

Executive summary of the UGC Sponsored Minor Research project File No 23-1509/09(WRO) 13 March 2010

A SYSTEMATIC APPROACH TO IMPROVING THE WRITING SKILLS OF SCIENCE POST-GRADUATE STUDENTS AND RESEARCH SCHOLARS OF SOLAPUR UNIVERSITY

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From the colonization to globalization, English in India is treated as a language of the elites and its social status has been changing from the language of the rulers to link language to library language to the language of opportunities today in the era of science and technology. Indians have been pursuing to learn it, master it since the days of freedom struggle. Under the present need based English for Specific Purposes there is need for the skills of Scientific English among the Science graduates. **Scientific English has its own features of vocabulary, grammar and style used in writing scientific research papers, books and blogs.**

Statement of the problem

Science postgraduate students and the research scholars of Solapur University are in need of the writing skills with Scientific English.

The learners interested in pure science continue with the conventional degrees of B SC, M Sc subsequently. In every stage, English is the medium of instruction. The learners unconsciously use nonliterary language imitating their teachers to carry out their educational process. Those who continue with their post graduation and research work after the post graduation depend on the same language skills with the poor vocabulary not so scientific in its style. Projects, thesis, research papers blogs are the part of the career at this level where they need perfect knowledge of scientific English.

The Objectives of the project:

- To study the awareness of writing skills with knowledge of Scientific English among the Science post graduate students and the research scholars of Solapur University
- To create the awareness of writing skills with knowledge of Scientific English among the Science post graduate students and the research scholars of Solapur University
- To prove the significance of scientific English among the science and technology graduates
- To introduce them the study material for developing the writing skills with Scientific English

Review of Research and Development in the Subject

- **National Status:** As already mentioned above the topic is much in discussion in India. Mr. Balram P, the editor of the reputed magazine *Current Science* decries that there is a dearth of good science writers. Considering the growing significance of scientific English

many institutes of science and technology are organizing conventions on scientific English.

- **International Status:** The search on internet web sites shows that western countries are taking care to improve scientific-writing. They have undertaken lot of research on this topic, but *The Journal of research in science*, has reviewed that, development of the conceptual frame work of scientific-writing is not well designed.

Significance of the study

The project will prove very useful to the scholars for writing their research paper, thesis etc. They can also try their hand as science writers of science books, editors of science magazines, pharmacy companies technical data presenter etc. The work will be a guide for the graduates of science to pursue different careers. The need of the scientific view is enshrined in our constitution so it is to be brought to the masses which cannot be done in literary language. The scholars in science will learn to present science in the special style required for science

Research Methodology: Research Methodology adopted:

Population and sample: The investigators selected 132 Science postgraduate students and research, 42 from technology post graduate students and 20 faculties from Solapur University and the PG centers in around Solapur city.

Data collection procedure: A questionnaire carrying 15 questions was used for the learners and with 5 for the faculties.

Design of the study:

- Collection of data from the post graduate students and the research scholars of Solapur University
- Collecting the data from the PG teaching faculty
- Processing the data to authenticate the hypothesis that the *Science post graduates and the research scholars need writing skills of Scientific English and draw the conclusion*
- To train the group in the writing skills by organizing the workshop,
- Finding the exposure through the contest

Data analysis and its interpretation

With the hypothesis in the mind that the Science postgraduates and the research scholars from Solapur University need the development of writing skills the questionnaire were prepared. The researchers wanted to test the awareness of scientific English among the target group. They finalized fifteen questions for the students and the research scholars and five questions for the teachers/guides. Out of fifteen questions five were open ended and the rest ten closes- ended.

The researchers personally approached hundreds of students and the aims and objectives of the project were explained. With the objective of authenticating the data, the concepts of scientific English were explained.

The learners were divided into PG and research scholars. Totally 174 students and 20 research scholars' response was collected. The indicators of the questionnaire included the questions to catch their exposure to Scientific English. Post graduation is also a part of some established

colleges of Solapur University so the researcher approached the teachers and the learners from different institutes at different places.

Organization of workshop: The main objective of the workshop was to introduce the writing skills of scientific English. Considering the practical need of the learners and as part of the project activity the workshop was organized. To train the learners and the scholars the researchers had sought the consent from the professional Yetindra Joshi (from Pune) a scientist turned -editor of the reputed science journals. He continued with the technical session after the inauguration. The respondents to the questionnaire attended the workshop. The workshop was conducted in the seminar hall of the department of Chemistry. The faculty from the department and other departments also attended the function. The chief guest in his inaugural address told the importance and explained the concepts of quality research of publication.

In the second session, the principal researcher explained the concept of scientific English and its linguistic features. He explained with the help of the workshop material he had developed. The technical parts like the register of scientific English were explained with the simple examples. Then the concept of domain of scientific language was explained. The printed handouts with every step of the workshop were provided to the participants. As a result it was very easy to clear the concepts. The handouts were consisting of the passages analyzed with all the features of Scientific English.

Then the researcher concentrated on motivation of the participants for the development of general English. The participants were brought to their notice the career scope for the human resource with the perfect knowledge of Scientific English. He even brought to their notice the fellowship instituted by journal *Current Science*. The handout had the list of the books for the further improvement scientific English.

A separate page was added with an example for the identification of the features of the scientific English from the passage given so that the participants would have the opportunity to do the actual work or the practice. The first passage was from the Einstein's theory of Relativity (Chapter II The system of coordinates) Methuen and Co Ltd London.

The contest and its outcome: Three participants: Mrs. Rajamanya SV research scholar from the Dept of Statistics, Mrs. Diwate AV a research scholar from Chemistry and an MSc Part II student Miss Jodmote A K from dept of mathematics were given the prizes at the hands of the principal of Sangameshwar College.

The students and the research scholars had the opportunity understand the special skills required by them in the form of scientific English. The special features scientific English enriched their skills for using English language effectively. The skills of writing scientific papers also helped them. The researchers had the opportunity of learning and sharing the skills of Scientific English skills with the faculty and the emerging scholars.

Recommendations:

- The above study shows that there is no difference of functional English learnt by the Science undergraduates at Solapur University from the Arts and commerce except some changes in prose passages. As business communication is the centre of Functional English of commerce, the science faculty should have the focus on Scientific English.

- A special chapter should be devoted for the basic concepts of scientific English at the first year. Finding the linguistic future of scientific English from the passage should be the part of evaluation of topic. In the subsequent years the writing skills should be focused and the ability to write the non-literary prose with the features of scientific English should be developed and tested.
- The BOS should design and develop the curriculum with the help of the faculty clear with the concepts of Scientific English.
- These are the days of curriculum enrichment (as expected in the Online AQAR the NAAC) with the help of the add-on courses .Even the institutes can go for the certificate courses to strengthen the functional English. The quality conscious institutes keeping pace with the changing times to make the institutes qualitative and innovative can go for the certificate course under English for the Specific Purpose. It could be the best course to the learners having special aptitude for professional writing.
- The committed teacher of functional English to science classes can introduce the skills as an added value to the existing course and strengthen them by introducing the learners the quality science journals. The teacher can make the learning of scientific English a fun by arranging the competitions on Scientific Writing.

Publications and Presentations: The researcher has published a research paper in the leading International Journal *Current Science* and *University News*. He has also presented two research papers at the National Conferences

Publications:

1. Scientific English: *Current Science* Vol 104 2013
2. *Need of Enriching English Language Skills of Scientific English* **University News** Vol.51 No 33 August 19-25, 2013

Presentation:

1.Strengthening Scientific English Study through Conscious Readership of Technical material:
An Experiment (best paper presenter award)

Teaching of English for science and technology (EST): Challenges and Strategies S B Arts and KCP Science College Bijapur 8-9 April 2011

3. **National conference** English in India: Language, Literature and pedagogy July 16-17 2015 organized by H M Patel Institute of English Training and Research
4. **paper:** Strengthening Science Studies in India with Scientific English

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