



Approach for Analysing Students Learning Needs: Needs Assessment Integrated to Syllabus Design for ESP Course

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Abstract: This study provided a methodology for analysing the ESP needs of Indian engineering undergraduates who would learn English for special purposes like engineering/business or learning English as a Foreign Language (EFL) setting. The research framework is motivated by a desire to update and enhance an ESP course. The literature review reveals that, for the course to be effective, it will be necessary to address the needs of the students. The literature presents fundamental ideas for examining learner requirements and specifies that efforts should be taken to address these needs in practical teaching and learning circumstances, which also requires syllabus building. This paper presents an approach for the assessment of learner needs that is interconnected into the curriculum and applied and reviewed during the course to determine if learner needs have been fulfilled in the context of engineering communication needs. It is possible that other scenarios for English as a second or foreign language (ESL), English as a foreign language (EFL), and English as a language taught (ELT) could benefit from a careful analysis of the framework that has been built in the research.

Key Words: ELT, ESP, EFL, Syllabus Design, Need Assessments.

1. INTRODUCTION:

Engineering students have special English prerequisites. This fact has prompted a range of ESP course designs to deal with these issues. Because these courses correspond to the core ESP concept of needs assessment, it is predictable that satisfactory results are invariably reported. A fundamental tenet of ESP is that instructors should make every effort to address the requirements of their students (Robinson, 1991). There is a possibility that it would be fair to state that no ESP classes should be taught without first conducting some kind of needs analysis, whether formal or informal.

IIT, Kanpur Language Studies Unit, Curriculum Development Cell, performed a countrywide survey in 1990 to determine the extent to which English was required for Science and Technology education. The MHRD government of India sponsored this survey. In order to establish an objective database for developing a more learner-centred syllabus, data collection was conducted on the kind of language-related needs of Science and Technologies students throughout the country. The following educational opportunities were created in light of the findings: The first course provides an introduction to technical communication, while the second is advanced technological writing.

According to Mohanty (2011), today's students are digitally savvy and live in an environment dominated by visual literacy. Today's students frequently use electronic media for leisure and communication, including television, computers/video contests, smartphones, web-based social networking sites, e-mails, chat rooms, and text messaging. As a result, students are exposed to visual media and can learn from it. Visual literacy is now paramount in education and the business world at large, with employers increasingly needing it for job candidates. Learning with technology promotes innovation in the learner because it allows them to design their own unique representations of the content, they are studying using the technology.

According to Rayan (2008), the majority of final-year undergraduate engineering students in Tamil Nadu are hired by credible IT and core-engineering firms. Recruiters attribute the success of these students to their capability to communicate effectively and make rational decisions. Candidates undergo several interviews where their technical knowledge, analytical and verbal comprehension, critical analysis, communication, and group skills are tested and evaluated. Those educational institutions that teach their student's employability skills are able to place the majority of their graduates in top companies. Numerous engineering institutions have started using full-time communication instructors to help their students.



An investigation into the theoretical literature surrounding ESP needs assessments and English for engineering is carried out. This results in a heightened knowledge concerning different techniques for needs analysis as well as different approaches to the construction of curricula. It is evident from an examination of engineering and ESP literature that the professional world demands English as a primary mode of communication.

Due to the significance of requirements analysis, numerous approaches have been developed. Consequently, this highlights the significance of curriculum development. Although the research on needs assessment and syllabus development provides essential guidelines for investigating the requirements of learners, there is no acceptable and practical framework available for putting these guidelines into practice in the Technical English classes. As a result, an innovative framework has been developed for the comprehensive application of the concepts.

2. Approaches for Need Analysis (NA):

For ESP syllabus development, several approaches have been given by prominent scholars. Some of the most prominent needs analysis approaches are discussed below.

2.1 Richterich & Chancerel Approach to Needs Analysis:

Richterich and Chancerel (1977) suggest a holistic approach to determining the needs of individual language learners. This concept fills the sociolinguistic model's flexible gaps and demonstrates a specific concern for students. They are the focal point, and their "current situations" (Jordan, 1997) are studied in depth. The emergent character of the learner's needs is also addressed. The investigation's context and diverse perspectives are prioritised. Before and throughout a course, learners and "teaching entities" such as their workplace of employment and supporting bodies examine information to determine the needs of the students (Jordan, 1997). Richterich & Chancerel (1977) also suggest using more than one or two data gathering methods for needs analysis, such as questionnaires, interviews, and attitude measures.

Although this method has not been heavily criticised, two problems should be raised: insufficient attention to learners' real-world demands and an overdependence on learners' views of their own needs. Jordan (1997) argues that course designers tackle real-world learner demands from two complementing perspectives: the target situation, as advocated by Munby, and the systemic model proposed by Richterich and Chancerel (1977). It is problematic to rely excessively on students' opinions because many students are unsure of their desires (Long, 2005).

2.2 A Sociolinguistics Model:

The important sociolinguistic paradigm developed by Munby (1978) for designing the curriculum of language training for special purposes. His concept can be utilised to define valid "target scenarios" (Jordan, 1997; West, 1994) that focus on communication skills. A profile of communication needs is offered, consisting of communicative interactions (discussing daily activities and responsibilities), purposeful domains (education), language (spoken), style (dialogue), means of communication (face-to-face), the environment of communication, etc. after developing a profile, the communication requirements are incorporated into a curriculum.

Although the model contains a lot of information, it is unworkable, inflexible, complicated, and time taking (West, 1994). It excludes needs that depend on human characteristics. For instance, the voice of the learner is not considered: it gathers information about the learner instead of from the learner" (West, 1994, p. 9). Jordan (1997) criticises the model for taking into account "implementational restrictions" such as the number of educated teachers who are available only after the completion of curriculum specifications. Sociolinguistic characteristics remain essential for good communication despite these objections.

2.3 Learning-Centred Approach:

Berwick (1989) and Brindley (1989) are pioneers when it comes to learner-centred methods of needs analysis. There are three perspectives on learner needs: perceived versus felt needs, product versus process-focused interpretations, and objective versus subjective needs. Experts have "perceived needs," whereas students have "felt needs" (Berwick, 1989). In the product-oriented view, the needs of the learner are understood as the form of language that would be most beneficial to the learner in their intended contexts. In the process-oriented perspective, the emphasis is placed on how learners respond to their learning context, which includes affective and cognitive elements that influence learning. In conclusion, objective needs are investigated before to the start of a course, while subjective needs are tackled during the actual instruction of the course.

Learner-centred approaches emphasise learners' attitudes and feelings in addition to their language needs. The distinction between perceived and felt needs raises the question of how perceptions and interpretations can influence an



individual's needs. A convergence of the sociolinguistic model's conceptions of needs and the learning-centred approach would successfully address the issue mentioned regarding learner-centred approaches.

2.4 Task-Based Approach to Need Analysis:

Long (2005) suggested a task-based perspective to both needs analysis and teaching and learning, arguing that "structures or other linguistic aspects should not be the central focus of instruction. "Learners are significantly more active and cognitively independent participants during the acquisition process than is suggested by the misconception that what is being thought and what they learn. In this method, activities are the analysis units and "samples of the typical discourse associated in outcomes of target tasks are gathered.

The concept of tasks is comparable to Munby's definition of communicative events (1978). In contrast, the task-based approach emphasises language characteristics as opposed to sociolinguistic variables. In this study, they are given similar weight, specifically for science and technology students who are supposed to perform real-world responsibilities after completing the course.

Task-Based Learning (TBL) focuses on learning activities where students engage in instructional activities (Simpson, online). Learners are required to do a task without input or direction from the instructor. Learners must utilise language similarly to how it is used in the actual world outside of the classroom in order to complete tasks. The TBL method does not include a predetermined language curriculum. Students' language components to successfully accomplish tasks arise during the procedure and can be reused at the conclusion of activities.

3. Guidelines for Analysing Student Needs:

Learner needs should adhere to the following guidelines, in accordance with the findings of the survey of different approaches to the needs assessment that was described above, as well as the researcher own personal academic experience:

3.1 Priorities Communication Needs:

When it is considered that students should be taught exactly what they will actually use and that the topic of ESP classes should be determined based on this, then communication issues come to the forefront of people's minds (Munby, 1978; Dudley-Evans & St John, 1998).

While many different sorts of needs can be covered in an ESP course, a communication needs assessment is extremely crucial in the Indian context due to a number of unique factors linked to English education as a whole and other difficulties pertinent to engineering. These include the ambiguous role of English usage in India, the absence of English exposure among students, the absence of fundamental English understanding prior to attending university/Colleges, and the dearth of English-teaching options at institutions. The investigation of engineering-related professions in India uncovered various instances in which engineers are required to use English extensively, such as the international project. In settings where English are being used rarely, businesses are eager to internationalise and want professional engineers with effective communication English skills. Sometimes, engineering students and aspiring engineers may not speak English at all. These scenarios demonstrate the necessity of precisely predicting students' individual communication needs in order to adequately prepare them for circumstances they are likely to encounter in the near future. During the investigation period, virtually little is known about the language needs of Indian engineering students.

3.2 Consideration of the Needs for Learning with Similar Importance:

Cognitive and affective characteristics, as well as learning contexts, are influential in defining how a language is or should be learnt (Berwick, 1989; Brindley, 1989). According to Hutchinson and Waters (1987), it is not possible to acquire a language through the analysis of language descriptions, which they define as the investigation of people's linguistic and linguistic-based communication requirements. In addition to this, learning scenarios that include a number of different learning elements need to be taken into consideration. In point of fact, a careful examination of both descriptions will make it possible to elaborate on student needs in a more comprehensive way.

3.3 Consideration of the 'Context' of Various Situations:

Language instruction and design that ignores certain student populations is likely to be ineffective or unsatisfactory (Long, 2005b). In the Indian environment, university engineering students emerge from either academic or technical pathways. Technical students have earned diplomas in engineering-related fields, such as construction, whereas academic students completed their secondary school in higher secondary programmes, which may have no connection to engineering. As parts of their higher secondary programmes, high school students usually study



chemistry, math's, and physics. As indicated by Hutchinson and Waters, English training for technical students in these settings might be directly focused on the student's specialised knowledge, such as engineering (1987). The students of the investigated civil engineering course will have a technical background. The English education for academic students should probably not be too closely related to their specialised expertise, as they do not hold a considerable measure of specialised knowledge before to enrolling in ESP classes.

Furthermore, instructor considerations determine how ESP courses for engineering students are delivered. When teaching English as a Second Language (ESL), teachers may have different opinions on how much time should be spent on each of the four skills. In addition to the pedagogical approach, conservatism, and individuality, all learning situations are influenced by crucial variables.

3.4 Consideration of Various Perspectives:

The expectations, interpretations, and subjective evaluations of value that learners of English bring to the language determine the kinds of English instruction they need (Berwick, 1989; Brindley, 1989). Meaningful interpretations must take into account the interests of all stakeholders. Diverse perspectives include those of educational institutions, instructors, and students. ESP pertains to professional or occupational settings (Flowerdew & Peacock, 2001; Jordan, 1997). Consequently, stakeholders from both areas should be asked to engage in research comprising a needs analysis.

Social, educational, and teacher aspects should also be considered when examining the teaching and learning circumstances (Richards, 2001). Socioeconomic variables refer to society's standards, such as employers' English prerequisites. Educational establishments may impact the engineering-specificity of ESP. Consequently, teacher factors determine how ESP classes are to be conducted for engineering students. The instructor of an English as a Second Language (ESL) class might disagree with the pedagogical tenet that all four skills should be equally emphasised in ESP lessons. Style of instruction, traditionalism and personal qualities are also crucial factors that affect every learning circumstance.

3.5 Use Numerous Sampling Techniques:

Long (2005) suggests a greater emphasis on "methodological choices" in the needs assessment. It is also suggested that any constraints of the data collection techniques be addressed before beginning the research process as well as while it is in progress. It is expected that all relevant information about the investigated setting can be gleaned from a combination of specific data collection techniques: one-on-one interviews, classroom observations, student work samples collected, focus group interviews, and an analysis of course materials. The interview process is the most straightforward technique for evaluating the opinions of stakeholders regarding learner requirements (Long, 2005a). Using structured interviews, repeatedly crafted questions about learner needs can be posed to all stakeholders to continually improve on particular issues (Dudley-Evans & John, 1998; Lynch, 1996).

3.6 Consider Needs Analysis a Continuous Process:

The purpose of a needs assessment is to discover the learning needs of students, which occurs outside of the classroom and generates suitable recommendations for a curriculum. The needs of students cannot be fully understood from a pre-class needs assessment alone. Allwright (1988) states, "What occurs in the classroom must continue to be significant. We need research on what currently exists in the classrooms (p. 51). In essence, Holliday (1994) notes that not only are there insufficient information about what currently exists in the classroom but there is also insufficient information for global settings. Brown (1995) explains that the curriculum is a methodical process during which language instruction and the development of language programmes are a "dynamic system of interrelated elements. The elements consist of a needs analysis, a set of aims and objectives, language assessment, the creation of materials, language instruction, and an evaluation of the implementation. He emphasises that learners' needs must be met, while additional perspectives must also be considered. Individuals and situational factors should also be evaluated in relation to language needs. It is also suggested that evaluation be regarded as a continuous assessment process. According to Richards (2001), the preparation and decision-making process should centre on the teachers in the classroom. Diverse individuals with diverse roles and objectives contribute to the curriculum development processes.

4. ESP Framework for Analysing Student's Prerequisites:

For curriculum development, it is essential to draw a framework to find out the best course for teaching and learning ESP. The present study offers a framework for ESP course design which will help ESP researchers' teachers, and college administrators to design an effective ESP course.

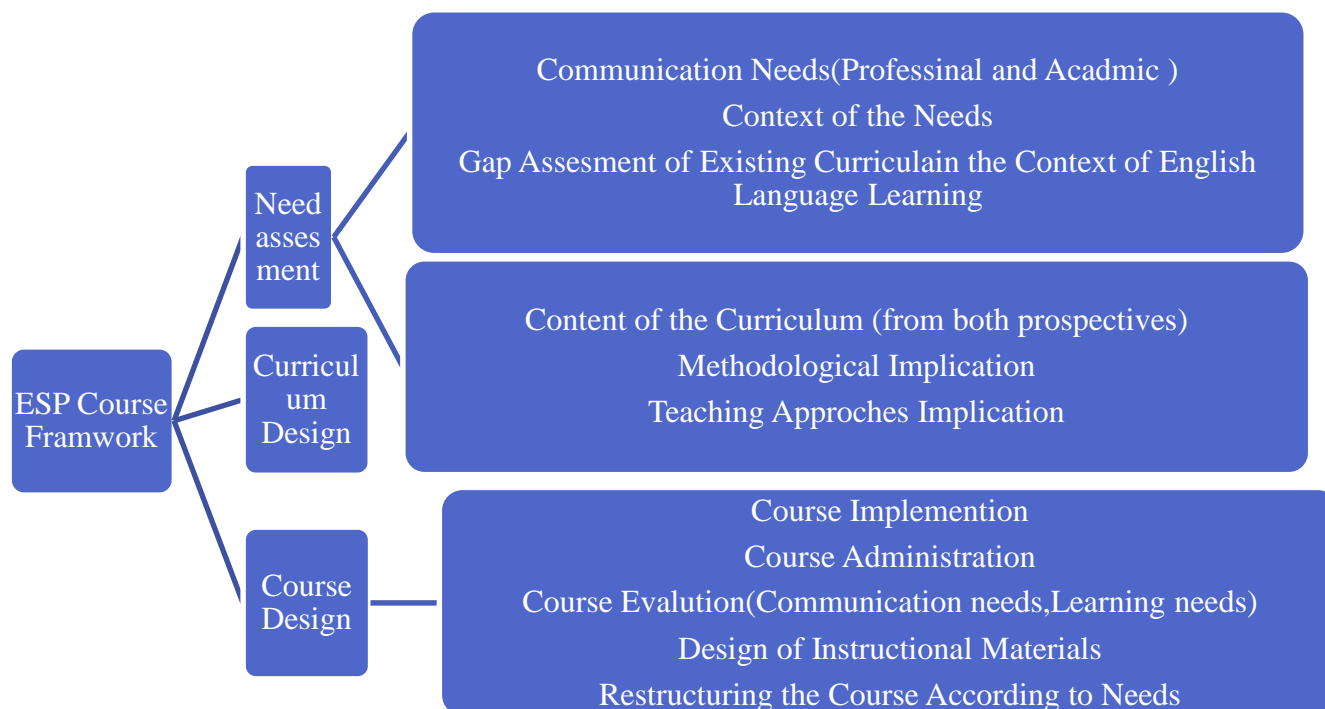


Figure: 1. ESP Framework for analysing student’s prerequisites

A need assessment should start from the present situation needs, and the context of the needs should be kept in mind while conducting the needs assessment for ESP Course. After investigating the learner needs gap should be recognised for the existing curriculum of the language course. Based on learners' needs content of the curriculum should be incorporated into the ESP course. Teaching methodologies and their implications for language teaching and learning play a vital role. In this regard, a need assessment of teachers' teaching methods and resources for training and development should be conducted to find the gap between teachers' needs and methodological upgrades. On the basis of the finding from both perspectives, the ESP course should be developed. After implementing the course, it should be monitored, and course evaluation should be conducted after every semester to find out the emerging needs of learners. Multiple techniques should be used for need assessments of the students, and if there is a need to restructure the curriculum, it should be modified according to the needs of the students.

5. CONCLUSION:

An extensive theory on needs analysis was crafted as a result of the research that was conducted. In order to better meet the needs of language learners in ESP, EFL, and ELT, there is still much to be attempted to explain. The framework presented in this paper advantages from a substantial number of studies and could be further expanded. However, Long's approach emphasises methodological choices, like selecting methods for collecting information and data analysis, rather than employing the outcomes of needs assessment to inform curriculum design. Also of great significance is Andrews's (2003) study. In this investigation, the findings of a needs analysis conducted prior to class have been applied to curriculum design, incorporation, and examination. Nonetheless, the method is most suited to a situation in which it is possible to teach a technical subject and the English language simultaneously. The study was also carried out in English-speaking surroundings.



Consequently, research on needs assessments, which must also include curriculum creation, is essential. This paper's framework is based on a comprehensive examination of existing knowledge, allowing it to be applicable to other ESP, EFL, and ELT environments. Within the scope of the current study, the framework will be applied to the task of analysing the communication and educational needs of Indian engineering students. In order to comprehend the framework's applicability in other situations, it is also recommended that the framework be utilised in other environments.

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