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THE VISION PROBLEMS OF HIGH SCHOOL STUDENTS ABOUT CAREER BUILDING
IN POST-SOVIET COUNTRIES AND TO WHAT EXTENT CERTAIN DIGITAL
PROGRAMS CAN BE EFFECTIVE IN RESHAPING THEIR VISION. A CASE STUDY IN
AZERBAIJAN.

MA Thesis

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Abstract

Title of the thesis: The vision problems of high school students about career building in post-Soviet countries and to what extent certain digital programs can be effective in reshaping their vision. A case study in Azerbaijan.

This thesis examines the common vision problems related to specialization and career building among high school students in many post-Soviet countries, with a particular focus on Azerbaijan. The research questions are as such: (1) What are the common specialization and career building problems of high school students in post-Soviet countries, and how do their limited vision affect their career choices? (2) To what extent can digital programs play a role in reforming the career vision of high school students? The case of “Sophistudent” in Azerbaijan. Data was collected from high school students, university students and graduates. The research qualitatively analyzes the collected quantitative data to identify the problems and evaluate the potential effectiveness of the program as a solution. The findings demonstrate that there is high demand for career guidance programs and the Sophistudent program has a noticeable potential role in transforming students' perspectives, providing valuable insights into potential career paths.

Keywords: career, specialization, students, vision, Sophistudent, post-Soviet, Azerbaijan, career guidance, digital programs.

Table of Content

1. Introduction	4
2. Theoretical overview	
2.1 Theoretical foundation	6
2.2 Literature describing the problems and the role of career guidance programs	7
2.3 Purpose of the study	12
3. Method	
3.1 Research design	13
3.2 Data collection and analysis	13
4. Results	
4.1 Survey with university students and graduates	14
4.2 Survey with high school students.....	18
5. Discussion	
5.1 Findings from the first group	26
5.2 Findings from the second group	26
4.3 Role of digital programs	27
4.4 “Sophistudent” as a potential solution	28
4.5 Limitations	32
6. Conclusion	33
Acknowledgements	39
Appendices	40

1. Introduction

Many post-Soviet countries, including Azerbaijan, have experienced significant changes in their political, social, and economic systems in the last two decades. These changes have brought many opportunities for career development and personal growth. However, the high school students in these countries face significant challenges in terms of career vision and goals due to various factors, including limited access to information, outdated educational systems, cultural norms and economic limits. This literature review aims to explore the vision problems of high school students in post-Soviet countries, focusing on Azerbaijan, and how certain digital programs can be effective in reshaping their vision. The Baltic states - Estonia, Latvia & Lithuania - are excluded from the topic of this research study.

1.1 Vision problems of high school students in some post-Soviet countries:

High school students in many post-Soviet countries are challenged by some insufficiencies that hinder their career development and personal growth. First, the education systems in these countries are often **outdated** and do not provide students with the necessary skills and knowledge for future careers (Mingaleva & Imanova, 2019). This lack of education quality can cause students to have limited career options and limited motivation to pursue their goals. Second, many high school students in post-Soviet countries **lack access to information** about career opportunities and how to pursue them (Kakabadze, 2017). The information and insight problem is thought to be mainly stemming from lack of student counseling services in schools. Such an information shortage causes students to have a narrow vision of their future and limit their career choices. Furthermore, cultural norms in post-Soviet countries can also contribute to vision problems among high school students. For instance, gender stereotypes, though not to the same extent in all post-Soviet regions, may still limit the career choices of female students (Kakabadze, 2017). Finally, economic situations, too, are not pleasant in most of these states which also create barriers for a massive number of people in benefiting from such services.

1.2 Digital programs for improving the vision of high school students:

Several digital programs have been developed to help high school students in Azerbaijan to improve their career building perceptions. These programs use various tools and techniques to provide students with access to information about career opportunities, skills training, and mentoring. For example, the “Career Guidance” program in Azerbaijan uses online resources and personal coaching to help high school students explore their career options and develop the necessary skills for future careers (Mingaleva & Imanova, 2019). Similarly, the “Youth Development” program in Azerbaijan provides students with access to online courses and webinars on topics such as entrepreneurship, leadership, and personal development (Ministry of Youth and Sports of Azerbaijan, n.d.). Moreover, another new program called Sophistudent is claiming a high potential role in leading teenagers to sophistication and more adequate career choices. It is a three-stage program including seminar, consulting and a career test.

1.3 Effectiveness of digital programs in reshaping the vision of high school students:

Several studies have examined the effectiveness of digital programs in developing the vision of high school students. For example, studies conducted by Mingaleva and Imanova (2019) as well as Nasraddinov and Sultanova (2018) found that the “Career Guidance” program significantly improved the career readiness of high school students. The program helped students to explore their career options, develop their skills, and make informed decisions about their future careers. Similarly, a study conducted by Kakabadze (2017) found that the “Youth Development” program in Azerbaijan helped students to develop their leadership and entrepreneurial skills, and increased their motivation to pursue their goals. Given that the Sophistudent is potentially a broader program having almost the same purpose as the others, noticeable effectiveness of the program, if properly advertised and implemented, can be predicted. The program is already in use and getting highly positive feedback from the users, though with low quantities, yet.

These programs provide students with access to information, skills training, and mentoring, which can help to broaden their vision and improve their career readiness. Further research is needed to explore the long-term impact of digital programs on the career development of high school students in post-Soviet countries.

2. Theoretical overview

2.1 Theoretical foundation

The theoretical foundation for this research involves several key concepts related to career development, high school students, and digital programs.

Career development is the process through which individuals identify and pursue career goals based on their interests, values, abilities and personalities. This process typically involves several stages, including self-assessment, exploration of educational and career options, and decision-making. Career development is influenced by a range of factors, including social, cultural, and economic factors, as well as individual characteristics such as personality and cognitive ability (Blustein, 2006).

High school students are a particularly important group when it comes to career development, as they are at a critical stage in their lives when they are beginning to think about their future goals and plans. High school students often lack the knowledge and experience necessary to make informed decisions about their future careers, and may require guidance and support to explore different options and develop the skills and knowledge needed for success (Watts et al., 2020). This lack of information and insight can be observed in many post-Soviet states more than in the Western societies due to outdated educational systems (Mingaleva & Imanova, 2019) and weakly going reform processes (Popov & Wolhuter, 2018), underdeveloped vocational education (Aliyeva, 2019), poor access to information (Kakabadze, 2017) as well as socio-cultural factors (Kakabadze, 2017).

Digital programs can play an important role in supporting career development among high school students by providing them with access to information about different career paths and the skills required for success in different fields. Digital programs can also help students explore their interests and aptitudes, and provide them with opportunities for experiential learning and skill-building (Hartung & Blustein, 2002).

The literature review has highlighted the importance of providing high school students with access to adequate career guidance and counseling services, as well as digital programs that can help them explore different career paths and develop the skills and knowledge necessary for success in their chosen fields. Theoretical perspectives such as Social Cognitive Career Theory

(SCCT) and Career Construction Theory (CCT) can also be useful in understanding the processes through which individuals develop their career goals and plans, and the role of environmental factors in shaping career development (Savickas, 2002; Lent et al., 1994). Career Construction Theory (CCT) focuses on the ways in which individuals construct their career stories and identities based on their experiences and the cultural and social norms of their environment (Savickas, 2002). CCT emphasizes the importance of considering the unique experiences and perspectives of each individual when understanding their career development.

In the context of our study, these theoretical perspectives can be used to explore the vision problems of high school students about career building in many post-Soviet countries particularly including Azerbaijan, and to understand how digital programs can be effective in bettering their views and leading to more sophisticated decisions. These theories suggest that individuals' career views and goals are formed by a complex interplay of individual, environmental, and behavioral factors, and that digital programs can play an important role in providing individuals with access to information and opportunities for learning and skill-building. The theoretical perspectives also highlight the importance of considering the unique experiences and perspectives of high school students in many post-Soviet societies when developing interventions to support their career development.

2.2 Relevant literature describing the problems and the role of career guidance programs

The lack of career guidance and counseling services for high school students and common reasons in many post-Soviet countries has been widely recognized in the literature. According to a study by Kovalchuk and Bazanov (2019), career guidance services are often nonexistent or inadequate in these countries, leading to uncertainty and indecision among students about their future careers. Similarly, a study by Jirgal and Fronkova (2017) found that career guidance and counseling services are underdeveloped in many Central and Eastern European countries, resulting in a lack of awareness and understanding of different career options.

An interesting research conducted by Rzayeva and Taghiyeva (2019) aimed to explore high school students' perceptions of career development and guidance services in Azerbaijan.

The findings of the study showed that the majority of students were *dissatisfied with the career guidance services they received*, and many of them felt that their school counselors lacked the necessary skills and knowledge to provide effective career guidance. *The students expressed a strong desire for more practical career guidance and more information about the job market, as well as for more individualized and personalized guidance that takes into account their interests, abilities, and goals.* Additionally, the study found that gender and academic achievement were significant factors in students' perceptions of career development and guidance services. Female students were found to be more dissatisfied with the services than their male counterparts, and high-achieving students had more positive perceptions of the services than low-achieving students. Overall, the study highlights the need for more effective career guidance services in Azerbaijan, particularly those that are tailored to individual student needs and incorporate more practical career-oriented activities.

The literature also shows the Western educational systems have developed more sophisticated platforms giving various types of career guidance services. In the European context, the European Union (EU) has recognized the importance of career guidance and has developed several policies and initiatives to promote career development among young people. For example, the EU's Youth Guarantee initiative aims to ensure that all young people under the age of 25 receive a good-quality offer of employment, education, or training within four months of leaving formal education or becoming unemployed. The initiative also includes measures to improve the quality and availability of career guidance services for young people (European Commission, 2013).

In the United States, the National Career Development Association (NCDA) has developed a set of guidelines for career development for children and adolescents, which emphasizes the importance of providing age-appropriate career guidance and counseling services to students (NCDA, 2018). The guidelines also highlight the need for schools to involve parents and families in the career development process and to provide opportunities for students to explore different career paths through experiential learning activities.

In terms of digital programs for career development, the United States has also developed several online resources for high school students, including the CareerOneStop website and the My Next Move website. These websites provide students with information about different career paths and the skills required for success in different fields, as well as tools for exploring their

interests and aptitudes (U.S. Department of Labor, n.d.). Similarly, the European Commission has developed the Europass platform, which provides students with tools for creating resumes and learning portfolios, as well as information about different education and training opportunities across Europe (European Commission, n.d.).

Digital programs have been proposed as a potential solution to address the lack of career guidance services for high school students in many post-Soviet countries. According to a study by Korkmaz, Özkan & Baykara digital career guidance programs such YouTube video instructions can provide students with access to a wide range of career information, as well as opportunities to connect with industry professionals and make more adequate decisions. Similarly, the findings of the study by Arnold & Cohen (2019) in the UK reports on an evaluation of a digital careers guidance tool called "Start" that was introduced in English schools. The study involved 46 schools, and data were collected from 2,029 students who completed surveys before and after using the tool. The research showed that after using the digital career guidance tool, *students had significantly higher levels of career self-efficacy and career knowledge*. Additionally, the study found that students who were less confident in their career decision-making and those from more disadvantaged backgrounds benefitted the most from using the digital tool.

Another study by Ahamed and Rahman (2018) found that digital career guidance programs can help students make informed career choices and increase their career self-efficacy.

Although it was conducted with university students, the research by Law & Siu (2019) has come to a conclusion that a program that was designed to evaluate the effectiveness of a digital career guidance and life planning program among Chinese university students was quite effective. The study involved a randomized controlled trial with 288 participants, with half of the participants receiving the digital program and the other half serving as the control group. The findings of the study showed that the digital program significantly improved students' career decision-making self-efficacy, career adaptability, and life planning competencies compared to the control group. The study also found that the digital program had a significant effect on enhancing students' perceived employability and reducing their career decision-making difficulties.

However, challenges remain in implementing digital career guidance programs in many post-Soviet societies due to the above-mentioned reasons. According to a study by Hrynevych and Ternovykh (2019), a lack of access to technology and internet connectivity can limit the effectiveness of digital career guidance programs. Similarly, a study by Karimov and Nurmukhamedova (2018) found that cultural barriers and a lack of awareness among students and parents can hinder the adoption of digital career guidance programs.

The research by Guliyeva & Jabbarov (2018) describes the main factors determining career choice of university students in Azerbaijan. The findings of the study highlight several key determinants of career choice. One major factor identified was *societal expectations and pressure, particularly from family and peers*, which significantly influenced participants' career decisions. The *desire for financial stability and job security* was another influential factor in career choices. Moreover, the study identified the role of personal interests, passion, and skills as important considerations in career decision-making. Participants emphasized the importance of pursuing a career that aligns with their individual strengths and interests. Additionally, participants acknowledged the influence of educational experiences, including academic achievements and guidance from educational institutions, in shaping their career choices.

Educational reforms in these regions have also been proposed as a solution to address the vision problems of high school students. A research by Suleymanova (2019) found that the integration of technology into the education system can improve students' digital skills and increase their employability. The study also implies that a lack of access to technology and internet connectivity can limit the effectiveness of educational reforms.

According to a study by Ahmed and Baig (2020), online career guidance programs can provide students with access to up-to-date information about different career options and the skills required for success in different fields. These programs can also help students develop the skills and knowledge necessary to make adequate decisions about their future education and careers.

In addition to online career guidance programs, social media platforms can also play a role in shaping the career aspirations of high school students. According to a study by Mamutova and Atabekova (2020), social media can provide students with access to information about different career paths, as well as opportunities to connect with industry professionals and learn about their experiences. Similarly, a study by Rzayeva and Taghiyeva (2019) found that social

media can help students develop a better understanding of different career options and the skills required for success in different fields.

The challenges remain in implementing educational reforms in many post-Soviet countries. According to a study by Shahbazova and Kerimova (2019), resistance from teachers and administrators, a lack of resources, and a lack of awareness among students and parents can hinder the implementation of educational reforms.

Digital programs can also play a role in providing teachers with the necessary training and support for implementing educational reforms. According to a study by Lashkhi and Andguladze (2019), online learning platforms and digital resources can provide teachers with access to professional development programs, as well as support for integrating technology into their classrooms. These programs can help teachers develop the skills and knowledge necessary to implement educational reforms effectively.

In addition to teacher training and support, the literature emphasizes the importance of involving industry professionals in career guidance and counseling services for high school students. According to a study by Kovalchuk and Bazanov (2019), involving industry professionals in career guidance services can help students develop a better understanding of different career options and the skills required for success in the modern job market. Similarly, a study by Ahamed and Rahman (2018) found that industry partnerships can provide students with real-world experience and practical skills training.

Digital programs can also facilitate connections between high school students and industry professionals. According to a study by Hrynevych and Ternovykh (2019), online platforms and social media can provide students with opportunities to *connect with industry professionals* and learn about different career options. Similarly, a study by Karimov and Nurmukhamedova (2018) found that online platforms can provide students with access to internships and apprenticeships, as well as networking opportunities with industry professionals.

However, challenges remain in involving industry professionals in career guidance and counseling services for high school students. According to a study by Jirgal and Fronkova (2017), a lack of awareness and understanding of different career options among industry professionals can limit the effectiveness of these partnerships. Similarly, a research by Shahbazova and Kerimova (2019) found that cultural barriers and a lack of interest among

industry professionals can hinder the involvement of these professionals in career guidance services.

The literature also highlights the challenges associated with the use of digital programs in career guidance and education. According to a study by Faleye and Egunjobi (2019), a lack of access to technology and digital resources can limit the effectiveness of these programs, particularly in rural areas or low-income communities. Similarly, a study by Mahmood and Bilal (2020) found that the quality of online career guidance programs can vary widely, with some programs providing inaccurate or outdated information.

Overall, the literature review highlights the importance of addressing the vision problems of high school students in many post-Soviet countries with a particular emphasis on Azerbaijan and the potential of digital programs and educational reforms in improving their specialization insight and career goals. However, challenges remain in implementing these solutions, including a lack of resources, general problems of educational reforms, resistance from teachers and administrators, limited access to technology and internet connectivity, and cultural aspects.

Future research should focus on developing effective strategies for overcoming these challenges and ensuring that all students have access to high-quality career guidance and education.

2.3 Purpose of the study

The purpose of this study is to investigate the common specialization and career building problems faced by high school students in many post-Soviet countries and examine how their limited vision affects their career choices. In the next stage, the study aims to explore the potential role of digital programs, specifically focusing on the case of "Sophistudent" in Azerbaijan, in reforming the career vision of high school students.

This research tries to answer to the following two questions:

1. What are the common specialization and career building problems of high school students in post-Soviet countries, and how do their limited vision affect their career choices?
2. To what extent can digital programs play a role in reforming the career vision of high school students? The case of "Sophistudent" in Azerbaijan.

3. Method

3.1. Research Design

This study uses a qualitative research design, as it is particularly well-suited for exploring complex and multifaceted issues such as students' vision about specialization and career building. Qualitative research allows for an in-depth exploration of participants' perspectives and experiences, which is important for understanding the main gaps in their approach and insight. The study uses a case study approach, which will enable us to examine the context of Azerbaijan and explore the use of digital programs in career guidance in a real-world setting.

3.2 Data Collection & Analysis

Data are collected through the administration of a Google Forms survey specifically designed for this study. The survey comprises a combination of closed-ended and open-ended questions, providing both quantitative and qualitative data. The data collection for this study involves surveys/questionnaires, and content analysis. Data for identifying the problems are collected from two main groups of respondents - (1) university students and graduates, and (2) high school students in Azerbaijan. Additionally, the results of the survey with those who have passed our program are also presented.

The purpose of the surveys is to (1) find out with university students and graduates, whether most people really opt for inadequate paths and if providing/improving counseling services could have been a solution for them, and (2) identify with high school students, what kind of specialization and career perceptions (gaps) they have and how helpful digital counseling programs could be.

3. Results

4.1 Survey with university students and graduates

This survey is conducted mainly to get figures on what percentage of university students and graduates are satisfied with their specialty (Bachelors major) and what part would choose another path if they would have a chance to be back to school years. 140 people participated in the survey. 63 of them are university students, 75 of them are graduates from 32 different universities including local and foreign ones and the remaining 2 are drop outs.

Significant points (Appendix 1):

Question #4 is testing the interest level of the respondent to his/her major.

This specialty... *

- is what I had passion for and I plan to build my career on this path.
- is what I once had interest to, but currently it doesn't seem that much interesting to me.
- is a path I have come to by chance (as per my admission grade) and I am interested in (an)other field(s)
- is a path I had chosen by others' encouragement or pressure.

The responses are coded: (a) Passion & will, (b) Weakened interest, (c) Accidental path, and (4) Interventional path. The figures from this question are interestingly descriptive:

50% (a) Passion & will

20.7% (b) Weakened interest

22.9% (c) Accidental path

6.4% (4) Interventional path

It can be observed that only half of the university students and graduates (under 35 years old) love their degree field and are willing to build or continue their career on that path. The other half are not happy with their major. However, the next question describes a more interesting picture regarding satisfaction.

Question #5 is testing how the respondent would behave if he/she was back to school years.

If I was back to school years... *

- I would chose this specialty again.
- I would go to a slightly different field.
- I would go to an absolutely different field.
- I would prefer a non-university way (vocational or other).

The responses have been coded this way: (a) Same path, (b) Soft change, (c) Hard change, and (4) Non-degree. The figures from this question are surprisingly descriptive:

30% (a) Same path

21.4% (b) Soft change

32.1% (c) Hard change

16.4% (4) Non-degree

The result indicates that exactly 70% of respondents are not happy or highly satisfied with their current specialty or career path and would go to a different path, though with varying degrees and ways, if they would have a chance to go back to school years.

An interesting point with these two questions is that there have been a significant number of people reporting Passion & will and a different path at the same time. This implies to us that even though some people go to a certain path with passion and still want to build/continue their career in that way, they wish they would have a chance to opt for other specialty and career pathways.

Question #6 asks the level of awareness/sophistication of the respondents about their own personality, specializations and the career world during high school years.

To what extent do you think you have been aware of yourself (character, interests, skills and opportunities), specialties and the career world during school years? *

- Sophisticated
- Moderately aware
- Almost unaware

10.9% (a) Sophisticated

50.7% (b) Moderately informed

38.4% (c) Almost uninformed

As seen from the figures only 11% of them reported they were well informed and self-knowledgeable. Considering that people tend to think they know themselves and understand the world well, even this figure might be higher than reality, though this kind of awareness is an implicit conception. From the general situation in terms of lack of access to information, lack of counseling services and all the other factors discussed above, it can also be thought that the understanding of being moderately informed can also be exaggerated and therefore many people who used to be weakly informed or uninformed enough may think they were in fact moderately informed. The answers to this question also clearly indicates the need to enlighten students in terms of both self-knowledge and sophistication of specialties and career trends.

This in turn shows the significance of special counseling with students in schools. In the question #7 the participants noticeably report how better it would be to have counselors in school.

Did you have a career counselor in school? *

- No. We would make more adequate decisions if we had.
- No. I think there was no need.
- Yes. It had a positive impact on our decisions/admissions.
- Yes, but not much helpful.

The answers are coded: (a) Negative/Need, (b) Negative/No need, (c) Positive/Helpful, (d) Positive/Unhelpful

74.5% (a) Negative/Need

8.2% (b) Negative/No need

10% (c) Positive/Helpful

7.3% (4) Positive/Unhelpful

As the numbers imply, only 10% of respondents have benefited from any kind of career counseling. Given that there is no counselor in public and most of the private schools, the ones who are treated by the respondents as career counselors are mere teachers informally advising students in terms of specialty and career choice.

Significant number of university students and graduates reckon that they would make more adequate choices and decisions if they would be advised by a counselor. This in turn shows the need for digital career guiding programs for schools as physically there are almost no experts of this field to serve in schools.

Overall, the survey with university students and graduates leads us to several major conclusions:

- 70% of people (respondents) wish they would be in another field or build their career by non-degree paths and methods, though some of them are still happy with their field.
- Only 11% think they were self-knowledgeable and well informed about specialties and the career world.

- 74.5% did not have a counselor in school and they think it would positively change their level of informedness and lead to more adequate decisions. Only 10% reported they benefited from counseling in school (though informally).

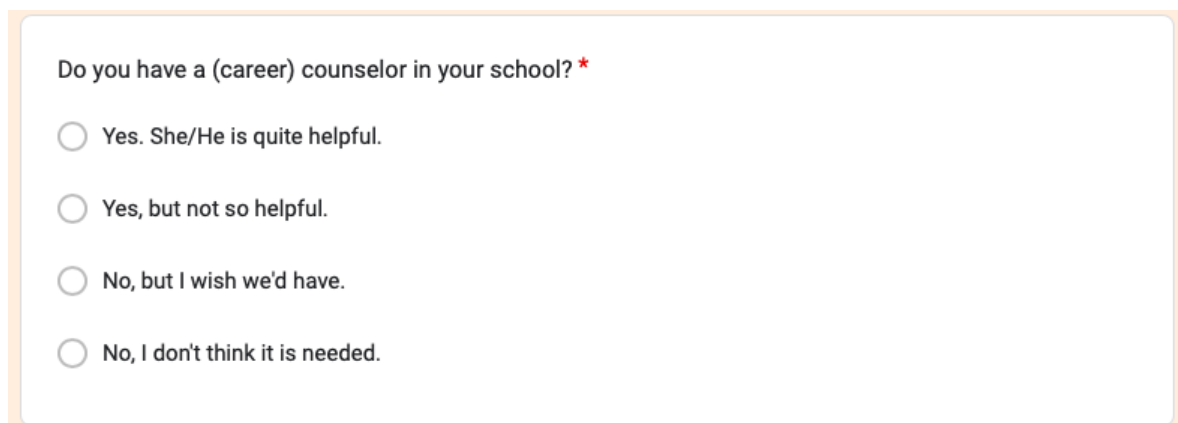
4.2 Survey with high school students

Relative to the survey with university students and graduates, this one is longer with more questions. This survey is conducted basically to get figures describing the level of high school students' (9-11th grade) need for career guidance; sophistication of specialties and careers, awareness on choice adequacy; general perception of higher education and its relationship with successful career building; and participation in digital career programs.

145 students from both public and private schools and both from urban and rural regions have participated in the survey. 94 students from the 11th grade, 17 students from the 10th grade and 34 students from the 9th grade have participated. Very interesting and descriptive data has been collected.

Significant points (Appendix 2):

Question #2 is asking whether there is a career counselor in the respondent's school.



Do you have a (career) counselor in your school? *

- Yes. She/He is quite helpful.
- Yes, but not so helpful.
- No, but I wish we'd have.
- No, I don't think it is needed.

The answers are coded: (a) Positive/Helpful; (b) Positive/Unhelpful; (c) Negative/Need; (d) Negative/No need

- 7.6% (a) Positive/Helpful
- 10.3% (b) Positive/Unhelpful
- 74.5% (c) Negative/Need
- 7.3% (4) Negative/No need

An interesting point is that exactly the same portion (74.5%) as the first focus group report they do not have a counselor and they wish they had. Combining this segment with the ones reporting Positive/Unhelpful, it can be understood that 85% of school students do not have and do need helpful career guidance, be it physically with counselors within the school or with digital versions.

Question #15 is testing the respondents' experience in, need for and perception of digital career programs.

Have you ever used/passed any DIGITAL program regarding specialties & career (tests, webinars, consulting, etc.)? *

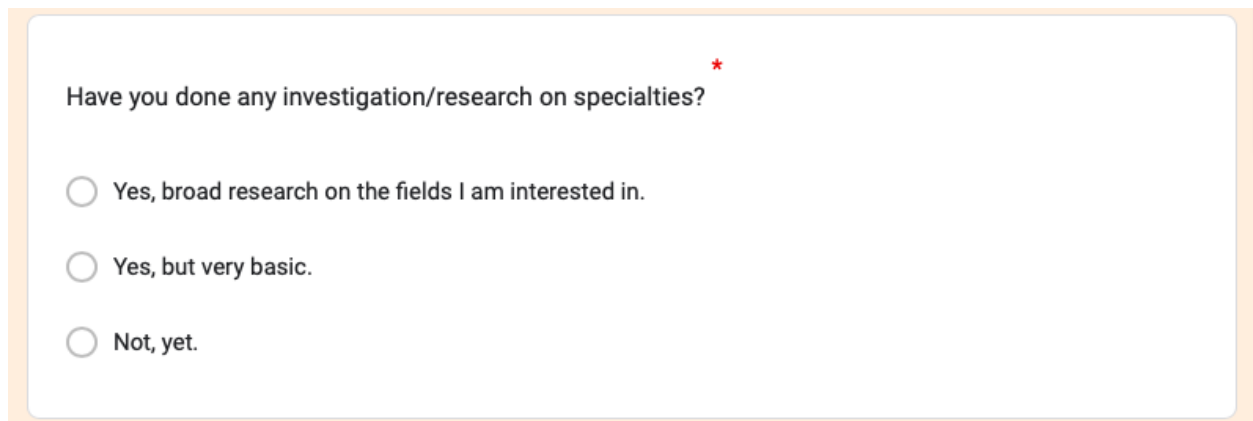
- Yes. Very useful
- Yes. Not much helpful
- No, but I'd like to.
- No, I don't need any.

The answers are coded the same way: (a) Positive/Helpful; (b) Positive/Unhelpful; (c) Negative/Need; (d) Negative/No need

- 22.1% (a) Positive/Helpful
- 9% (b) Positive/Unhelpful
- 62.1% (c) Negative/Need
- 6.9% (4) Negative/No need

The main interpretation of these figures is again that still the majority (71%) of high school students are in need for career guidance programs. Another interesting point is that in comparison with physical career counseling (7.6%), students are more involved in digital career programs (22.1%) which in turn indicates that **digital replacement is treated by many students/parents as the only option in case of absence of physical counselors in schools.**

Question #3 tests the level of informedness about specialties.



Have you done any investigation/research on specialties? *

Yes, broad research on the fields I am interested in.

Yes, but very basic.

Not, yet.

The answers are coded: (a) High (b) Basic (c) None

35.2% (a) High

55.2% (b) Basic

9.7% (c) None

Only 35.2% reported they had detailed investigation on specialties before applying, though as per my personal observations from my experience with high school students not more than 5% of high school students are well-informed about specialties and careers. Nevertheless, even as per these numbers 65% of students are not knowledgeable about further educational and career options and relationships between them, all of which lead to a very high rate of random choices and decisions which in turn causes dissatisfaction and unhappiness. 55.2% report they have done basic investigation. Basic informedness, however, should not be relied on in the decision-making process of specialization and career building as one of the most fundamental situations in life.

The next question is openly asking the source, rate and effect of the ones who have done any investigation on specialties and careers.

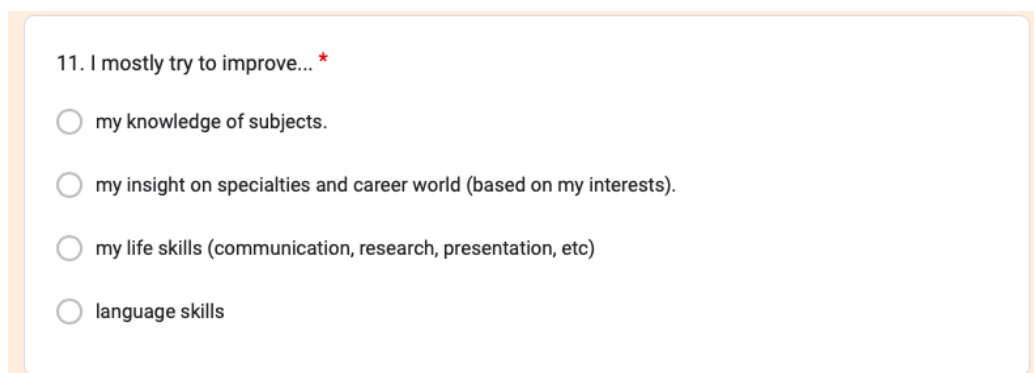
(Q#4) If you have investigated some fields, (1) from what sources and (2) to what extent have you done it, and (3) how has it affected your decision (you might have not made a decision yet).

Very few respondents have reported detailed information and only a small portion of them (approximately 10%) sound to be considered as normal or good investigations.

(Q#5) What percentage of university students and graduates do you think are happy with their first specialization path?

39 respondents guess it is less than 40%, 25 of them think it is 40%-60%, 19 students reported for 60% and above, all the rest did not type any number saying they have no idea or guess about it. Hence, we observe that most high school students think not more than half of university students and graduates are happy with their first choice, which is actually the case as per our estimations from the former survey. It implies to us that they are aware of the problem at least by passing this survey and making some guesses. However, still a high number of students think most people are happy with their major. These students are not aware enough about potential risks.

Question #11



11. I mostly try to improve... *

- my knowledge of subjects.
- my insight on specialties and career world (based on my interests).
- my life skills (communication, research, presentation, etc)
- language skills

24% (a) Subjects

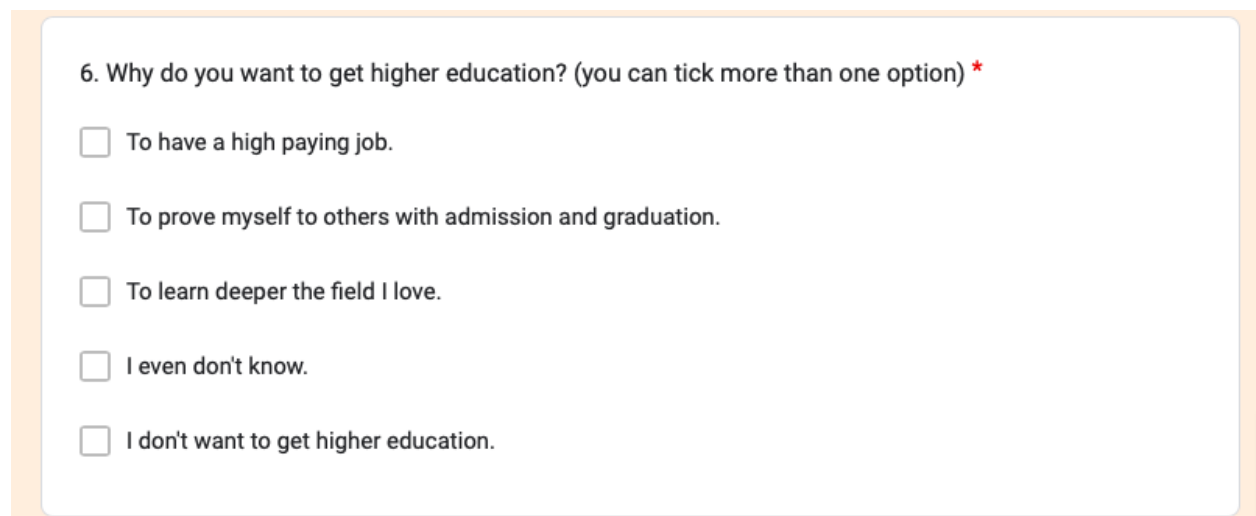
32.9% (b) Specialties/Career

28.8% (c) Life skills

14.4% (4) Language

The figures give such an impression that students have misunderstood the question and thought the question was about engagements during *free* time, because an average high school student, as the answers above also suggest, is actually not expected to spend more time for extra knowledge and skills than subjects that are required for their specialty orientation. They even mostly do not go to school in order to have more time to go to tutors for test preparations. Hence, a very high portion of time is in fact spent for subjects.

One of the major points is to observe the purpose of students in wanting to study in a university. Question #6 is a checkboxes question allowing more than one variant.



6. Why do you want to get higher education? (you can tick more than one option) *

- To have a high paying job.
- To prove myself to others with admission and graduation.
- To learn deeper the field I love.
- I even don't know.
- I don't want to get higher education.

(a) High pay; (b) Self prove (c) Learning (d) Uncertainty (e) No degree

71.2% High income

25.3% Self prove

56.8% Learning

7.5% Uncertainty

5.5% No degree

An interesting point here is the rate of Self-prove which can be assumed to be abnormally high. It can also be thought that the real rate is even higher because many people do not

acknowledge to themselves that this factor does have some part in their intention. Moreover, the lack of internal motivation is also clearly noticed with 43.2% of respondents not willing to learn deeper the field they love or not to have it at all.

Another major point regarding the perception of higher education is students' view of the relationships between higher education and wealth.

7. How important do you think higher education (university) is for having a high paying job? *

- It is a must
- It is an advantage
- It is not important

29.3% (a) must

54.4% (b) advantage

16.3% (c) no need

As seen, a significant part of the students think higher education is a must for a high pay job. This can also be treated as a perception problem. The other two variants can be debated based on subjective views and be variably valid among societies.

Responses on the question #13 also indicate the same perception even with higher numbers. Almost half of the students think even studying in a low-rank university affords more career opportunities rather than getting good vocational education or trainings and proactively participating in projects.

13. I would get better career opportunities... *

- studying in a mediocre or a low-rank university
- having high level trainings, participating in projects and getting more practical knowledge

Question #8 tests the students' perception on decision making period of life in terms of career.

⋮

8. Do you think every high school student should identify his/her career path before graduation? *

Yes

Not necessarily

No, it is better to identify during life time.

71.4% of respondents reckon they should identify their career path prior to graduating from school. It can be assumed that this number could have been even higher if the options were merely “yes” and “no”. In our version the 3rd variant may have sounded interesting to some respondents and may have changed their mind from “yes” to “no”. These numbers indicate the lack of some psychological insight in terms of personality maturity as well as understanding of flexible aspects of the career world. Sociologically, such kind of limited insight is assumed to be mainly stemming from career perceptions of communism in which there was very limited flexibility and students used to be encouraged to make definite decisions over their specialization and never change their path. Hence, nowadays students are still encouraged by their parents or sometimes grandparents to behave the same way.

They also tend to think their admission grades will almost determine their future life.

⋮

12. To what extent do you think your admission grades will play a part in your future life? *

significant

moderate

little

54.4% of respondents report an expectation of high correlation between their admission grades and future career success. Such perceptions sometimes become a self-proving factor and

determine the pass grades for specialties. For instance, in Azerbaijan while the minimum pass grade for Cyber Security is 682 (out of 700) which is extremely high, the pass rate for Electrical & Electronics Engineering is 200-250. This is because neither students, nor their parents have proper insight and understanding of specialties and careers. They usually assume electronics engineering generates electricians only in charge of merely changing bulbs, etc. These cases indicate massive unawareness on the very basics of specialization and career trends.

The survey also tests, with an open question, the students' view on how people in rural regions can build good careers without having to come to cities.

(Q#14) How do you think one living in a rural place can build a successful career by not having to come to urban places?

Only 42 (29%) responses can be considered as reasonable, most of which are apparently about using the internet. These numbers also imply the lack of proper conceptual insight of careering and uninformedness of the majority of high school students about career building opportunities.

4. Discussion

5.1 Findings from first the group

If summarized, the findings from the data collected from the university students and graduates are as following:

- (1) later dissatisfaction about the majors
- (2) high level of uninformedness during school years
- (3) the absence of and the increasing need for career guidance.

Instead of testing specifically the need for digital programs we have tried to identify the level of inadequate choices/decisions; of sophistication during school years; and the perception of career counseling in schools. The figures are alarmingly informational and descriptive.

The relationship of these results with our topic is that, on one hand the gap of career counseling in schools needs to be filled, on the other hand physically there is no chance to fill this gap. The only remaining option is to cover it with comprehensive digital programs that would be accessible for a massive amount of students at the same time.

5.2 Findings from second the group

The summary of the analysis on the data collected from high school students are as following:

- (1) Almost absence of and increasing demand for career counseling in schools
- (2) Informational unawareness on specialties and careers
- (3) Weak understanding of career concept
- (4) Lack of internal motivation for learning and research as well as self-efficacy
- (5) Better understanding of the risks of inadequate choices/decisions
- (6) Better understanding of what is in fact required for success

It can be assumed that the first problem is the core one causing the others (2, 3, 4). Providing good career guidance services would lead to improved awareness about specialties and career options, better insight on the concept of career building, higher internal motivation for learning and investigations, and self-efficacy. Hence, solving the specialization and career guidance issue would significantly lead to mitigation of the other insufficiencies. According to the literature review, many other post-Soviet societies do have this problem of career guiding. As long as there is no chance to physically arrange it in public schools due to the lack of expertise, the only short-term solution seems to be serving students with digital programs through which a massive number of students can achieve certain sophistication on these subjects. Physically affording career counselors in schools is a long-term issue. Teachers cannot be relied on for this purpose as their vision and insight on these subjects are not usually better than students. Parents are not responsible for enlightening their children in terms of career building though they should

motivate them to investigate. Some are even expected to avoid themselves from making pressure on their childrens' choices.

5.3 Role of digital programs

The literature review highlights the vision problems of high school students in many post-Soviet countries, particularly in Azerbaijan, and the actual and potential effectiveness of digital programs in improving their insight. The education systems in post-Soviet countries are often outdated and do not provide students with the necessary skills and knowledge for future careers. This can cause students to have limited career options and limited motivation to pursue their goals. Additionally, many high school students lack access to information about career opportunities and how to pursue them, which can limit their career choices.

Digital programs can play a crucial role in addressing these challenges and lead students to have a more rta and sophisticated approach to career building. In addition to providing access to career information and counseling, digital programs can also *facilitate connections with industry professionals and mentorship opportunities*, which can help students gain practical experience and develop networks.

Furthermore, the COVID-19 pandemic has highlighted the importance of digital programs in supporting students' career development. The pandemic has disrupted traditional modes of education and employment, leading to an increased need for innovative and flexible career guidance and counseling services.

Digital programs such as the "Career Guidance" and "Youth Development" programs have been developed to help high school students in Azerbaijan and other post-Soviet countries rebuild their vision and career goals. These programs use online resources, personal coaching, and mentoring to provide students with access to information about career opportunities, skills training, and personal development. Several studies have found that these programs can significantly improve the career readiness and motivation of high school students. Therefore, it is

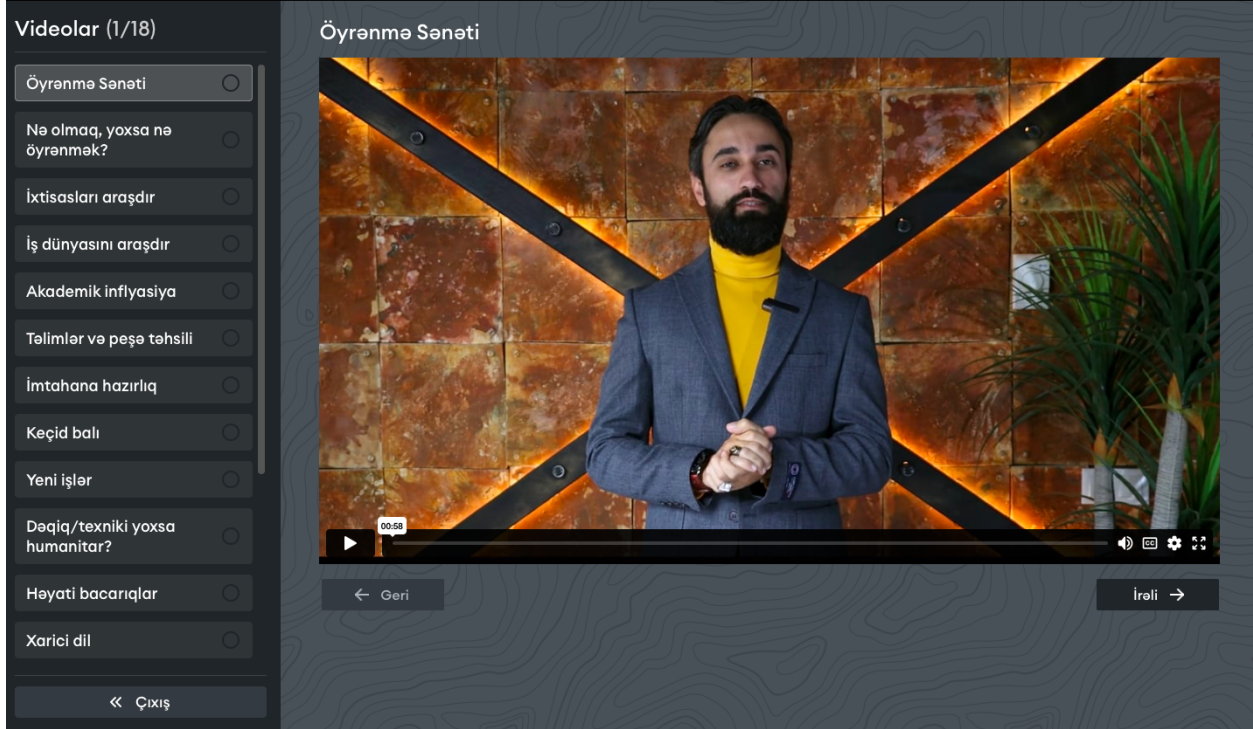
predicted that another more detailed digital program called Sophistudent is assumed to noticeably contribute to high school students' educational and career building insight.

5.4 "Sophistudent" as a potential solution

Sophistudent is a digital specialization & career program aiming at reshaping high school students' vision on education, career building and relationship between them. In Azerbaijan the program is called TIP (Comprehensive Program for Specialization) and as a startup project placed within another startup platform called Taskool (Appendix 3). The main part of the program is ready and in use, though advertisements are still to be launched soon. Initially the program is coded only in Azerbaijani. On further stages it is supposed to be translated to English, Russian, Turkish and Arabic. Generally, once a certain level of sales and application is achieved in the local context, the startup project is planned to get registered either in Estonia or the UK and then globally promoted. The current content is more suitable for post-Soviet societies based on their common aspects in terms of specialization and career building. For the global version there will be some changes in the content and may be in the concept, too.

The program consists of three parts: (1) Seminar (2) Consulting & (3) Career test

Seminar is a set of eighteen short talks about different subjects, from the concept of learning to academic inflation, from investigating specialties to soft skills, that are assumed to be the most critical points high school students usually should know or consider. These are the topics which neither parents, nor teachers usually discuss with students. The speaker is Elchin Hasan for all the Seminar talks. Seminar is free of charge.



After listening to the Seminar the system takes the student to the second - paid - part of the program which is a virtual consulting session again with the founder of the project. Differently from the seminar, here the participant watches videos based on his/her individual responses to sixteen fundamental questions testing his/her perceptions of education, specialties and career building. After each response to a multiple-choice question - with answer options that almost capture all possible versions students would think of themselves in case of open questions - the student watches an individual video record. For instance, the 2nd question asks the student's grade and when clicking on their grade they listen to a specific video talk advising them what could be done on that grade in terms of career sophistication and decision making. Another question asks what they think a school is for.

↑ Çıxış

Sual: 1/16 Təsdiqlə

1. Səncə məktəb təhsili nəyə lazımdır?

A Güclü şəxsiyyət və vətəndaş yetişdirmək üçün

B Cəmiyyətə savadlı işçi qüvvəsi yetişdirmək üçün

C Ali məktəbə hazırladmaq üçün


D Məktəb ümumiyyətlə insan üçün zəruri deyil.

↑ Çıxış

6%

Sual: 1/16 İrəli →

1. Səncə məktəb təhsili nəyə lazımdır?



Məktəbin məhz güclü şəxsiyyət və vətəndaş yetişdirməli olduğunu düşünürsünüzsə (ki bu, ən doğru yanaşmadır), o zaman çalışın məktəb illərindən özünüzü bu istiqamətdə inkişaf etdirin. Yeni zamanınızı təkəcə dərs oxumaqla (xüsusilə qəbul imtahanına hazırlıqla) keçirmək əvəzinə, sizə həm təhsil, həm karyera, həm həyatın digər yönlərində bəzən oxuduğunuz fənnlərdən daha çox lazım olacaq keyfiyyətləri əldə edin. Bura idman, incəsənət, mənəviyyat, həyatı bacarıqlar və s. daxildir. Bunları məhz məktəb illərində əldə etməyin çox üstünlükləri var

Seminar and Consulting are particularly designed to address the above-mentioned problems of (3) weak understanding of the concept of career and (4) lack of internal motivation for learning and research. The other gap we identified with the survey - (2) informational unawareness on specialties and careers - is tried to be filled by the third part of the program.

The third part is a psychometric career test with forty questions. Once the student completes the questionnaire he/she gets a list of ten most suitable specialties to him/her as well as their descriptions. The test measures not only the personality type of the respondent (as likelihood for

inaccuracy is high in identifying a teenager's personality type by a digital means), rather the algorithm works according to the user's actual interests, knowledge, thoughts and skills. The test has been prepared solely by the founder of the project - Elchin Hasan.



On the next stage there will be video presentations about all specialties by their expertise as well as expert meetings, workshops and site visits. On further stages students will be offered free basic courses regarding the fields that are most suitable for them as per the test.

The fee for the program is \$25. The program is already in use though still a few - around hundred - people have passed it. Data collected from the survey with them presents positive and promising messages.

Some points are worth mentioning (screenshots are available):

- 73.3% of the users report that they have not passed any similar program before.
- 53.3% found it very interesting, 33.3% interesting, the remaining 13.3% moderately interesting.
- They mostly like Seminar and Career test sections.
- 33.3% think the program will be very helpful, 46.7% report helpful, 20% moderately helpful.

- Most of them think it will mainly help them in path choice and self-efficacy (awareness).
- 86.7% reported they made new decisions while passing the program.
- Half of them say it helped them clarify their fluctuating ideas.
- 100% of the users report that the career test results present adequate career options among which there are mainly specialties they are interested in.
- 86.7% of them are interested in participating in further stages of the program.

4.3 Limitations

Considering the program is so far *completely digital* it certainly can not fill all the gaps generated by the absence of counseling services in schools. Therefore, it should be a priority issue for the government to train a sufficient number of education specialists/psychologists as counselors/coaches.

Regarding the application process, one of the main issues is *limited access to technology and internet connectivity* in rural areas. Another barrier is expected to be cultural - the lack of experience with and perception on digital programs. It may be time and money consuming to convince a massive number of parents, even those who understand and acknowledge the need for such platforms, in the effectiveness of the program. One psychological aspect is that on one hand when such products are paid very few people spend money for it presented, on the other hand when it is presented as a free product, say with the government support, it is usually treated as an unimportant thing.

Additionally, *cultural norms and gender stereotypes* can limit the effectiveness of digital programs in reforming the vision of high school students, particularly female students. Hence, even if some female students pass the whole program and get more sophisticated they may not have opportunities to realize their ideas, study the fields that are most suitable to them and build their career the way they desire. Some of the post-Soviet societies (e.g. Azerbaijan, Uzbekistan, Georgia, Kyrgyzstan) can be assumed to be more conservative than some others (Ukraine, Russia, Moldova) from this aspect.

Moreover, *financially* it may be unachievable particularly for students from low-income families and those living in rural areas. This can only be solved by public support (e.g. affording free or very cheap application of the program for all students from low income families).

Conclusion

In conclusion, this thesis has examined the vision problems of high school students in post-Soviet countries, with a specific focus on Azerbaijan, and explored the potential of digital programs in reshaping their career vision. Through a comprehensive literature review, the study has identified common career aspirations among high school students in the region and the factors that can influence their career decision-making, including socioeconomic background, gender, and cultural values. The review has highlighted the various vision problems that can impact students' academic and career goals, such as lack of awareness, lack of motivation and limited exposure to career opportunities.

Furthermore, the study has explored the potential benefits of digital programs in addressing these vision problems and shaping students' career perceptions. Digital programs, such as career guidance platforms, online mentoring, and virtual internships, have the potential to provide students with access to diverse career options, guidance from industry experts, and opportunities to develop their skills and competencies. The study has also highlighted the importance of tailoring digital programs to address the specific vision problems of high school students in Azerbaijan regarding career building.

The effectiveness of such programs depends on various factors, including their design, implementation, and tailoring to address the specific needs and preferences of students. Therefore, it is crucial to develop and test digital programs that are evidence-based, user-friendly, and tailored to the unique context of each country and population.

A specific specialization and career program named “Sophistudent” is designed to address the above mentioned issues. The surveys with both high school students as well as university students and graduates plainly indicates the gaps and high demand for such career guidance programs that could serve a massive number of students.

However, the study has also identified potential barriers to the implementation of digital programs, including limited access to technology, lack of awareness and knowledge, cultural resistance and economic limits. These challenges must be addressed to ensure that digital programs can reach all students and make a significant impact on their career vision.

Overall, this thesis has contributed to the existing literature on the vision problems of high school students in many post-Soviet countries and the potential role of digital career programs in rebuilding their career perceptions. The findings of this study can inform policy and practice in the field of education and career development, particularly in Azerbaijan and other post-Soviet states. Future research can build on this study to explore the effectiveness of specific digital programs in addressing the vision problems of high school students and to identify strategies for overcoming the barriers to their implementation.

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Author's declaration

I hereby declare that I have written this thesis independently and that all contributions of other authors and supporters have been referenced. The thesis has been written in accordance with the requirements for graduation theses of the Institute of Education of the University of Tartu and is in compliance with good academic practices.



Elchin Hasan

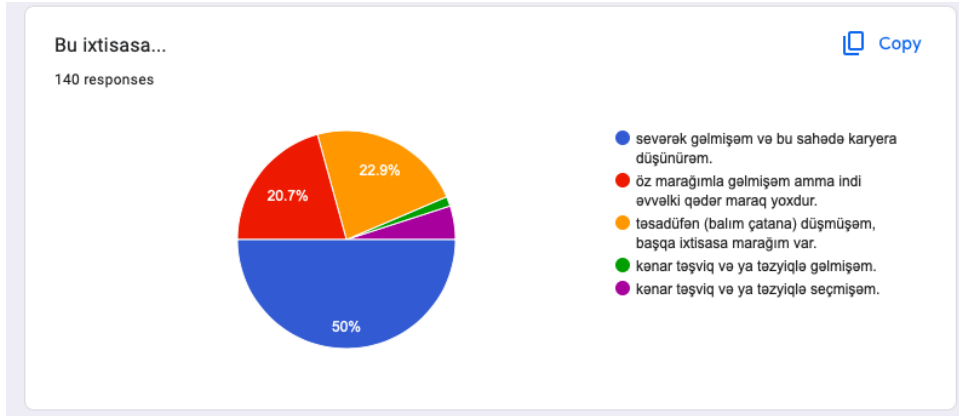
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Appendices

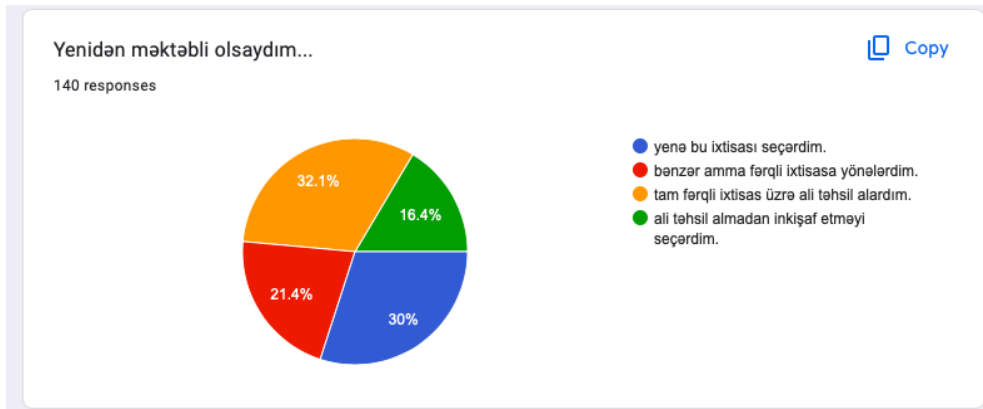
Appendix 1: Questionnaire #1

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Q#4



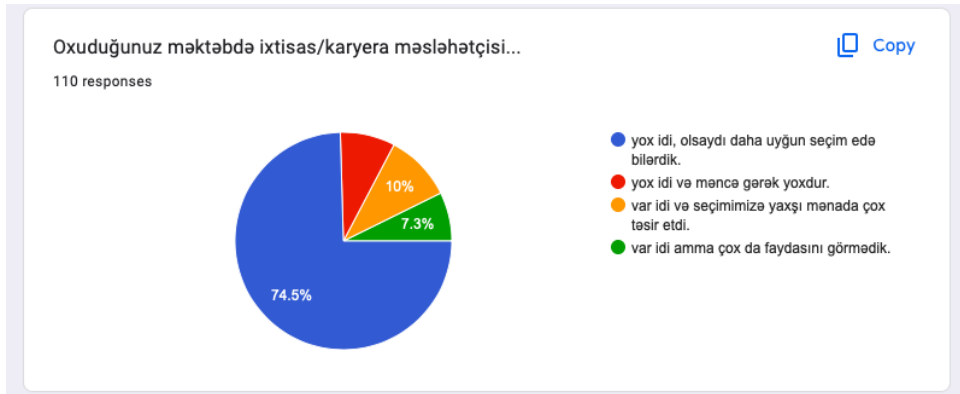
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Q#6



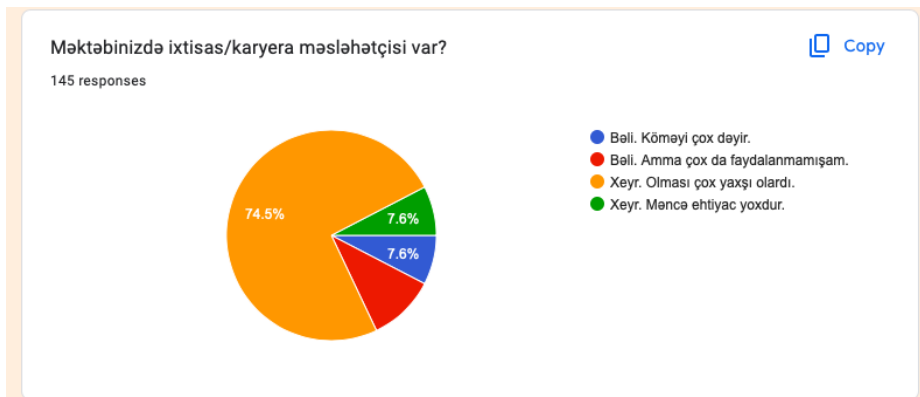
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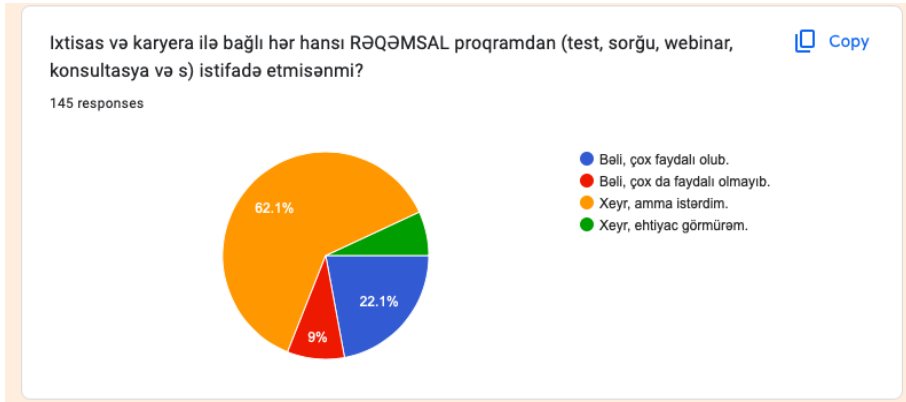
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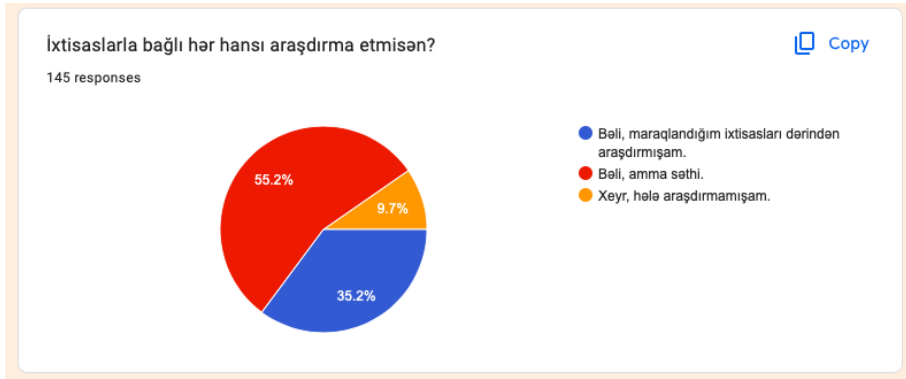
Q#2



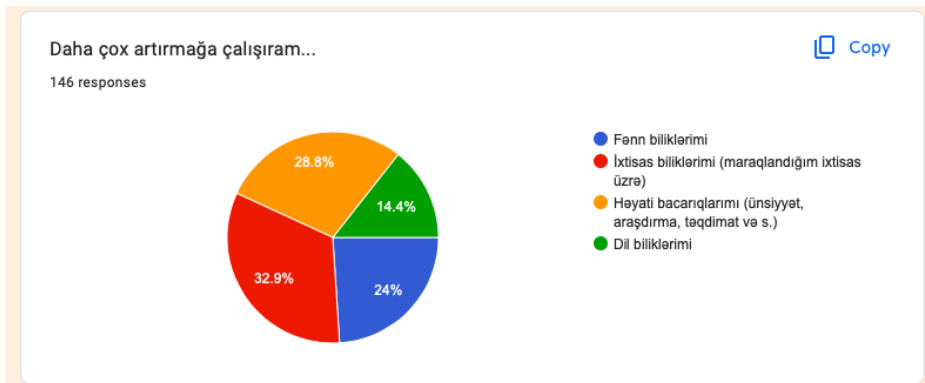
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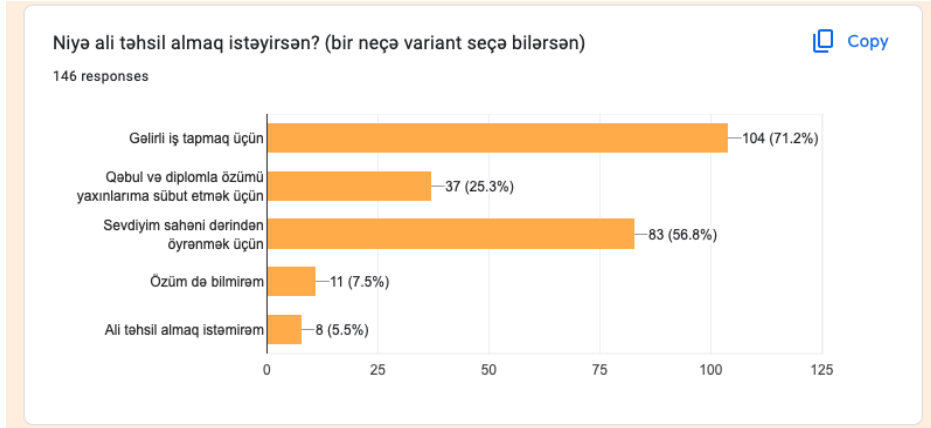
Q#3



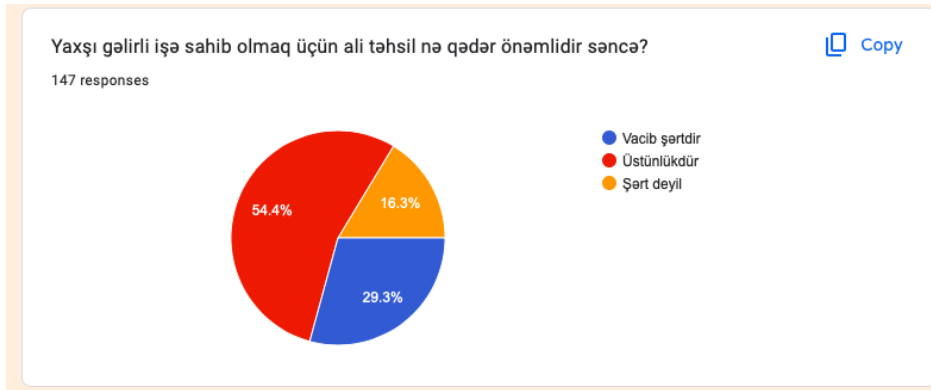
Q#11



Q#6



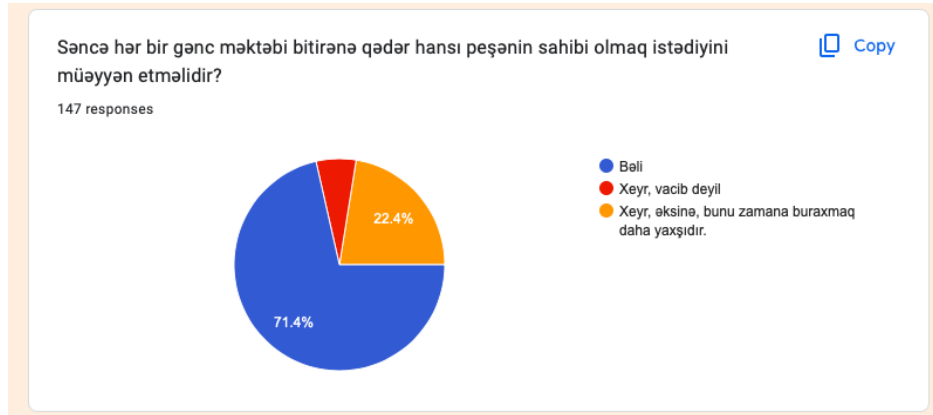
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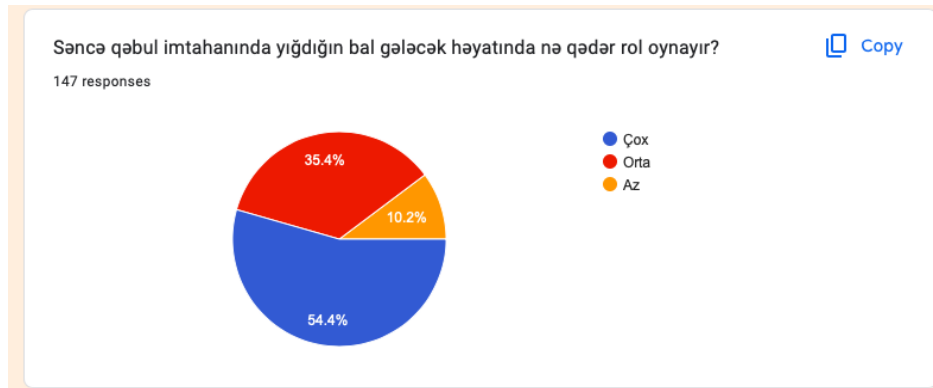
Q#13



Q#8



Q#12



Appendix 3: Website

www.taskool.com/tip

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supervised by Emanuele Bardone

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