

**CURRICULUM DESIGNING: A SYNCHRONOUS APPROACH BETWEEN INDUSTRY
AND ACADEMIA**

Nagendra Rao Howji1, Division of Humanities, Vignan's Foundation for Science Technology and Research, Guntur, A.P., India

Sharada Allamneni, Division of Humanities, Vignan's Foundation for Science Technology and Research, Guntur, A.P., India

Ajit Kumar Pradhan Department of English, Centurion University of Technology and Management, Odisha, India

Abstract

In the context of Higher Education, by now it is a well acknowledged fact that the objectives of the language curriculum are to be determined keeping in mind the academic and professional needs of the students getting ready to compete for jobs in a globalized market. Likewise, the language needs of students are found to be progressively changing, given the evolving requirements of a dynamic industry sector. Against such a scenario of the changing world of great opportunities, students need to be trained on the requisite competencies that the industry is looking for. Moreover, India is a signatory of the Washington Accord which is aimed at assuring that every Indian engineering graduate stepping out of Indian institutions is globally competent and on par with those from the industrially developed countries of the world. Current trends in the global employment market indicate that there has been a steady increase in the absorption of Indian Engineers, though there is a potential for more. This improvement in employability could be attributed to the strict regulations and close monitoring of Higher Institutions of learning by apex bodies such as the UGC and AICTE, which also includes upgrading the curriculum for technical courses that also covers the English language and communication skills curriculum that is followed in Engineering universities and colleges. The paper will analyse reports like the India Skill Report- 2021, AICTE model of curriculum and the language syllabi followed by the private and Deemed to be universities of A.P to discuss whether there are gaps between industry needs and the academic inputs, on the aspect of the English language needs of the learners. The results highlight the gaps and the paper will make recommendations on how to overcome them.

Keywords: Globalisation, curriculum, employability prospects, talent and skill component

Context and Overview

Given the evolving needs of a rapidly changing industry, the teaching-learning process in recent times has undergone a sea change, more so during the present pandemic, when institutions were compelled to quickly change and adapt from blended modes of teaching in offline setting to an online mode of delivery. Notwithstanding the Covid-19 crises in institutions of Higher Education, there has been evident a general shift in curriculum, particularly for professional courses like engineering. Unlike the earlier model of one size fits all model, there is a gradual but discernible movement towards a need based curriculum that will equip graduates with appropriate skill-set that could be deployed at the workplace once they join professional organisations. Among the skills that are in high demand apart from, design thinking, a problem solving ability and usage of latest tools, is communication for which an ability to speak, interact as well as correspond in written form in English becomes critical for an engineer to enjoy career success. This is more so for those working in IT companies, where seamless communication on a day to day basis, both vertically and laterally is essential to ensure the deliverables in time. Given such industry demand, for engineers who are highly effective at communication, it becomes incumbent on institutions training engineers to upgrade their English language curriculum, keeping in view the evolving industry needs and the work place challenges that the graduates will face once they take up positions in professional organisations, particularly Multinational Corporations which operate from diverse geographies.

India Skills Report 2022

A report prepared by Wheebox, a global leader in Remote Proctored Assessment conducts variety of surveys and submits data on employment trends to the Government of India. The report is a combination of an assessment of three lakh candidates across India, who appeared for the Wheebox National Employability Test (WNET), and 150 Corporates across 15+ industries participated in the India Hiring Intent Survey.

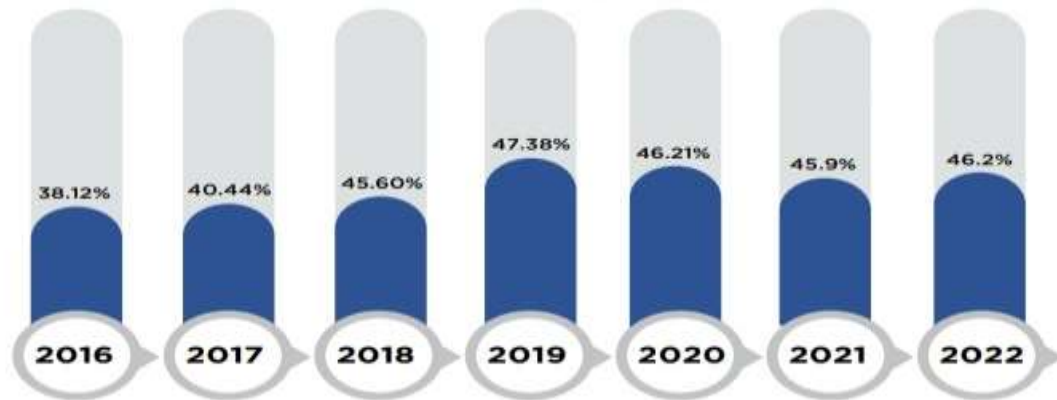
The 9th edition of the India Skills Report, ISR 2022, explores the Re-engineering of Education and Skilling – Building for future work and comes up with a cumulative insight into the talent demand and supply across the employment landscape providing a concrete basis to the changing employability trends and industry forecasts.

Wheebox partners are Taggd (A global recruitment platform that provide ready-to-hire talent to India Inc, Sunstone), **Eduversity** (India’s leading higher education provider that invests in upskilling students across the country and contributes as a placement catalyst for the industry), **Confederation of Indian Industry(CII)** which sustains development in India through partnering industries, government entities, civil societies, and organisations as an advisory and consultant. **Association of Indian Universities (AIU)** that focuses on the access and advancement of Higher Education in India. AIU leads the country’s education landscape with the highest academics in nation. Out of 831 Universities in India, 635 are already members of the Association. **United Nations Development Programme (UNDP)** that operates across 170+ countries and regions with mission to eradicate poverty and reduce inequalities and exclusion. UNDP nurtures development policies, leadership skills, institutional capabilities, and partners globally. **All India Council of Technical Education (AICTE) and Additional Skills Acquisition Programme (ASAP)**

Wheebox presents the following information:



How Employability has Changed Over the Years? 2016 - 2022



Which Sectors Have Hired The Most? Top Sectors 2016 - 2022



States with Highest Employability



The possibilities of young talent garnering the right opening whether in the core engineering sector, core IT or IT enabled services sector, it is evident rests as much on communication competencies as their engineering skills. Effective communication, and by extension team skills and leadership skills all rest on possessing high levels of English proficiency for today's globalised workforce. This paper addresses how the private and deemed to be universities in the State of Andhra Pradesh have

engaged with their English language curricular reform to cater to the needs of their engineering students aspiring to join the global workforce in realisation of their career aspirations.

Role of Apex Bodies and Accreditation Agencies

Private and Deemed to be Universities offering engineering education in the country are regulated by apex bodies like UGC and AICTE in the maintenance of basic standards of the curriculum, teaching-learning processes, research or other extension activities. Accreditation bodies like National Assessment and Accreditation Council (NAAC) and National Board of Accreditation (NBA) assess the efficacy of these Higher Education Institutions and certify them based on the educational outcomes, and various quality parameters which include course curriculum, teacher student engagement level, graduate employability etc. Institutions offering courses on Technology come under the ambit of NBA for their recognition and national level ranking. Another significant development for the higher education in the country lies in the National Board of Accreditation(NBA) of India becoming a signatory of the Washington Accord on 13th June 2014. The Washington Accord originally signed by six countries in 1989, is an international agreement among bodies responsible for accrediting undergraduate engineering programmes and it is aimed at facilitating the mobility of engineering graduates in particular and professionals of STEM disciplines globally. It means an engineering graduate emerging from any NBA accredited institution in the country will possess the requisite skill-set to practice as an engineer in his/her relevant domain in other countries, of Europe, America, Asia etc., that are member signatories of the Washington Accord.

As a member country of the Washington Accord, with a global outlook, keeping in view its demography, it is in India's interest to upgrade its quality of engineering education to make its students globally competent. Hence, in accordance with the terms of the accord, India in the last one and a half decade or so has been making all out efforts to introduce radical changes in the way HE is being imparted in the country. There is a discernible shift from the earlier stress on theoretical knowledge inputs to modifying the curriculum and teaching-learning practices to impart practical and ready to use skills for the workplace or one's profession. Other supporting agencies and organisations like the NITTTRs (National Institute of Technical Teachers Training and Research), which have been in existence since 1964 have been contributing their bit towards extending their support in training the faculty of engineering and other technical institutions towards realising the nations mission of preparing a globally competent and skilled human resources.

The Objective of the Present Study

The study is undertaken to investigate whether the needs of the students pursuing engineering at the five deemed to be and private universities in the State of Andhra Pradesh; Vignan's Foundation for Science, Technology and Research, KL University, GITAM University, VIT, SRM University match those that have been perceived by syllabus designers and teachers, whether the materials and teaching methods help the students, the faculty and the syllabus designers in achieving their goals.

Model Curriculum Introduced by AICTE

Since 2018, engineering institutions in the country have been resolutely following the guidelines of AICTE and making all out efforts to empower their engineering graduates to secure higher paid jobs that MNCs have been offering in the country. Towards implementing a high and uniform standards in the quality of education being imparted, and coordinating the efforts of the government and the academia, AICTE has attempted to identify and address the existing gaps in the curricula that were being offered in various universities across the country.

Drawbacks Identified in the English Language Curricula

- 1) The syllabus does not help in improving the language proficiency of the learners.
- 2) The absence of clarity concerning the purpose of teaching English in professional courses prevented students from acquiring essential communicative competencies.
- 3) Often students who joined the engineering course lacked even the minimum language skills to follow lectures, read or understand other prescribed courses in English.

4) The selected materials adopted for teaching English are often ill suited for meeting the needs of the engineering students.

5) The examination system was rarely application oriented and failed to test the skills required for communication in real life situations

These four POs are essentially required for an engineer to communicate well, exhibit good interpersonal, managerial, team skills & leadership skills, behave ethically in their workplace, carry out life-long learning in their chosen fields.

To address the above identified gaps, AICTE as the nodal agency, responsible for governing all engineering courses, in terms of the curricular implementation and evaluation proposed a synchronous approach through presentation of a model curriculum. The model curriculum, mandated by the AICTE is available on its official website.

Reflecting on the whole exercise of developing the model curricula proposed by AICTE in which, he played a pivotal role, Professor Girish Agarwal of Shiv Nadar University opines, "Engineering education in India must produce graduates, irrespective of their previous education and socio-economic backgrounds, who will be recognized by industry and academia for their capabilities, employability, leadership qualities, and their ability and ambition to learn and change as the demands of the profession and of social change.[...]. To do this, graduates must have a solid grounding in sociology, economics, history, political theory, law, and management, **as well as very strong communication skills, primarily in English.**"

Thrust on Functional English in the AICTE Model Curriculum

Nunan (2003) opines that English has become a mandatory subject in most Asian countries because of its dominance as a global language. Likewise, Krishnaswamy & Krishnaswamy (2006) argues that English in India has to be taught for global communication, career opportunities and social mobility. Against this imperative, with the aim of realising the Course Outcomes (COs) of helping students acquire a basic proficiency in English covering reading, listening, writing and speaking skills, a total of three credits are recommended for English in the engineering curriculum. The proposed model syllabus by AICTE comprises the functional aspects of English starting with 1) vocabulary, covering word formation, root words, prefixes, suffixes, word derivatives from the source of origin and their evolution and use, word synonyms, antonyms; 2) Basic writing skills covering phrases/clauses and sentence structures, use of punctuation, elements of cohesion and coherence in writing, paragraph organisation, and features of succinct writing; 3) Overcoming common errors in writing, aspects of grammar like subject-verb agreement, pronoun usage, correct use of modifiers, articles, prepositions, omitting redundancies and cliches; 4) Aspects of style and sensible writing for describing, defining, classifying, substantiating, writing, effective beginnings and conclusions for comprehension, writing essays; 6) Oral communication and Listening Comprehension through lab practices in the English Language Lab covering aspects of Pronunciation, Intonation, Stress and Rhythm; situational practice for speaking exercises touching on everyday and workplace communication, mock interviews, and formal presentations.

The AICTE Model Curriculum for engineering enforced by accreditation bodies like NBA and NAAC seeks to address the Programme Educational Outcomes (PEOs) and 12 Programme Outcomes (POs) as determined under Washington accord. Of the 12 POs mentioned in the preparation of an engineer, it is ascertained that the English Curriculum could address at least 4 POs, that of PO-6 (*The engineer and society*) PO-7 (*Environment and sustainability*), PO-10 (*Communication*) and PO-12 (*Life-long learning*).

Mapping the English Curriculum of A.P Private and Deemed to be Universities against the AICTE Model curriculum

As part of academic research, an elaborate exercise was undertaken by the researchers to map the English curriculum currently being followed by the five deemed to be and private universities in the State of Andhra Pradesh; Vignan's Foundation for Science, Technology and Research, KL University, GITAM University, VIT, SRM University, with interesting findings. Prior to carrying out the study, the researchers also carried out a survey to assess the needs for English at workplace

and to ascertain the specific needs of engineering students in India whilst planning for the English language courses.

Some of the common features that were discernible across the curricula of these five Technical Universities indicated that the communication skills imparted as a part of the mandatory course on General/Technical English offered in the first year of engineering here covered both the receptive as well as productive skills, i.e., focused on the comprehension ability of oral and written English and aimed at enhancing the students competency to use English orally and in the written form adequately and appropriately in varying contexts and for different purposes. It is found that there was a thrust on developing students' written skills through practice on workplace communication like letters, Emails, memos, reports besides writing technical descriptions of things, processes etc. The resources or selection of texts adopted for teaching English in the first year of engineering on aspects of vocabulary, grammar and writing skills in context are done with a clear objective of orienting students to academic reading and writing on subjects of science and technology.

The English curriculum in all the institutions had an integrated Computer Assisted Language Learning (CALL) providing students with a minimum of two hours of practice each week covering aspects of listening comprehension, pronunciation and oral presentations through role plays, snap talks, group discussions etc. The curriculum of these institutions, it was found when surveyed, to have gone beyond the functional English aspects recommended by the AICTE Model curriculum, and was more ambitious in scope with stress on innovative pedagogies for better learning outcomes of their students. Some of these institutions have fine tuned their language curriculum beyond the functional English aspects to provide valuable add-on programmes that include special training for international certifications like Business English Certificate (BEC) by tying up with reputed professional bodies like Cambridge to ensure that their students have a distinct advantage over their peers graduating from other institutions in A.P. Besides the language curriculum is revised once in every two or three years to keep it on par with the changing industry requirements. Overall, it is found that in the curricula of all these institutions, perhaps influenced by the model AICTE curriculum, more attention being paid towards improving the communicative competence of the students rather than just their grammatical competence.

Conclusion

Based on the inputs provided through the India Skills Report-2022, and following the model AICTE curriculum, the English Language Curricula of Private and Deemed to be Universities are incorporating suggestions as well as recommendations given by their Board of Studies as well as Board of Academics, to address the needs of the aspiring students pursuing professional courses like engineering. Timely measures adopted in curricular design and well thought out teaching-learning techniques have enabled students to garner higher paying jobs. Therefore, the deemed to be Universities are found to be performing better on the employment front and are on par with global institutions as per the research. Thus, our engineering students are reaping the benefits of frequently modified curriculum. This momentum of upskilling and upgrading our engineering graduates and post graduates is expected to continue in future also, as more avenues open up for Indian students in the global job market.

References

1. AICTE Model Curriculum: Will it improve the quality?
2. <https://news.careers360.com/aicte-model-curriculum-will-it-improve-quality>
3. Model Curriculum for Undergraduate Degree Courses in Engineering & Technology, January 2018, (Volume I)
4. https://www.aicte-india.org/sites/default/files/Vol.%20I_UG.pdf
5. India Skills Report: ISR –Report_2022
6. www.myclassroom.com
7. Spending, Adoption, Analysis & Data
8. Half of India working population of 400 mn people credit active: Report/ Business standard News(business-standard.com)

9. India Population 2021- Current Population of India (indiaonlinepages.com)
10. High paying Skills of 2021 / Top Skills in Demand in future (startuptalky.com)
11. The Top 10 Job Skills to Learn before 2022 – GQR (gqrgm.com)
12. Over 50% Indian Workforce will need New Skills by 2022, That's why Let's Embrace Learnability (indiatimes.com)
13. Freshworks: Overview/LinkedIn
14. Technology Creates more jobs than it destroys- Foundation for Economic Education (fee.org)
15. KLU Regulations.pdf
16. Gitam University.pdf.
17. Nunan, David. (2003). The Impact of English as a Global Language on Educational Policies and Practices in the Asia-Pacific Region, TESOL Quarterly, Vol. 37, No. 4 (Winter, 2003), pp. 589-613
18. VIT.pdf
19. SRM_2018_Regulations.pdf
20. VFSTR Guntur Humanities Courses Model Curriculum AICTE.pdf
21. Curriculum design and development-B Rajashekhar.pdf
22. Krishnaswamy, Lalitha & N. Krishnaswamy, (2006) *The Story of English in India*, Cambridge University Press