclusion is that students may lose interest, or simply be using the content as they please by fast-forwarding to the relevant sections of difficulty.

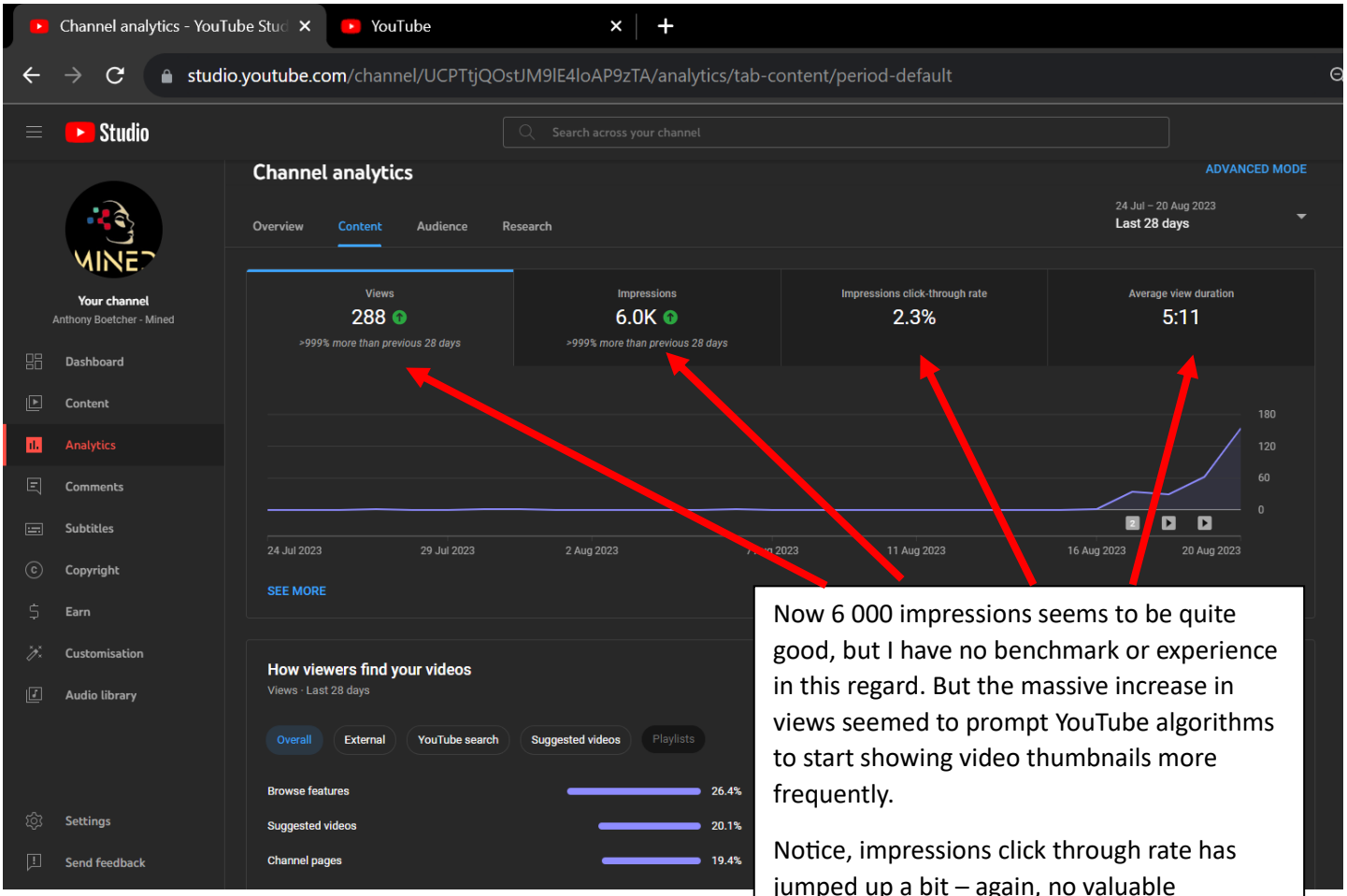
Chapter 2 - 1hr post assessment analytics, EXCLUDING test day



Considering the target market was a maximum of 90 students, these numbers really started to get my attention. The view numbers, hours watched and even new subscribers seems to be a testament to the change learning techniques.

Now granted, the 288 views is across 4 videos, you will note that the summary video has 123 views alone, with an average view duration of 7:24mins – this I can tolerate, but ideally we as 'solutionists' need to find better ways to give people solutions to what ails them – that means that statistically speaking, some 50mins of my videos where irrelevant at different parts, for different people.

But a good "free Youtube tutoring" prototype nonetheless. The potential has been proven.

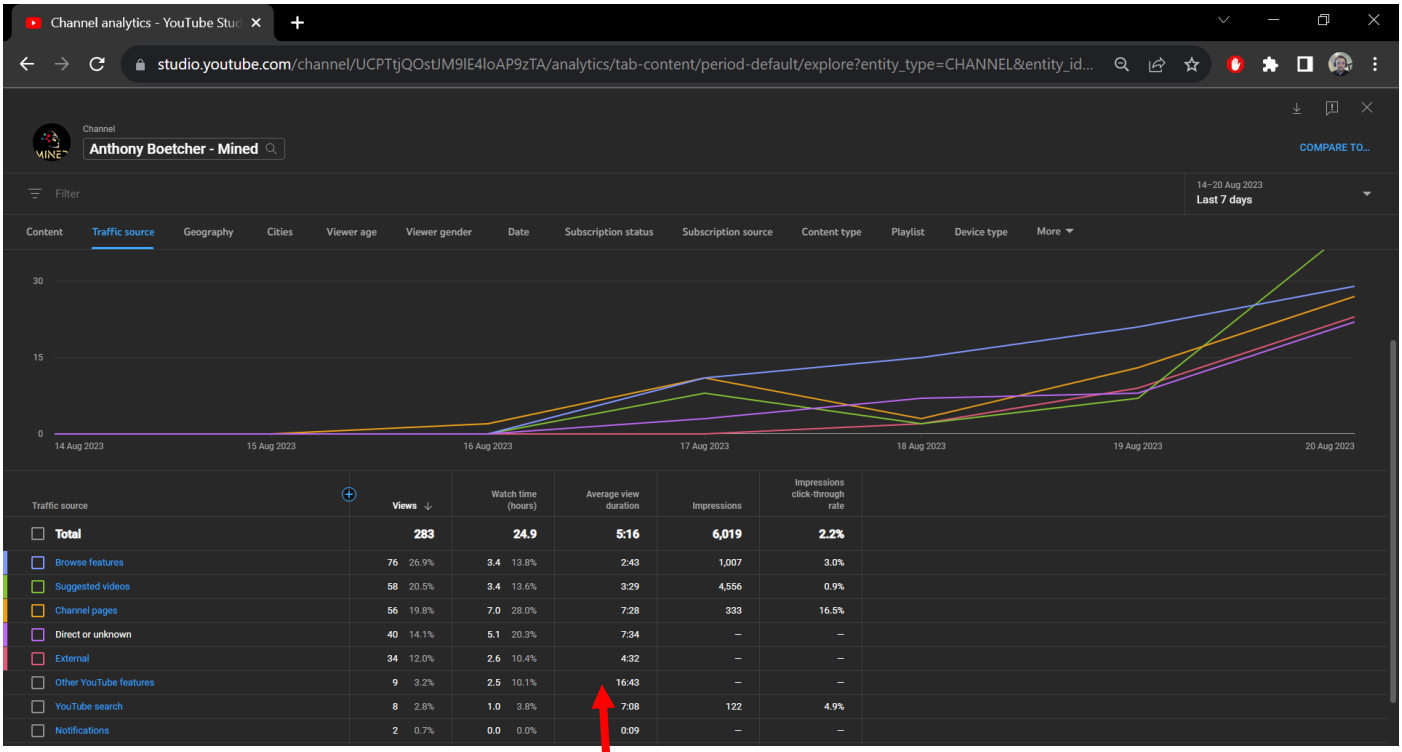


Now 6 000 impressions seems to be quite good, but I have no benchmark or experience in this regard. But the massive increase in views seemed to prompt YouTube algorithms to start showing video thumbnails more frequently.

Notice, impressions click through rate has jumped up a bit – again, no valuable information here as our target market is unlikely to receive a thumbnail and think "yes, I want to watch a video on measuring brickwork right now", other than the class group.

Average duration has bumped up to just over 5 mins, which is okay for now. But clearly needs some refining.

Keep in mind this page seems to lag by 1 day.



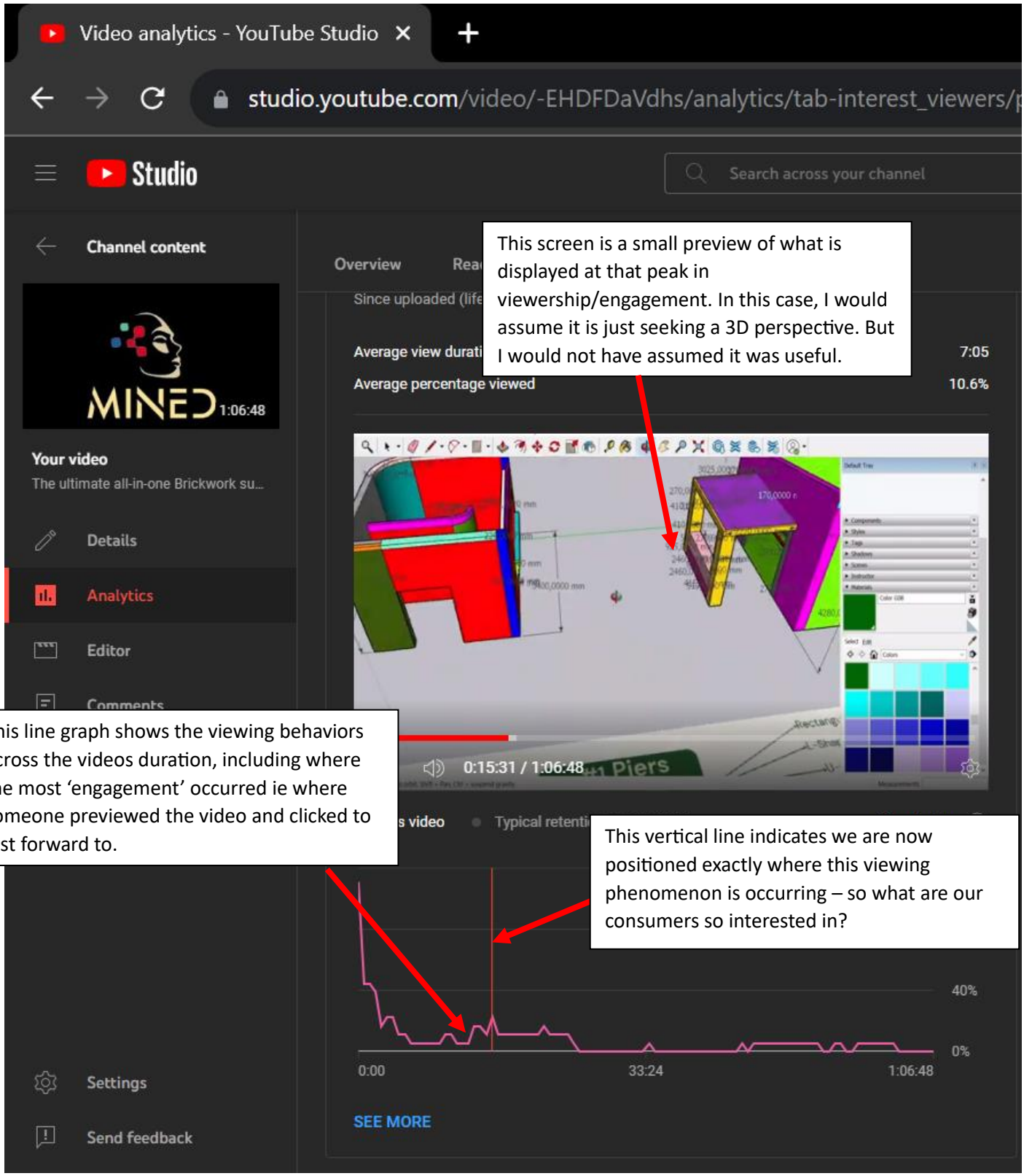
A couple of interesting things are going on here.

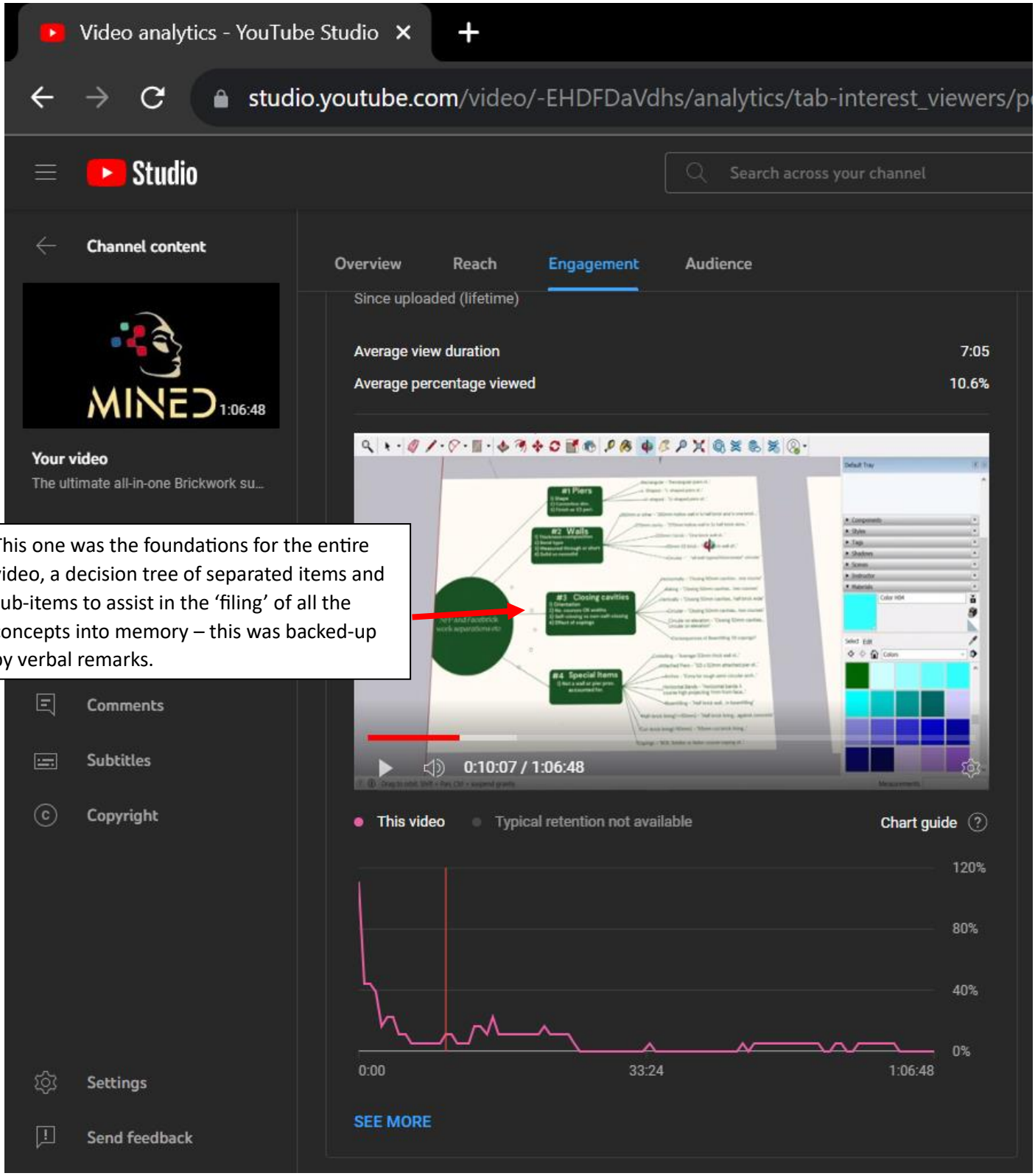
1) A lot of views are coming from suggested videos – this is what happens once someone explores the video posted on WhatsApp, and are prompted to watch another.
2) From there, it looks like viewers hop onto my channel page to see what else this maniac has made.
3) The direct or unknown traffic source is either directly pasting url or using unknown apps.

Chapter 3: Unparalleled free access to what your end-users want

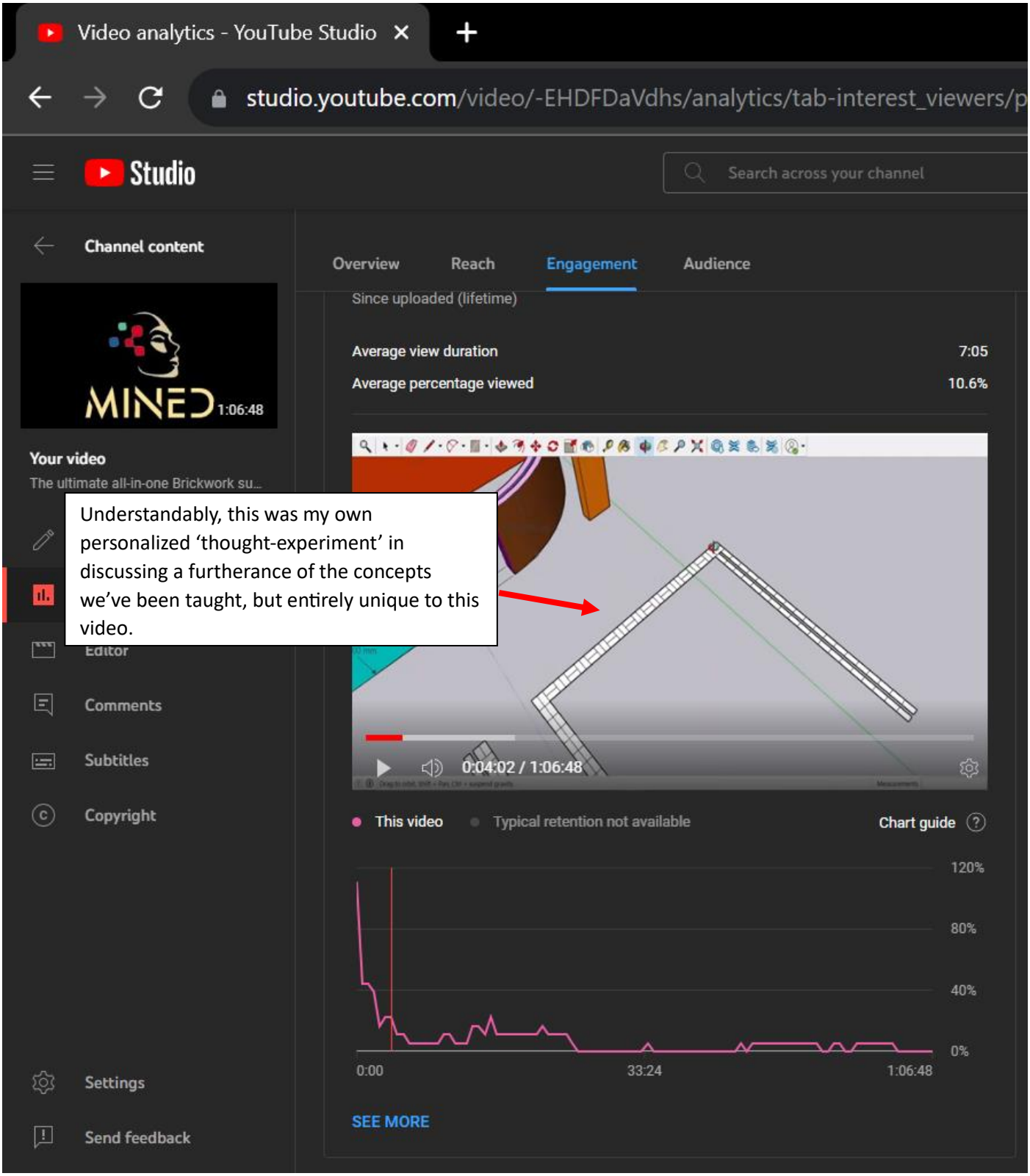
So what exactly does this feature look like on YouTube analytics?

The following are screenshots of peaks in views, which understandably happens to coincide with summaries and known areas of difficulty (hence it's presence in the video)





This one was the foundations for the entire video, a decision tree of separated items and sub-items to assist in the 'filing' of all the concepts into memory – this was backed-up by verbal remarks.


Video analytics - YouTube Studio
studio.youtube.com/video/-EHDFDaVdhs/analytics/tab-interest_viewers/p
Studio
Search across your channel
Channel content
Overview
Reach
Engagement
Audience
Since uploaded (lifetime)
Average view duration
7:05
Average percentage viewed
10.6%
MINED
1:06:48
Your video
The ultimate all-in-one Brickwork su...
Understandably, this was my own personalized 'thought-experiment' in discussing a furtherance of the concepts we've been taught, but entirely unique to this video.
Editor
Comments
Subtitles
Copyright
0:04:02 / 1:06:48
This video
Typical retention not available
Chart guide
120%
80%
40%
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1:06:48
SEE MORE
Settings
Send feedback

Video analytics - YouTube Studio
studio.youtube.com/video/-EHDFDaVdhs/analytics/tab-interest_viewers/p
Studio
Search across your channel
Channel content
Overview
Reach
Engagement
Audience
Since uploaded (lifetime)
Average view duration
7:05
Average percentage viewed
10.6%
MINED
1:06:48
Your video
A tricky point in the content, something I learnt very well whilst 3D modelling and describing the process – here I peeled back a wall and actually drew how it is measured.
0:21:35 / 1:06:48
Editor
Comments
Subtitles
Copyright
This video
Typical retention not available
Chart guide
120%
80%
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0%
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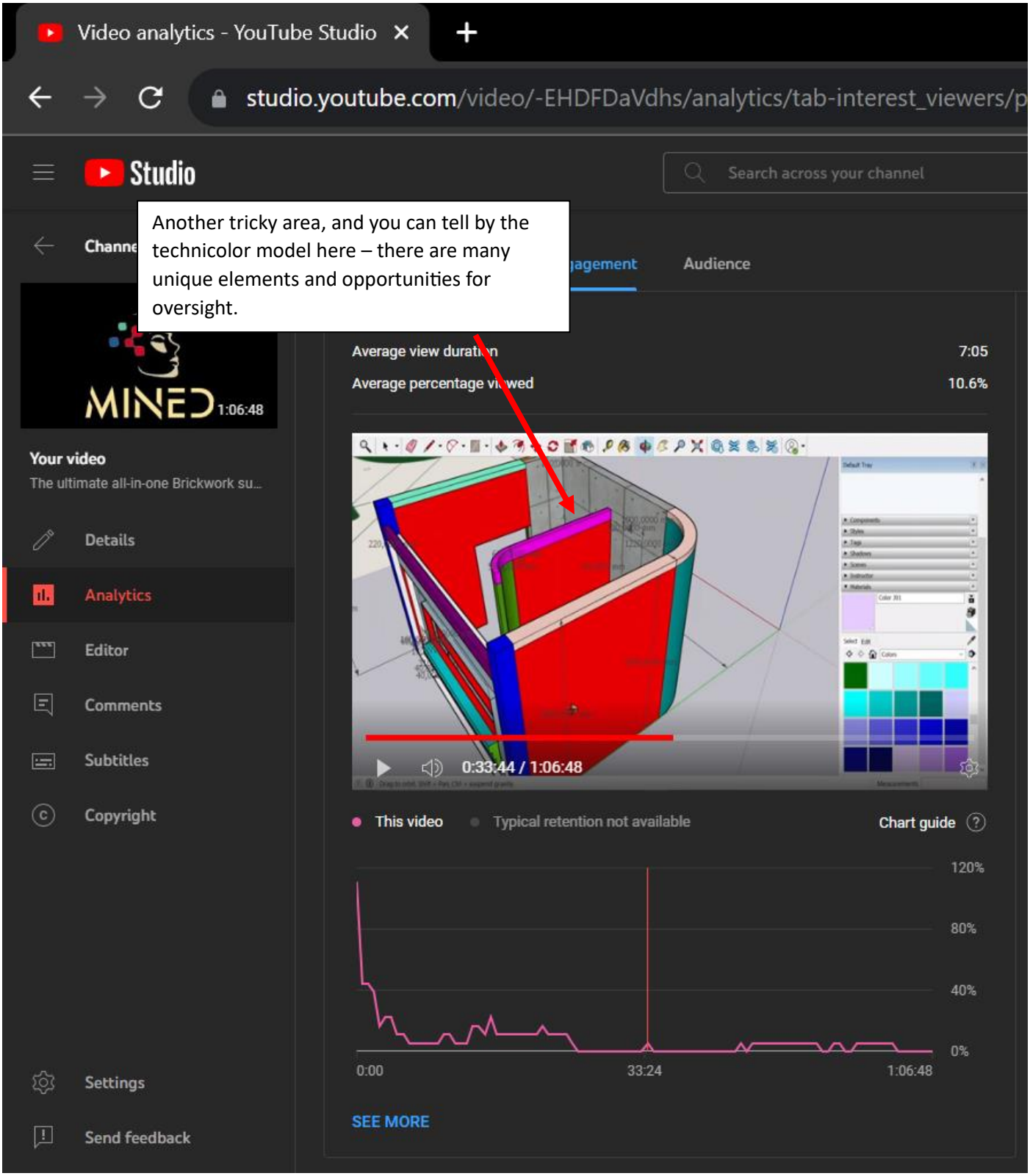
Settings
Send feedback
SEE MORE


Video analytics - YouTube Studio
studio.youtube.com/video/-EHDFDaVdhs/analytics/tab-interest_viewers/p
Studio
Search across your channel
Another tricky area, and you can tell by the technicolor model here – there are many unique elements and opportunities for oversight.
Audience
Average view duration
7:05
Average percentage viewed
10.6%
MINED
1:06:48
Your video
The ultimate all-in-one Brickwork su...
Details
Analytics
Editor
Comments
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This video
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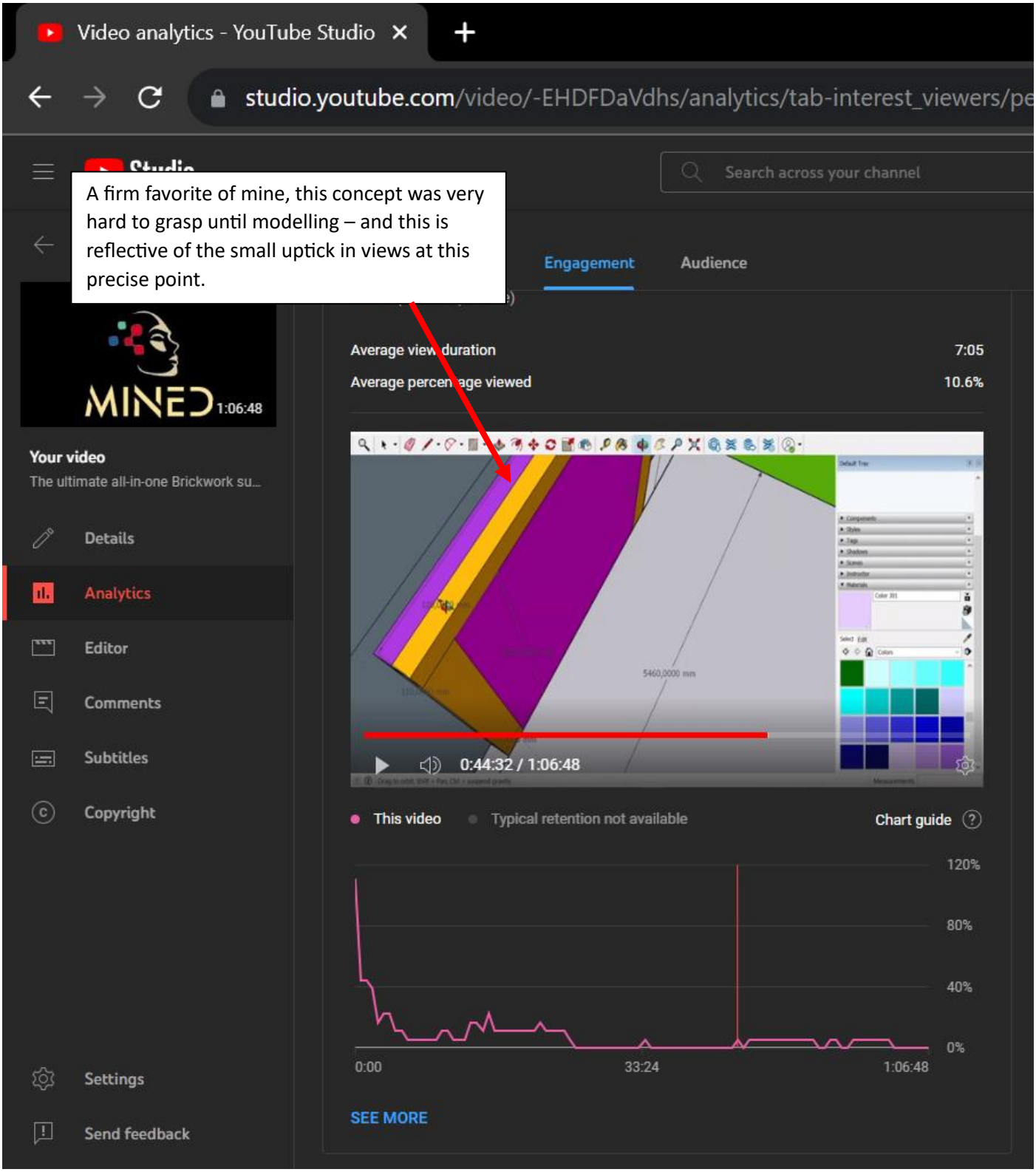
SEE MORE


Video analytics - YouTube Studio
studio.youtube.com/video/-EHDFDaVdhs/analytics/tab-interest_viewers/pe
Search across your channel
A firm favorite of mine, this concept was very hard to grasp until modelling – and this is reflective of the small uptick in views at this precise point.
Engagement
Audience
Average view duration
7:05
Average percentage viewed
10.6%
MINED
1:06:48
Your video
The ultimate all-in-one Brickwork su...
Details
Analytics
Editor
Comments
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0:44:32 / 1:06:48
This video
Typical retention not available
Chart guide
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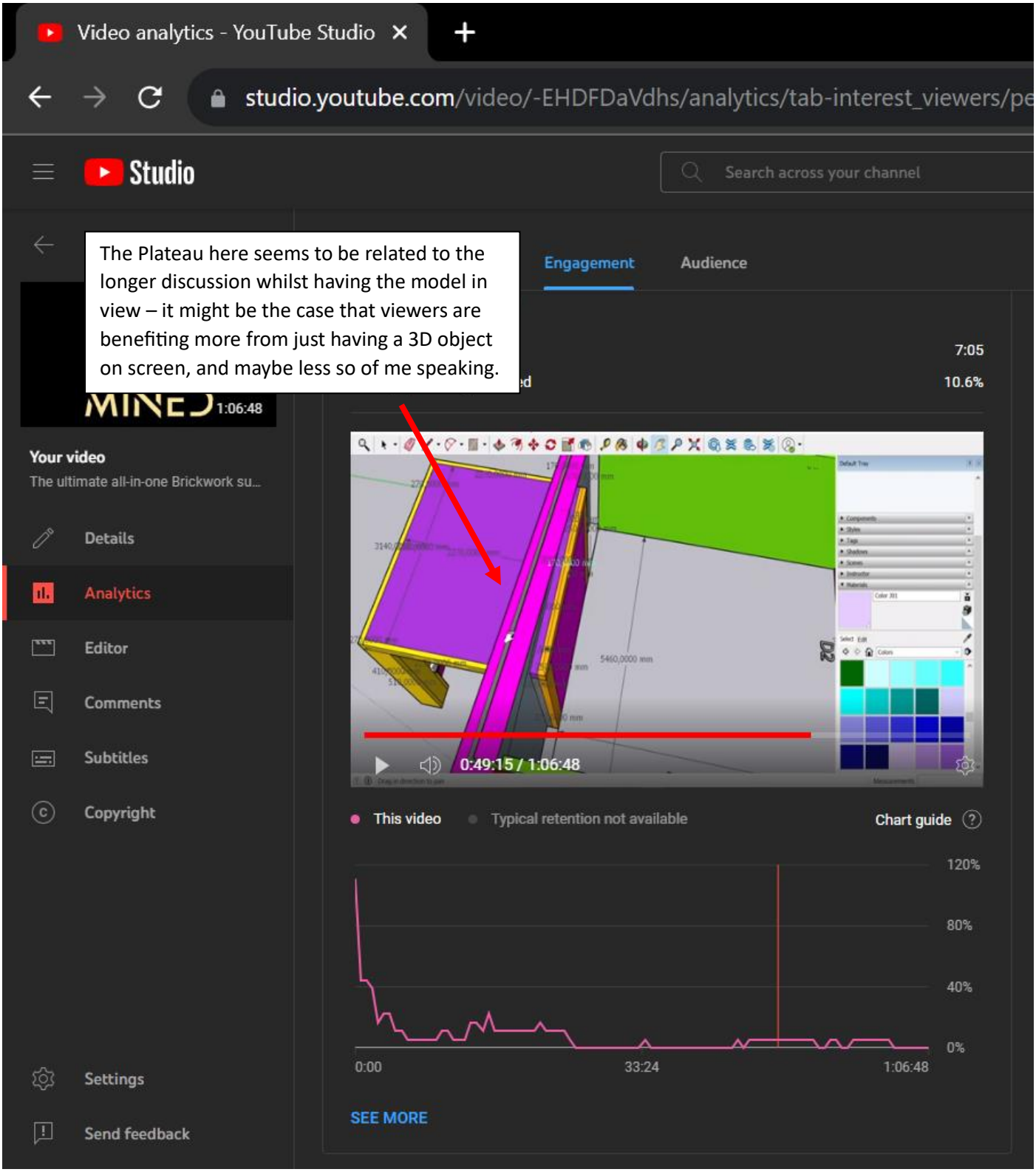
SEE MORE


Video analytics - YouTube Studio
studio.youtube.com/video/-EHDFDaVdhs/analytics/tab-interest_viewers/pe
Studio
Search across your channel
The Plateau here seems to be related to the longer discussion whilst having the model in view – it might be the case that viewers are benefiting more from just having a 3D object on screen, and maybe less so of me speaking.
Engagement
Audience
7:05
10.6%
1:06:48
Your video
The ultimate all-in-one Brickwork su...
Details
Analytics
Editor
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Subtitles
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Chart guide
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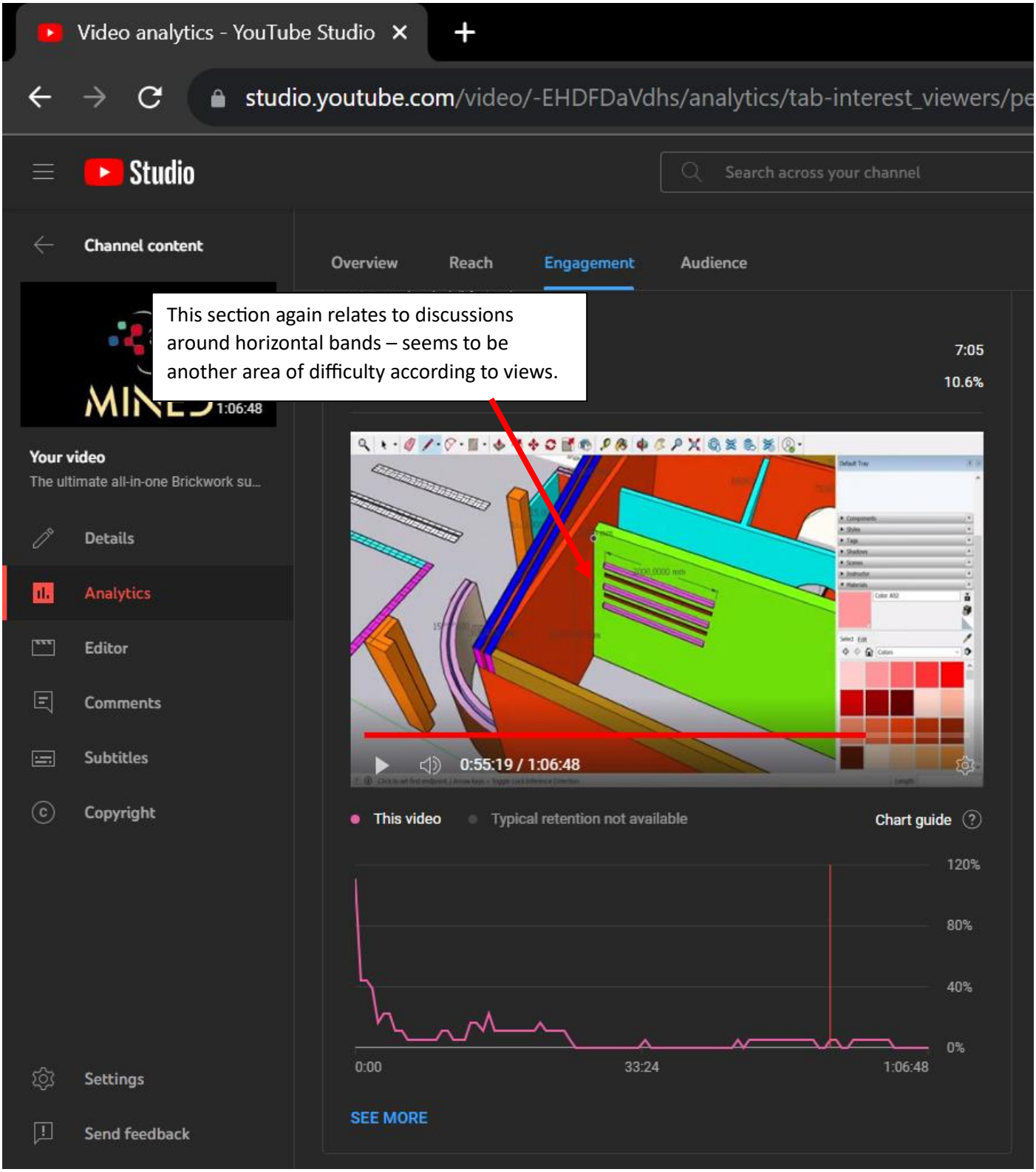
SEE MORE


Video analytics - YouTube Studio
studio.youtube.com/video/-EHDFDaVdhs/analytics/tab-interest_viewers/pe
Studio
Search across your channel
Channel content
Overview
Reach
Engagement
Audience
This section again relates to discussions around horizontal bands – seems to be another area of difficulty according to views.
7:05
10.6%
1:06:48
Your video
The ultimate all-in-one Brickwork su...
Details
Analytics
Editor
Comments
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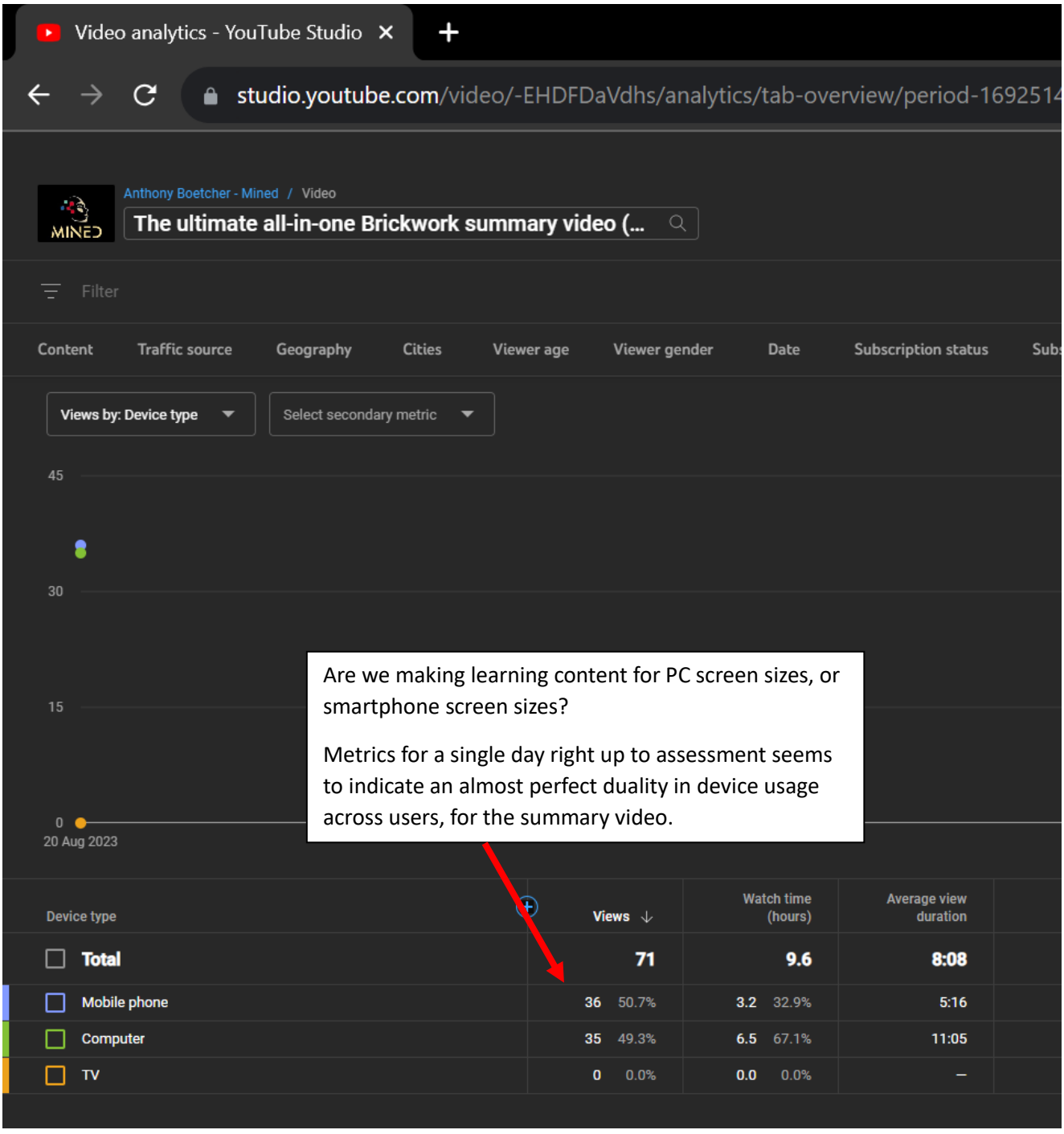
This video
Typical retention not available
Chart guide
120%
80%
40%
0%
0:00
33:24
1:06:48
SEE MORE
Settings
Send feedback

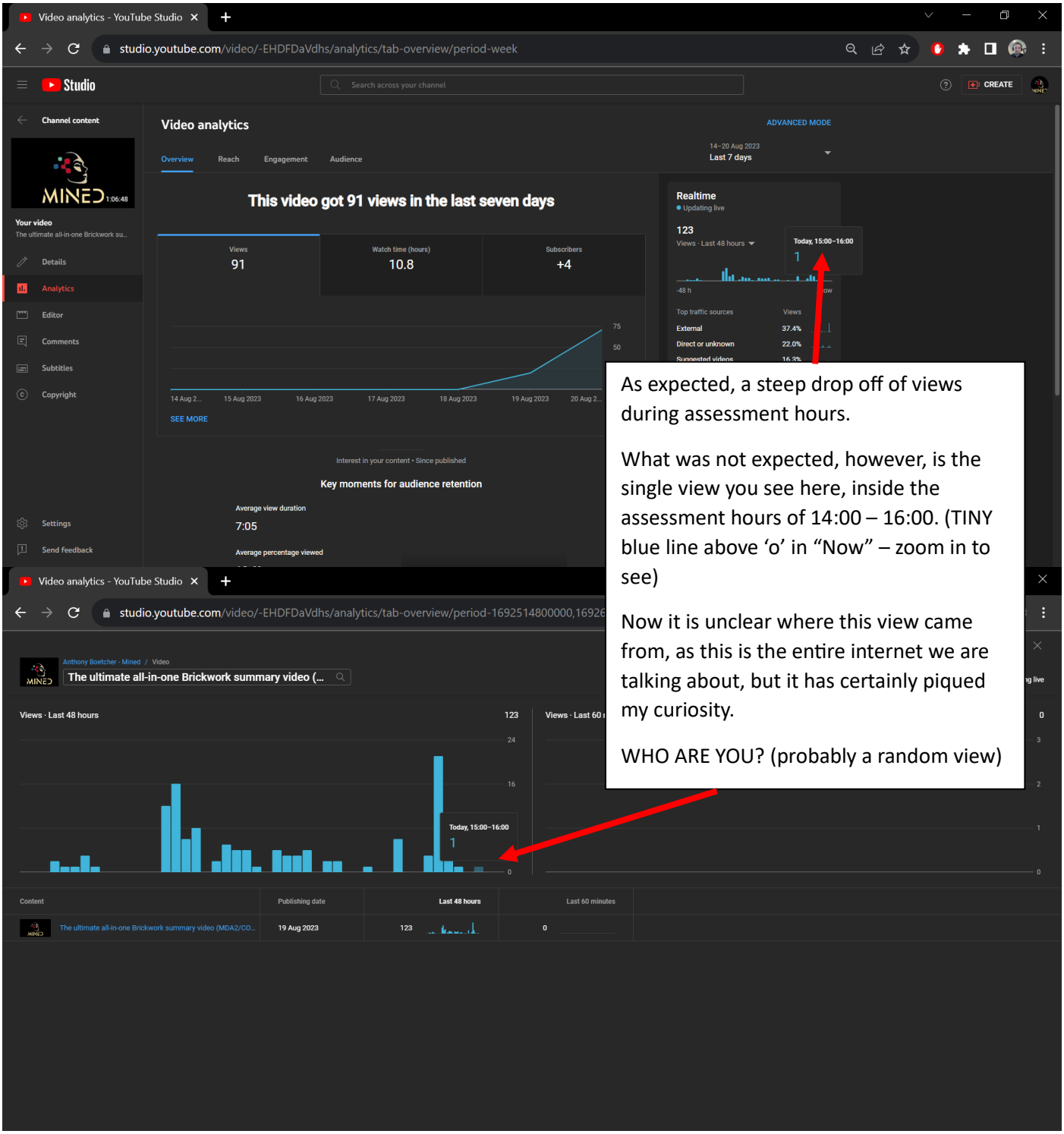
MORE INTERESTING INSIGHTS

(By the way, the fact that your observed 20 pages in proves my point – we are visual creatures, we (humans) want audio-visual feasts, not black and white 2D information)

Smartphones almost outcompeting PC for watching YouTube tutorials?



And let’s not turn to the dark side…



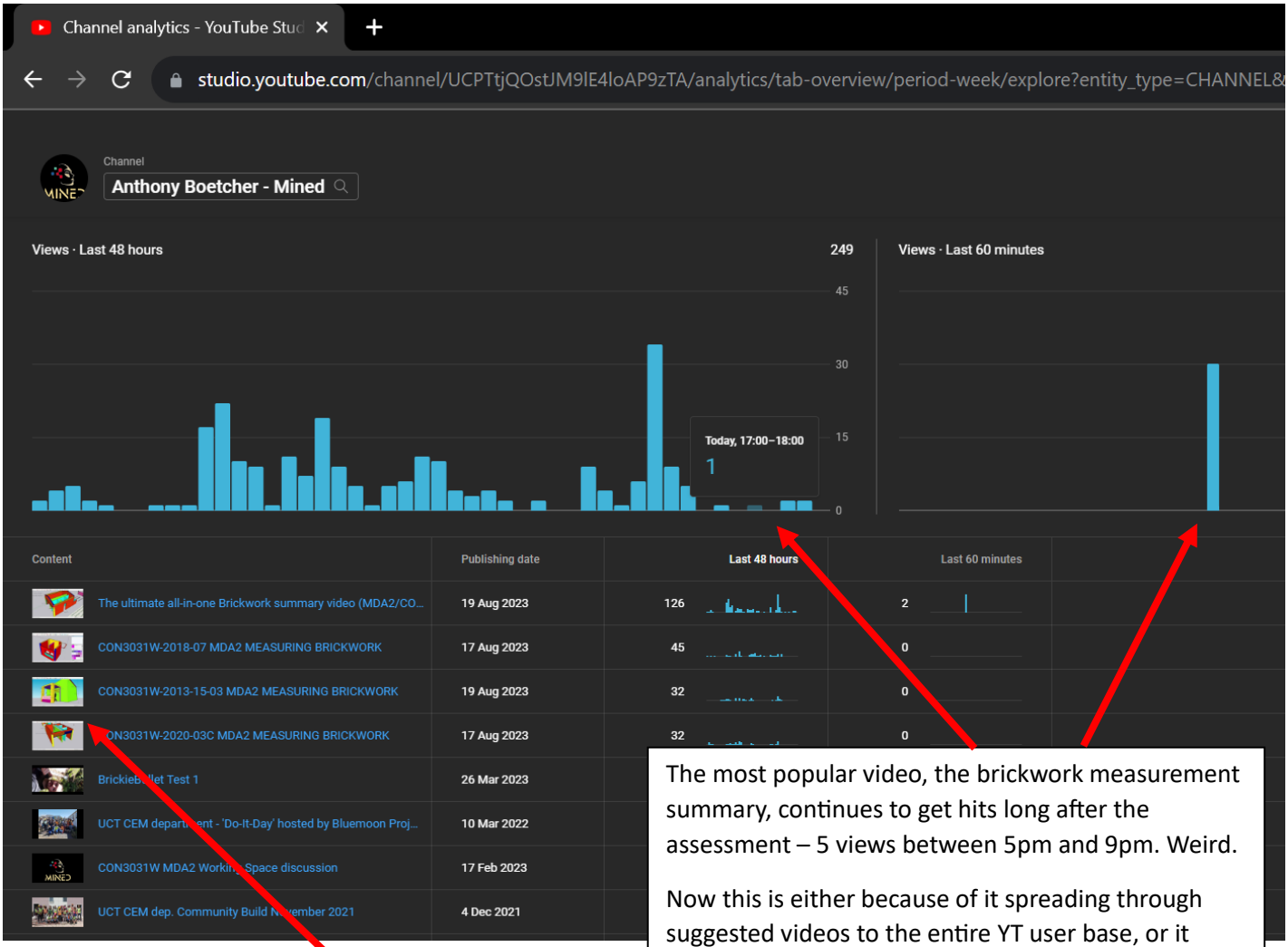
As expected, a steep drop off of views during assessment hours.

What was not expected, however, is the single view you see here, inside the assessment hours of 14:00 – 16:00. (TINY blue line above ‘o’ in “Now” – zoom in to see)

Now it is unclear where this view came from, as this is the entire internet we are talking about, but it has certainly piqued my curiosity.

WHO ARE YOU? (probably a random view)

And this is pretty weird…



The most popular video, the brickwork measurement summary, continues to get hits long after the assessment – 5 views between 5pm and 9pm. Weird.

Now this is either because of it spreading through suggested videos to the entire YT user base, or it continues to enjoy sharing and views amongst the immediate social circles – there is no way to differentiate between these two.

It appears this video broke some sort of 'viral' threshold, because even after taking this screenshot, it continued to get views per hour, clearly NOT the students the video was intended for.

Admittedly, at this point I have changed the video thumbnails to show the gorgeously colorful 3D models – much more exciting to click on right?

Putting the YOU in Youtube

Now I know what you're thinking "Anthony, I also want a Youtube channel so I can create tailor made content that addresses a wider audience, creates change and impacts lives".

Well firstly, that's great news! I don't believe anyone receives these ideas or 'callings' by accident – it is your duty not to ignore, but act on it. It is a crying shame to think of all the ideas and dreams not executed. It came to your mind. Now let's make it real.

Secondly, you must have something worth saying… either there is a need or you have identified a niche. The only way to find out if either are true is by taking the first step and putting content out there. I remember the first real barrier (for me at least) is letting go of the fear that you and your voice will be judged. In fact, even your errors might be judged – LET IT GO. You are human, I think viewers appreciate that you have the stones to take the leap, at this point you could make a total fool of yourself and still be appreciated as a maverick. You must have a "I don't give a s%#t attitude" (but not too reckless! There is a fine line here.)

Thirdly, get recording! The learning process can take some time, including mic set-up, recording and editing software usage and getting comfortable with Youtube Studio. BUT why not start small? Even a well produced 2min video will give you enough evidence to continue your work, alter it, or give up entirely (letting go is a very difficult thing to do, not a lot is said about the calculated 'giving-up' of concepts. But it must be done to optimize your efforts.) But all of this is well within everyone's reach (pun intended). Don't believe me?

1) I use "Obs studio" for recording, very powerful free software with tons of customization options
2) "G-Ink" is occasionally used where you want to draw over any visible screen you are recording – again, very useful free software originally produced by MIT (Yes, THE MIT)
3) The last thing is whether you intend to use hardware - drawing tablets, microphones, maybe a headset and software for video editing – these do carry a price tag, but do your research and you can get these costs waaay down. And that's IF you really need any of these.

I'll close with one of my favorite quotes by Elon Musk "When something is important enough, you do it even if the odds are not in your favour."

You do it even when it scares you.

You do it even when you're not ready.

You do it when nobody else is doing it.

You do it when the odds are stacked against you.

Because it is important enough.

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