

## Enhancing Engineering Students vocabulary through Academic Word List (AWL): A Study.

Mr. Ravibabu Velaga<sup>1</sup> Dr. K V B Ravindra Babu<sup>2</sup> Dr.M. Suresh Babu<sup>3</sup>,

1. Assistant Professor of English, Department of English and Other Indian and Foreign Languages, VFSTR Deemed to University, Vadlamudi, Guntur, A.P, India.
2. Associate Professor, Department of English & Other Indian and Foreign Language, VFSTR Deemed to be University, Vadlamudi, Guntur Dist.A. P India.
3. Assistant Professor of English, Department of Basic Sciences and Humanities, B V Raju Institute of Technology, Narsapur, Telangana, India.

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### **Abstract:**

Vocabulary is a major component in English language learning. Developing English proficiency especially ESL is a daunting exercise for which adequate academic vocabulary is necessary to improve their language. This paper investigates how AWL (Academic Word List) impacts the knowledge of academic vocabulary of the ESL learners at UG level and looks at the feasibility of adopting Academic Word List in their existing English curriculum. The results indicate that AWL has a positive impact on engineering students' size of the academic vocabulary. It also indicates that AWL can be a source for improving their vocabulary skills through which students' can communicate in English effectively

**KEYWORD:** Academic vocabulary, Academic Word List, ESL learners.

### **Introduction:**

Vocabulary plays a vital role in mastering all the four skills listening, speaking, reading and writing. It adds the richness to one's language. Based on the vocabulary knowledge only English language learners can communicate well and produce good English in their writing and speaking. The more the words known by the more they can use those words in their language functions and use English in their day to day life as well. Similarly, when they deal with their receptive skills, they can understand language well which can lead to improve their productive skills. In academic context, particularly at university level, graduates need academic vocabulary to understand their subjects well followed by to get the better academic scores.

Engineering graduates at university level need adequate vocabulary to deal with their academics during their engineering course particularly in the 1<sup>st</sup> year itself. They need to get the knowledge of all the fundamentals of other subjects like Maths, Physics, Chemistry, Professional Ethics, Constitution of India (CoI) and Soft Skills (in 2<sup>nd</sup> year) as the part of their curriculum. For better comprehension of their academics, they need a good amount of vocabulary which they lack. At their plus two level, students hardly focus on their English Vocabulary. Studies show that students' vocabulary range falls in between 3000-4000 words hardly which is insufficient to understand the subjects at graduation level. There is a need to improve their vocabulary to deal with the subjects at their graduation level and meet their professional goals.

Since there are many wordlists available, students at the university level are not aware of what and how to find out suitable word lists to master them in order to meet their academic as well as professional goals. On the other hand, English teachers also don't have the clear idea about the vocabulary their students possess and what to be supplemented to their students existing vocabulary so as to support their learning process. In the light of this context, there is an urgent need to look at the wordlists that serve the students' needs and help them to meet their immediate goals within the short span of time. This study looks at the various lists available for the graduate students level and suggests the suitable one to enhance their academic vocabulary.

### **Literature review:**

There are many studies focussed on this problem that how much receptive vocabulary is needed in the case of native speakers and non-native speakers to deal with the reading a novel, a newspaper or taking a participation in a conversation.

Hirsh and Nation (1992) study found that at least 5000 words one should have to read a novel written for teenagers who are native speakers. Naturally, the number would be the high in the case of non-native speaker's case.

(Goulden, Nation, & Read, 1990; Zechmeister et al, 1995) come to the understanding that a well-educated native speakers have 20,000 word families excluding proper names and transparently derived forms. It has become a thumb rule that each year is equal to 1000 word families in the case of native speakers. Recent unpublished research also indicating that a non-native speaker should have 8000-9000 word families as a receptive vocabulary.

Many language researchers focussed on this problem and came out with appropriate conclusion that Academic Word List is the one which has much significance from time of its existence even in the educational research papers. In Chung and Nation study which was conducted in 2003 by comparing the technical words in an Anatomy book (Moore and Dalley, 1999) and an Applied linguistics book (Ellis, 1999) they found that academic words appeared in the both field are mostly from Coxhead's AWL in clouding the GSL (General Service List). They identified the importance of AWL in their study.

Hu and Nation (2000) also examined the relationship between the reading comprehension and text coverage. They came out with the conclusion that 98% of text comprehension is required for adequate comprehension. Another study carried out by Mudraya in 2006 which focussed on the lexical analysis on the students Engineering English corpus consisting of 2,00,000 words also came out a positive outcome that many words are frequent in the corpus and that are from AWL. Example: assume, correspond, define, illustrate, indicate, locate, obtain, occur, require and sketch

One more study which was carried out by Chen and Ge (2007) focussed on the usage of AWL words in the medical papers also resulted in a positive mode that AWL constitute about 10.07% in medical corpus. In the opinion of Mukoroli (2011), learners who had higher academic vocabulary could tolerate the proportion of unknown words and even could guess the meanings of unknown words better than the other learners who didn't have.

Since the previous research shows that AWL is widely covering the other fields, it's the need of the hour to introduce at the graduation level students to give a kind of support to deal with their academics in a comfortable way. 90% of the words in AWL come from French, Latin and Greek (Coxhead, 2000).

#### **Research Questions:**

**The paper tries to answer the following questions:**

1. Do the students of university at undergraduate level have adequate academic vocabulary to understand their academic texts?
2. Should AWL can improve the Academic Vocabulary of the ESL students in a short time?
3. Should AWL be used as a source to improve the ESL students' academic vocabulary level at the under graduation level?

#### **Methodology:**

The study employed purposive sampling. It was carried out in three stages. In stage-1, a diagnostic test was conducted for the subjects based on the words from AWL to check their existing knowledge of the AWL. In the stage-2, based on the scores the subjects scored in the diagnostic test, words from AWL were taught for nine weeks for the subjects. In the stage-3, after nine weeks of teaching the words from the AWL, post test was conducted for the subjects on the same words taught for them in the same format of the diagnostic test to check that whether their academic vocabulary levels have been improved or not.

#### **Sample**

The research participants for this study were the 1<sup>st</sup> B. Tech Engineering graduates who were in their second semester who completed one course in English names English Proficiency and Communication Skills, a lab course which led them a chance to take Cambridge Assessment English, Preliminary English Test (PET) of the B1 level exam on Common European Framework of Reference in Vignan' s Foundation for Science, Technology and Research (Deemed to be University), informally called as Vignan University, located in Vadlamudi, Guntur (District), in the state of Andhra Pradesh in India. 62 students participated in this study and out of then 29 students were female students and 33 were male students. The researcher was the teacher for them for one semester. So, he has a fair idea about their academic performances and knew the subjects personally.

#### **Instruments**

### Test-1(Diagnostic Test)

A diagnostic test was conducted on Academic Word list to check their existing knowledge of the vocabulary regarding AWL. Test-1 has three sections, Section-A, B and C. Section-A covers the aspect of Word meaning where word meaning is tested in various ways. Section-B covers the aspect of Word Families in various ways and Section-C covers the aspect of Collocation of the words in various ways. The students were instructed in a clear way the purpose of this study and asked to take the test in a fair way. Ninety minutes' time was given to finish the test. They were instructed not to copy any answer from the other participants since the test was conducted for them to know their existing knowledge about the AWL.

### Intervention:

Based on the results of the pilot study the researcher planned nine weeks of intervention to cover the maximum words from the AWL. Out of 570 words from the AWL the researcher covers the 504 words in his 9 weeks of intervention. For this he selected the book **Focus on vocabulary: Mastering the Academic Word list by Diane Schmitt and Norbert Schmitt** which he felt the suitable one to introduce the AWL to the learners in a systematic way. There are 7 units in this book and in each unit there are 4 chapters and out of them three chapters were covering 30 words of AWL in the context. In each unit, the fourth chapter is a strategy practice chapter covering how to use the dictionary, finding the right meaning for the word in the context, locating the word forms for the target words, using the roots, prefixes and suffixes to learn the new word and making word associations. The researcher used all these strategies while he was teaching those words in the 9 weeks of time.

### Test-2: (POST-TEST)

After nine weeks of intervention of teaching the AWL words, Test-2 was conducted by covering the same aspects of the all introduced words in the similar way of Test-1 study. This Test-2 also has the all the three sections mentioned above and in the same order also like in Test-1. Same time 90 minutes were given for the students to complete the test. They were clearly instructed that they could not take any answer from the other students because based on their scored they would be intimated their improvement during those 9 weeks of teaching.

### Results

The results of the study indicate that providing AWL words have a significant effect on students' use of vocabulary and improve their language abilities. Diagnostic and Post-tests results were presented here:

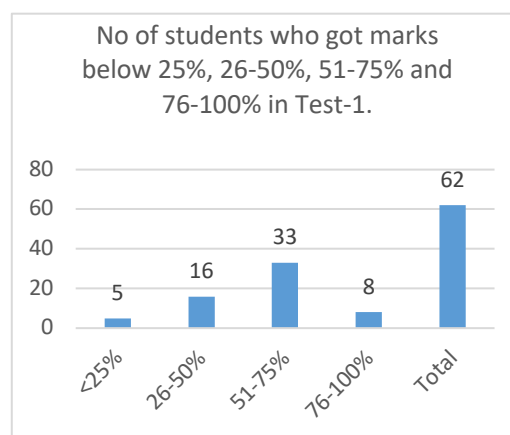
#### Test-1 Scores of the subjects

Marks	No of students-62
<25% Marks	5
26-50% Marks	16
51-75% Marks	33
76-100% Marks	8

**Table-1**

In Table-1, test-1 results shown that out of 62 students only five students got below 25% of marks out of total 60 marks which smallest number in the table. 16 students scored the marks in between 26-50% of marks which is almost 25% of the total students. 33 students scored in-between 50-75% marks which than half of the students out of 62 students. Only 8 students were able to score above 75% marks which was the second smallest group out of 60 students and which is only below 7 to 8 % of the total students taken the test. The same results were shown in the chart-1.

#### Chart-1



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**Test-2 Scores of the subjects**

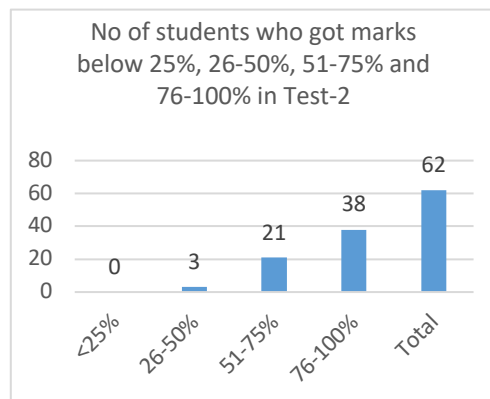
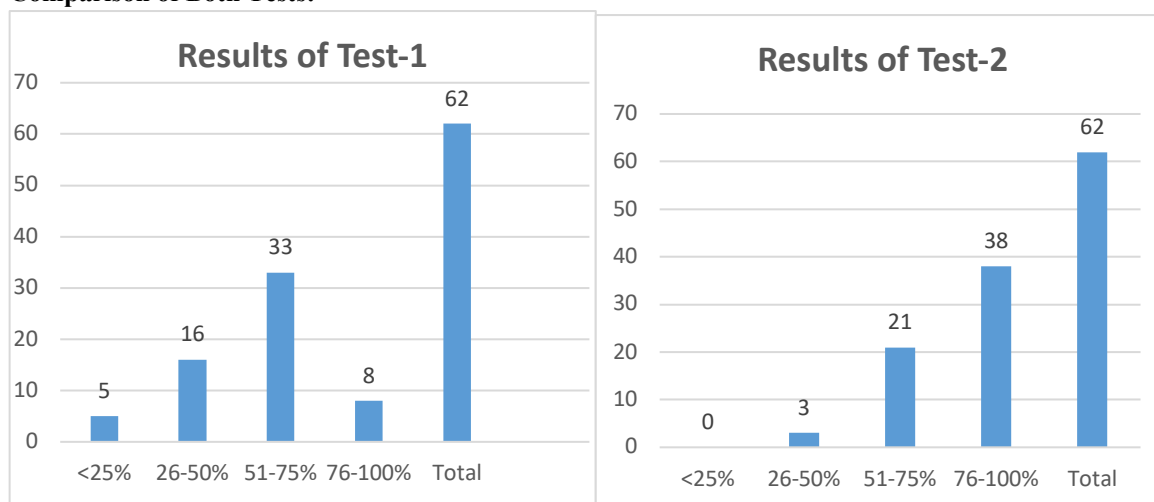
Marks	No of Students
<25%	0
26-50%	3
51-75%	21
76-100%	38
Total	62

**Table-2**

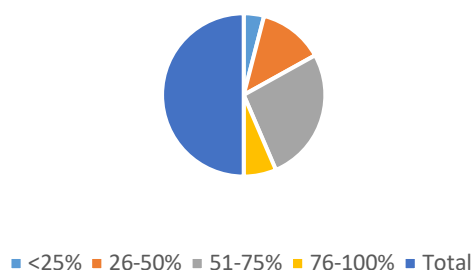
When Test-2 is considered, no student scored below 25% of marks.

Only three students scored above 25% below 50% of marks which is the smallest number. 21 students scored above 50% and below 75%.

And, in the last, 38 students scored above 75% of marks which is the highest number in the test-2 results. This number, i.e., 38 students who scored above 75% is showing the positive indication about the students learning outcome. The same results of post-test were shown in the chart form in chart-2.

**Chart-2****Comparison of Both Tests:**

When Test-1 and Test-2 were compared, in test-2 there are no students below 25% marks, but in test-1 there are 5 students at level. Followed, when compared the 26-50% marks level there 16 students in the test -1 and only 3 students were there in the Even at the next level 51-75% marks considered, though it there small difference, there were 33 students scored the marks in between that level but in test-2 38 students secured marks. coming to the last category 76-100% marks, there was a huge difference. In that level only 8 students got the marks in test-1 whereas 38 students got marks in that level in test-2. It was shown that 30 students scored those marks when compared to This was the highest difference between the both scores.

**Results of Test-1**

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**Discussion:**

The results of the test-1 were showing that the learners graduation level do not have the adequate knowledge the words from AWL. It's very clear from the test-1 they know very few words and 54 students scored 75% of marks and only 8 students scored above 75% marks. It is the indication that 54 students do not have adequate knowledge of the AWL words.

The results of the Test-2 were so encouraging that showing a lot of improvement in students' scores compared to test-1 scores. There is a noticeable difference between the results of Test-1 and Test-2.

all, when it was considered below 25% marks, there is no one in table-2 where as in the same category 5 students were there in test-1. It was the clear indicator that all those 5 five students who scored below 25% marks in test-1 were moved to the next level of scores.

The next scoring level 26-50% also witnessed the notifiable improvement in its scores. In test-1, there were 16 students who scored in between that percentage of marks but only 3 students fall in this zone in the test-2. It is very clear from these figures that maximum students scored the marks in the test-2 in between 26-50 percentage. This is a clear evidence that during the intervention they were able to learn the words from AWL and able to score good percentage of marks in test-2 when compared to test-1.

When we considered the next level of percentage, 76-100 %, the students number was increased who scored very good percentage of marks in test-2. 38 students out of 62 students scored the marks above 75% marks which was showing a clear evidence that the maximum students scored the highest percentage of marks. 38 students mean more than half of the students who took the test have scored the best marks and that is above 75%. It is evidential that AWL intervention helped the students to learn the words in a quicker way i.e., in 9 weeks of short time. This shows the clear indication that teaching AWL for nine weeks for the students have a positive impact on student's vocabulary improvement. It is clearly answering the research question two.

On the whole, these results were suggesting that AWL teaching at the graduation level is helping to improve the students' knowledge of Academic vocabulary if not to the hundred percent but more than eighty present students can learn the AWL words in a quicker way and in a shorter period of nine weeks of intervention. By answering the research question three, AWL should be considered as a best resource to improve the academic vocabulary knowledge of the graduate students at the university level. Teachers of English who are teaching English in ESL context at graduation level could use this AWL as a good source to improve their student's academic vocabulary without wasting time for selecting a list.

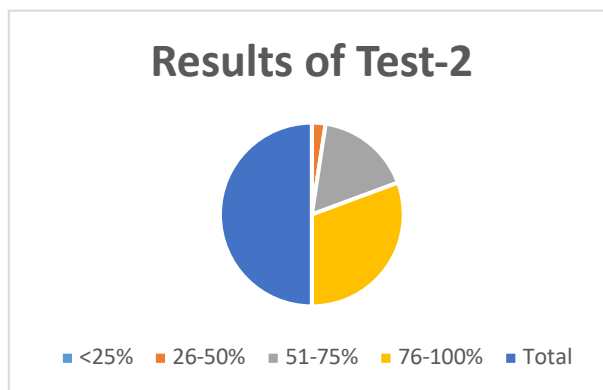
### Conclusion:

The findings of this study revealed that AWL has the very positive impact in improving the second language learner's academic vocabulary in a short time and helps them to meet their immediate goals. It gives a kind of scaffolding to the learners at the graduate level to boost up their word power. This study suggests that university level English teachers should consider the AWL as a rich resource readily available to be used in their classes. It also creates a sensitiveness in English teachers' community towards the word lists in general and towards AWL in specific. ESL students also can find the AWL as a ready resource to improve their academic vocabulary needed at the graduation level to meet their academic as well as professional goals. The study has met its objectives successfully and created a positive impact about the AWL.

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