

these two hours are put in the schedule one after the other, then understanding the meaning of the text will be much easier because the two contents are interrelated.

Comprehension reading ability is usually tested with standardized comprehension reading tests. These tests usually consist of a small number of texts, which can be of different lengths, the understanding of which is usually checked with the help of several questions of choice. Possession of such a psychological instrument has great theoretical and practical significance.

Literature

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PERSONALITY TRAITS AND CAREER DECISIONS

Abstract: The aim of this study is to analyze the results of the career quiz launched by Brainster in November 2020. The career quiz was solved by 7009 participants as of December 20, 2021, making it one of the biggest, if not the biggest self-assessment study on this topic in the country. The career quiz includes three types of question: 32 questions which are intended to determine the personality type of the respondent in accordance with the 16 Myers–Briggs personality types; 30 questions to determine the respondents' affinity towards digital skills based on their personal characteristics and 4 questions focusing on the personal data of the participants required for getting personalized career suggestions. Once they completed the quiz, participants received their specific personality type, the digital careers that are a good fit for such personality type as well as how the specific personality type would act in a team and as a leader. The results show high validity of the quiz results in regards to both the specific personality type and recommended career based on the feedback of the participants regarding how true and relevant the results are to them (4.27 and 3.97 respectively on a 5-point Likert scale).

Keywords: Personality traits, MbtI types, Career personality, Career decisions

Introduction

One of the greatest challenges our country faces in the field of education is the incompatibility of what is offered by formal education and the needs and requirements of the labor market as well as the new types of professions that are not covered by formal education. This has been confirmed by research conducted in 2019 by Mojsoska-Blazevski [1] which states that only 45% of respondents without higher education reported that the skills and knowledge acquired during the educational process are useful to perform their current jobs' tasks and responsibilities, while 23% reported that the knowledge and skills acquired through the educational process are useless in the context of their existing job, and 30% answered that they could only partially use the acquired knowledge and skills in the context of the existing job. Similarly, only 52% answered that their educational field is relevant to their job, while 22% answered that their current job requires a completely different field of education from the one they went through in their educational process.

The numbers are slightly more positive for respondents with higher education, where just under 70% stated that their educational qualifications and study field are appropriate for their current job, 13% reported that their current job requires a completely different educational field, while 10% reported that their current job does not require knowledge and skills in any particular educational area. Considering the above stated, we, as an organization that is a leader in formal and non-formal education in our country, have decided to conduct our own research by creating a tool named "Career Quiz" that we launched in December 2020. The online tool has operated publicly since its launch as it is still open to the public. Anyone interested can take the quiz at the following link: <https://careers.brainster.co/quiz>

In addition to the aforementioned discrepancies between what the formal education system offers in our country and what is required by the labor market, we decided to explore yet another relationship closely related to the abovementioned discrepancy through the usage of our tool, i.e., the mismatch of the respondents' current careers with their ideal careers and career goals. With this tool, we also analyzed the personality type of each respondent and which digital profession would suit the respondent best, given that digital professions are resistant to automation and extinction. For this purpose, we used the 16 Myers – Briggs personality types which are based on the Carl G. Jung theory for psychological types [2], where all respondents who took the test were placed within one of these 16 personality types. We chose the Myers – Briggs personality type as the basis for determining the personality type since according to Stein and Swan [3], MBTI tests are one of the most commonly used metrics through which personality traits are measured and which are not only quite popular but also have long lifespan since this test has been first used 70 years ago. According to the above-mentioned research, over 2 million people take the MBTI test each year and 89 of the Fortune 100 Most Successful Companies List use this test for their employees as a regular practice, making a sufficient argument to base our tool on this test.

The results of the career quiz discussed and analyzed in this article refer to a period of just over a year, i.e., from the launch of this tool in November 2020 to December 20th 2021. This time period was chosen in order to provide a significant sample and an appropriate number of career quiz results so that relevant conclusions can be drawn. As mentioned above, the purpose of the career quiz is multifaceted:

- Respondents will determine and acquaint themselves with their personality type and personality code based on the 16 Myers – Briggs personality types.
- We shall determine the relationship between the respondent's personality type and their ideal career.
- We will analyze the proportion of people whose current career is the same as their dream career.

Methodology

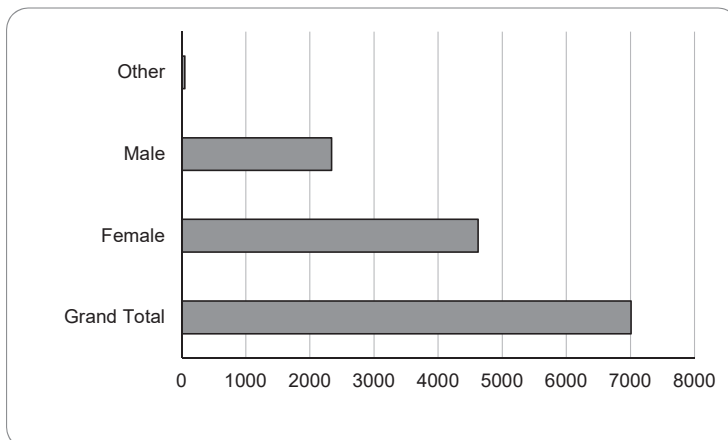
The career quiz comprises 3 parts with a different set of questions. The first part is composed of 32 questions for the respondent to determine which of the 16 types of persons they belong to. Each of these personality types has its own characteristics and strengths that are best associated with certain professions. In this set of questions, respondents chose their preferences on a 5-point scale to fit into one of the 16 Myers – Briggs personality types. The second part consists of 30 questions to reveal the respondents' affinity for digital skills related to their personal characteristics. Based on the answers to this set of questions, the respondents received suggestions about which type of digital profession would suit them. The answers in this part were also on a scale of 1 to 5 stars, where 1 star means the least, and 5 stars that the respondent most agrees with the statement or question. The third and last part consists of 4 short personal data entries for each respondent, which are necessary to determine the personalized result for the personality type and their related career suggestions generated by this tool.

Results and Discussion

From the quiz launch until December 20th 2021, a total of 7009 respondents completely answered the career quiz with relevant data that can be analyzed. Such a large number of respondents is representative of our research. We analyzed the demography of the respondents as well as the period when they took the quiz and here we provide summarized results in a couple of charts. From the demographic and informative data, we can derive (Fig. 1), it is clear that more female respondents have taken the quiz, which may indicate that females are much more interested in finding out more details about their careers, what is their personality type, and what career options from the corpus of digital technologies best suit their personality type. In terms of age (Fig. 2), it is clearly visible that 18-year-olds are most interested in discovering which personality type they belong to, as well as which career options from the corpus of digital technologies correspond to their specific persona, which is not surprising since at that age students complete their high school education and decide whether to proceed with university education and what they will do if they do not. Also unsurprisingly, the ages 19 to 26 are the following most prominent age categories that were most interested in the career quiz which is to be expected taking into consideration that at this point in life it is usually easiest to make career changes, given that people at these ages have merely just started their first jobs and are at the very beginning of their careers.

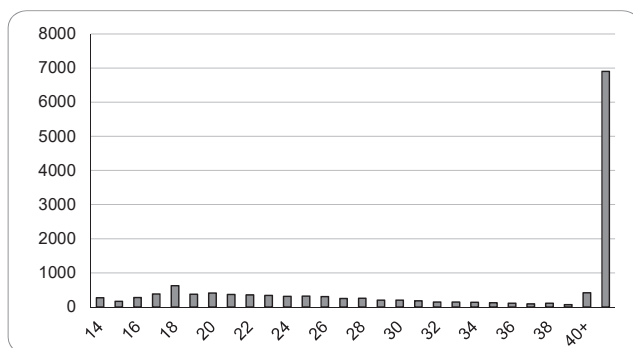
Figure 1

Respondent gender distribution



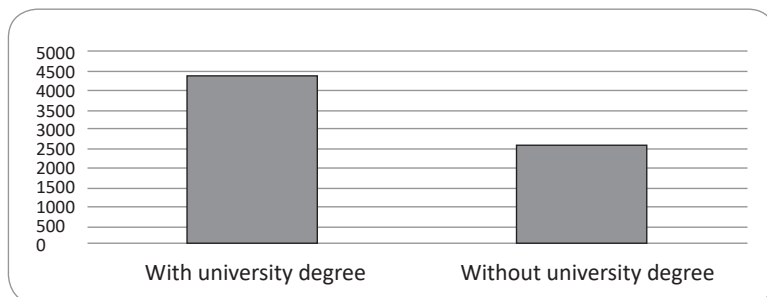
What is interesting is the representation of the 40+ age group. There are just over 400 participants who took the quiz and who have more than 40 years. We found this quite surprising, which can be told from the bare fact that we didn't even offer them an option to select their age, but instead we put them into a 40+ cluster. This result clearly indicates that there is no upper age limit regarding self-awareness and potential alternative career options. Although at first quite an uncommon finding, when we searched the available literature to see if this is just a coincidence or a phenomenon, we found that many researchers have reported that tech-savvy jobs are interesting for every age group [4] and are motivating people to switch to these creative, digital careers even later in life after pursuing a given traditional career for years and even decades [5]. Our results offer a proof to these findings.

Figure 2
Respondent age distribution



It is also an interesting fact that most of the respondents have a university education (Fig. 3) which indicates that even though many people have already gone through higher education, they do not stop thinking about their career and the direction it may take. This, as an occurrence, was quite uncommon, even unthinkable a few decades ago when careers of university-educated individuals were entirely dependent on the study field in which they graduated. The lifelong learning concept is slowly but surely ensuring that university degrees become indecisive for an individual's career. Although they can help kickstart the young students' careers, the long-term development of one's skills and the profession that the person will be working in isn't conditioned by the university the one visited.

Figure 3
Respondent educational distribution

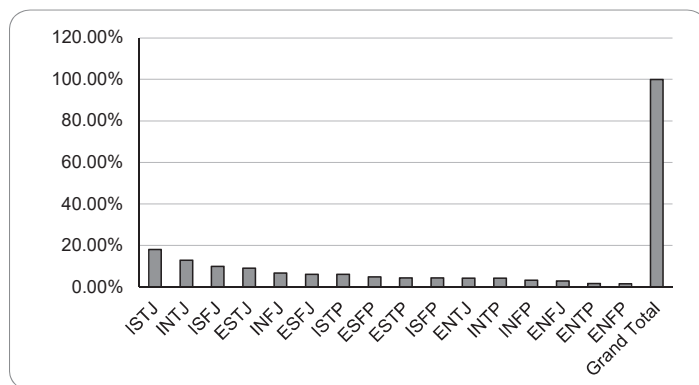


When analyzing the distribution of the personality types (Fig. 4), we wanted to check how Macedonian respondents' personality types are distributed compared to the US population. We took the US population as a benchmark since MBTI tests are the longest implemented in the USA.

Interestingly, the most common personality type of the respondents is ISTJ, a result received by 18% of respondents, which is not far from the data of Lawrence and Martin (2001) [6] according to which 11.6% of the US population falls under this personality type, making it the third most commonly represented in the American population. A greater discrepancy occurs in the second most common personality type, where 12.9% of them found that they belong to the INTJ type, which is present in only 2.1% of the American population and is the 3rd rarest personality type in the USA. And at the bottom, we have an even greater discrepancy between our respondents and the American population. The rarest personality type among our respondents was ENFP with 1.6% which is represented by 8.1% of the American population and thus ranks 7th out of 16 personality types in the USA. We have a more minor discrepancy among the second rarest type of personality in our quiz – ENTP which is represented by 1.7% of our respondents while in the American population it is represented by 3.2% which is the fourth rarest type of person in the USA.

Figure 4

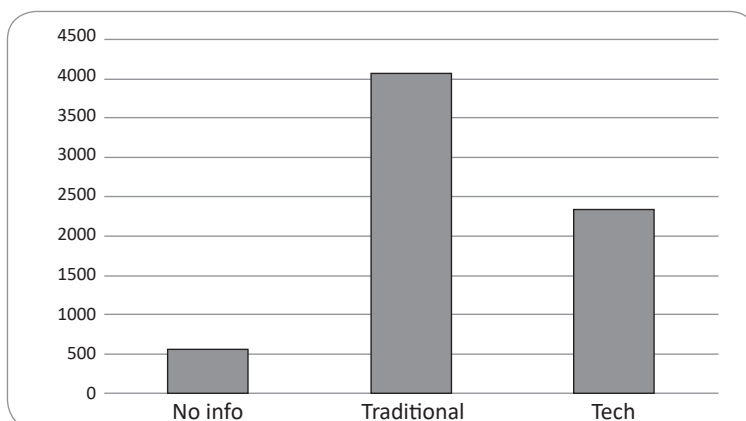
Respondent personality type based on the 16 Myers – Briggs personality types



In addition to the analysis of the above-presented data, the purpose of the career quiz was to find the particular area in which the respondents' ideal career falls and whether it belongs to the category of professions of the future (predominantly digital professions) or in the traditional professions (Fig. 5).

Figure 5

Category of the chosen ideal career



As the chart shows, the results from this part of the career quiz indicate that a large proportion of participants (almost twice as many) still opt for traditional professions as their ideal careers. These results are similar to those from the research by Mann, Denis, Schleicher, et al. (2020) [7] who showed that about half of respondents coming from 41 countries and who are 15 years old expect or want to work in one of 10 careers marked as traditional, some of which are at risk of vanishing due to the growing trend of automation. This research also states an interesting fact regarding the careers and professions marked as traditional, i.e., professions that have existed for over 2 centuries such as doctors, teachers, lawyers, veterinarians, engineers, police officers and business managers. It is interesting to mention that these traditional professions are actually becoming increasingly popular among teenagers in the last 20 years, despite all the changes and transformations in the jobs that have already occurred, that are still happening and will continue to happen in the coming period. This research found a very small or almost non-existent correlation between the career aspirations of the teens involved in this research and the anticipated needs of the labor market, which indicates that market signals and new trends in the world of work do not reach young people or awaken their imagination. However it must be taken into account there are differences between our analysis and that of Mann, Denis, Schleicher, et al. (2020) [7] in the aspect of the respondents' age, i.e., in their research, the respondents are exclusively teenagers, whereas our career quiz has no age limit and our respondents' age ranges from 14 to above 40. During the research and analysis of the career quiz results, we also wanted to examine whether and to what extent the respondents believe that they actually match the personality type they received as a result of the career quiz. These results are presented in Figure 6 and Figure 7.

Figure 6

Number of respondents who answered whether they match the personality type according to the results of the career quiz

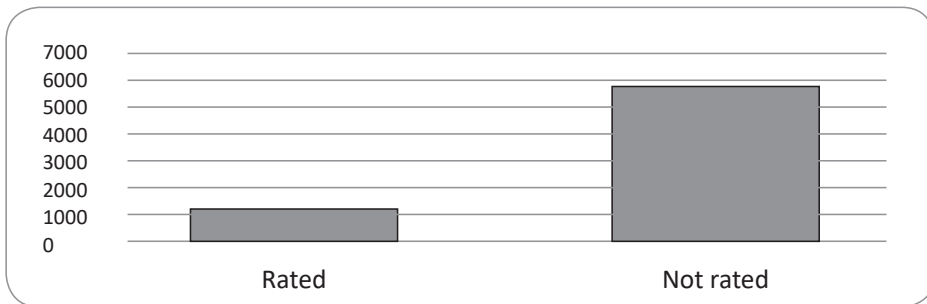
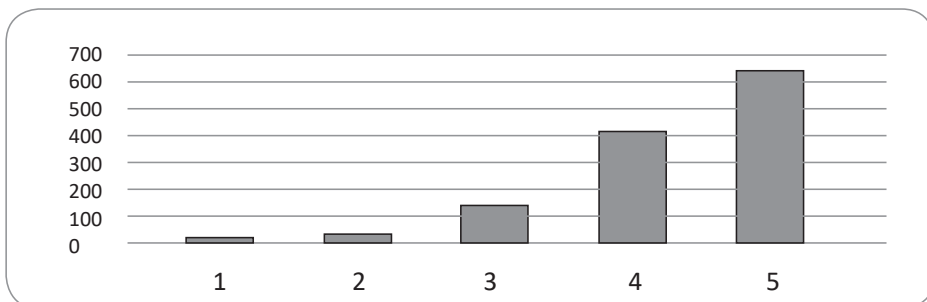


Figure 7

Match between perceived personality type and the personality type based on the results of the career quiz (1-not match at all, 5-perfect match)



As seen from Figure 5, only 1259 respondents answered whether and to what extent they match the type of person they belong to according to the career quiz results, while 5749 did not give an answer. One of the reasons why so few respondents answered this question might be the fact that this question was asked after receiving the results of the career quiz, as an optional question whose intention is for the respondent to evaluate the experience with the quiz. Out of 1259 respondents, the average score in terms of how much they match the personality type they belong to according to the results of the career quiz is 4.27 (Fig. 7), which indicates the high reliability of the results of the quiz given the fact that each of the respondents best knows whether they match and the extent to which they match the description of the personality type result that they received from the quiz. To further examine the validity of the quiz results, we also analyzed whether and how many respondents think that the professional suggestions recommended to them based on the quiz result are suitable. We did this by offering them an option to rate the results that the tool generated and evaluate whether the results actually match their perception of their strengths or not. They could evaluate the tool's results on a 5-point scale with 1 being less correct and 5 being the most correct prediction. The results are presented in Figure 8 and Figure 9.

Figure 8

Number of respondents who answered whether the professions that were recommended to them based on the results of the quiz are suitable to them

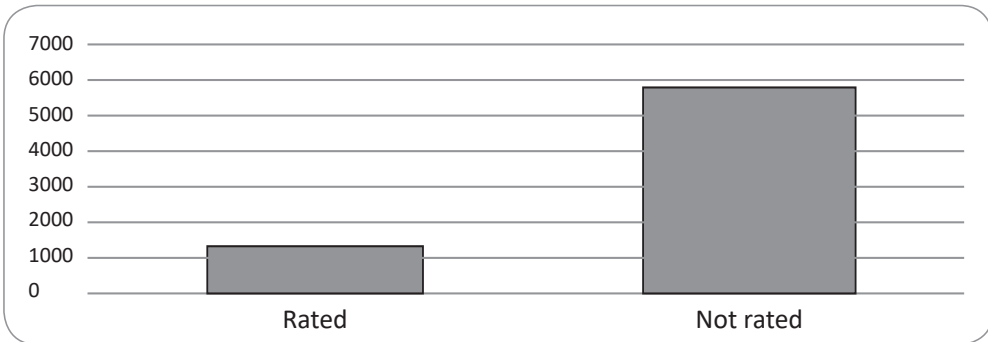
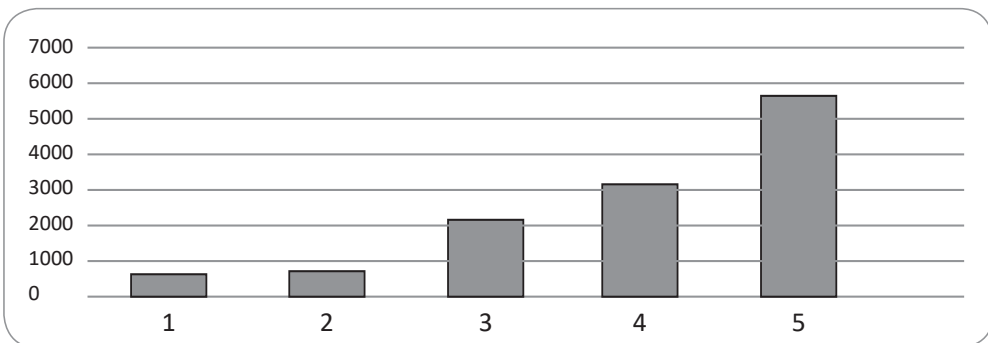


Figure 9

Evaluation of the suitability of the professions that were recommended to the respondents based on the result of the quiz (1-not suitable at all, 5-perfect match)



The ratio of respondents who answered whether and how much they relate to one of the professions that were recommended to them based on the quiz result is very similar to the results that referred to the previous question – 1240 respondents answered, 5768 did not answer. This is not surprising given the fact that this optional question followed immediately after the previous optional question in the section that requires an assessment of the experience with the quiz by the respondent. The average score in this instance was 3.97 which is slightly less compared to the corresponding average for the previous question, but it is still high enough to confirm the validity of the career quiz in this part as well – whether and how many respondents relate to any of the professions that were recommended to them based on the result of the quiz.

Finally, we analyzed the data on how many respondents believe their current career is ideal. We based this analysis on answers from the questions related to both the current and ideal career, i.e., if the answers to both questions are identical, it is considered that the respondent is currently working in his ideal career. Only 25% of the respondents left relevant answers to both questions, and 42.2% answered that their current career is also their ideal one. This data may indicate that as many as 57.8% of the respondents are ready for changes in their careers, given that they did not evaluate their current career as ideal. These figures are not far from the results of Dishman (2021) [8] which showed that 52% of workers in the United States want to make a change in their careers.

Conclusion

The career quiz can rightly be called one of the biggest researches in Macedonia in the field of career analysis. Given that in less than 13 months the career quiz was taken 7009 times (with relevant data that is the subject of this analysis), it can be concluded that this is a valid representative sample for the analysis and conclusions included in this article. One limitation of this research is the validation of the data entered by the respondents in terms of their identity, age, gender, and education. This data was provided solely by the respondents and was not verified in any way. Some type of verification could be added as a mechanism, but it is our opinion that such a mechanism would undoubtedly reduce the number of respondents who would participate in such research. It is very important to point out that the validity of the quiz results in terms of the personality type and the recommended profession based on the personality type is confirmed by the high average scores (4.27 and 3.97 respectively on a scale from 1 to 5) that the respondents gave in terms of the extent to which they consider the obtained results to be accurate and relevant, increasing the research value of this quiz. Another noteworthy fact is that the quiz is based on the 16 Myers – Briggs personality types developed following Carl G. Jung's theory of psychological types that are the basis for the MBTI tests have been used for over 70 years all around the world which allows the results of this quiz to be compared with the corresponding results from many countries that have conducted similar research. Finally, the fact that as many as 57.2% of respondents believe that their current career cannot be described as their ideal career leaves room for the results of this quiz to help them examine whether their personality type fits any of the digital professions of the future and thus, through re-qualification and retraining to be able to pursue a career in one of these highly paid and demanded professions.

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REPRESENTATION OF EDUCATIONAL CHALLENGES DURING THE COVID-19 PANDEMIC IN CROATIAN RESEARCH ON EDUCATION

Abstract: The crisis caused by the COVID-19 pandemic has posed numerous challenges in various fields and areas of life. This research paper is focused exclusively on the field of education. The aim of this research is to determine how much the topic of education in the COVID-19 pandemic is represented in Croatian research on education and which guidelines the researched sources provide in response to pedagogical challenges.

The research was conducted within the quantitative paradigm by the documentation analysis process. The analysis of all available original scientific papers published in scientific journals in the field of pedagogy in the Republic of Croatia is focused on the time period from the beginning of the pandemic to the time of the research. Apart from the analysis of the representation of analyzed researches, which is one of the research questions, all sources are categorized according to the criteria of the subject of the educational process to which the papers are directed (parent, teacher, student). From all available scientific research papers, a synthesis of results was made, presented by selected categories. The concluding part of the paper discusses the results of the analyzed sources and their reflection on the field of crisis pedagogy.

Keywords: Pandemic, Educational challenges, Crisis

Introductory Remarks

The year 2020 brought the global pandemic to the world caused by the SARS-CoV-2 corona virus. The arrival of the virus rapidly changed the form and function of all social subsystems, as well as the established everyday life of most of the world's population. What was initially a health crisis soon began to have a significant effect on the realms of trade, tourism and the economy, and the educational system was also not spared the consequences of the global reach of this disease. This was also how it was in the Republic of Croatia, where by means of various *decisions, recommendations* and *models* adopted by the Government, attempts were made to prevent or limit the harmful effects of the pandemic on education. In so doing the Government tried to