

THE "CLEVER SUCKER" – THE IMAGE OF RESEARCHERS AMONG HUNGARIAN UNIVERSITY STUDENTS

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ABSTRACT

"A researcher is a 'clever sucker' who serves humanity but is not appreciated or not appreciated enough for it. He/she has a lot of work, but mostly little pay. There is some excitement in what he/she does, but it involves a lot of fiddling. The researcher has to go in many directions, but there are many dead ends. Thus it takes a very strong determination to choose this path. Without dedication, perseverance and patience, you cannot succeed." In short, this is the outcome of a qualitative survey among students on the perception of research careers in four universities. The focus groups made up of university students provided a lot of insights into what the image of researchers working in science and academia looks like from the outside and what could possibly make research careers attractive to members of Generation Z.

Keywords: *research, research career, image, perception, focus group, qualitative study*

1. INTRODUCTION, THE AIM AND METHODOLOGY OF THE QUALITATIVE RESEARCH

At the end of 2021, a research team led by the author of this article mapped what Generation Z, and more specifically university students, think about innovation. The first step of the two-phase research was a qualitative survey. On the one hand, the exploratory focus group procedure formed the basis for the second phase, a targeted questionnaire survey quantifying the significant points of the problem. On the other hand, a characteristic of qualitative research is that the exploration of perceptions and attitudes provides concrete results that can be interpreted in themselves, providing the basis of which action directions and recommendations can be formulated in relation to the research questions (Schleicher 2007, Babbie 2020).

In the qualitative phase, focus groups were used. This is an interview technique in which appropriately selected members of the target group participate in a joint interview. For methodological reasons, a group usually consists of eight people. The advantage of this method over individual interviews lies in the interaction of the participants in a lifelike group setting. The group situation provides an insight into how group members relate to, think about and feel about an 'object', product, service or concept (Vicsek 2006, Mitev et al 2015, Cyr 2019, Straus 2019, Krueger – Casey 2014, Morgan 2018, Stewart – Shamdasani 2014). In addition to the specific answers of the respondents, the comments attached to the response, gestures, and group dynamics all carry valuable information. One of the main strengths of focus group research is that it is better suited to 'modelling' opinion formation and debate than other methods.

The focus group is one of the most suitable tools to clarify an exploratory research question or to formulate hypotheses. It is also recommended for developing a general picture and gathering background information; generating creative ideas and new thoughts; identifying potential flaws in a draft; and gathering associations concerning the research question. In order to take into account the different life situations of the target group members (university students) and the resulting differences of opinion and views, the study sample was filtered according to the geographical location of the university of education and the field of study of university education.

We distinguished 3 groups according to the geographical location of the university:

- 1) Western Hungary (University of Sopron)
- 2) Budapest (Budapest Metropolitan University – METU, Budapest University of Technology and Economics – BME)
- 3) Eastern Hungary (Neumann János University, Kecskemét)

In terms of the field of university education, the research covered 3 groups:

- 1) Participants in economic courses
- 2) Participants in technical courses
- 3) Participants in social science courses

In order to get to know the widest possible spectrum of feedback and attitudes, four focus groups were held. This made it possible to identify the relevant aspects of university students and to control the distorting effects of any opinions that might appear accidentally.

Setup of the qualitative, focus group study		
Group 1 (Sopron)	Group 2-3 (Budapest: METU, BME)	Group 4 (Kecskemét)
<ul style="list-style-type: none"> ➤ 18-24 years old ➤ Mixed composition in terms of the field of university education 	<ul style="list-style-type: none"> ➤ 18-24 years old ➤ Mixed composition in terms of the field of university education 	<ul style="list-style-type: none"> ➤ 18-24 years old ➤ Mixed composition in terms of the field of university education
<ul style="list-style-type: none"> ➤ Men and women mixed ➤ Even age distribution within the age zone in all groups ➤ At least 2 people per group who have participated in a Students' Scientific Association (TDK) <ul style="list-style-type: none"> ➤ At least 2 people per group who work alongside their studies ➤ At least 2 people per group who have their own business or are involved in a family business 		

*Table 1: Main characteristics of the qualitative focus group study, sampling
 (Source: own research, 2021)*

The qualitative research covered several areas, such as: attitudes of Generation Z towards innovation; Meanings and perceptions of innovation; Participation in innovation; Aspects of innovation promotion in the 18-24 age group; Characteristics of innovative thinking; The meaning of the word startup and attitudes towards it; Entrepreneurship and launching startups; The ideal startup organisation; Self-perceptions of Generation Z; and last but not least, perceptions of research careers. In terms of the latter, the following questions were discussed with students during focus groups:

- "What do you think of a career in research? What do you think of the words research, researcher?"
- "How do you see research and the results of research affecting your immediate environment and your own life?"
- "What do you think are the ways to make scientific research as a career interesting for the 18-24 year old generation Z?"

In addition, we also asked them to describe what they think a typical researcher looks like: "Imagine that we are waiting for a typical researcher. Suddenly there is a knock on the door and here he/she is. Describe what he/she is like. (Look, appearance, interior, marital status, financial status, health, gender, age, grooming, character, dress, style of behaviour, etc.)"

- *How does he/she live?*
- *What is most important to him/her?*
- *Does he/she have goals and plans? What are they?*
- *How successful is he/she, how satisfied is he/she with his/her life, is he/she happy?*
- *What does he/she do in his/her spare time? Does he/she like to have fun? How? What does he/she spend his/her money on?*
- *How does he/she behave: in a group of friends, with strangers, with men, with women?*
- *How attractive is his/her way of life to you? In what ways would you like to be like him/her and in what ways would you not? Why?*

2. GENERAL RESULTS: PERCEPTIONS OF A CAREER IN RESEARCH

It can be said that there is ambivalence in the researchers' perceptions. In simple terms, the typical view was that the researcher was a "clever sucker" who served humanity but was not or not sufficiently appreciated for it. The first reactions to the word research and researcher were as follows – the information in brackets, in italics indicate what was said in the focus group:

- A smart person who has the innate ability and dedication to research. (*"He/she is quite a clever person, actually, there are people who are born with it in them, that they are a bit more advanced than, say, the average person, they do research on these things, or someone is interested in it, and not everyone is born to do research, even if they want to, but they are not as good at it as someone who is born to it, so to speak.";* *"You can also say that it's a way of life, that he/she thinks about it day and night, 0-24."*)
- The researcher serves the whole of humanity, but it may not benefit the individual, it may not pay off, he/she may not be "rewarded." (*"Actually, it occurs to me that those who do research are not really serving man himself, but rather humanity, because let's say someone starts doing research in physics, whatever, in some discipline, he/she has an idea and not necessarily in his/her lifetime, but maybe one or two years later it will be useful to humanity, but not to that person in his/her lifetime. It's for example a negativ aspect to it.";* *"Yes, the result that he/she succeeded but he/she leaves disappointed."*)

Primary associations with a research career:

- A lot of work
- Low pay
- Excitement
- Lots of fiddling, going in many directions and lots of dead ends
- Testing
- Patience
- Dedication, perseverance
- Learning new information, gaining experience
- Very strong determination

It is fair to say that many young people do not find a career in research financially rewarding. They associate this with conditions in Hungary, where they consider it to be valid. Financial appreciation is also considered to be much more important in foreign companies or in foreign companies in Hungary. Researchers in Hungary are seen as working out of dedication, putting aside their situation, and this is their motivational base. (*"Financially they are ... poor. ... Yes.";* *"There are some topics that are funded by grants, but not everything.";* *"A career in research, the problem is that someone comes up with something really good, but doesn't get there because they starve to death in the meantime. A lot of research careers are that someone does research and if it's not that popular, then he/she has to work on something else besides it."*)

Minimum resources for living, minimum wage is likely. You have to be rather dedicated, you have to be more driven by the feeling that the person who wants to do it, does not necessarily do it because of such external material factors but because of their personal factors, I mean, people who are like that want to change the world.")

According to the participants of the focus groups, in Hungary, a career in research is stressful, especially in the private sector. There are grants that can make a research career rewarding, but it is difficult to plan for. There is ambivalence in the situation, as they find the researchers' job interesting and attractive, but it is a lot of work, which can only be done out of dedication. In the past, interviewees described their generation as being distinctly resentful of the workload and existential insecurity. (*"I used to work in a research company, the fact that you see Hungary as a starting point. ... It was a chemical engineering company, a surface treatment company, but researchers don't just exist, there are universities and companies that have very tough tenders and receive huge sums of money; the research thing, the fact that in our country research is unfortunately now intertwined in such a way that research is done in the university, and the financial situation there is not necessarily perfect, they are not paid as much, that's one thing, but research work involves a lot of setbacks, it's much more stressful than people imagine, it's also a huge pressure, it really is, especially if you're in a competitive company. It's good, and it's very interesting, I liked that part of it, but you have to pick up the pace, there's as much work as in a production company, it's not all like you're there three times a day having coffee for two hours, but it is a good career really, but dedication is needed, that's a fact, but you also have to admit that it involves a lot of work."*) Those who would like to be researchers stressed the importance of the topic of interest. The topicality of the pandemic was a key factor in this assessment. Health issues came to the fore. (*"I mentioned that, yes I did. I'm very interested in the topic itself and how it could be stopped, there are epidemics for which there is no medicine to date, they can only slow it down or alleviate the symptoms."; "I'm mainly interested in diseases. However, I'm a business and marketing major, but I didn't study biology in high school, so I didn't have the opportunity to go to medical school."*)

Aspects that enhance the attractiveness of a research career:

- The results of the research could be of breakthrough significance (*"It could be attractive at the level of revealing how society now feels about certain things and whether that again could help companies in how strongly they need to communicate about something, where the breakthrough could be."*)
- Research work is a creative activity – ambivalence about whether it can be afforded as a hobby (*"Very creative."; "When I'm on a stable footing, with a massive income, then."*)
- It promotes development, innovation (*"He helps us with data that, let's say, promotes innovation."*)

Not attractive in a research career:

- They see the life of the researcher as a lonely, isolated world, where the researcher misses out on a lot of things because he/she is solely focused on research (*"It's such a lonely and isolated world."; "For me it's not because he/she misses out on a lot of things, human relationships, because he/she is focused on one goal, having a good idea that he/she has to do, putting all his/her time into it."*)
- It is risky in the sense that there is a lot of competition and the results may expire in a short period of time. The work invested will not pay off in that case. (*"It's difficult because what if you're doing research on a topic and a year later a much better solution and comes, you find out that it's all been a waste of time."*)

3. IMPERSONATION: 'THE TYPICAL RESEARCHER'

As already mentioned, the focus group participants were asked to try to imagine a typical researcher who has all the hallmarks of a researcher. The projective exercise revealed hidden attitudes to researchers' careers. The impersonation was not clear. Opinions that included contrasts were based on different personal experiences or on various film experiences (e.g. Indiana Jones, The Big Bang Theory). The gender of the "typical researcher":

- More like a man (*"Man. Male. The overall average is a man."; "Male."; "I'd like to think it could be a woman, but because of the stereotype a man comes into my mind."*)
- It could be a woman (*"She's about 40-50, more like a woman. She doesn't care about her appearance, about looks; she cares about being clean and tidy, but her most important topic is not dressing fashionably, her focus is not looks."*)
- Unclear definition of gender (*"It doesn't matter if it's a man or a woman, he/she does research, is dedicated and persistent"; "I wouldn't define that clearly"; "When I hear 'researcher', I think of a picture, and I can't imagine it's only a man; I think of a woman and a man, I can't imagine it's only a man"*).

Age of the "typical researcher":

- Old (*"Wears glasses. Old."*)
- Could be young – The Big Bang Theory series effect (*"It's completely random, in The Big Bang Theory, for example, Sheldon Cooper is a very young man, a twenty-something year old man who won the Nobel Prize, that's what the series is about."*)
- Middle-aged (*"I'd say around 40."; "I'd say 40-50. ... That's when careers tend to be at their peak."; "I'd say 30, under 30 is very rare, over 40 yes, more from 30 onwards." "I'd imagine middle age, above 45, that's when you can really fulfil your potential professionally, not being an assistant, not being an intern and maybe being the leader of something."*)

The characteristics of a "typical researcher":

- Organized (*"Likes order very much."*)
- Curious, passionate (*"Curious. Can be passionate about a subject."*)
- Team player (*"Team player, usually you don't do research alone, there is always a process in a research that takes you further, it needs more people."*)
- Dedicated (*"Because he/she is dedicated."*)

The financial situation of the "typical researcher":

They think it depends on the research topic. A more moderate material prosperity was considered more typical (*"Poor."; "It depends. "; "I know a historian who found meaning in life, you could say, not having much money, barely making a living from all these archaeological finds and excavations, but after finding something, by the age of 40, wrote a book, and suddenly was funded, then getting more money; but at the very beginning when only doing research, one might not be in the same financial situation as he/she is a few years later."; "It all depends on the research topic as well. Maybe someone won't achieve anything in their research, but maybe someone like this archaeologist will, and they'll be recognised in the end."*)

The appearance of the "typical researcher":

It has provoked controversy. Opinions ranged from shabby to very elegant. (*"Elegant."; "Shabby."; "Some people are very elegant and others wear simple everyday clothes."; "For me it is more elegant."; "How they dress depends on what field they are researching."; "The archaeologist and historian I know is quite elegant."; "Manly, modest."; "Well-groomed. Yes, well-groomed."*)

What is most important for the "typical researcher":

Research is a life goal, not just a job (*"Research itself. It's his purpose. It's what he's dedicated his life to"; "Research is the beginning and the goal, it's what he's dedicated his life to"; "To achieve something"; "To achieve results through research"; "He/she has no other goal, whatever is set out to achieve, should achieve it, whatever the field"; "He/she wants a little recognition"; "A Nobel Prize"; "It's usually a warm handshake, a hug or a pat on the back"*)

The behaviour of the "typical researcher":

- An average character in his/her behaviour. He/she is not the centre or the voice of society, but he/she is not on the periphery either. (*"He/she may not stand out, but he/she doesn't close off either. He/she is not the centre, but is not necessarily the most reserved personality. I'd say the person is more average."*)
- Talks a lot in company, but mostly about his/her own research topic. (*"In a company, he/she is happy to talk to anyone."; "And talks a lot."; "About his/her own topic."; "No, he/she is open to new topics, because maybe it has something to do with his/her research."; "But he/she can lead you to his/her own topic."*)
- He/she is a narrow specialist, just doing his/her job. (*"A researcher is always researching, always looking for opinions, always looking for different views on the world, always asking opinions on the subject of his/her preference."; "He/she is always on the job, does it all the time, and then one day collapses from exhaustion"; "It's the Indiana Jones kind of person, up in the cathedral one minute and out in the field the next, this is the way I could imagine the male researcher, and the female one in the same way."*)
- The satisfaction and happiness of the "typical researcher" depends mostly on how much appreciation he/she receives (*"Happy, yes, because he/she is dedicated, thinks that he/she can achieve a very good goal if he/she can figure something out"; "Yes, he/she considers his/her work as a hobby, doing it with heart and soul"; "I don't think he/she is happy"; "I don't think he/she is happy either."; "Because he/she is looking for what is bad and not for what is good, and for that you need to have a very developed, so to speak, social thinking, so that you can think in a way that you can see what is beautiful in life, and that is not characteristic of scientists, maybe it is characteristic of their professional skills, but not of their social skills, and that is why they tend to see the bad aspects, in the social field they tend to see the bad aspects, precisely because they are not the centre of the company."; "I would say he/she doesn't get enough credit for his/her work. There are very few researchers nowadays, there are a lot of people coming up with new things all the time, but very few that have survived at the level of honours, but they're still improving things all the time, it's just that a lot of people don't get that recognition for it. Even a theoretical one, just the title, that he/she is really considered as a researcher, we've mentioned that the salary is really inadequate."*)

4. VISION: WHAT MAY MAKE RESEARCH ATTRACTIVE FOR GENERATION Z?

The typical researcher – if he/she cannot make a connection, for example because he or she uses too much jargon – is less charming and interesting. This opinion of university students is well related to what they have experienced in university lectures (*"If he/she is very clever, he/she is not so nice, I mean, he/she uses jargon to address the audience in a lecture, and three quarters of it is not really clear to us because of the jargon used"; "A know-it-all kind of person."; "He/she can say anything, we won't understand that because of the words used."*) Opinions are divided regarding the attractiveness of the researcher lifestyle. It is considered to be personality-dependent, being more attractive for introverts and people who tolerate monotony (*"It depends on the person, if you can tolerate monotony you can be a good*

researcher"; "Some people are so simple and they get by with it, it makes them happy"; "There are a lot of stereotypes about researchers being very introverted and gray people.")

It is unattractive, people with the opinions below would not like to do research work:

The researcher lifestyle is not attractive because he or she does not feel the necessary dedication to everyday research. For them, it seems to be a tied lifestyle and they think that work does not end when the working hours are over. ("I certainly wouldn't be one. I'm not that much of a researcher, I can't imagine doing research every day, I wouldn't be that kind of person"; "It's a more reserved way of life"; "The researcher takes work home, never stops thinking; I put the work down when the working hours are over and take care of myself, after the working hours I don't want to be thinking about what else I should look at, what else is there."; "It's a bit more of a tied way of life"; "I'd do it, too, because I like 3D, for example, and I can imagine further development in this technology, researching to make it as good as possible, but I wouldn't want to spend my whole life researching day and night or constantly thinking about it. I want to do other things in my life, too.")

It is attractive, people with the opinions below would be keen to do research work:

- The researcher lifestyle is attractive for those who like problem-solving challenges ("Gladly. I like solving problems, if I want to work somewhere I don't want to hate it, I want to do a thing, a job that I like, and let's say if it is problem solving, research, it is something that I like, solving problems, and that's why I'd be keen to do research.")
- It is diverse, always bringing something new, and researchers are doing what they like. ("I imagine it to be more varied, this is too typical for me."; "It can be very varied, in a good case they're doing what they like, within that there's always something new, something different to look at or develop."; "Within their work it's varied, there are always new stories.")

5. CONCLUSION, THE RESEARCHER'S CAREER IN HEADINGS ACCORDING TO UNIVERSITY STUDENTS

Based on the 4 focus groups conducted among university students, the results can be summarised as follows, i.e. this is how young people perceive researchers:

- The typical researcher is a middle-aged male, 40+.
- They are characterised by a sense of commitment to their work.
- They are tidy, curious and passionate, especially about their work.
- Financially, they tend to have a modest existence, but this also depends on how current their research is.
- Their appearance is uncharacteristic, it can be shabby, casual, but very elegant as well.
- For the typical researcher, the most important thing is the success of his/her research and the recognition (professional, moral, financial) that this brings.
- They are average characters who fit in socially but are not the centre of attention.
- They talk a lot about their work, not interested in much else, being specialists.
- Their satisfaction and happiness depend mostly on how much appreciation they receive.
- Overall, they are a kind of "clever sucker."

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