

Young people and data

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SPEAKERS

Guy Clapperton, Helena Schwenk



Guy Clapperton 00:07

Hello and thanks for streaming the Near Futurist, a show presented by me, Guy Clapperton. This is a fortnightly look at the technologies that are going to affect our lives in - there's a clue in the title - the near future. Today, I'm going to look at education again, this time: young people and what's happened to the data literacy. I'm pleased this episode to welcome someone who's done some research around 16 to 21 year olds in the UK, the US and Germany. Some of the headline findings include that young adults don't think their education has given them the confidence and skills to use or communicate data. Businesses today struggle to get their employees to effectively manage and act upon their data. With the natives as the report calls them digital natives data natives, we can come on to that in a second, not reading themselves. Hi in data literacy. And closing the data literacy gap is essential in shaping major roles in the future careers of young people not to mention shaping our society for the better. My guest is the global market intelligence leader at exosome. Helena Schwenk. Welcome



Helena Schwenk 01:16

Thanks Guy, thanks for the intro and great to be here.



Guy Clapperton 01:19

Perhaps you could start off by telling us a little bit about Exasol.

H

Helena Schwenk 01:22

Exasol is a leading analytics database company, we're really interested in this topic around education of young people and, and data literacy. Because we believe the ability to analyse data, to do clever things with data such as identify patterns and turn them into insights is becoming one of the key skills in the data led economy.



Guy Clapperton 01:50

Yes, of course, I think also as a technology company, there's got to be a certain level of you know, this is your future you're talking about as a corporate entity, you've got to have those educated people. And that's not a criticism. It's just a fact, I think it's good to kind of take us forward. And your report suggests I believe that education has not gone 100% right for people in the data space. So could you perhaps give me an idea of what it says and where education is not perhaps serving them as it could.

H

Helena Schwenk 02:18

We conducted this survey because we wanted to understand these crucial issues, we wanted to understand the level of data use by young people their experiences of data, perceptions, around data literacy, and also their attitudes towards data related careers. And what we are seeing in our research is actually there's a bit of a disconnect between what young people believe is important in terms of data skills, and experience on what's actually happening in the educational system. Indeed, the majority of 16 to 21 year olds we surveyed want data skills to be more prominent in their education and their learning. But they don't feel that courses, the topics and certain aspects of the curriculum, have given them the confidence and skills to use data in the way that they want to in the future. We actually spoke to a teacher, as part of our research Ferdinando Paul, who's the head of economics and business in a UK secondary school. And his view was very interesting. You know, he said that data skills for his pupils tend to be focused or grounded in maths and stats and computer science. That's definitely the perception by many of his students. And he did believe that, of course, those subjects are very important. But actually, when we think about data and data skills, it's more than that. It's actually about cultivating a full range of data skills, the ability to interpret data to draw insights from that data, to tell stories, but also to ask the right questions from that data. So it requires lots of curiosity and creativity.



Guy Clapperton 04:23

That makes sense. Now I noticed the poll classifies young people as d-natives, is that data natives or digital natives?



Helena Schwenk 04:31

So we've all heard of digital natives, you know, those young people who have little or no memory of the world as it existed before smartphones, so d-natives is actually Exasol's twist on this term. And in the context of this research, the D refers to data natives, so they've not only grown up as digital natives but also in a data driven world.



Guy Clapperton 05:00

Okay, let me put the point to you. I'm wondering whether we haven't as a generation been a bit guilty of taking that for granted, as you say, people who are now in their 20s - have, they haven't grown up in a world without smartphones? So we call them digital natives, I accept the data natives term is great being a useful one. But have you perhaps thought they just know this by themselves almost by osmosis or something rather than taking the trouble to teach it?



Helena Schwenk 05:25

Well, I think, you know, there's a lot of assumptions built into the skills and education and learning of this generation of this age range. They are native to mobiles to, to apps to technology, then older generations, for example. So it's not necessarily a stretch to assume that the natives are confident and have some of the necessary skills and data competencies for some of the things that are expected in a future world work, whether that's effective data analysis, whether it's storytelling, whether it's about being able to visualise data and pull out key trends and patterns, and outline outliers. And what's interesting to us really is that our survey recognised that the connection that D-natives have to data isn't necessarily as hard wired, as you would expect. So for example, they didn't fully realise that a lot of their everyday online activities involve a lot of data capture and analysis and consumption behind the scenes, you know, whether they using fitness trackers, for example, or whether they're being served up recommendations on on their iPhones or mobile devices. So the rub really is that the experience with tech and and being born into a data driven world doesn't necessarily mean that the DNA test that we spoke to feel fully equipped to translate this experience into data skills and and data literacy in the real world in the world of work.



Guy Clapperton 07:37

(MUSIC PRECEDES ADVERT INSERT) Do you want to sound as confident as my interviewee in this episode? If you talk to the press or other media, are you worried you'll be misquoted or they'll just publish their story and not yours? Clapperton Media Associates can help with coaching, drop me a note guy@clapperton.co.uk and we'll arrange a time for an exploratory call. Now, back to the podcast. (MUSIC INDICATES RETURN TO THE PODCAST) I'm wondering if we have an issue here where a lot of sort of what we might call digital immigrants or data emigres - my sort of age, people in their 50s and you know, a bit below - are trying to manage these D-natives. But we're loading them with our expectations, rather than understanding where they actually are. Is that something that you think?



08:25

Well, yeah, I think it's an interesting discussion to add. And I should also say that that's my sort of age too. So I'm in a similar position. But I think there's been extensive studies carried out by a lot of research organisations that have defined workplace behaviours, and attitudes, based on different segments of the population, and we call them baby boomers, Gen X, right the way through to digital natives, and we call them D-natives. And I think it's not necessarily as clear to cut to say that everything comes down to what generation you belong to, and the skills and the attitudes and behaviours that you may display. So interestingly, when we looked at the survey data, being in charge, leading a team making decisions, were not the key drivers. For young people, the vast majority around 65% made it clear that they actually want to learn those new skills, specifically around data and gain new experiences. And this rated higher than actually earning a lot of money.



Guy Clapperton 09:49

What were the numbers like how many young people did actually identify as data literate? And we have to talk about age, they are the future.



Helena Schwenk 09:56

Yeah, sure, so this was actually an interesting one. In our research 54% were either not that familiar or not at all familiar with the term data literacy. So you can assume by that, that they weren't necessarily identifying as data literate. However, the majority actually feel skilled in finding information. Almost three and five respondents felt skilled in problem

solving, and over half felt skilled in asking questions and presenting an argument through data. So to us this suggests that the connection of these skills that I've I've mentioned to being data literate is not straightforward, you know, young people's perception of what it is to be data literate, is potentially quite blurry. And the term is one that isn't universally understood by young people.



Guy Clapperton 11:08

That's an interesting point. I'm not a young person, except at heart, of course, but I'm thinking through the the term data literate. If you'd ask me, can I find something on Google? The answer is yes, of course. Now, by a definition we might bandy around, that could mean I'm data literate. But if someone were to give me a whole bunch of Excel spreadsheets and say, could you please build out some analytics based on this and throw in some big data, guess who's the biggest data illiterate on the planet? What exactly do you mean by data literacy when you're asking these questions?



Helena Schwenk 11:40

For us, it's about being able to work fluently with data. It's about being able to read data, interpret data, but also to communicate data in your everyday working lives, and also personal lives. That's what constitutes a data literate person. But I think it's also important to add that there are different levels of data literacy, as you've just explained, and what we're thinking about is that we need to raise the levels of data literacy. And, you know, this survey is definitely giving us an indication of that. And we need to raise it. So there is a sort of minimum standard. Now, not everyone needs to be professional in terms of their use of data, not everyone needs to be a data storyteller. But we need to help young people feel comfortable with the skills and concepts around data, so they can use it effectively.



Guy Clapperton 12:51

I wonder if there's a confidence, or indeed self identification issue here, though, you, you may well find, and I don't know whether you have the data, and I'm not criticising if you haven't. You could be talking to a number of young people who will say they don't have a clue about data but they'll be using Google or other search engines, you know, Bing is available, every day of their lives to find stuff.



Helena Schwenk 13:13

Yeah, so I think, you know, data literacy, as we're talking about here, is a term that's grown up in business environments. And we've seen a lot of a lot of it in industry research, as well, you know, to underline that need for more and more people to be fluent using data. And I think what our survey is highlighting is that this term, this terminology has not necessarily translated into a non work environment or an educational setting, for example, so that many of the young people we spoke to don't really identify with that term. But perhaps they're demonstrating behaviours they have experience that would be contrary to that.



Guy Clapperton 14:04

You've got a bunch of young people who if your sample is representative, don't identify as being terribly data literate, rightly or wrongly, but they don't feel confident putting themselves forward in that way. What's the impact? On society and business, would you say?



14:20

Well, I would just say there were plenty of positives to being a D-native. You know, we believe that many of the young people that we surveyed, many young people generally will be our future data champions, you know, they're not only going to be using data and analytics, in you know, their future work to help businesses solve different data challenges, but also these skills can help tackle some of our biggest challenges, you know, such as climate change, vaccine discovery or health inequality. And our research suggests that people, and young people in particular, are really interested in this. And this is an important part of their future view. So 65% of respondents said it was important that they work they do is actually going to make a difference to the wider society. So I do believe the appetite is there. But perhaps the path to get there isn't always clear. And I do think that, you know, with better education with better awareness with better training and development around data, and data literacy, you can create a better and more affluent data driven culture, really, because it's easy to say your data driven if the data supports your decision making. But it's also equally as important to understand if the data doesn't support your decision. So the ability to question data, its provenance, and its value is really important. So I think this whole concept of data literacy and identifying with it, and being able to raise data literacy levels is really important.



Guy Clapperton 16:32

Another area I'd like to look at is whether you have any data on from the survey on the different demographics, and how they felt about being data literate, whether you have

anything on gender, or perhaps ethnic ethnicity.



Helena Schwenk 16:46

Well, we do have some not on ethnicity, but we do have some interesting findings when it comes to gender, and the split between male and female. So our research suggests that there are different views about competencies around data. So around 19% of young females in our survey strongly agreed that they were capable of working with data. But this is in comparison to 26% of young males. So there is a confidence level perhaps there as well. And meanwhile, more than half of males, so around 55% of males see working with data as forming a major part of their career going forward. And this is compared with just 48% of females. And I think this feeds into a wider debate around diversity in the tech industry, as well. And we know that this is a problem, you know, disciplines, such as data science, for example, research that I'm reading, do suggest that many women do not feel they have a good understanding of what a data science career is, on what the day to day life of a data scientist would entail. And this very much complements some of the things that we're finding in our research, too.



Guy Clapperton 18:32

I was rather hoping some of that would have gone away by 2021, but apparently not. And you're doing the right thing to highlight it, of course. Do we have any ideas? Is it actually your role to put ideas forward as to what we can do about this - you as Exasol, not you as Helena?



Helena Schwenk 18:51

Yes, I would definitely think this is -



Guy Clapperton 18:54

I mean I'm sure Helena will have very strong opinions!



Helena Schwenk 18:56

Well, as you know, I am a woman in tech. And you know, as I've alluded to, I'm not a D-native, and I definitely believe we're in a better place. You know, I have seen a lot of progress over the decades, but more needs to be done. When I started in the tech industry as a female, I was the exception, I was one of only a handful of females on my degree

course that focused on Computing and Information Systems. So I do believe, you know, we can contribute to this discussion and raise the awareness about the need for more diversity in tech and in data related careers. But when we talk about diversity, it's not just about gender, you know, also looking at race and age. And there are plenty of good reasons why you might want to broaden the diversity of your teams in your organisation because as we know, as a lot of research backs up people with different backgrounds, and it's experiences often see the same problem in very different ways and therefore can come up with different solutions, different ways to tackle this. And as I've explained, this is going to be really important as we become more data driven as businesses. But as we try and tackle those really big problems that are challenging businesses and society, such as climate change, such as you know, drug discovery, and so on, and so, so forth. But I also believe there's a really good case for it. There's a really good business case for having more diversity, because diverse leadership teams, for example, can lead to better innovation within organisations. And this can be aligned to improved financial performance.



Guy Clapperton 20:47

Yes. And also, of course, you get to choose your talent from the whole talent pool rather than just the ones that look like you. Because they subconsciously make you feel comfortable, and there's got to be a good thing. So finally, could you tell me how people can find out more about Exasol and what you do?



21:01

Yes, of course. So if you're interested in the survey and the research report that I've referenced, then please do take a look at the datadreamer.com website, you'll find the report there and lots of really interesting interviews and insights about D-natives. And if you're interested in connecting with me, then I'm on social media. So you can connect in the usual way.



Guy Clapperton 21:31

Helena Schwenk, global market intelligence leader at Exasol, thank you for joining me. Thank you very much. And thank you for listening. That was the near futurist with me Guy Clapperton, as always, I'll be back in two weeks time. Thank you.