

An Analysis of Influential Factors Affecting Career Selection Process

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Abstract

Making careful and well-thought-out decisions regarding a career can increase one's chance of success. Choosing the right career depends on many different factors related to the individual. The scientific approach for career guidance plays a vital role in reducing the expenses and efforts of a student in determining an optimum career path. This article focuses on scientifically determining the most relevant factors affecting the career selection decision of a person. The first section deals with a literature review of the various factors considered by the researchers for designing expert systems for career selection. A detailed questionnaire was designed to extract useful information from 95 individuals from different professions. The data consisted of 63.8% male and 36.2% female individuals belonging to professions viz. agriculture, fine arts, technology, education, and media. The individuals considered in the study comprised varied education levels ranging from intermediate diploma to post-graduation. Based on the above, a logical conclusion was drawn. The most relevant factors were determined by statistical analysis of the data obtained.

Keywords: Expert System; Career Guidance; Career Selection.

1. Introduction

Mentoring students by parents and teachers for selecting a proper career path plays a vital role in deciding their future. This can be done through direct career guidance and information communication technology (ICT) solutions. Therefore, the ICT is essential in spreading information among students and as an expert system that improves student decision-making [Supriyanto et al., 2019]. Expert systems are artificial-based software that employs facts, science, and thinking techniques to address specific problems requiring human expertise [Bojuwoye & Mbanjwa, 2006; Gokuladas, 2010; Lent et al., 2010]. Such systems are widely utilized in academics, educational evaluation, student characteristics recognition, and career guidance [Atitsogbe et al., 2018; Li, Hou, & Jia, 2015; Agarwala, 2008]. Machine learning expert systems for providing multilevel career guidance for primary, secondary, and higher-level students have been proposed [Ansari, 2017]. Various factors such as family background, socio-economic status, and students' interests were considered for developing the system. In addition, the nearest neighbour technique of data mining was employed to extract the best-suited case from the system database. Students' personality, skills, capability, past academic performance, parent's influence, friend's/teacher's opinion has been identified as essential factors for decision-making [Waghmode & Jamsandekar, 2015]. A hybridized picture fuzzy set-based technique for dealing with unclear and

uncertain data has been presented [Sahu et al., 2021]. Various students' career memory, interest, knowledge, attitude, and environment have been considered. The degree of positive and negative potential, neutrality, and refusal degrees for students and subjects has been presented systematically. A stratified random sampling technique for data collection considering demand time, motivation, environment, personality/gender, opportunity, and student background has been presented [Shahzad et al., 2014]. Through neural network analysis, it was revealed that educational background plays a significant role in career selection. A mixed-method survey has been proposed to determine the career choices and shifts in the youth of Mumbai and their perception of influences and career satisfaction [Bakshi et al., 2012]. The most important factors were determined to be 'self and family' and 'self, family, and teachers'. Interestingly, the youth were 'very' or 'extremely satisfied' by their career choices. This trend was manifested by the importance ratings provided by the students for various influences. Table 1 summarizes various factors considered by the researchers for developing career guidance expert systems.

Table 1: Summary of various factors considered for developing career guidance expert systems

S. No	Factor	[Edwards & Quinter, 2004]	[Grygo, 2006]	[Wu, 2004]	[Ari et al., 2009]	[Alias et al., 2010]	[Darren Fizer]	[Hendahewa et al., 2006]	[Razak, et al., 2014]	[Aslam & Khan, 2011]	[Grygo, 2006]	[Olamide & Olawaiye, 2013]	[Borchert, 2002]	[Ghuangpeng, 2011]	[Shumba & Naong, 2012]	[Eremie, 2014]	[Alexander et al., 2011]	[Fizer 2014]
1	Ability/capability	-	-	-	Y	Y	Y	Y	Y	Y	Y	-	-	Y	Y	Y	Y	Y
2	Age	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
3	Area of residence	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Attitude	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
5	Availability of jobs	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Community		Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Counsellor/Advisor		Y		Y	-	Y	-	-	-	-	-	-	-	-	Y	-	-
8	Environment			Y	Y	-	Y	-	-	-	-	-	Y	Y	-	-	-	Y
9	Family Business	-	-	-	-	-	Y	-	-	-	-	-	-	Y	-	-	Y	Y
10	Family income/Financial support	Y	-	-	-	-	Y	-	-	-	-	Y		Y	Y	-	Y	Y
11	Friends influence	-	Y	-	-	-	Y	-	-	-	Y	-	-	Y	Y	-	-	Y

12	Gender	Y				Y	Y	-	-	-	-	-	-	Y		Y	Y	Y
13	Hobbies	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
14	Interest/Interest assessment test	Y		Y	Y	Y	Y		Y		Y	Y		Y		Y	Y	Y
15	Industry alignment with subjects	-	-	-	-	-	-	Y	-	-	-	Y	-	Y	-	-	-	-
16	IQ	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-
17	Job guaranty	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
18	Learning experience	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Location	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Media	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Opportunity	-	-	-	-	-	-	-	-	-	-	Y	Y	Y	-	-	-	Y
22	Outcome expectations	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
23	Parents educational background	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
24	Parents influence		Y		Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y
25	Past academic performance				Y			Y	Y	Y	Y	Y	Y	Y				
26	Personality					Y	Y		Y			Y	Y			Y	Y	Y
27	Preference			Y				Y			Y			Y	Y			
28	Prestige	Y														Y		
29	Programme					Y												
30	Self-efficiency													Y				
31	Self-employment	Y																
32	Scholarship					Y												
33	School attendance	Y	Y	Y								Y						
34	Skills					Y		Y	Y		Y	Y	Y			Y		
35	Student strength								Y									
36	Teacher		Y			Y	Y						Y	Y	Y			Y
37	Tuition fee			Y														

2. Data collection and analysis

The present study aims to find the most influential factors that play a vital role in the career selection of an individual. The research methodology was based on the quantitative research technique.

A questionnaire designed in 'Google forms' was sent to different individuals working in various areas, viz. education, media, engineering, technology, fine arts etc. A total of 95 individuals (61 males and 34 females) participated in the study. The educational qualifications of participants varied from high school (10th), intermediate (12th), diploma, graduation, post-graduation and others. Out of the total, 42.1% (40) were post-graduate, 34.7% (33) graduate, 13.7% (13) intermediate, 6.3% (6) were others and 3.2% (3) diploma holders. The pie charts in figure. 1(a & b) depict the gender and education-based percentage distribution.

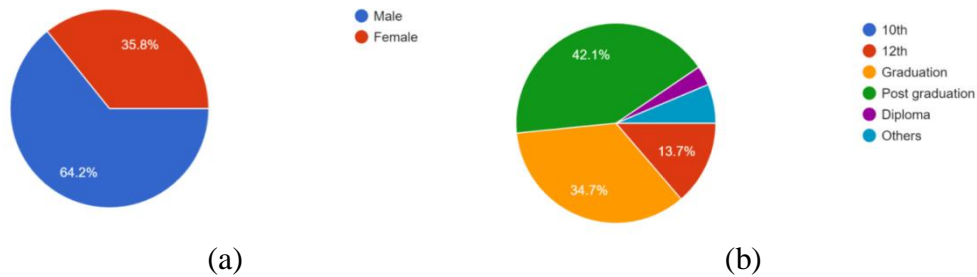


Figure. 1. (a) Gender and (b) education-based distribution of participants

Data were also collected about high school and intermediate percentages of the participants. As far as high school is concerned, 33.7% participants secured between 60-70%, 27.4% secured above 80%, 22.1% between 70-80%, 13.6% secured between 50-60% and remaining secured below 50% marks. In intermediate, 31.6% secured marks between 60-70%, 28.4% secured between 70-80%, 17.9% were above 80% as well 50-60%. On the other hand, the remaining participants secured less than 50%.

Father's and mother's qualifications were also extracted from the participants via the questionnaire. 33.7% of participants mentioned their father's qualification to be graduation, and 26.3% mentioned post-graduation. On the other hand, 11.6% of participants mentioned their father's qualification to be intermediate and the remaining mentioned 'others'. Similarly, mothers of 17.9% of participants were post-graduate, 37.9% of participants were high school passed, 31.6% did graduation, and 12.6% were intermediate. On the other hand, 17.9% of participants mentioned their mother being post-graduate, and 12.6% of participants mentioned the qualification of their mother being intermediate. The pie charts in figure. 2 depict the educational qualification-wise percentage distribution of the total participants.

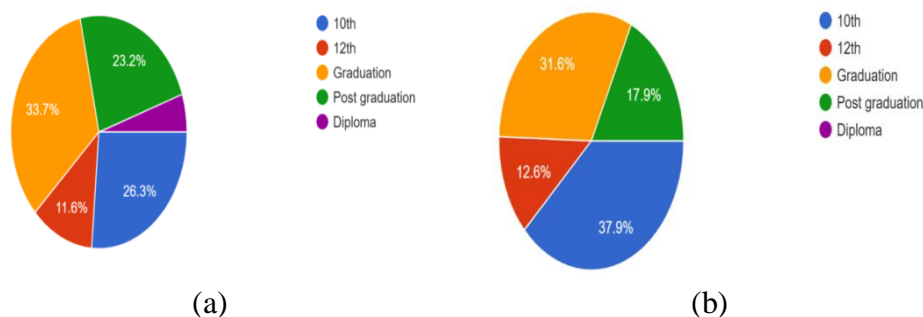


Figure. 2. Percentage distribution of educational qualification of (a) father and (b) mother of participants

The pie charts in figure. 3 depict the percentage distribution of the occupation of the father and mother of the participants. Fathers of 45.3% of participants are in a job, 18.9% are in business, 12.6% are from

farming, and 23.2% were 'others'. On the other hand, the mothers of 78.9% of participants are housewives, 14.7% are in a job, and just 2.1% are in business.

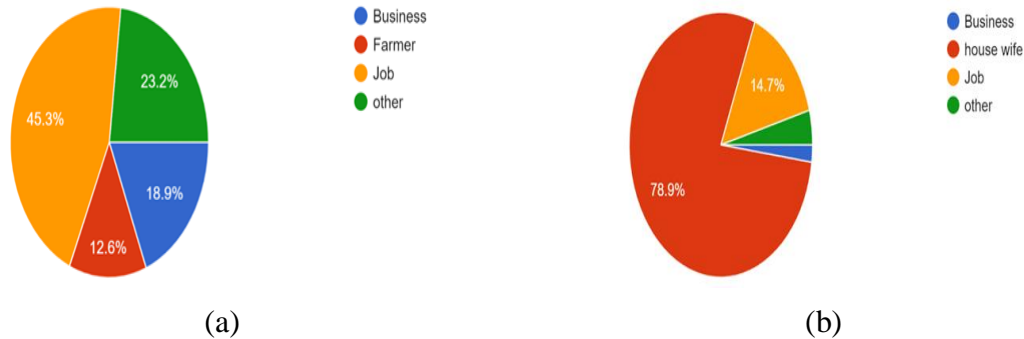


Figure. 3. Percentage distribution of occupations of (a) father and (b) mother of participants

It is well understood that parents are the first and foremost teachers of a child. The role of parents in early life and teachers in adolescence is highly crucial for the growth of an individual. Data was also collected via the questionnaire about whether the participants got proper guidance from their parents and teachers. The pie charts in figure. 4 show the percentage distribution of participants' responses to questions about proper career guidance from parents and teachers. Regarding career guidance from parents, 42.1% of participants mentioned their answers as 'Yes'. On the other hand, 24.2% of participants mentioned their answer as 'No'. Similarly, 25.3% of participants mentioned 'Some times' as their answer and 8.4% mentioned 'Always'. Therefore, the total negative response, i.e. 'No' and 'Some times', comprises approximately 50%. Regarding whether the participants got career guidance from teachers, 36.8% mentioned 'No', 34.7% mentioned 'Yes', and 26.3% mentioned 'Some times'. Interestingly, the total negative response contributed to approximately 63% in this case. This finding emphasizes the need for career guidance sessions at the school and college levels.

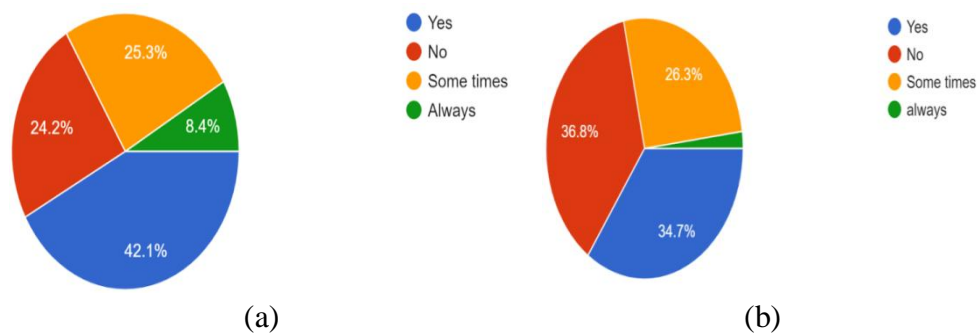


Figure. 4. Percentage distribution of whether participants got career guidance from (a) parents and (b) teachers

Some of the questions were also asked to know more about the person's mental and monetary satisfaction. Table 2 presents the responses to the participants' mental and financial satisfaction levels.

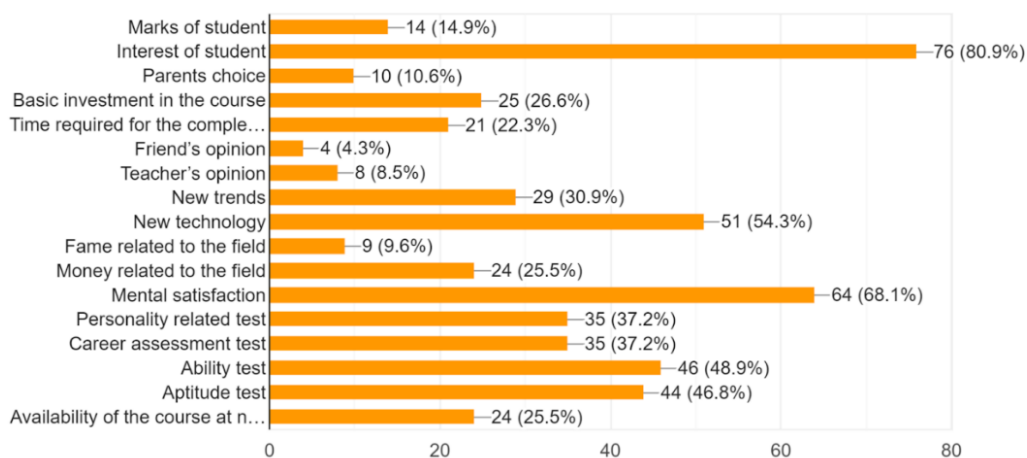
Table 2: Responses of participants about their mental and financial satisfaction levels

Question	Response			
17-Are you satisfied with your career decision in terms of mental satisfaction?	64.2% (Yes)	9.5% (No)	9.5% (Sometimes not)	16.8% (Sometimes)

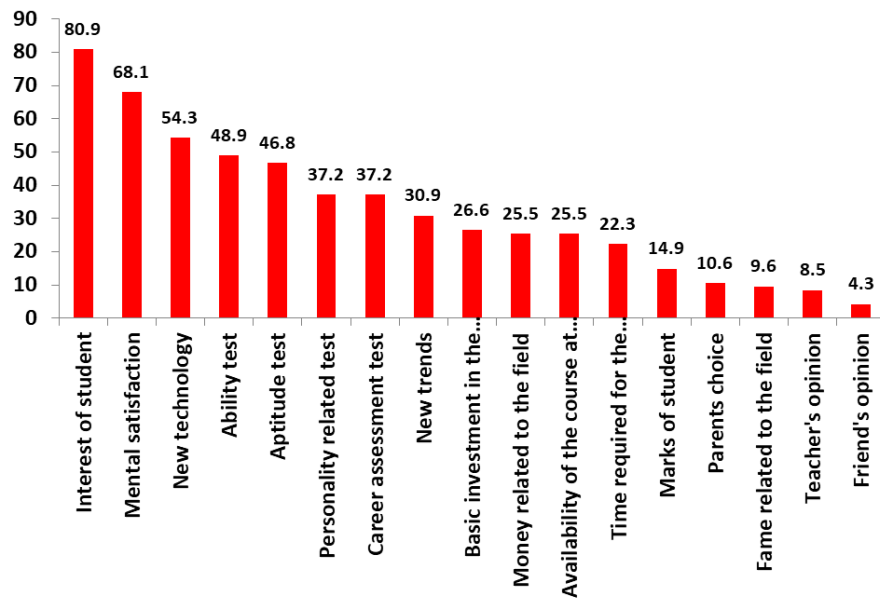
18-Are you satisfied with your career decision in terms of earning?	55.8% (Yes)	20% (No)	5.3% (Sometimes not)	18.9% (Sometimes)
19-Your education area and interest area are related to each other?	67.4% (Yes)	16.8% (No)	9.5% (Maybe)	6.3% (Do not know)
20-If you would get career guidance from an expert career counselor then you would have a better career	48.4% (Yes)	11.6% (No)	40% (Maybe)	-
21-What do you think that you can do better in another area of interest?	35.8% (Yes)	22.1% (No)	42.1% (Maybe)	-
22-Are you satisfied with your work?	71.6% (Yes)	13.7% (No)	14.7% (Maybe)	-
23-If you got the chance to change your work field as per your choice you want to change?	40% (Yes)	32.6% (No)	27.4% (Maybe)	-
24-Career counseling services should be provided by the school from high school?	87.4% (Yes)	8.4% (No)	4.2% (Maybe)	-

2. Analysis of factors

Figure 5 (a) shows the critical factors to consider in selecting the right career in the form of a bar chart. Figure 5 (b) presents the responses of various individuals showing the relative importance of factors.



(a)



(b)

Figure. 5. (a) Important factors to be considered in selecting the right career and (b) responses of various subjects showing the relative importance of factors

It is observed that different research focuses on different factors. However, some factors are common out of all the considered factors. These are the student's interest, ability, and capability, family and teacher opinion, financial support, career assessment, interest assessment, time, mental satisfaction, new trends and technology, and availability of the course near the place. The present article presents an approach for determining various factors affecting the career selection decision of an individual. A detailed questionnaire was designed to extract relevant information from 95 individuals from various professions such as fine arts, agriculture, technology, media, and education. The individuals belonged to education levels ranging from diploma to post-graduation. The extracted information was systematically analyzed, and critical factors affecting career-based decision-making were identified.

The figure illustrates the responses of various subjects depicting the relative importance of various factors. It has been established that personal interest plays a pivotal role in deciding one's career path [Caldera et al., 2003; Bojuwoye & Mbanjwa, 2006; Gokuladas, 2010; Lent et al., 2010; Choi & Kim, 2013; Atitsogbe et al., 2018]. Gokuldas et al. have concluded that the career choice of urban students is greatly affected by their interests rather than societal pressure. Similar findings have been reported by [Lent et al., 2010]. In the Chinese culture, students' interest has a significant contribution in aiding their career choice. However, it is also observed that these preferences of individuals are affected by social comparison [Li et al., 2015]. In some countries, such as Switzerland, the students have been highly influenced by personal interests. This finding might be attributed to the fact that such decisions are closely associated with the student's self-identity. Other societies, such as Burkina Faso, showed lesser associativity between career decisions and self-identity [Atitsogbe et al., 2018]. Such a finding contrasts with the American and Mexican-American students, who are more future-oriented and believe in setting their individual future goals [Choi & Kim, 2013; Caldera et al., 2003]. In the present investigation, 76 (80.9%) individuals consider the 'interest of student' the most crucial factor for career

guidance. This finding is in agreement with the literature as most individuals weigh their personal choice highest among all other factors

2.1 Parent's choice

In the Indian context, it was observed that the father plays a highly significant factor in influencing management students' career choices [Agrawala, 2008]. This finding is mainly attributed to the highly patriarchal society prevailing in India. Also, fathers being mainly working professionals have great potential in affecting their children's career choices. Another study concluded that mothers (52.5%) are the more crucial factor in deciding students' career choices. This percentage was followed by fathers amounting to 18.75% and siblings & guardians amounting to 16.75% [Bojuwoye & Mbanjwa, 2006]. Good bonding among family members culminates in efficient family communication, forming the backbone of career guidance. Greater congruence between the career of parents and students was also observed to increase confidence in career selection [Sawitri et al., 2014, 2015]. It was also seen that parents from agricultural societies have a more significant influence on the career selection of their children. On the other hand, parents from industrialized societies had little influence on the career selection of their children. As a result, their children displayed greater autonomy and a career-oriented approach.

In the present study, only 10 (10.6%) students considered their parent's choice necessary for their career choice. As discussed above in detail, this finding is congruent with the observation in the literature survey. Furthermore, most of the individuals (80.9%) considered in the present investigation are from small towns or metropolitan cities. Therefore, it can be asserted that their career choice is least affected by their parent's choice.

2.2 Mental satisfaction

Mental satisfaction also plays an essential role in deciding an individual's career selection. This is because modern life revolves around careers. Therefore, an individual's happiness and mental satisfaction are closely related to her career. Factors affecting mental satisfaction are family, friends, working environment, income, education status etc. [Abele, and Spurr, 2009; Abele-Brehm, 2014; Keller, Samuel, Bergman, and Semmer, 2014]. Furthermore, mental satisfaction is directly related to career decision self-efficacy, which depends directly upon academic satisfaction, family income, work experience etc. [Pinquart, Juang and Silbereisen, 2004; Sarwar, A. and Azmat, A., 2013].

In the present study, 64 (68.1%) individuals consider mental Satisfaction one of the most critical factors in deciding their career path. Therefore, the individuals were asked: "Are you satisfied with your career decision in terms of mental satisfaction?" The registered responses are shown in figure. 5. Sixty (60) out of 95 (63.8%) individuals mentioned that they are mentally satisfied with their current career choice.

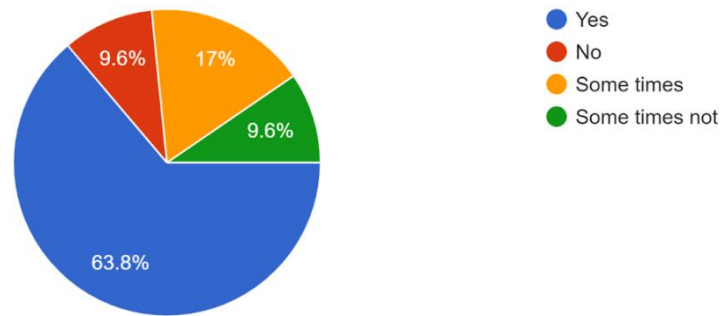


Figure. 5. Pie chart showing the percentage distribution of the response of individuals regarding mental satisfaction

Mental satisfaction is paramount in determining the proper advancement of one's career progression. An individual's growth is blocked in an environment where mental peace is absent. Making a career decision is a thorough process of understanding what an individual wants from his career. If this process is handled correctly, the individual's well-being, stability, and job satisfaction are affirmed [Kunnen, 2013].

2.3 New technology

New technology significantly affects the nature of career choices currently in demand. Careers that were popular two decades ago have become obsolete or are less popular today. In today's world, multi-layered, dynamic and multi-tiered career choices have replaced venerable classified jobs, which were more stable. Individuals are finding novel avenues in the form of contracting agencies instead of spending their complete life in the same company. Even in developing countries such as India, manual labour has been partially replaced with brainpower. Future workers must ensure continuous improvement in their existing skills to achieve coherence with today's career options. In the present study, 54.3%, i.e. 51 out of 95 individuals, considered new technology a vital career selection criterion. The past decade has witnessed a sharp increase in the accessibility of information and communication technology (ICT) among the young generation. The advent of 4G technology has permitted individuals to access ICT through personal computers and mobile phones [Vuorinen et al., 2011]. ICT provides a platform for helpful information via automatic interaction and a smooth communication channel [Hooley, Hutchinson & Watts, 2010; Vuorinen, 2011]. Various new and lucrative job roles have originated as information technology reached our doorsteps. For example, many individuals are approaching smaller firms, skill-contracting companies or entrepreneurship instead of full-time jobs.

2.4 Other factors

Interestingly, 46 (48.9%) individuals marked ability tests as an essential factor while making career-related decisions. Similarly, 46.8% of individuals marked that aptitude tests were necessary for choosing the correct career path. This percentage was followed by 37.2% of individuals who considered personality and career-related tests an essential factor for career selection. On the other hand, new trends were considered an essential factor for 30.9% of individuals. Generally, the money required for pursuing any career is considered an essential factor for any individual. However, in the present study, just around 26.6% of individuals considered 'basic investment in the course' an essential factor. This number is followed by 25.5% of individuals considering 'availability of course at nearby places' an essential factor

for career selection. This finding implies that 25.5% of individuals are willing to move to far-away places if they want to pursue a particular profession. The 'time required for the completion of course' is an essential factor for just 22.3% of individuals. This finding implies that the course completion time is insignificant to a more significant number (77.7%) of individuals.

Unexpectedly, 'teacher's opinion' and 'friend's opinion' were considered important factors for just 8.5% and 4.3% of individuals. This finding is against the joint hypothesis that the career-related decisions of an individual are affected mainly by teachers' and friends' opinions.

Conclusions

The selection of the right career plays a significant role in deciding the work satisfaction of an individual. A logical and scientific approach toward career selection can shorten the success path of a person tremendously. This study is focused on various vital factors which affect one's career-related decisions. Identifying these factors was accomplished through a systematic review of the literature published in the last couple of decades. A study was conducted on 95 individuals from various fields, viz. agriculture, fine arts, technology, education, media and information was extracted from them. The information was analyzed and presented systematically through pie charts for developing an adequate understanding. The study revealed that the 'interest of students' was considered significant by 80.9% of individuals. This factor was followed by 'mental satisfaction' and 'new technology', considered significant by 68.1% and 54.3% of individuals.

Interestingly, the factors such as 'teacher's opinion' and 'friend's opinion' played an insignificant role, with just 8.5% and 4.3% of individuals considering them necessary.

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