# The preferred language learning strategies of the science faculty undergraduates in Pakistan

Mansoor A. K. [1], Elizabeth, M. A. [1], Insaf, A. S.[2], Tarique [1], Ishfaque A. A. [1], Sarala, T. P. [1]

[1]Centre for Language Studies, Universiti Tun Hussein Onn Malaysia, Malaysia
[2]Quaid-e-Awam University of Engineering, Science and Technology (QUEST), Pakistan

**Abstract:** This paper is an empirical study aimed at detecting the preferred language learning strategies of the undergraduates from the Science faculty at Quaid-e-Awam University of Engineering, Science and Technology (QUEST), Nawabshah, Pakistan. The study was undertaken due to the realization of a serious dearth of strategy research in the Pakistani context contributing to the large domain of English as a Second Language. This study was carried out by collecting data from the respondents belonging to the Science faculty in QUEST. The data was collected through the Strategy Inventory for Language Learning (SILL), the ESL version questionnaire. The findings reveal a high use of strategies among the students with preference given to Meta-cognitive, Cognitive and Social strategies. It is thus recommended that students need to be motivated towards their less preferred strategies to bring a balance in and improve their L2 learning.

**Key words:** *Language learning; Strategies; Language learning strategies; English as second language; Pakistan*

## 1. Introduction

The steps that a language learner deliberately takes to improve his language learning are called Language Learning Strategies (LLS), (Cohen & Macaro, 2009; Griffiths, 2013; Oxford, 2011). A considerable amount of work has been done under the domain of Language Learning Strategies since the 1970s. Rubin, Chamot, Cohen, Oxford and many others have been among the major contributors. All of them have been insisting on the significant contribution of using language learning strategies in learning a second language as the strategy use has been found helpful in doing so (Cohen & Macaro, 2009). Though there has been considerable research on the use of language learning strategies yet there has not been enough strategy related research in Pakistan. The only few published studies include Kazi & Iqbal, (2011), Khaliq, (2015) and Gujjar, Naoreen & Aslam, (2010).

Kazi & Iqbal, (2011) in their research over Pakistani students' use and preferences of LLS have provided some insights and the internal scenario of LLS in Pakistan. They conducted the research on higher secondary (college) level students. They wanted to explore the difference of usage and treatment by students of three different academic groups: arts, science and commerce. Khaliq, (2015) is a study originated by detecting the significance of the language learning strategies (LLS) with relation to the psychological factors. The objectives of this study were multifold. The first was to investigate which language learning strategies were frequently used by Pakistani high school students. The second was to discover the anxiety level of the participants and the third to find out the interaction of anxiety on the use of LLS. While Gujjar, Naoreen & Aslam, (2010) in their study have done a comparative analysis of the Language Learning Strategies used by the students of formal and non-formal systems of education in Pakistan.

Apart from the strategy research, Pakistan has been contributing in the global domain of ESL research in various contexts with a major focus on motivation related studies. Just to mention some of them are, Siming, (2016); Khan, (2016); Rehman, Bilal, Sheikh, Bibi & Nawaz, (2014) and Manzoor, Ahmed & Gill, (2014).

Thus the strategy research can be conducted in Pakistan on various platforms. This paper however, focuses on a population from QUEST, a public university in Pakistan. The aim of this paper is to unearth the Pakistani students' preferences regarding the English language learning strategies, particularly of those at QUEST Pakistan.

## 1. Related literature

### 1.1. Language learning strategies

Language Learning Strategies (LLS) is the tactics or methods employed by learners to learn a second language (Oxford, 2011). Every learner consciously or subconsciously uses certain strategies to learn a language and make the process easier. Second Language learning is a tedious task which requires patience and continuous effort. Effort always requires the right method to produce the required

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results. Language learners also adopt certain methods consciously or subconsciously not knowing what they are doing is the recommended method to ease their learning process (Griffiths & Cansiz, 2015). These methods are strategies which if used in the right way by the right user in the right context, make the second language learning a lot easier, enjoyable and quicker (Oxford, 1990).

The proper introduction of the concept of language learning strategies goes back to the 1970s when in 1975 Joan Rubin attempted to identify the strategies used by successful language learners in her 'What the good language learner can teach us'. This proved to be a groundbreaking article which gave birth to a new field of study under the domain of Second language learning (L2). This triggered the interest in many scholars to do research and write about language learning strategies. As a result, we saw works of Hosenfeld and Naiman, Fröhlich, Stern, and Todesco in the 1970s. Then in the 1980s, O'Malley, Chamot, Wenden and Rubin presented their contributions in the field. In the 1990s it was O'Malley, Chamot, Oxford, Wenden and Cohen who made the contributions. In the 21st century, famous contributions have been from Oxford, Cohen, Macaro and Griffiths.

## 1.2. Language learning strategy use in Pakistan

Kazi & Iqbal (2011) state that there has been considerable work on ESL in Pakistan however there has not been much work on LLS which is the need of the hour. There have been only a few published studies related to language learning strategies in Pakistan. Most of the research done has been towards motivational factors of L2 learning i.e. Siming, (2016); Khan, (2016); Rehman, Bilal, Sheikh, Bibi & Nawaz, (2014) and Manzoor, Ahmed & Gill, (2014). However, Kazi & Iqbal (2011) in their research over Pakistani students' use and preferences of LLS have provided some insights and the internal scenario of LLS in Pakistan. They conducted research on higher secondary (college) level students. They explored the difference of usage and treatment by students of three different academic groups: arts, science and commerce with three dependent variables of meta-cognitive, cognitive and social-affective strategies.

According to the research conducted through a questionnaire survey, it was seen that the arts group demonstrated greater strategy use, followed by commerce and sciences. This difference according to them and some other researchers (Hong & Leavell, 2007) was perhaps because of their greater professional requirement of the strategy use. For the dependent variables of meta-cognitive, cognitive and social-affective strategies, the results showed that the meta-cognitive strategies were highly preferred by students of all groups. It was also observed by results that social affective strategies are not much preferred by students. This can be attributed to the learning environment, as it is not Pakistani culture to learn language through social interaction.

These findings are also supported by Mansoor, (2004) who maintains that generally, the method of learning English in Pakistan is that of grammar translation, the syllabi/curricula are outdated, the facilities are almost nonexistent, the teachers are untrained and the learners lack motivation.

## 2. Methodology

The Strategy Inventory for Language Learning, a reputable and extensive questionnaire to obtain information on the language learning strategies was used as a tool for data collection in this quantitative study

### 2.1. Strategy inventory for language learning

The Strategy Inventory for Language Learning (SILL), the ESL version is a self-report questionnaire prepared by Rebecca Oxford in 1989. It is a very frequently used tool in the quantitative studies related to language learning strategies. The reliability of the SILL Cronbach's alpha was found as 0.87 which is quite high (Oxford & Burry-Stock, 1995).

The SILL contains 50 questions classified into six groups: Memory, Cognitive, Compensation, Metacognitive, Affective and Social strategies. The Memory strategies included 9 items to help learners store and retrieve information, such as grouping, reviewing, and creating visuals. The Cognitive strategies involved 14 items manipulating the language and understanding, making meaning such as repeating, summarizing, analyzing and practicing. The Compensation strategies consisted of 6 items to help learners in overcoming limitations in language learning by guessing, using clues, getting help and using gestures. The Metacognitive strategies contained 9 items involving organizing and directing learning such as self-monitoring, planning schedules, evaluating and setting goals. The Affective strategies comprised of 6 items aimed at controlling emotions, coping with people's attitudes, and handling motivation such as discussing one's feelings with others and fighting anxiety. Lastly, the Social strategies involved 6 items on interacting and cooperating with others in language learning by using strategies like asking questions and asking for rectification (Oxford & Burry-Stock, 1995).

### 2.2. Participants

The participants in this study were a group of undergraduates from QUEST. There were 144 participants from the Science faculty with 90 male and 54 female students representing 3 departments; Mathematics, Information Technology and Computer Science. All the participants were in the 1st year of their study at QUEST aged between 17-19 years. They were randomly selected from those studying the compulsory Functional English course. All agreed

to participate voluntarily as their anonymity was assured with the demographic section not having any details of their names, contact numbers or residential addresses.

## 2.3. Procedure

Data was collected through printed copies of the SILL questionnaire which was administered to all selected participants. The purpose of the study was explained prior to the distribution of the questionnaire and each student was given 30 minutes to complete the questionnaire. Upon completion, the collected data as per questionnaire was keyed into the Statistical Package for the Social Sciences (SPSS), a very widely used software for the quantitative analyses (Pallant, 2013). In order to fetch the results, a descriptive analysis was generated to yield the statistics regarding the preferred language learning strategies of the Science faculty undergraduates.

## 4. Findings

The findings of the SPSS analysis are presented to indicate the students' preferred language learning strategies.

## 4.1. Preferred language learning strategies

Table 1 shows the usage frequency of all the 50 items of the SILL questionnaire ranking-wise with the first item with the highest mean score. The mean scores of items from bottom to top ranged from 2.63 to 4.01. Interpreting the table in terms of three groups of high, low and medium use it can be maintained here that the items with the mean scores of 3.5 or higher can be labeled as the items with the highest frequency, items scoring from 3.25 to 3.49 can be labeled as the items with medium frequency and the items with the mean scores ranging from 2.63 to 3.24 can be labeled as the items with the least frequency. To make it clear it can be said thus that items ranking from 1 to 23 fall in the first group with the highest frequency. Opposite to it, the items ranking from 41 to 50 fall in the group with the least frequency. The medium rank items however, range from 24 to 40. It is quite evident that over all the students are medium or high users of strategies as proven by the facts above that the bottom mean range from 2.63 to 3.24 which is almost the half of the total range (2.63-4.01) has only 10 items in it while the remaining 40 items of the questionnaire place themselves in the medium or high range of strategy use.

**Table 1:** The ranking of SILL item frequency

| Ranking | Item No. | Participants | Mean | Ranking | Item No. | Participants | Mean |
|---|---|---|---|---|---|---|---|
| 1 | 12 | 144 | 4.01 | 30 | 1 | 144 | 3.40 |
| 2 | 32 | 144 | 3.99 | 31 | 25 | 144 | 3.37 |
| 3 | 31 | 144 | 3.88 | 32 | 24 | 144 | 3.35 |
| 4 | 33 | 144 | 3.87 | 33 | 20 | 144 | 3.33 |
| 5 | 38 | 144 | 3.77 | 33 | 50 | 144 | 3.33 |
| 6 | 17 | 144 | 3.69 | 35 | 19 | 144 | 3.30 |
| 7 | 2 | 144 | 3.68 | 35 | 27 | 144 | 3.30 |
| 8 | 29 | 144 | 3.67 | 37 | 8 | 144 | 3.29 |
| 9 | 37 | 144 | 3.65 | 38 | 9 | 144 | 3.28 |
| 10 | 13 | 144 | 3.64 | 39 | 34 | 144 | 3.26 |
| 10 | 16 | 144 | 3.64 | 40 | 3 | 144 | 3.25 |
| 12 | 14 | 144 | 3.61 | 41 | 23 | 144 | 3.23 |
| 13 | 10 | 144 | 3.60 | 42 | 44 | 144 | 3.15 |
| 13 | 11 | 144 | 3.60 | 43 | 42 | 144 | 3.11 |
| 13 | 49 | 144 | 3.60 | 44 | 7 | 144 | 3.08 |
| 16 | 36 | 144 | 3.58 | 44 | 43 | 144 | 3.08 |
| 17 | 30 | 144 | 3.57 | 46 | 4 | 144 | 3.01 |
| 18 | 41 | 144 | 3.56 | 47 | 26 | 144 | 3.00 |
| 18 | 46 | 144 | 3.56 | 48 | 5 | 144 | 2.99 |
| 20 | 35 | 144 | 3.55 | 49 | 22 | 144 | 2.94 |
| 21 | 28 | 144 | 3.53 | 50 | 6 | 144 | 2.63 |
| 22 | 45 | 144 | 3.52 | | | | |
| 23 | 47 | 144 | 3.51 | | | | |
| 23 | 18 | 144 | 3.51 | | | | |
| 25 | 15 | 144 | 3.49 | | | | |
| 26 | 21 | 144 | 3.48 | | | | |
| 27 | 40 | 144 | 3.47 | | | | |
| 27 | 39 | 144 | 3.47 | | | | |
| 29 | 48 | 144 | 3.41 | | | | |

In relation to the six major categories however, the most preferred strategies of the students are the Metacognitive language learning strategies with the highest mean score of 3.6798 as shown in the Table 2 above. The second most preferred strategy group is the Cognitive with a mean score of 3.5050. Descending down the ladder, the Social strategy comes next followed by Compensation, Affective and

Memory respectively with the respective mean scores of 3.4873, 3.3692, 3.3056 and 3.1813.

The findings are consistent with AliReza & Abdullah's (2010) involving strategy use among science students, except for negligible differences. While comparing the two studies, it can be seen that the top three strategy groups mean-wise of both the studies had two groups Cognitive and Social in common. While for the least preferred strategies also of science students both the studies tend to support each other as the Memory strategies were identified as the least preferred strategies of the science students involved in both the studies. Interestingly the participants in both the studies belong to Asia (Iran and Pakistan) which helps in generalizing the findings over whole the Asia by taking the two studies as the representative sample.

**Table 2:** revealing category-wise preference of the students

| Category | Number | Mean | Std. Deviation |
|---|---|---|---|
| Metacognitive | 144 | 3.6798 | .71915 |
| Cognitive | 144 | 3.5050 | .63456 |
| Social | 144 | 3.4873 | .81167 |
| Compensation | 144 | 3.3692 | .71368 |
| Affective | 144 | 3.3056 | .68375 |
| Memory | 144 | 3.1813 | .62060 |

However, keeping in view the above findings it can be concluded that the most preferred strategies among the science students are the Meta-cognitive and Cognitive strategies with the mean scores of 3.50 onwards while the Memory strategies are the least preferred with a mean score of below 3.20. Relatively, the Social, Compensation and Affective strategies have a mean ranging from 3.30 to 3.49, indicating medium use of those strategies.

These figures are representing the fact that Pakistani students are active users of Cognitive and meta-cognitive strategies to learn English as a second language. This implies that Pakistani ESL learners involve their higher thinking in learning English as are the traits of Cognitive and meta-cognitive strategies. On the other hand the least preference towards the memory related strategies signifies that Pakistani students do not prefer to memorize things with effort possibly because of being an old school method and having the touch of forced learning like cramming.

It is quite positive to see this study being supported by AliReza, & Abdullah's (2010) already mentioned earlier as this would provide reliability to this study because of both having the same Asian context.

Another interesting thing is a contradictory outcome regarding the use of Social strategies. The researcher cited Kazi & Iqbal, (2011) in section 2.2 to introduce Pakistani ESL learners not being much inclined towards learning language through social interaction which is indeed a quite common notion in Pakistan as students in Pakistan do usually tend to avoid communicating in English publically due to the fear of public and lack of confidence. This study however reveals social strategies as third 3rd highest in the order of preference of Science students. This disagreement may possibly be due to the quoted study being in general ESL context of Pakistan, not being in the context of LLS in Pakistan. However, due to whichever the reason, this disagreement appeals for more research and evidence in the case.

## 5. Conclusion

To sum up, it can safely be said that the undergraduates in Pakistan, particularly in science faculty at QUEST are active users of language learning strategies and they have their particular tendencies towards the use of certain strategies i.e. Meta-cognitive, Cognitive and Social strategies which signifies that they are motivated towards and interested in learning English as a second language and they are also interested in strategy use. It has also been found that this study is supported by AliReza, & Abdullah's (2010) in terms of the most preferred and the least preferred strategies of science students in Asia. A disagreement within Pakistani context has also been discovered of this study with Mansoor, (2004) in terms of learning English through social interaction which appeals more research in the context.

Through the findings presented here, the students as well as teachers can focus and work on the strategies less focused upon with lower mean scores in this study. As a matter of fact, learning English by means of language learning strategies itself is a less focused aspect of the ESL learning in Pakistan which needs more highlight, more attention and more research.

## Acknowledgement

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