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# Subject Selection Psychology of Students during Junior College Admissions in Maharashtra, India

Dr. Bondage ShivrajDattoba<sup>1</sup>, Dr. Mandale Sarvottam Uttamrao<sup>2</sup>, Dr. J. D. Shaikh<sup>3</sup>

<sup>1</sup>Research Fellow, Department of Zoology, Maulana Azad College, Aurangabad

<sup>2</sup>Librarian, Abhinav college of Education, Latur

<sup>3</sup>Head and Associate Prof. Department of Zoology, Maulana Azad College, Aurangabad

**Abstract:** *The choice of subjects at the time admission of class eleventh is very pick point of students life. There found the anxiety between student and parents. Now the government of Maharashtra applied the admission of class eleventh by centralize system. So in this system student can choose liked subject who are above 90% marks. Knowing the preferences of students for future specialization and factors affecting this choice may help plan the educational system, set priorities, and instigate the interest of students who are reluctant to further studies in particular subject which has more public health or academic importance.*

**Keywords:** *Subject, Science, Engineering, NEET, Teachers.*

## I. INTRODUCTION

The choice of subjects after class X is a very essential decision in a student's life, something that is understandably met with a lot of anxiety and confusion both on the part of parents and students alike. This uncertainty is not out of place really since to large extent, on this decision, hinges the general direction that a student's career is going to take. A pretty intimidating task it is for sure. Students become increasingly aware of career opportunities and the availability of vocational pathways during their final years of senior schooling (Harvey, 1984). It is a general practice to base this imperative decision on the marks that the student obtains in his class X examinations. So, a student who get an average 90% plus aggregate in his class X Board Exams, is sure 'candidate' for the Science subjects and another student who secures a 60% in his class X exams, assumes that Humanities or the Arts subjects is what he must be cut out for several colleges of Maharashtra. Such generalizations often prove erroneous and students may end up disillusioned and unduly stressed (Warton&Koonney 1997). Knowing the preferences of students for future specialization and factors affecting this choice may help plan the educational system, set priorities, and instigate the interest of students who are reluctant to further studies in particular subject which has more public health or academic importance. (Rajesh K. Jha et, al. 2015).

### A. Science

This is the most chosen stream for 10 + 12 education and offers many lucrative career options including medicine and engineering. It is also famous for the fact that it keeps you options open, i.e. a student is allowed to select commerce or arts after pursuing science in 10+12, while commerce and arts students cannot pursue science. In science stream, the student have to take at least six subjects including one compulsory language. There are lot of options for subjects like mathematics, biology, physics, chemistry, computer science, IT, electronics etc. The student should select the subjects that can lead them towards their prospective career (Gati 1993). The choice of subjects after class 10<sup>th</sup> is a essential decision in a student's life something that is understandably met with a lot of confusion both on the part of parents and students alike. This angst is not out of place really since to large extent, on this decision, hinges the general direction that a student's career is going to take. A pretty daunting task it is for sure (Ainely et, al, 1994). It is a general practice to base this important decision on the marks that the student obtains in his class 10<sup>th</sup> examinations. So, a student who secures an average 90% plus in his class 10<sup>th</sup> Board Exams, is sure candidate for the Science subjects and another student who secures a 60% in his class 10<sup>th</sup> exams, assumes that Humanities or the Arts subjects is what he must cut out for. Such generalizations often prove misguided and students may end up shattered and unduly stressed. (Andrew et, al. 2017).

### B. Popular Engineering Entrance Exams

While aggregate in the class 10<sup>th</sup> final examinations may be a fair indication of the student's hold over academic subjects, it should not be taken as the sole indicator for the level of propensity in any given area. Motivation or interest is likely to have played a relatively insignificant role. However, the scenario will change two years hence when he/she will be looking at her Class 12<sup>th</sup> Board Exam results. All the factors mentioned above his/her involvement with his/her subjects of study and her overall interest in the same will truly reflect in her final performance. This is because studies in the higher classes (Class 11 and 12) get tougher and success in

the examinations at this stage can be attained only by a consistent approach and an interestingness to learn that is best brought about by an inherent interest in the subject matter. It therefore brings us to the central point of this subject, and that is the choice of stream or subjects in class 11 should be arrived at only after taking an individual student's interest and propensity into related subject and stream. While most students complete their HSC over two years during Years 11 and 12, there are other options. If you want to study while you work, care for your family or, for example, take part in elite sports or cultural activities, one of these five pathways may be suitable for you. Special education for life skills, if you have special education needs students can attain your HSC by studying life skills courses. There are typical entry requirements for the life skills courses and you still need to meet the general eligibility and study patterns to earn your HSC. Students will need to talk with your year adviser or careers adviser to find out whether these courses are suitable for students. Aim of student is to attain the best 12 result. So, student should choose courses that student are good at, interested in and may use in the future. When calculation of considering which courses to study, explore the content of a course. For example, what are the course outcomes. Will student be required to submit a major work, or perform, as part of student's exams. It is necessary discuss with teachers about students strengths and weaknesses, as well as individual course requirements, before making students opinion about selections of division. Student can take up to five consecutive years to finish student studies, starting from the first year student complete class 12 course. After two years, student must have met all requirements of courses, including the MBBS and IIT. Student can complete a school-based apprenticeship or traineeship where studied the student. These combine paid work and training, lead to a recognised Vocational Education and Training.

### C. *Psychology*

Psychology is the practical study of behaviour and human mind. As a subject option, it opens up many exciting career opportunities and fits well with all four of the streams. Taking up Psychology construct students and parents path to work across diverse areas such as Schools, Hospitals, Counselling Centres, NGOs, Organizations, MNCs, etc. Since it is the study of humans, it is a subject that has applications in practically all fields. There fore, there are many applied fields of Psychology today, such as Aviation Psychology, Sports Psychology, Behavioural Economics, Engineering Psychology, Consumer Psychology, Forensic Psychology, etc.

### D. *Fishery Science with Physics, Chemistry, and Biology (Medical Stream)*

Taking up Fishery Science with Biology in class 11<sup>th</sup> is a great subject choice. The subject curriculum of Fishery Science is such that it provides you with knowledge related to the agricultural fishery. Studying this subject as a Biology student will allow you to relate all of this to your other studies and understand fish and related functioning better.

If students are an aspiring related Medical, Fishery Science offers another advantage as a backup option in case students are unable to clear NEET, those can try in MHCET and get admission in Agricultural, Fishery colleges, Fishery Science would open up opportunities not just in a agricultural setting such as open pond fishery, but student can even explore other diverse settings such as aquarium, fish food industry, fish seed preparation, preservation of fishes and its products. etc.

### E. *Crop Science with Physics, Chemistry, Biology (Medical Stream)*

A combination of Biology and Crop Science works really well if you wish to make a career in the field of Nutrition and Dietetics. Home Science provides you knowledge of a variety of topics related to plant nutrition, crop health, high yielding variety etc. Depending on your area of interest, as a PCB student, students can specialize as a Plant developer, Seed preparation, Garden specialist, or Nursery which recommended in urban and rural area. The centre of environment. Students can appear NEET or may try MHCET. Besides this, students can also enter the fields of academics, research, or social welfare. Other investigations have attempted to provide further insights into the influences on career decision making and subject selection (Sleet R. & Stern W. 1980).

### F. *Home Science with Physics, Chemistry, Maths, Biology*

Food Technology is another domain which can be explored with Home Science, as many of the concepts of students for learn in Home Science can be applied to a degree in Food Technology. To pursue this field, students can pursue either a B.Sc. or a B. Tech in Food Technology. For B.Tech, Mathematics and statistic is a compulsory subject to study along with Biology in class 11<sup>th</sup>. Students also have an option to pursue B.Sc. in Home Science and then do M.Sc. in Food Technology to enter this field. Under this course, student will get to understand the science behind food and nutrition. Work areas in this field include food processing, food preparation, food quality testing and evaluation by keeping a check on the shelf life of ingredients used in different food



products in industry level. The running student's studies have shown that certain preferences for different subjects of specialization at an early stage of their medical education. (Wright B. Scoot et, al, 2004).

#### G. Home Science with Humanities

Home Science is a feasible option for study for humanities students too. While as a humanities student you will not be eligible for a B.Sc (Hons.) course in Home Science, student can still get into a regular program such as a B.Sc or B.A in Home Science. As a part of this course, students will study a variety of areas and disciplines like sociology, economics, resource management, design, community living, hygiene, food, nutrition, etc. With a degree in this field, students can work in sectors such as family and child welfare organizations, schools, hospitality, fashion journalism, retail, etc. in various roles. The most prominent dimension in terms of the variance it accounts for distinguishes hard sciences, engineering, and agriculture from social sciences, education, and humanities (Anthony Biglan 1973).

#### H. Mathematics

Mathematics is a worldwide subject that holds application in practically every single field and career. An Architect uses math and statistics to calculate dimensions and space to build a building, while an Accountant uses it to maintain financial records. It is application based subject that helps an individual in developing problemsolving, analytical and logical thinking abilities. For study in detail in mathematics the branches of maths studies like real analysis calculus, complex, statistics and topology for complete use of mathematics and research level. As a result, Mathematics proves to be helpful in cracking various entrance exams after class 12th, such as JEE, BBA entrances, CLAT, etc.(Janis and Derek 2001).

#### I. Mathematics with Science

As a Science student, Mathematics is an indispensable part of learning, number of concepts of Physics and Chemistry are related to the application of Mathematics. A career perspective, Mathematics is essential to many of the careers offered in the science domain, including Engineering, Aviation, Defence, Architecture, and even research-based fields like Physics, Chemistry, Geology, Mathematics, Cartography, etc. (Joyce and Aneth 2014).

Earlier students choose either Maths or Biology to enter Engineering or Medicine, but now with multi-disciplinary options coming up, such as Biotechnology, Food Technology, Genetic Engineering, Biomedical Engineering, Biophysics, etc., a lot of students are studied for a PCMB combination to keep career opportunities open.

The subject keep in mind that both Mathematics and Biology are subjects that require a significant amount of time for practice and learning, and keeping them both as your prime subjects can impact your score. Therefore, PCMB as a subject combination should be studied only after a lot of careful consideration.

A growing critical problem not only in India but all over the globe is that students are more stressed than ever. In fact, India has one of the highest rates of suicides among people aged between 15 and 29 which depressed due to under pressure study. Although the reasons are myriad but failure in examination, unemployment, and depression are some the reasons why people put their life at risk.

A common cause of concern is the pressure from parents to do well in the class 12 board exams and even before that. There have been many events in the past where students have committed suicide during exams and on the result day. But what can be so extreme that students decide to end their life and want get relief from study stress.

The Psychologists suggest that students suffer from traumatic disorder and anxiety relating to fear of examination. The critical factor is the reason why students suffer from anxiety, depression, and the following consequences. And the anxiety not only comes from the school but also from parents, who go to extreme levels to push their children into getting better grades.

The best time period of the life that students are supposed to enjoy and cherish is the time period they are pushed to extreme levels which can be overwhelming for many.

- 1) *Indian Education:* The Education system of India is very complicated and made a very complaints were made against the Indian education system which is more disposed towards memorization and takes long systematic study hours. Leaving less time for sporting activities, and socialization which is an essential part of the development of a child. The progress of a student's 12th grade determines the choice of college or university he/she will get admission in. Students from science stream goes into further stress by giving entrance exams for different universities and colleges and the competition is dangerous.
- 2) *Pressure from Parents and School:* Anxiety of failure to do well in studies is causing fear among students which has substantial negative force on their academic and social success. The self-worth of a student is determined by the educational success and

grades, and not on the basis of individual qualities they already do possess. Guardian/parents try to get rid of cable connection, internet, computer, only so that their children could concentrate and get better grades.

Survey of recent period is two-third (66%) students explained that's say their guardians/parents attempt to pressurize them for better academic performance and the pressure from non-graduate parents was more compared to parents those were graduates and post graduates.

Every day, 6.23 students commit suicide due to the peer pressure, there must be something wrong that community are not understanding (Pamela Corey, 2015).

The emphasis is so much so on the better grades that students forget the fun element in learning. Anything can be made interesting if taught well. So, it's not only the students who un performed, teachers un performed too. Sadly there were no criteria to judge the grades of a masters. More than 50% of 12<sup>th</sup> class students admitted of having more than three private tutors. Parents are paying schools high tuition fees if ultimately the students are going to study from private tutors (Siann. G. Lightbody et, al, 1980).

**J. Help Of Students For Get Rid From Stress**

Everyone learner is different and learner could develop their own plans on how to study for long hours effectively, and parents and masters could help them develop their own learning methods. The starting of board examination, what every parents should know is, it's just exams, not the end of the world. The sure success of someone lies in what they chose to do with that's sources, the actions are taken, and not on the grades.

**K. Decision Making is Essential**

An individual's decision making is the most sought after skill in each and every career no matter which job wants student do, student success will be based on the reasoning applied behind the decisions by students take. This skill is spurred in a student from time to time and it starts right after student finish students 10th grade. Before 10th, the only choice of student was made selecting students second language. After 10th, the story changes for the first time, students have the steering wheel of his/her career (Chapman R. 1993).

The students such phase appears like a complex tangle with lots of doors leading to different directions, and it becomes difficult to find the door that leads towards the student's dream career. Let us try to look at this tangle from above, so that students can connect the doors that will lead they towards them dream.

**II. MATERIAL AND METHODS**

Table No. 1 Subject of Crop Science Choice student data from Vivekananda Junior college, Latur

Number of Stu.	Mathematics is hard Subject	Carrier in Biology	Parents suggestion	Only target of Medical	Target B.Sc. Agri	Target Nursing
51	8	13	5	16	4	5

Table No. 2 Subject of Crop Science Choice student data Modern Junior college, Latur

Number of Stu.	Mathematics is hard Subject	Carrier in Biology	Parents suggestion	Only target of Medical	Target B.Sc. Agri	Target Nursing
57	8	11	4	19	6	9

Table No. 3 Subject of Computer Science Choice student data from Vivekanand Junior college, Latur

Number of Stu.	Biology is hard Subject	Carrier in Maths	Parents suggestion	Only target of Engineering	Target B.Sc. Computer	Target IT
49	7	12	5	14	5	6

Table No. 4 Subject of Electronics Choice student data Modern Junior college, Latur

Number of Stu.	Biology is hard Subject	Carrier in Electronics	Parents suggestion	Only target of Engineer	Target B.Sc. Maths/Electronics	Target Physics
52	12	9	3	15	8	5

### III. RESULT AND DISCUSSION

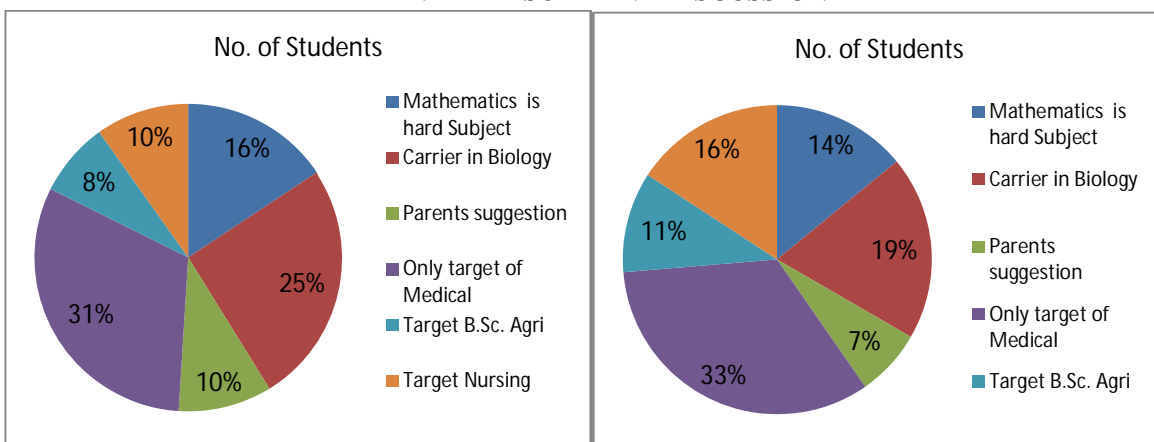


Fig. No. 1 : Data of Table No. 1

Fig. No. 2 : Data of Table No. 2

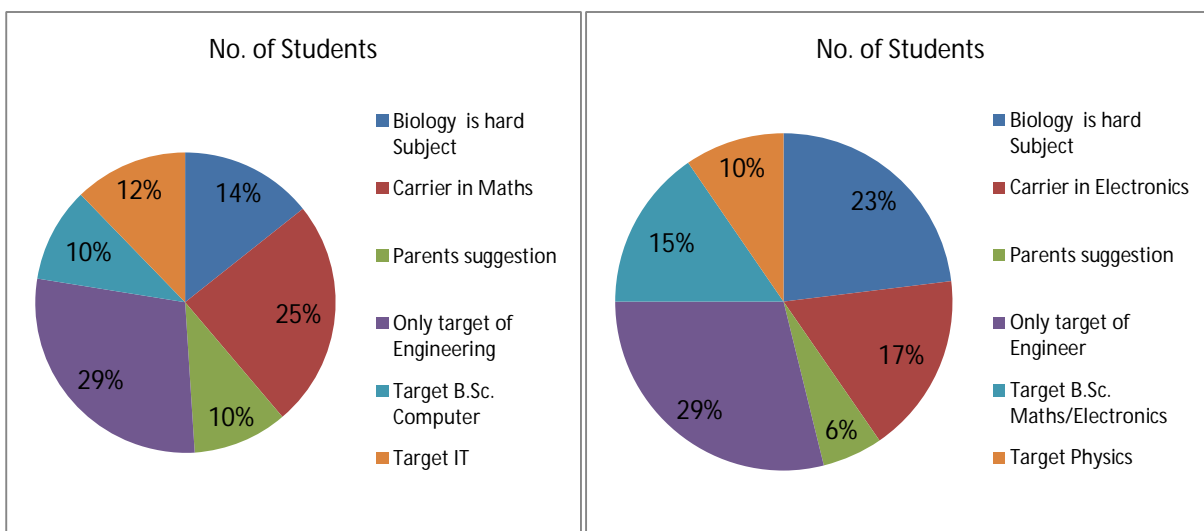


Fig. No. 3 : Data of Table No. 3

Fig. No. 4 : Data of Table No. 4

The Table no. 1 from Vivekananda junior college, Latur shows out of 51 students there are 8 students chosen crop science for the sake of Mathematics, due to the opinion of students mathematics is hard subject and some students opinion is mathematics is necessary for engineering target. 13 students are chosen in biology with crop science because these are chosen carrier in field related biology like medical, pharmacy, agri, biotechnology. 5 students are choose the subject crop science by guidance of parent, some students are not matured by mentally so they not be able to take its own decision these are now also depend on parents suggestion. 16 students select the crop science with biology because there target is only admission of medical the crop science is for 200 marks in government of Maharashtra syllabus so it will easy to student get score and student can concentrate their NEET exam. 4 students are choose the crop science due that's aim is admitted to B.Sc. Agri which is reliable subject for agri course. 5 students choose crop science they want to get admission of Nursing courses.

Table no. 2 from Modern Junior college, Latur there are total 57 students are choose crop science subject it is related to field of biology. 8 students are choose crop science due the mathematics is hard subject and crop science is easy than mathematics. 11 students are choose the crop science due to they get carrier in only biology field, 4 students are choose the crop science by the guidance of parents, 19 students are choose the crop science due to that's aim is only medical section, 6 students are choose the crop science because their aim is B.Sc. agri, 9 students are choose the crop science because they get only nursing courses so these are avoid mathematics and select crop science.

Table No. 3 shows from Vivekananda Junior college, Latur which total student of 49 are select the subject of computer science, out of these 8 students opinion are biology is hard subject so they choose computer science, 12 students opinion are they want carrier in

maths so they select the computer science, 5 students are select the subject computer science by suggestion of parents. 14 students are select the computer science subject for their target only engineering so they select maths with computer science. 5 students are choose the computer science subject due they get carrier in B. Sc. Computer or engineering in computer. 6 students are choose the computer subject due the get carrier in information technology.

Table no. 4 show from Modern Junior college, Latur there are 52 students are select the Electronics subject. 12 students are choose electronics due the biology is hard subject, 9 students are choose electronics subject due they want carrier in Electronics or related engineering, 3 students are choose the electronics subject by the suggestion of parents, 15 students are choose the electronics for their aim is only engineering after class 12, 8 students are select the electronics due they want get education after 12 class in Maths or Electronics, 5 students are choose the electronics due they get education electronics with physics after class 12.

Figure no.1 shows the 16 % students are related maths subject is hard, 25 % students are want carrier in biology, 10% students are depend on parents opinion, 31% students are only target of medical, 8% students are they want B.Sc. agri, 10% students are target is only nursing.

Figure no. 2 shows the 14% students are get subject hard of mathematics, 19% students are want carrier in biology, 7% students are depends on parent suggestions, 33% students are only target of medical, 11% students are target of B. Sc. Agri after class 12, 16% students are target nursing.

Figure no. 3 shows 14% students are get subject hard of biology, 25% students are want carrier in maths, 10% students are depend on parent suggestion, 29% students are only target of engineering, 10% students are target of B.Sc. computer or electronics, 12% students target is information technology.

Figure No. 4 shows the 23% students are get biology is hard subject, 17% students wants carrier in electronics, 6% students are depend on parent suggestion, 29% students are target only engineer, 15% students are target B.Sc. Math or Electronics, 10% students are target physics.

#### IV. CONCLUSION

Among the reasons mentioned for the choice of subject for specialization, there significant difference was observed. This possibility explains the fact that subject choice for specialization depends on multiple factors rather than the single most important factor, which may include sex of the students, profession of the parents, individual interest, intellectual capability of students, attitude and skill toward a subject, professional income, social prestige, scope of the subject, future security, (Cleland J, Johnston et, al, 2012).

The findings confirm the role of teachers in influencing students' interests to learn a particular subject. This is inconsistent with the study by which showed that teachers were able to influence the motivation of students via specific aspects of their teaching but mainly through their orientation to the student. On the other hand, some students indicated that they dislike certain subjects because they were disappointed by their teachers (Athanasou J. A. and Petoumenos, K 1998).

##### A. *What Are the Alternatives for Indian Students*

Few colleges and limited seats against quantity of populations, and high number of students applying to get into the top universities and colleges, it will be complicated to get into the top college.

The students which are not get in can always study abroad in the UK, Ireland, US, Canada, Russia or other countries who are more than ready to welcome international students.

#### V. SUGGESTIONS

- A. Need of Know students interests and aptitude. Co-curricular criteria for activities and inputs from friends & family can be valuable in this regard. Student can also take the help of psychometric testing by certified guidance counsellors.
- B. A need of career plan revolving around a minimum of 3-4 careers in place.
- C. Think it through student self, what is good for your friend may not be good for you.
- D. Explore career options and discover new opportunities that may excite student.
- E. Students pay attention to the advice from parents and other adults who know to him closely. Their experience can often give to student valuable insights about the world of work.
- F. This is important that student think through before taking this decision. Do not take it in haste or feel pressure in any way whatsoever.

## VI. RECOMMENDATION

The researcher wishes to make some general recommendations based on the research findings. Some of the recommendations would be of benefit to the student.

- A. Secondary schools where admitted student should have well-equipped laboratories which make the conduct of practical easier.
- B. Schools should evolved other means of covering the syllabus such as organizing extra classes for the students or using some pre periods for lessons, instead of sacrificing practical periods for lesson in an attempt to cover the syllabus.
- C. Student must take admission in secondary school which is regular inspected by the regulating education boards in charge of secondary schools to check qualifications of teachers and qualities of laboratories. This is because there are many schools in the state that do not have well equipped laboratories and qualified teacher especially in the sciences.
- D. Student should admit in those education society where Science teachers should be encouraged to attend workshops and symposiums on the teaching of science so that there can be a forum for them to come together and share ideas and innovations to make the teaching of sciences and conduct of laboratory practical easier and interesting.

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## REFERENCES

- [1] Ainley J., Robinson L., Harvey Beavis A., Elsworth G. & Fleming M., (1994) Subject choice in Years 11 and 12. Australian Government Publishing Service, Canberra.
- [2] Andrew D. Madden, Sheila Webber, Nigel Ford, Mary Crowder (2017), The relationship between student's subject preferences and their information behaviour. *Journal of Documentation*, Vol. 74, No. 4 pp 692-721.
- [3] Anthony Biglan (1973) The Characteristics of Subject Matter in Different Academic Areas. *Jou. Of applied psychology*, vol. 57, No. 3, pp 195-203.
- [4] Athanasou J. A. and Petoumenos, K. (1998) Which Components of Instruction Influence Student Interest. *Australia Journal of Teacher Education*, Vol. 23, pp 61-67.
- [5] Chapman R. (1993) Occupation information at a critical time of decision making. *Australian Journal of Career Development*, Vol. 2(2) pp 31-35.
- [6] Cleland J, Johnston PW, French FH, Needham G. (2012). Associations between medical school and career preferences in year 1 medical students in Scotland. *Jou of Med Educ*. Vol.46(5) pp 473-484.
- [7] Gati I. (1993). Career compromises. *Journal of Counselling Psychology*, Vol. 70 (4) pp 416-424.
- [8] Harvey, M. (1984). Pupil awareness of the career pathways and choice points in high school. *Jou. Of Educational Review*, Vol. 36 (1), pp 53-66.
- [9] Janis Jarvis and Derek Woodrow (2001) Learning preferences in relation to subjects of study of students in higher education. *Winter Jou. Of Education*, Vol. 21(2), pp 158-167.
- [10] Joyce Lazaro Ndalichako and Aneth Anselmo Kombo, (2014), Students subject choice in Secondary schools in Tanzania : A matter of students Ability and Interests or Forced. *Open journal of social sciences*, Vol. 2, pp 49-56.
- [11] Pamela Corey , (2015) Thesis submitted to University of Toronto, Title : Examining the influence of parental pressure and perceived control on young Adults Career exploration.
- [12] Rajesh K. Jha, Keshab R. Paudal, Dev K. Shah, Ajit K. Shah, Sangharshila Basnet, Phoolgen Sah, Sandeep Adhikari (2015), Subject preferences of first and second year medical students for their future specialization at Chitwan Medical college and Teaching Hospital Chitwan, Nepal – A questionnaire based study. *Journal of Advances in Medical Education and Practice* Vol. 6, pp 609-613.
- [13] Siann G., Lightbody P., Nicholson S., Tait L., & Walsh D. (1998). Talking about subject choice at secondary school and career aspirants: Conversations with students of Chinese background. *British Journal of Guidance and Counselling*, Vol. 26(3), pp 25-30.
- [14] Sleet R. and Stern W. (1980) Student selection of science subjects and careers. *Jou. Of The Australian Science Teachers*. Vol. 26(3), pp 25-30.
- [15] Warton P. M. & Cooney G.H. (1997). Information and choice of subjects in the senior school. *British Journal of Guidance and counselling*, Vol. 25 (3), pp 389-397.
- [16] Wright B, Scott I, Woloschuk W, Brenneis F, Bradley J. (2004). Career choice of new medical students at three Canadian universities: family medicine versus specialty medicine. *Canadian Medical Association Journal* Vol. 170 (13), pp 1920-1924.





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