Research Methodology

Data required for the designing, implementation and validation will be collected through descriptive as well as quantitative research. The most common use of the tool in research will be survey method using google forms.

The following technology will be used for the implementation of Career Stream Assessment System are:

- PHP 5 (core PHP)
- MYSQLi database
- Jquery
- Ajax
- HTML 5
- CSS 3

Population

In the present study, the researcher will be decided to design and implement a Web-based Career Stream Assessment system (WCSAS) for high school students. Educationist, counsellors, and Students from Indian school of Dar es-Salaam, Tanzania are included in the population of the study.

Sample

In the present study, the researcher will choose 2 counsellors, 9 Educationist and 120 students from Indian schools of Dar-es-Salaam, Tanzania by applying random sampling technique. The researcher will select already counselled student to verify the system. To ensure the criteria of large sample size total no of the sample (n=120) will be for the study.

Data Collection (sources)

Primary Data:

1. School Students Survey.
2. Counsellors’ and Educationists’ Interview /Survey.

**Secondary Data:**

1. Books related to study conducted.
2. Documents Published or unpublished
3. Referred Journals and Research papers.
4. Internet
5. Various Websites

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**The Work plan**

The study would deal with the theoretical review of the literature on Psychometric testing technique, Holland’s theory and personality, interest and aptitude test, and various career in science, commerce and humanities and available instruments and information from the counsellors and educationist. After that, an initial item pool will be generated on the basis of gathered information. Data collection will be the next step after designing of initial item pool of Stream Assessment. Once the data will be collected, the information will be analysed and summarized from the survey report followed by implementation of the system by using PHP and MYSQLi database. Just after the implementation, the testing process starts and after successful testing system will show academic stream and guide the students about the career in that stream. The system will be checked for validity by quantitative research on 120 students.
System Flow Chart

Review of the literature on Psychometric testing technique, Holland’s theory, personality, interest and aptitude test analysis and various career in science, commerce and humanities and available instruments.

Generate Research Questions

Understanding of the attributes for different streams

Counsellor

Formulate initial item pool

Educationist
On the whole, the study will be held in four phases:

1. Designing of Stream assessment tool
2. Analysis of questionnaires
3. Implementation of the system: WCSAS
4. Validation of the system: WCSAS

**Outline of the thesis**

1. Introduction will give the background details, problem statement, research purpose, objectives, hypothesis, and significance, definitions of the terms, scope and limitations and overview of the dissertation.
2. Review of literature outlines relevant literature under the broad headings: Assessment of Personality, Interest and Aptitude and process of tool development, guidance and counselling, career guidance in Science, Commerce, and Humanities, available instruments, Holland's code model, validation and reliability of psychometric tool.

3. Methodology and Data analysis explains research approach and design, population and setting, sample and sampling, data collection procedure, definition of terms and instrumentation. Data analysis methods.

4. Implementation outlines the SDLC model of software engineering, system designs, Data flow diagrams, Databasetables, SQLQueries and logic behind the system details of implementation of Web-based Career Stream Assessment System (WCSAS) will be explained.

5. Testing of hypothesis: testing of the hypothesis will be done to check the reliability and validity of the system.

6. Results presents the answer to the research question with statistical support.

7. Conclusion and Future trends explains the outcomes of the research conclusions and also explains limitations and recommendations for future research.