Students Readiness after 12\textsuperscript{th} in the Stream of Engineering, Medical, Paramedical and Law with Reference to Central and State Government of Tamil Nadu by the Support of Career Chart

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Abstract: Student readiness refers in preparing students for their career after 12\textsuperscript{th} class and this will support for their career enrichment. Career readiness helps the students to understand the world of work with the courses available in different streams and it helps the student to relatively choose the course with their interest. Career readiness in this study explains more about the streams and courses available commonly in all government universities in Tamil Nadu and also explains about the career information and admission process in the streams like Medical, Paramedical, Engineering and law in the government institutions in national and state level in Tamil Nadu.

Keywords: Career readiness, career information, Engineering, Medical, Paramedical and Law

1. Introduction

Career readiness encompasses that a student to attain a successful occupational career, that includes career exploration, where career information plays an important factor to provide required and available career information after 12\textsuperscript{th} standard. career readiness refers to readiness for courses specific to an occupational area or certificate. According to David T Conley, career readiness is that a student who is ready for college and career can qualify for and succeed in entry - level, credit - bearing college courses leading to a baccalaureate or certificate, or career pathway - oriented training programs without the need for remedial or developmental coursework. stated that the foundational content knowledge is similar in all cases, the precise skill profile associated with success in a career course pathway may be more focused than that required for a bachelor’s degree.

2. Review Article

According to Sandra McNally (2016), the provision of tailored information might help young people make better - informed decisions about their educational investment. Researchers and policymakers can benefit from the growing body of literature on this topic. Most of the relevant studies suggest that information on the costs and benefits of educational choices and the application process for attending university and/or applying for financial aid does impact knowledge and expectations for those participating in the studies.

According to the study of Career Guidance, Participation of Students and its Implication for Kano (2013) mentioned that good quality career information is a crucial factor for first-rate career decision - making. Career information should include relevant information about education and training opportunities, occupations and their characteristics; labour market supply and demand. Similarly, career information should contain occupational implications of educational decisions and the learning pathways that lead to particular occupational destinations.

The study of The Role of Information on Students’ Career Choice and School Effort Experimental Evidence from Bogota, Colombia (2015) it mentioned that information has a role to play by promoting upward educational mobility in middle - income countries that will allow individuals to escape inequality traps and break the vicious cycle of poverty.

3. Challenges in career information

According to organisation for economic co - operation and development the European com (OECD) in 2004 where research was conducted in 34 countries and European Union the challenges and policy in providing career information was there is often a lack of collaboration between different government agencies, and in particular between education and labour portfolios, and between different levels of government - and in particular between national and regional governments - in providing and sharing career information. This leads to costly overlap, fragmentation, and lack of transparency and comprehensiveness.

4. Career Chart

As mentioned in Osuala (1985), career information means accurate, understandable, and useable facts that describe exploring and interpreting occupations, vocations, careers, and jobs. Career information is most important factor for student readiness after 12\textsuperscript{th}, even though career information...
is available in various sources in printable and digital format. Most of the career information is available only in the digital format, but students from rural areas, hilly region and remote area, these students are not much aware about the career information in digital format. So to conclude career information is the most important factor, to provide career development for the students in various factors.

The Department of Extension and Career guidance has Published a career chart which contains career information for various streams, eligibility, and entrance exams for school students, which covers the courses in government colleges in Tamilnadu state and this paper talks about the Medical, Engineering, Paramedical, Veterinary, Fishery and law in detail.

5. Methodology

Analytical research has followed for collecting the data through secondary sources like government websites for each stream such as Engineering, Medical, Paramedical and Law courses.

6. Objective

The objective is to understand the career information available to make student readiness in various streams.

- To assess and understand the career information in detailed for courses like Medical and Paramedical courses.
- To assess the career information in streams like Engineering and law courses.
- To understand the career information about the number of colleges in streams like Engineering, Veterinary, Fishery and law courses in Tamil Nadu.

7. Various stream and Procedure for admission

7.1 Engineering

According to Cambridge, engineering is the study of using scientific principles to design and build machines, structures, and other things, including bridges, roads, vehicles, and buildings.

Admission Process on National Level

Joint entrance examination (JEE) which is conducting by national testing agency, JEE (Main) comprises two papers. Paper 1 is conducted for admission to Undergraduate Engineering Programs (B. E/B. Tech.) at NITs, IIITs, other Centrally Funded Technical Institutions (CFTIs), and Institutions/Universities funded/recognized by participating State Governments. JEE (Main) is also an eligibility test for JEE (Advanced), which is conducted for admission to IITs. Paper 2 is conducted for admission to B. Arch and B. Planning courses in the country.

JEE main Paper 1 is conducting for 300 marks which covers subject like Physics, Chemistry, and Mathematics and paper 2 is for 400 marks which covers subject like Mathematics, Aptitude Test, and Drawing Test, both are objective type. The JEE Advanced question paper will be divided into two papers - papers I and II. Attempting both papers is compulsory, and they all need to be completed within 6 hours and it is objective type, JEE Advanced’s total marks is 306 marks, and each paper carries a total of 183 marks.

Admission process in the State of Tamil Nadu

In the state level, Tamil Nadu Engineering admission by online (TNEA) is conducting by the DOTE (Directorate of technical education). At present 2022, 461 colleges are included in counselling and total available seats are 151870. According to Tamil Nadu engineering admission allocation of seats in colleges

a) Seats in Government Engineering Colleges
b) Seats in Aided and self - supporting courses in Government Aided Engineering Colleges
c) Seats surrendered by Central Government Institutions
   - Central Electro Chemical Research Institute (CECRI), Karaikudi
   - Central Institute of Plastic Engineering and Technology (CIPET), Chennai
   - Indian Institute of Handloom Technology (IIHT), Salem
d) Seats in B. E. & B. Tech. Degree Courses in University Departments and Constituent Colleges of Anna University.
e) Seats in B. E. Degree Courses in Mechanical Engineering and Civil Engineering (Tamil Medium) in university
f) Departments and Constituent Colleges of Anna University.
g) Seats in B. E. /B. Tech Degree Courses in Annamalai University, Annamalai Nagar, Chidambaram.
h) Seats surrendered by Self Financing Engineering Colleges

<table>
<thead>
<tr>
<th>Table 7.1: Engineering Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
</tr>
<tr>
<td>National level Entrance</td>
</tr>
<tr>
<td>State level</td>
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<tr>
<td>Course Duration</td>
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<tr>
<td>S. No</td>
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<td>21</td>
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</tbody>
</table>
In India, the entrance exam NEET is mandatory to get admission in Medical, Dental, and Ayush courses. For all the above courses in Tamilnadu the affiliating university is Dr. MGR Medical University. There are 37 Government medical colleges, 2 dental colleges, 19 self - financing medical colleges and 18 self - financing dental medical colleges, 8 Government colleges and 55 Self - financing colleges for AYUSH is available in Tamilnadu.

### 7.2 Medical Courses and NEET exam

According to NTA (National Testing Agency), national eligibility cum entrance test [NEET (UG) – 2022] will be conducted by National Testing Agency (NTA) in Pen and Paper mode in 13 languages, as a uniform entrance examination for admission to MBBS/BDS/BAMS/BSMS/BUMS/BHMS and other undergraduate medical courses in approved/recognized Medical/Dental /AYUSH and other Colleges/ Deemed Universities /Institutes (AIIMS & JIPMER) in India. The languages in which the NEET (UG) 2022 would be conducted are: English, Hindi, Assamese, Bengali, Gujarati, Kannada, Malayalam, Marathi, Odia, Punjabi, Tamil, Telugu, and Urdu.

NEET will be conducted for 720 marks for four subjects Physics, chemistry, Botany and Zoology. Each subject will consist of two sections. Section A will consist of 35 Questions and Section B will have 15 questions, out of these 15 questions, candidates can choose to attempt any 10 questions, total question for each subject are 50 questions.

### 7.3 Paramedical course

College of Paramedics (2018) A paramedic works autonomously as a generalist clinician across a range of healthcare settings, usually in emergency, primary or urgent care. They may also specialize in clinical practice, education, leadership or research.
According to Tamilnadu state and Tamilnadu medical selection board, all paramedical courses are affiliated under Dr. MGR. Medical University and it is a single window application for admission.

### 7.4 Law

<table>
<thead>
<tr>
<th>Course</th>
<th>Law - Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A LL. B</td>
<td>5 - Years</td>
</tr>
<tr>
<td>B. COM LL. B (Hons)</td>
<td></td>
</tr>
<tr>
<td>B. C. A LL. B (Hons)</td>
<td></td>
</tr>
<tr>
<td>BBA LL. B (Hons)</td>
<td></td>
</tr>
</tbody>
</table>

The Tamil Nadu Dr. Ambedkar Law University is functioning as the nodal agency of the Government of Tamil Nadu for selection of candidates for admission to 3 - Year LL. B. Degree Course and 5 Year B. A. LL. B. Degree Courses (Regular), offered in Government Law Colleges located in the State of Tamil Nadu, under the unified Single Window Admission System.

According to Dr. Ambedkar Law university, B. A LL. B is the only course provided in government and government affiliated colleges in Tamilnadu. And as per the data, there are 15 government colleges and 9 private colleges in Tamilnadu to offer law courses.

### 8. Conclusion

To conclude every school should have a career cell for career counselling to offer a counselling and guidance from class 9 to class 12, which tells about various sector from entrance exam, eligibility, streams and courses availability according to centre and state which was listed in the article.

Career information should also include government colleges, university and central universities in state level and National level.

So the government has to initiate to recommend all the schools, irrespectively of centre and state they have to place the career chart in the school campus to make the students for understanding various courses and its entrance exam by themselves.

National and state level providing career information should be available in single window, career centre should be established in each district, which should be one stop centre which should help the student in their career choice, and career development.

### References

[1] https://www.tneaonline.org/
[2] https://nta.ac.in/
[3] https://tanuvas.ac.in/
[6] https://tnjfu.ac.in/
[7] https://josea.ac.in/
[8] https://tnau.ac.in/
[9] https://www.tndaluc.in/

### Annexure

#### Table 1.1

<table>
<thead>
<tr>
<th>Engineering Universities &amp; colleges under TNEA</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Engineering colleges</td>
<td>10</td>
</tr>
<tr>
<td>Government aided Engineering colleges</td>
<td>3</td>
</tr>
<tr>
<td>Anna university campus</td>
<td>3</td>
</tr>
<tr>
<td>A constituent college of Anna University</td>
<td>16</td>
</tr>
<tr>
<td>Central University for Engineering course</td>
<td>3</td>
</tr>
<tr>
<td>Annamalai University</td>
<td>1</td>
</tr>
<tr>
<td>Private colleges affiliated with Anna University</td>
<td>425</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>461</strong></td>
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#### Table 2.1

<table>
<thead>
<tr>
<th>Medical and Dental Colleges</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Medical colleges</td>
<td>37</td>
</tr>
<tr>
<td>Government Dental Colleges</td>
<td>2</td>
</tr>
<tr>
<td>Self - Financing Medical Colleges</td>
<td>19</td>
</tr>
<tr>
<td>self - financing Dental colleges</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>76</strong></td>
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#### Table 2.2

<table>
<thead>
<tr>
<th>Courses</th>
<th>Government colleges</th>
<th>Private colleges</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. A. M. S (Ayurvedic)</td>
<td>2</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>B. N. Y. S (Yoga and Naturopathic)</td>
<td>2</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>B. U. M. S (Unani)</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>B. S. M. S (Siddha)</td>
<td>2</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>B. H. M. S (Homeopathic)</td>
<td>1</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

#### Table 2.3

<table>
<thead>
<tr>
<th>Course</th>
<th>Government College</th>
<th>Private College</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law</td>
<td>15</td>
<td>9</td>
<td>24</td>
</tr>
</tbody>
</table>
**Allied and Paramedical**

- 12-ஆம் நிலை 12வது / 12ஆம் நிலை 12வது (NEET)
- MBBS (Bachelor of Medicine, Bachelor of Surgery)
- BDS (Bachelor of Dental Surgery)
- BAMS (Bachelor of Ayurvedic Medicine and Surgery)
- BNYS (Bachelor of Nursing and Home Science)
- BUMS (Bachelor of Unani Medicine and Surgery)
- BSMS (Bachelor of Shiroor Medicine and Surgery)
- BHMS (Bachelor of Homeopathic Medicine and Surgery)

**Clinical Nutrition Courses**
- Nutritional intervention & Clinical dietetics
- Clinical nutrition & dietetics (B.Sc. Nursing)
- Clinical nutrition & dietetics (B.Sc. Respiratory)
- Clinical nutrition & dietetics (Radiology & Imaging Technology)
- Clinical nutrition & dietetics (Physician Assistant)
- Clinical nutrition & dietetics (Cardio Pulmonary)
- Clinical nutrition & dietetics (Optometry)
- Clinical nutrition & dietetics (Medical Laboratory Technology)
- Clinical nutrition & dietetics (Critical Care Technology)
- Clinical nutrition & dietetics (Dialysis Care Technology)
- Clinical nutrition & dietetics (Accidental & Emergency Care)
- Clinical nutrition & dietetics (Operation Theatre & Anaesthesia)

**LAW**

- BA (Bachelor of Arts)
- LLB (Bachelor of Law)
- B.Com. LLB (Honours)
- BBA LLB (Honours)
- BCA LLB (Honours)
- LLB (After UG) (Honours)
- BL.LLB (Honours)

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**Volume 12 Issue 7, July 2023**

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Engineering

B.E. / B.Tech.

- (Civil)
- (Mechanical)
- (Electrical & Electronics)
- (Electronics & Communication)
- (Computer Science / IT)
- (Electronics)
- (Aerospace / Aeronautical)
- (Automobile Engineering)
- (Industrial Engineering)
- (Petroleum / Chemical Engineering)
- (Marine Engineering)

- (Electronics & Instrumentation)
- (Information Technology)
- (Artificial Intelligence)
- (Production & Industrial)
- (Industrial & Systems)
- (Mechanical & Aerospace)
- (Bio-Technology)
- (Polymer Science)
- (Pharmaceutical Science)
- (Mineral / Mining Engineering)

- (Ocean Engineering & Naval Architecture)
- (Ceramic Engineering)
- (Industrial Architecture)
- (Food Technology)
- (Chemical & Electro-Chemical)
- (Leather Technology)
- (Rubber & Plastics Technology)
- (Textile Engineering)
- (Manufacturing Engineering)
- (Printing Technology)

Entrance Exam: NATA / JEE Main

B. Plan / 4 Years
B. Arch / 5 Years