Influence of Motivation Factor and Anxiety in L2 Learning among Engineering Students in Dharmapuri, India

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Abstract

Objectives: This study investigates the influence of motivation factors and language anxiety in second language learning among engineering students in Dharmapuri district, Tamil Nadu, India. The main purpose of this study was to examine the relationship between L2 learners' motivation factors and language anxiety. Methods: The researchers had adopted Gardner's Attitude and Motivation Test Battery (AMTB) questionnaire and conducted semi-structured interviews. The data were collected from 120 engineering college students and the interview was conducted with twenty respondents. Data were analyzed by using descriptive statistics, Cronbach's Alpha, and Correlation. Findings: The results revealed that motivation factors and language anxiety are positively correlated among Technical L2 learners. Applications/Improvements: The language instructor could create a pleasant and collaborative environment inside the classroom.

Keywords: Correlation, L2 Learning, Language Anxiety, Motivation Factors, Socio-Educational Model

1. Introduction

Every year around 2 lakhs students’ enroll in technical education, especially engineering courses in Tamil Nadu, India. The courses are offered in Universities, government engineering colleges, autonomous engineering institutions and affiliated engineering colleges. After the graduation everyone wants to get a good job, ideal for them on and off campus interview. Thus, it is necessary to develop their employability skills. One of the preliminary steps to attend interview is that the learners has to speak in English Language (L2). To enhance the motivation towards learning English and language anxiety, which are essential factors for success. Motivation is considered as one of the important key factors in success of second language learning. Numerous studies have investigated the relationship between motivational factor and language anxiety on second language achievement1-5 but none of them particularly concerned with a multilingual country. Especially in India, the present study is highly relevant as it focuses on the motivation factor and language anxiety among engineering students in Dharmapuri district, Tamil Nadu.

1.1 Background of the Study Area

According to the office of the Registrar General and Census Commissioner of India6, Dharmapuri district is most backward in literacy rate in Tamil Nadu with 68.54%, the lowest literacy rate in the state. From the overall population of Dharmapuri district, 82.68% belongs to rural background and 17.32% belongs to urban. Based on the background of the study area, the researcher selected only the engineering college students because engineering graduates are the backbone of infrastructural development for a country. This study will help to identify the levels of motivation and anxiety in second language learning by drawing qualitative and quantitative technique. It also focuses on the possible reasons to improve the English language proficiency among the engineering students in the study area.

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2. Literature Review

According to Dornyei\(^2\), motivation provides “the primary imputes to initiate L2 learning and later the driving forces to sustain the long and often tedious learning process”. The motivation and anxiety play an effective role in achieving L2 learning. Trang, Moni, Baldauf\(^7\) investigated the anxiety level in the tertiary students for learning English language. The result predicts that the learners were lack of aware about English language and desire to learn English has to be strengthened. Elkhafaifi\(^8\) conducted an empirical study on anxiety in foreign language among Arabic students. The result proved that the learners have low listening comprehension scores among anxious students. Whereas Park, Lee\(^9\) examined the relationship among anxiety, self-confidence and oral performance of Korean college students. The results showed that learners had high level of anxiety especially communicative anxiety. This brings out the fact that level of motivation might hinder L2 achievement in EFL and ESL context. Chalak, Kassaian\(^10\) investigated the Iranian L2 learners’ motivation and attitudes. The result indicated that the Iranian learners learned the English language for both instrumental and integrative reasons. On the other hand the Malaysian and Chinese studentsshow great inclination so has to get good job and thus instrumentally motivated\(^11,12\). Ahmed\(^13\) did the study on Attitudes towards English Language Learning among EFL. The result showed that learners were keen in language learning and hence it indicates that EFL learners have positive attitudes towards English language. Similarly Malaysian arts and science students have positive attitudes towards learning English\(^1\). In addition Iranian EFL learners have a positive attitude towards English idioms\(^4\). From the light of the above reviews this research paper is to investigate the L2 learners’ motivation factors and language anxiety in Dharmapuri district, which has the least literacy rate in Tamil Nadu, India.

2.1 Gardner’s Socio-Educational Model – An Outlook

In 1960, Gardner and his colleagues developed the socio-educational model to identify the learners’ attitudes and motivation in second language learning. Gardner believes that the second language takes places in the nature of context of an individual learner. Thus shows that the learners’ cultural setting has a great influence in L2 or other languages. In the developed socio-educational model, Gardner\(^15\) presented four variables that are interconnected with L2. These variables are

- Social milieu – Individual learners’ cultural settings and their environment.
- Individual differences – includes sub-variables such as intelligence, aptitude, motivation and anxiety.
- L2 settings – formal learning settings and informal learning settings.
- Outcomes – linguistics language skill and non-linguistics skills.

Due to several criticisms, Gardner modified them in 1985 by introducing the integrative motives within the individual differences variable. This integrative motive has three components, such as

- Integrativeness
- Attitudes towards the learning situation and
- Motivation

Gardner\(^16\) states that motivation is “a very complex phenomenon with many facets”. The socio-educational model emphasized language achievement through various factors such as motivation, attitude towards learning situation, integrativeness, instrumentality and language anxiety. Many studies proved that this socio-educational model is useful as a research paradigm in language achievement. So Gardner’s\(^14\) socio-educational model was chosen, to investigate the influence of motivation factor and anxiety in L2 learning among engineering students in the study area.

3. Objectives of the Study

- To identify the level of motivation factor among the engineering students’ in the study area.
- To examine the influence of language anxiety among the engineering students’ in the study area.
- To recognize the important factors for L2 achievement.

3.1 Research Questions

1. What is the level of motivation factors towards L2 among engineering students?
2. What is the relationship between the two language anxiety factors (Language use anxiety and Language class anxiety) among L2 learners in the study area?
3. Which factor is the most important for L2 achievement?
4. Methodology

4.1 Population and Sample
The population of the study consists of engineering college students in Dharmapuri district, Tamil Nadu, India. Simple random sampling under probability sampling method has been used for the study to select the respondents from various disciplines and colleges. The data were collected using mixed method, which is both quantitative and qualitative.

4.1.1 Participants
The participants for the quantitative study using adapted AMTB questionnaire were 120 respondents (male and female). The study included qualitative method, especially semi-structured interview. Twenty respondents among them took part in the interview, which was recorded through voice recording device. The age group of participants ranged from 18 to 23 years and the study was conducted in both government and affiliated engineering colleges in Dharmapuri district.

4.1.2 Instrument
The questionnaire consisted of a demographic profile and 56 AMTB questions. Most of these were close-ended questions. So the respondents simply had to tick in appropriate place and provide answers to a few open-ended questions. Based on the quantitative study, the researcher framed eleven open-ended questions for qualitative study.

4.2 Data Collection Procedure
Data were collected with the help of a questionnaire adopted (partially) from the Attitude/Motivation Test Battery\textsuperscript{17}, followed by semi-structured interview questions. The questionnaire used in the quantitative study contains 56 items, which were in five point Likert scale from strongly agree to strongly disagree. Similarly in the qualitative study 11 items were used. The questionnaire and interview were conducted during the leisure period and the respondents were given as much time as they needed to fill in the data.

5. Results
The gender differences and respondent residential area were shown in Table 1. Table 1 indicates that 71 (59.2%) respondents were male students and 49 (40.8%) respondents were female students. Similarly, it is found that 88 (73.4%) respondents were from villages, 25 (20.8%) respondents were from town and 7 (5.8%) respondents were from city. From the demographic profile it is found that most of the L2 learners’ cultural milieu is rural settings.

Table 1. Gender and respondent residential area

| Demographics            | Frequency | Percentage (%) |
|-------------------------|-----------|----------------|
| Gender                  |           |                |
| Male                    | 71        | 59.2           |
| Female                  | 49        | 40.8           |
| Total                   | 120       | 100.0          |
| Respondent residential area |       |                |
| Village                 | 88        | 73.4           |
| Town                    | 25        | 20.8           |
| City                    | 7         | 5.8            |
| Total                   | 120       | 100.0          |

Internal reliability is to measure the correlations between the different items used in the questionnaire. Total number of items in the questionnaire is 67, including 56 Likert scale variables and 11 items related to demographic variables. The internal consistency of the Cronbach’s alpha is 0.865, which is good in reliable as shown in the Table 2.

Table 2. Internal reliability

| Cronbach’s alpha | No. of items |
|------------------|--------------|
| .865             | 67           |

5.1 Attitude Motivation Test Battery (AMTB)
The results of the Attitude Motivation Test Battery (AMTB) used in the study have been shown in this section. There are eleven subscales were used in this quantitative study. The descriptive statistics in Table 3 has shown the mean differences for AMTB factors. The mean score of attitude towards learning English and instrumental orientation have high mean values of 4.24 and 4.08 respectively. Very low deviation was found in motivational intensity with 0.52. And similarly high deviation was found in evaluation of their English teacher with 0.911. Subsequently use of English have a lowest mean score with 3.24 and a deviation of 0.811. From the mean differences, it is found that the respondents’ the level of anxiety in using English is high, thus acting as an affective filter in L2 learning.

In Table 4, a Pearson’s correlation was run to identify the relationship between Motivational Intensity and
Desire to learn English. It reveals that there was a significant positive correlation between Motivational Intensity and Desire to learn English (r=0.552, N=120, p<0.01). Similarly significant moderate positive correlation were found between Motivational Intensity and Attitude towards learning English (r=0.468, N=120, p<0.01), Attitude towards learning English and Desire to learn English (r=0.424, N=120, p<0.01) respectively.

Table 3. Rank of mean differences for AMTB factors

| Rank | Factors                                | Mean  | SD   |
|------|----------------------------------------|-------|------|
| 1    | Attitude towards learning English      | 4.24  | .622 |
| 2    | Instrumental Orientation                | 4.08  | .570 |
| 3    | Integrative Orientation                 | 3.93  | .622 |
| 4    | Interest in foreign languages          | 3.72  | .543 |
| 5    | Desire to learn English                | 3.71  | .687 |
| 6    | Motivational Intensity                 | 3.68  | .520 |
| 7    | English teacher Evaluation             | 3.60  | .911 |
| 8    | Attitude towards English speaking People| 3.44  | .606 |
| 9    | English class Anxiety                  | 3.42  | .696 |
| 10   | English course Evaluation              | 3.26  | .819 |
| 11   | English use Anxiety                    | 3.24  | .811 |

N = 120

Table 4. Correlation between motivation variables

| Sl. No | Factors                                | N   | Pearson (r) | Sig. |
|--------|----------------------------------------|-----|-------------|------|
| 1      | Motivational Intensity & Attitude towards learning English | 120 | 0.468**     | .000 |
| 2      | Motivational Intensity & Desire to learn English | 120 | 0.552**     | .000 |
| 3      | Attitude towards learning English & Desire to learn English | 120 | 0.424**     | .000 |

** Significant at the level 0.01

To identify the relationship between English use anxiety and English class anxiety, Pearson's correlation was run. From Table 5, it is found that there was a significant moderate positive correlation between English use anxiety and English class anxiety (r=0.414, N=120, p<0.01).

Table 5. Correlation between anxiety variables

| Sl. No | Factors                                | N   | Pearson (r) | Sig. |
|--------|----------------------------------------|-----|-------------|------|
| 1      | English class Anxiety & English use Anxiety | 120 | 0.414**     | .000 |

** Significant at the level 0.01

5.2 Semi-Structured Interview

Based on the quantitative study, eleven semi-structured interview questions were framed. This interview was recorded through audio device and it was transcribed by the researcher.

- Do you wish to learn any language other than Tamil? Which language and why?

Researcher observed that most of the L2 learners wish to learn English language and few L2 learners wish to learn national language (Hindi). English is the global language, which acts as the link language for communication. When people with different languages come together they commonly use English to communicate. English is also a major medium of instruction in Indian higher education system. The learners felt that good English proficiency will help them to find a better job.

- How do you manage the difficulties in learning English?

The learners were unable to manage the difficulties in learning English. A few learners tried to manage the difficulties through regular practice or interaction with others. Very few tried to get help from teachers or by using dictionaries. Nevertheless, most of them use the regional language between the English sentences for communication.

- Do you feel nervous while speaking English inside the class? Why?

Most of the learners felt nervous while speaking English inside the classroom because they did schooling in their mother tongue. Anyhow, English plays a major role in higher education which forces them to use English language. A major factor that obstructs the regional learners to speak in English is thus they get very less exposure.

- Do you like your English teacher? Why?

Most of the learners like their English teacher because of their English fluency, accent and teaching style. A very few learners do not like their English teachers because they find it difficult to follow his/her classes, particularly when they instruct in English.

- How much do you like learning English? Why?

Researcher observed that all the learners like English to a great extend as they feel it is going to help them for better employment and communication.

- What do you think of Indian people who always speak in English?

Half of the respondents respect the Indians who can...
speak in English. However there are a few who consider speaking English just a show off. They feel English could be used only when necessary and they prefer regional languages for casual communication.

• Do you believe learning English is important to communicate easily with others? Why?

Every learner believes that learning English is beneficial for easy communication. Most of them want to travel across the world for which they need to learn English. They prefer to use English beyond their comfort zones.

• What all can you do to improve your English?

In order to improve their English proficiency, the learners usually read English newspapers and magazines, which are available in their area and watch English movies with subtitles, listen to cricket commentary, crack jokes with friends and relatives. A few learners have also enrolled in the spoken English classes at their locale.

• Do you like Technical English when compared to other subjects? Why?

Learners believe that Technical English is very essential in every aspect of engineering field. Most of the learners pointed out that with the help of Technical English, they could learn the writing mechanism and sentence structure. But there are a few learners who don't like Technical English subject because they feel that English should taught as language for communication.

• How do you feel while speaking in English outside the classroom?

Learners believe that speaking English enriched their personality and their image but they are scared to speak outside the classroom. However few learners feel free and proud while speaking in English with their friends or relatives or with teachers. A few learners are nervous to speak in a particular community. On the other hand, a few never tried to speak in a public forum.

• How do you think learning English can benefit you in your future?

Everyone agreed that English is necessary for their future. Learning English is the only way to set up their career, especially to get a good job in IT companies and in MNC's. Most of the engineers feel learning English plays a vital role in their career.

6. Discussion

The main purpose of the study was to investigate the L2 learners’ motivation factor and anxiety in the study area. The discussion part is described along with the research questions.

Research question 1: What is the level of motivation factors towards L2 among engineering students?

The result shown in Table 4 reveals that motivational intensity and desire to learn English have strong positive relationship between the factors. Similarly moderate positive relationship found between motivational intensity and attitude towards learning English. To learn English a strong motivation has to be influenced, which can be managed by the learners themselves.

Similarly motivation was found to be so closely related to students’ L2 achievement; it is very essential to enhance language learners’ motivation to learn a second language. Learners’ attitudes towards English language learning varied according to their area of fields and so the curriculum and teaching method has to be changed.

Yang found that Chinese learners have no motivational intensity towards English language so the learners not succeed in their L2 achievement. However, motivation factor such as motivational intensity, attitude towards learning English, and desire to learn English are very important for L2 achievement.

Research question 2: What is the relationship between language anxiety factors (Language use anxiety and Language class anxiety) among L2 learners in the study area?

The result shown in Table 5 illustrated that the learners in the study area have moderate positive correlation between English use anxiety and English class anxiety. Anxiety is one of the most influenced affective variables, which prevents L2 learners’ success. Horwitz, Cope uttered that anxiety occurs only in specific situations. The learners and teachers feel that second language learning anxiety is a huge hurdle to get over when attempting to learn a language other than their own language (p. 125). To improve L2 learners’ achievement the language teacher should pay more attention to learners, affective factors, in particular learners, self-confidants’ and anxiety have to be focused. The qualitative study reveals that English use anxiety is high among the learners in the study area. But the learners feel free to use English language inside the classroom. The learners felt self-doubt while speaking with others outside the classroom.

Research question 3: Which factor is very important for L2 achievement?

Based on the qualitative analysis, the learners felt that communication skill and criticism by others were
the main components of anxiety in L2 learning. Even though L2 learners wish to learn English language, they felt difficult to use inside and outside the classroom. Most of the learners like their teacher’s style but still they are not confident to use the language. Learners feel that communication is very important for their career, especially for interviews. Learners were scared to speak in English and they wish to reduce their anxiety level. Awan, Azher, Anwar, Naz suggested that speaking in the L2 in front of others increase learners’ levels of anxiety. The high anxiety is because of learners’ are not sure about the use of language and more bother about the grammar errors and inability to respond spontaneously. Therefore it is utmost importance to improve their self-confidence and reduces the anxiety level.

7. Conclusion

The uses of motivational strategies by teachers are very essential for L2 learners’ success. Thus Saranraj, Zafar, Khan suggested that language instructor might be aware of motivational factors and they could build learners’ self-confidence. Similarly learners’ motivation would change according to the learners’ environment, learners approach towards learning and teaching methods. According to Zafar, Feleciya, Khan, the PBL (Project Based Learning) method motivates the L2 learners to use their technical communication skills in situations that seem realistic. PBL involves collaboration with peers and thus helps control learners’ anxiety levels. The L2 learners should be sociable, willing to join in a group conversation in target language for their achievement.

In Indian context, L2 achievement is associated with both cultural settings and individual differences. Hence motivation factors can be affected by both social and cognitive factors. So the researcher suggests the language instructor could create pleasant and collaborative environment inside the classroom. This automatically paves the way for the learners to use the language effectively and provides a platform for enhancing their employability.

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