Designing a Course with Critical Thinking Focus: Developing basic English Skills for the Students of Computer Science and Engineering at a Private University of Bangladesh

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Abstract- This article suggests some critical thoughts about a four months English course for the students of Computer Sciences and Engineering titled 'Developing Basic English Skills' for general academic and professional purposes. The primary aim of this paper is to exhibit how the course can be designed by critical thinking and by following some well-established strategies with the help of needs analysis. Some new approaches like flipped approach along with lecture and multimedia presentation the class was conducted by the researcher for the group of students from CSE, first semester in a private university in Bangladesh.

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1. Introduction

For university education, students need to prepare themselves with adequate knowledge of the English language because in Bangladeshi private universities with the recommendation of UGC initiated English as the medium of instruction. So English courses are offering to every school. Like the school of Business Administration, School of Social Sciences and School of Science and Technologies. The prime concerns of the courses are made every student able to read and write in English and to cope them up with English Lectures and presentations. From that intentions the researcher is taking a Developing Basic English Skills course with the students of BSc in Computer Sciences and Engineering for academic Purposes with context embedded language of everyday interaction and academic writings. The course designing for the course was the mixture of ESP (English for Specific Purposes) and CSD (Communicative Syllabus Design) models.

The EGAP (English for general academic purpose) curriculum typically based on the consciousness of the students that in academia they should talk and write about their new plans and reading materials in a definite manner. It develops their ‘Cognitive Academic Language Proficiency (CALP)’. Cummins (1979).CALP builds on the students' acquisition of basic interpersonal communication skills (BICS) - the oral confidence required to act promptly for everyday's casual circumstances.

Developing Basic English Skills for general academic purposes course, which reflect a one-size fits all study-skills perspective on EGAP, are still offered to a considerable number of students in many university settings (Rogers, 2016:38) though these type of course fail to take adequate steps to develop a remarkable changes of individual disciplines. (Murray, 2016:2). Moreover, students enrolled on BSc in Computer science and Engineering program have already completed Higher Secondary Certificate, and therefore have had their fill of the study skills-based teaching-learning associated with Basic English Skills. Therefore, this Developing Basic English skills (DBES) for specific academic purposes course has been designed to reflect the academic literacy perspective, which lea and Street suggested as ‘focuses on the literacy demands of the curriculum' involved multiplicity of communicative performances, as well as variety, and disciplines' (Lea and Street, 159). Along with the perception of Chomsky's (1965) concept of ‘linguistic competence' has been censured as being too constricted, and now everybody believed that any theory of language must have the knowledge of the social features that form our selection and use of these structures. So Chomsky's concept has to be developed into a extensive notion of ‘communicative competence', which relates the relationship between language and the appropriate particular condition (Campbell & Wales, 1970; Hymes, 1972). The paper will discuss how the course accomplishes development through designing critically to mitigate the problem of unwelcoming rural students.

II. Context

The course’s with ESP (English for Specific Purposes) approach in which the teaching content is matched to the requirements by needs analysis of the learners tasked with authentic materials and tasks have been chosen and build up for medium-sized classes of 20-30 students. The course adopted a ‘flipped’ approach to giving lessons to make the course effective.
for the short duration of the course. For this reason, students required to work in pair and also separately with the sense of independence which motivated to develop the communicative performances. Which also help them to be self reliant in other courses of Computer Science and Engineering, because the medium of instruction and learning in university is English.

III. Course Type

Students of the university were all adults who already had connections with English after completing their HSC (Higher Secondary Certificate) and would like to learn the language properly for communication. As required by the University Grant Commission the university were suggested to initiate a new English course to prepare the students to be skilled in using English in their classes.

IV. The Approach

The basic approach to course design that is taken here is an ESP (English for Specific Purposes) the teaching content is matched to the requirements of the learners. So the researcher has done the needs analysis of the students by semi-structured discussions (interviews) with the students. The interviewers had eight guiding questions for finding out the real necessity the respondents. The interview questions were basically similar to the questions written on the questionnaires. For designing the course Bell’s Language teaching syllabus design was in plan. (Bell, 1981, p.36)

a) Needs Analysis

The most useful model for analyzing linguistic needs is Munby’s Communicative Syllabus Design (1978). A basic view of the appropriate part of the model is showing bellow in figure 2.
b) Key findings from the

In the face of the informal and small-scale nature of the NA, it provided affluent information about the students’ goals and their necessities, requirements and deficiency. The key findings from the NA are summarized below. Key findings:

- Students are newly arrived in Dhaka and are highly motivated to do something new with new ways of learning, and they want to develop their speaking skills.
- Each of the student fulfilled the requirement for the BSC in computer science and engineering. (lowest CGPA 2.80)
- Most students are on the course did not meet the IELTS requirements.
- Classes are homogenous, with 100% of students are from Bangladesh.
- The field of reading and writing are most important in the BSC in computer science course because technical writing, exam writing (short answers), research-based writing are regular needs.
- Assessment is through written work (except six largely lab-based exams), with word counts ranging from 1000 words to 2000 words.
- Students have to give a 20-minute oral presentation in their last class to go with their lab reports.
- Lectures are the key mode of deliverance, but students also engage themselves in seminars, power point slide presentation sessions in group and individual performances.
- Students have accesses to the online library so a lot of the library research students comes to consult about research articles.
- Students are expectant to take their own notes during lectures for self-help.
- The CSE faculty is consist of of international lecturers and for some students understanding accents and international variations of English are challenging. (Malaysian English and American English)
- Students are expected to use Moodle as a guide of communication (among other things).

c) Needs Analysis and some negative reality of the students

- Inadequate background knowledge of the subjects students comes to study.
- Poor English language skills.
- Lack of motivations and enthusiasm.
- Taken for granted assumption that certificate or degrees are to be given, not earned.

V. Implications

The result of the needs analysis facilitate the researcher to prepare the design of the new English course that fit into the needs of the target audience, i.e, the students of the non-English Departments. After arranging the design, the researcher formed a list of books and online materials which were conducted in the classroom.

VI. Teaching Methodology

Communicative Language Teaching (CLT) was selected as the methodological approach of the Developing Basic English Skills course for its distinctive characteristics. First, this CLT methodology aims at communication and emphasizes interaction as both the means and the ultimate goal of learning a language (Larsen-Freeman, 2000). In CLT classes, learners are expectant to enthusiastically engage themselves in understanding others. Second, the responsibility of the teachers in CLT is also different from traditional teaching methods. The teachers act only as facilitators, allowing their students to be charge of their own learning (Larsen-Freeman, 2000). The lecturers set up various communicative situations that the students are likely to
encounter in real-life social contact, for example asking, requesting, getting permission, offering help, clarifications or writing reports. The exercises are in the forms of games, role-plays, problem solving tasks, etc. In these exercises, the students are required to communicate their needs and thoughts using the target language. By applying CLT methodology in DBES classes, the students were anticipated to enhance their self-confidence in using the target language.

a) Expectations about course designing

At this stage, there are several situational issues to think before categorize learning outcomes (Fink, 2005). Questions related to the context of the course, the students, the institution, and the environment can help identify the course framework before shaping the learning outcomes for the course. The Course Design Cycle is a useful tool for ideas and working through the development, assessment, teaching and learning strategies, and continuous improvement of course design. So with the view of flower researcher found out the learning outcome given below.

b) Intended learning outcome (ILO)

Upon completion of the course, students will be able to:

- Communicate, both orally and in writing, in a more grammatically correct and appropriate way.
- Communicate effectively, and give formal presentations in a wide range of situations, without any inhibition or shyness.
- Students will be better able to process and produce the written and spoken texts archetypal of BSc computer science course.
- Students will have increased awareness of the different cultural standard and values of the universal context.
- Students will have engaged in a range of communicative activities to help them acclimatize to and function confidently in an interactive learning environment.
- As a Student of computer science will have developed the academic literacy to fulfill the requirements of an active member of the computer science communication community.
- In postgraduate level students will act with core academic skills acquisition and policies by self-help.

c) Course objectives (CO)

The course objectives articulate the detailed ways in which the goals will be achieved (Graves, 1996:17), therefore each objective mentions a course goal/s or intended learning outcomes. The objective of this course is to remedy certain lapses and weaknesses in the use of grammatical structures that students retain from their former learning in schools and colleges. It is found that although they have memorized many rules of grammar, they often lack competence in using them for actual communication in real life situations and academic purposes.

Students will require doing short, contextualized tasks covering a wide range of situations for the practice of grammar items and structures (such as the tense, subject-verb agreement, modals, etc.) as well as for developing new vocabulary.

d) During the course

- Students will identify the features of spoken and written texts that are distinctive of a BSc in computer science and engineering course, particularly research journal articles, examination questions, critical literature reviews, technical writing and, oral presentations.
- Students will be exposed to a range of international variations of spoken English (through the use of video) to better prepare them for instruction by international faculty. And through some songs lyric written in colloquial English.
- They will be introduced to role play with some mini dialogues to solve some problematic circumstances.
- Students will critically analyze and synthesize spoken and written Scientific research from multiple sources in order to adopt a stance and build a variance.
- Students will employ and build up a variety of learning tactics and academic proficiency (particularly vocabulary diaries, reading journals, newspapers, online study, forum discussion, corporate analysis, peer-reviewing, and self-evaluation) that will enable them to be efficient and autonomous graduate learners who can monitor and check their learning.

(Ok till here)

VII. Findings from Classes

The course was offered to the students of 2nd semester of the undergraduate program of CSE, and the class size was consist of 20 students from different areas of Bangladesh and different family background. For their needs analysis, there were some questions asked where they admitted that the level of difficulty for the skill of listening was average (not very fair). While in speaking, 65% of the students found that delivering presentations was very complicated. Some students stated that to give a presentation using English was tough because they had to face the fright of stage in front of people, to look intelligent and attractive, and to use a language that they hardly ever used in their daily life. When asked about each skill of reading, 30% of the learners admitted that they had complexity in scanning reading texts. Some interviewee confessed that their reading speed was slow because they tried to understand each written word. At the end, these slow
readers had complicatedness in their reading comprehension. Writing an essay or review was also considered complicated by 48% of the subjects. Some students said that it was difficult for them to apply their inadequate knowledge of grammar and vocabulary in writing. They already had problems in writing in Bangla (the mother tongue), thus it was even more difficult for them to write in a foreign language. When asked to grade the significance of each English skill in relation to their subject matter courses, most students also claimed that they needed speaking (45.5%), listening (32.9%), reading (56%) and writing for exam or other purposes (35%) to support their 1st and 2nd semester’s study. The majority of students also emphasize to prefer speaking and writing to other skills. They also claimed needs about the other course teachers of their courses of computer science and engineering to take classes with English though it will be difficult for them to understand for some days they will cope by time as English is the medium of instruction.

To motivate them in learning English, the respondents asked the researcher to include some of the most interesting topics in their future English course namely entertainment, technology, tourism, career, business, and culture. Another suggested topic was sports and social media (10.6%). Students interviewed affirmed that it would be more motivated when topics presented were associated to their personal focus like music or sports. Sometimes the classes were fun through picture or painting description with the biography of some world-class painters and musicians. Listening lyrics of songs and filling blanks was real fun and test for their capability of listening.

Students and teachers of the department argued that they needed the mastery of speaking in English. In Bangladesh, at the beginning, people desired English reading knowledge in order to be global with the econo-technologically developed countries. As a result, it was tacit that reading must be the aim of teaching and learning English (Ahmad, 1997, p. 47).

However, as the exercises and utility of the English language continue to grow, now Bangladeshis need the language to play active roles in the advancement of technology, economy, trade and international politics. As a result, the students should be given opportunities to master the English language for communicative purposes and academic purposes.

a) **Designing a DBES course: (course content)**

Students who are able to think critically are able to solve problems effectively. To be effective in the workplace (and in their personal lives), students must be able to solve problems to make effective decisions; they must be able to think critically. The course design ought to leave enough space for the students to ponder upon:

- Their thoughts and opinions on the issues being taught.
- The source and reasons of the opinions and thoughts.
- The implications of new knowledge.
- Possible areas of applying the new knowledge.
- Judgmental analysis of the opinion.

b) **Course Design Approaches: A Consolidation**

We also need to consider our own expectations for students, prioritize and narrow the content so that it is manageable within the allotted timeframe, and consider the degree to which our students should learn the material. Bloom’s revised taxonomy (Krathwol & Anderson, 2001) can be helpful when determining the level of complexity of our educational goals and students’ demonstration of achievement.
c) The Course Design Cycle

When designing a course, the natural inclination is to begin by examining the course material and developing class lectures according to the selected texts. This approach makes content the focus of the course and may leave the knowledge, skills, and values we want students to have upon completion of the course undefined. Whether designing a new course or modifying an existing one, thoughtful planning during the design stage can help instructors develop a successful course.

As the Course Design Cycle indicates, reflection is integrated throughout the process. The significance of reflection on teaching and learning has been well documented in the education literature (Boud, Keogh, & Walker, 1985; Boud & Walker, 1993; Boyd & Fales, 1983; Brookfield, 1990, 1995; Dewey, 1933; Mezirow & Associates, 1990; Mezirow, 1991; Schön, 1983, 1987).

VIII. Course Content

Here the researcher included one of the course outline for the students of CSE for the course DBES (Developing Basic English Skills).

a) State University of Bangladesh
Department of CSE
Summer 2018
Course Code: ENG101
Course Name: Developing Basic English Skills
Credit hours: 3
Table 1: COURSE OUTLINE

<table>
<thead>
<tr>
<th>Lecture number</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture-01</td>
<td>Ice breaking and introduction to 4 skills of language</td>
</tr>
<tr>
<td>Lecture-02</td>
<td>Brainstorming- skills and strategies</td>
</tr>
<tr>
<td></td>
<td>Practice brainstorming for language skills</td>
</tr>
<tr>
<td>Lecture-03</td>
<td>Reading-top down and bottom up process</td>
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<tr>
<td></td>
<td>Pre, while and post reading activities</td>
</tr>
<tr>
<td>Lecture-04</td>
<td>Writing- product and process approach</td>
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<tr>
<td></td>
<td>Pre, while and post writing activities</td>
</tr>
<tr>
<td>Lecture-05</td>
<td>Writing- describing picture/ surrounding, writing activity</td>
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<td></td>
<td>Speaking- strategies, extempore speech practice</td>
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<tr>
<td>Lecture-06</td>
<td>Listening-pre-while and post listening activities</td>
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<tr>
<td></td>
<td>Writing- Linking words</td>
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<tr>
<td>Lecture-07</td>
<td>Reading-Reading skills, practice (skimming, scanning)</td>
</tr>
<tr>
<td>Lecture-08</td>
<td>Writing-structure of paragraph and its kinds, writing practice</td>
</tr>
<tr>
<td>Lecture-09</td>
<td>Quiz and practice</td>
</tr>
<tr>
<td>Lecture-10</td>
<td>Speaking and vocabulary practice- “guess the word”</td>
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<tr>
<td></td>
<td>Listening- listen to a story and find the answers</td>
</tr>
<tr>
<td>Lecture-11</td>
<td>4 skills- practice and discussion</td>
</tr>
<tr>
<td>Lecture-12</td>
<td>Reading- practice skills (inferring, predicting)</td>
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<tr>
<td></td>
<td>Listening- listen to a speech and ask questions</td>
</tr>
<tr>
<td>Lecture-13</td>
<td>Speaking- situational context/role-play/polite request</td>
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<td></td>
<td>Writing-practice</td>
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<tr>
<td>Lecture-14</td>
<td>Writing- formal application writing</td>
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<td></td>
<td>Reading-practice with authentic resources</td>
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<tr>
<td>Lecture-15</td>
<td>Writing- complain letter</td>
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<tr>
<td></td>
<td>Reading-skills practice</td>
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<tr>
<td>Lecture-16</td>
<td>Writing- formal/informal writing</td>
</tr>
<tr>
<td></td>
<td>Speaking- completing a story</td>
</tr>
<tr>
<td>Lecture-17</td>
<td>Writing short-film review</td>
</tr>
<tr>
<td></td>
<td>Speaking- sharing opinion on a given topic</td>
</tr>
<tr>
<td>Lecture-18</td>
<td>Presentation session</td>
</tr>
<tr>
<td>Lecture-19</td>
<td>Writing practice</td>
</tr>
<tr>
<td>Lecture-20</td>
<td>Group/pair work for reading activities</td>
</tr>
<tr>
<td></td>
<td>Review, practice and discussion</td>
</tr>
</tbody>
</table>

Course Instruct: Shamima Sultana

a) Recommended Readings

IX. The use of Technology

Technology aided courses ‘offer enhanced support for the poor performer’, connect students who do not react well to typical classroom education, give chance for speed up learning for exceptional and brilliant students, and develop self-determining learning skills (Boulton, 2008:11). Also, they bring in extra straits for communi-cation and an opportunities for teamwork (Richardson, 2010). This course, therefore, sometimes uses technology to accept a ‘flipped’ approach to teaching. Peachey (2012:72) states that using a flipped approach guaranteed that students come to the face-to-face sittings willingly prepared with a well-built understanding of surroundings matters and essential technical skills and knowledge. The flipped approach is particularly suitable for this short course because it maximizes the effectiveness of the face-to-face sessions.
a) Assessment and course evaluation in DBES

"Reflecting on what we and our students are doing and learning all the way through and at the conclusion of a course can assist us to appreciate how improved learning works, which can help us get better our practice and provide us insight into serving students become more autonomous and self-governing learners. "(flower, 2011) So in the commencement of the DBES course students were informed how they would be assessed by the instructor with marks distribution. Not only they will have marks for attending class, but they have to perform to gather marks for the final grade. Here instructor showed how they normally segmented the marks for the whole semester.

Marks distribution
1. Attendance and performance-10 (sudden test + attendance)
2. Presentation -05 (slide show and oral )
3. Group task-05 (flip class)
4. Class test/quiz-10 (multiple choice)
5. Midterm -30 (written)
6. Final-40 (written)

b) Formative and Summative Evaluation

Facts can be collected through continuing feedback for student learning development (formative assessment) and advice for a grade (summative assessment). In the framework of the Course Design Cycle, assessment can be understood as an continuing process of realizing, accommodating, and improving student knowledge. Assessment can approach in many shapes. For example, grounding assignments, report writing, presentations, exams, group works, reading test from journals, and class discussions can all be used to evaluate student learning. As flower said "It is important to keep in mind that the information we gather through our assessment techniques is not only feedback for our students in how well they are performing and how much they understand the material, but it is also feedback for instructors in terms of what teaching strategies may or may not be working." (flower, 2011)

c) Common Mistakes in course designing and way out

The most common mistake one may be susceptible to is to start course design with too big scope Failing to assess the skills and competence level of the learners may misalign the course contents with the student’s way of learning. Courses that are designed in isolation and contain vague objectives end up in failure to transmit any practical or critical knowledge to the very learners who should attain such through the process. Unfocused, poorly compiled and inadequate course contents or deficient scope of interactivity cause to the students to drop interest and glide away from the learning flow. Improper or insufficient means assessment and lack of focus on course contents results in textual and incomplete learning. Designs that fail to consider at the beginning the targeted outcome of the course never finds its way out to accurate knowledge.

To avoid such mistakes, one must not repeat using the same course contents for a long time; regular modification should be done to fit into the situational requirements. Course objective must also be addressed with due importance so that learning and critical thinking can be ensured at the same time. It must be accepted that students have their differences in capabilities and ways of learning as well as motivations. Sufficient flexibilities, therefore must be kept inside the course design to accommodate these differences in the same classroom. However, attainment of course objective must be ensured. Finally, learning for past academic experiences and using them may be the most rational way to design courses that can provide enough space for critical thinking of their own growth and development.

X. Conclusion

We should think as a teacher about the future of the graduates so a course designer on the one hand incorporates contents that students can and will understand and learn and on the other hand elicits student’s inner capability to act as it appropriate. In the course of Developing Basic English Skills was designed to meet the needs of Employability, that means good communication skills, problem-solving skills, innovative approach, pair work (British Council 2013) with the other purposes of academic life related to reading, writing and speaking. It will also help them to understand class lectures of additional courses of computer sciences delivered in the English language.

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