

AN ANALYTICAL STUDY FOR THE DATA COLLECTION OF CONFUSING LETTERS OF ENGLISH ALPHABET AT NURSERY LEVEL

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ABSTRACT

Learning of Alphabet is a basic step to learn English language. Most of our children in the country start learning English Alphabet at the age of four years. Some of the letters are similar to each other in one way or the other and they create a lot of confusion for the very young kids who is learning four languages at a time in most parts of our country namely Urdu, English, Arabic and a local language. This document presents the results of a study about the confusing letters at Nursery level in the private schools of the Sialkot city. The purpose of the study was to identify letters at which students of Nursery class have confusion in one way or the other and provide a base to bring about subtle changes in the font style to minimize the confusion. The questionnaire was used as instruments for collection of data for the study. The questionnaire comprised twenty questions – 19 were close ended having a pair and teachers have to tell how much confusion students have at 5 points Lickert scale ranging from “No”(1 score) to “Often”(5 score). Last question was an open ended question asking, are there some other letters that create confusion? The findings of the study revealed that b-d cause maximum confusion in the minds of the students at Nursery level. Pairs of q-p was at the second number, w-v at the third number, u-v at the fourth and n-m was at the next position in the descending order in causing confusion in the minds. All these pairs got a score more than 50. Findings of the study also reflect that experienced teachers know more about confusion and less experienced know less than those. Recommendations include bringing changes in the font style of letters b-d, q-p, w-v, u-v, n-m so that they should look distinct and cause minimum confusion.

Key Words : *Confusing, learning ,Alphabetic, Nursery ,Language*

INTRODUCTION

Humans vary in learning language especially the second or third language. Language is a system of symbols that is used to communicate one's meanings to other/s. It is a mental phenomenon, a body of knowledge about the speech sounds (consonants and vowels), meaning and syntax which reside in the mind (brain) of the users. It is important to note that the term 'language' is used to refer to all processes of speaking, writing or signing that is common to an individual or group of individuals (Singh, 2007).

Language is a complex system that depends on four coordinated sub-systems. Phonology is the system that maps speech sounds on to meanings and thus meanings are part of the semantic system. Grammar is related with syntax and morphology. Morphology can be defined as the way in which words and parts of the words are combined to communicate different meanings. Pragmatics has relation with language use. Laymen think that every child when comes in the school knows the native language very well. It seems true apparently but problems are there with whom who are not good with words. They show lags in listening and speaking and when they enter in the school, they show problems in reading and writing as well. It is important to note that speech and language delay can be the first sign of reading difficulties (Snowling, 2009).

In language learning, human organs are well versed. Nature has granted humans the ability to produce number of different sounds rapidly and in a controlled manner. Human mouth

organs possess specific biological features which are very helpful in the production of speech. Some parts have the natural ability and still others might have partial adaptations of the body that is of helping nature in the production of speech (Siraj, 2010). Human teeth are even in height, form an unbroken barrier. They are not in a slanting position like animals rather they are upright. Top and bottom sets of teeth meet in a style that is very useful for speech. Teeth are evenly spaced and of equal size. In this way they are very comfortable in the pronunciation of a number of sounds for example s, f, v, sh (as in ship), th (as in thick) and several others. Muscles of lips are highly developed, mouth is relatively small. This small size gives mouth the ability to be opened and shut rapidly and easily. It enables mouth to articulate sounds like p and b that require a total stoppage of the airstream with the lips, followed by a sudden release of the pressure as the mouth is opened. Tongue is muscular, thick and mobile. Due to this factor mouth cavity can be varied and it allows a range of vowels to be produced. Larynx plays its part as well. It contains the voice box or vocal cords. Air freely passes through it and goes to nose and mouth without any disturbance of any type. Breathing that is very important to the production of any sound depends on lungs. Structure and functions of lungs are nicely poised for breathing during the speech, giving flexibility and adjustability and thus allowing humans to talk for longer periods of the time without getting tired. During speech breathing pattern is changed. Breathing in is accelerated and breathing out slows down. Thus breathing mechanism is biologically prepared for speech.

Language learning is an automatic process as far as first language is concerned. Things vary when a child has to learn another language. Children learn different languages at different times during schooling. English is an international language widely used all over the world especially in the fields of education, media, business, etc. In Pakistan it is official language so a lot of emphasize is given on it. Most of the schools especially in the Punjab and Pakhtoonkhaw start its teaching at Nursery level at the age of 4 years (age range 3.6 to 4.6 years). In private schools it is an integral part all over the Pakistan. If Urdu is considered the first language then it the second language of the country. If native languages – Punjabi, Sindhi, Balochi, and Pashto are considered the first languages and Urdu the second language then it becomes the third language. At pre-school level majority of Muslim children start learning another language – Arabic, the religious language. So they learn Arabic in advance to English. In this situation English becomes fourth language. English is given extraordinary importance in province of Punjab. Children don't learn to read and write their mother tongue Punjabi. In spite of English language, they learn Urdu as the first language and English as the second language. There are many private English Medium schools as well, where majority of the subjects are taught in English as medium of instruction so English becomes first language at school. People's trend towards these schools is increasing day by day.

When a child enters in the school at the age of about four years, English Alphabet are taught at the outset. Learning to read in an alphabetic system, such as English, needs development of mappings between speech sounds and letters – the so-called alphabetic principle – and this depends on speech skills (Snowling, 2009). Recognizing and naming the letters of the alphabet—the standard ones—is the first step to learning to read. In different school set ups this level is called with different names like Nursery level, Montessori level, KG (Kindergarten) level or Kachi level (in most of the Govt. Schools). At this age, typeface and font size can have an impact on learning. If letters are similar to each other, there might be greater confusion in the

minds of the children because identification and discrimination will be difficult. A research with the title, "Effects of typeface and font size on legibility for children" shows that children performed discrimination and identification tasks better at Arial font than Times New Roman font and 18-pt size. Performance was better for discrimination than identification (American Journal of Psychological Research, Vol. 1, 2005)

Following are some of the fonts that are similar to the most commonly used font styles at Nursery level.

CENTURY GOTHIC

a b c d e f g h i j k l m n o p q r s t u v w x y z

ARIAL

a b c d e f g h i j k l m n o p q r s t u v w x y z

COMIC SANS

a b c d e f g h i j k l m n o p q r s t u v w x y z

English Alphabet, whatever writing style is used, has some letters that are similar in nature and cause great confusion in the minds of the students. According to Nadene, a teacher, research shows that people have developed strategies to overcome problems with confusing letters. Usually these letters are;

b	d	q	p
u	n	w	v
j	g	i	
a	o	c	

Another site www.learning.materials.btinternet.co.uk/confusing_letters.htm says following letters might be confused by the children;

d	q
i	l
s	z
g	y

It will be interesting to note that children have a tendency to confuse letters with similar numbers as well. Following are the letters with their respective confusing numbers;

0	O
1	I
2	Z
3	E
4	H
5	S
6	G
7	T
8	B
9	P

As far as efficiency of human eye is concerned we have contrasting findings. Some say that the human eye is fully developed after the first year (Slater, 1998) and, children, like adults, are able to discriminate small visual details (Gaines, 1969). This suggests that even subtle differences in text characteristics, such as typeface or size, should also be distinguishable by

children. On the other side there is another study that says that despite rapid development in the efficiency of eye movements, by the time children enter school eye-movement patterns remain significantly less efficient than those of adults (Kowler & Martins, 1982).

As far as effects of typeface are concerned, many studies have examined the effects of variations in typeface characteristics on legibility and readability. Way back in the decade of 1940 it was known that differences in font increase or decrease the ability of an individual to distinguish or read letters (Tinker, 1944). According to Chauncey (1986), different fonts may influence reading speed as much as 30 percent. However, under certain conditions, variations in font characteristics may particularly influence the legibility of letters. For example, legibility may be compromised due to presentation factors, such as when one uses faster rates of presentation, smaller letters, greater distances, poorer graphic resolutions or contrasts, or inadequate illumination (e.g., Legge, Rubin, & Luebker, 1987; Mansfield, et al., 1996). It is under these conditions that variations in type should make the greatest differences in legibility. Similarly, when any factor stresses the visual system, differences in font greatly affect legibility (e.g., Yager, Aquilante & Plass, 1998).

The more difficult task, identification, had a more detrimental effect on performance for the lower grades. Kindergarteners scored worse on the identification task than all other grades for either task. Both kindergarteners and first graders scored lower on the discrimination task than did the fourth graders. In addition, as shown by the standard error bars on Figures 1 and 2, the variance within kindergarten and first grades was larger than in any other grade. A comparison of the discrimination data and the identification data shows that the kindergarteners' and first graders' significantly poorer performance on the identification task contributes greatly to the overall difference between tasks (Woods, Davis and Lauren, 2005).

One major reason for this type of problem in the identification and recognition of letters might be a learning disability. A child with a learning disability will have average or above average intelligence or potential but he has difficulty in learning in one or more areas like reading, writing, calculating or matter. Due to it there is a huge discrepancy between his ability and his performance or achievement. This inability is not due to mental retardation, emotional disturbance, or environmental disadvantage. There is a huge gap between his apparent capacity of achievement and his actual achievement so everybody around him is disturbed if he/she does not have an awareness and understanding of learning disabilities (Singh, 2007). Laymen say that problems are due to his in-attention, low motivational level or lack of hard work although a child with a learning disability cannot try harder, pay closer attention, or improve motivation on his own. He needs professional and specific help to learn how to do things correctly or in an improved form. Common learning disabilities are dyslexia, dysgraphia and dyscalculia. Causes of the dyslexia are not yet very clear. There are different types of hypotheses. One proposed by Vellutino (1979) states that children with dyslexia are subject to problems centering on the verbal coding of information that create specific problems for learning to read in an alphabetic script. Vellutino et al., 2004 have taken a gradual shift in an updated review and they are now of the opinion that dyslexia is characterized by phonological processing difficulties. This theory is supported by many other studies as well. Main cause for dyslexia now a day is considered the underlying phonological deficit. It is thought that dyslexic children come to the task of learning to read with poorly specified phonological representation – the way in which

their brain codes phonology is less efficient than that of normally developing readers. At the basic level, learning to read needs a child to establish a set of mappings between the letters (that are called graphemes) of printed words and the speech sounds (that are called phonemes) of spoken words. These mappings permit new words to be decoded and give a base for learning more automatic reading skills (Caravolas, Hulme and Snowling, 2001). Plaut et al, 1996 proposed that reading is conceptualized as the interaction of a phonological pathway mapping between letters and sounds and a semantic pathway mapping between letters and sounds via meanings. Students with dyslexia specifically face difficulties that primarily affect the phonological domain; the most consistently reported phonological difficulties are limitations of verbal short term memory and more directly related to their reading problems, problems with phonological awareness. It has been documented by some researchers that dyslexics might have problems as far as long term memory is concerned as well. This type of memory problem might be cause of academic difficulties in school that mainly depend on long term memory. Difficulty in memorizing days of the week or the months of the year, mastering multiplication tables by heart, and learning a foreign language are actually signs of problems with long term memory. This problem with long term memory might be seen responsible for word-finding difficulties and poor vocabulary development often observed in children with dyslexia. It is important to note that some researchers (Ziegler and Goswami, 2005) have found that these types of problems are seen in lesser extent when students learn other languages like German, Italian, Spanish or Greek than English. This factor is considered due to similar sounds of some of the letters in English language. In short, it can be said that learning to read is an interactive process in which child uses all his linguistic skills. However phonological processing that is most strongly related to the development of reading is the source of most dyslexic problems in reading. There is considerable biological evidence in support of phonological deficit hypothesis as well (Snowling and Stackhouse, 2009).

It is noticeable that there is a ray of hope for the solution of problems of dyslexia. It is known now that brain has a natural lifelong ability to change and form new neural connections and generate new brain cells in response to experience and learning. This ability of brain is called neuroplasticity.

OBJECTIVES OF THE STUDY

The research was conducted to;

- appraise the letters on which children have more confusion,
- find out the magnitude of the problem,
- Suggest alterations in the formation of confusing letters so that students face minimum confusion while learning English Alphabet.

SIGNIFICANCE OF THE STUDY

The study will lead to highlight the confusing letters and thus problems of children in learning English Alphabet at Nursery level. It will also create awareness among teachers about the confusions in similar letters. At school level it motivates teachers to think about the remedies about the confusing letters. It will also help planners, principals of the schools, parents, and students in various ways

METHODOLOGY

The population of the primary school which have the nursery level classes were taken. The 20 teacher randomly selected from these school who are teaching at primary levels. a detail questionnaire were developed to collect data from teacher

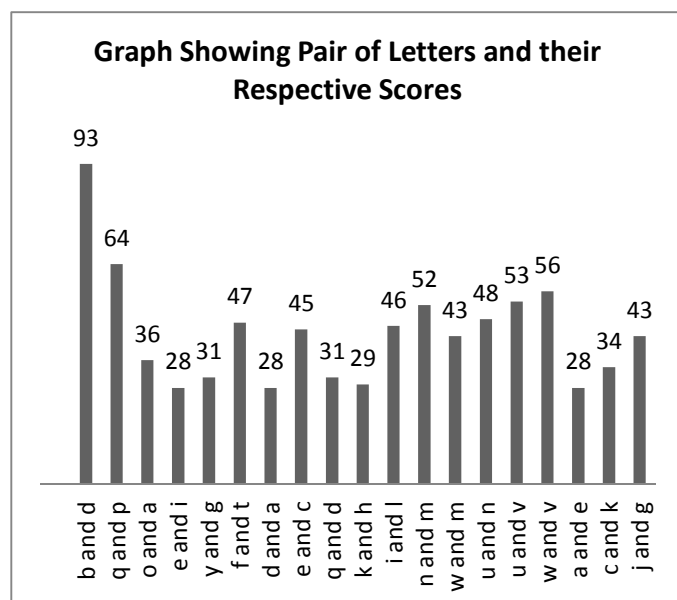
DATA ANALYSIS:

Following is a table that shows scores of 20 respondent teachers at a questionnaire that consisted of 20 questions.

Following is the table that contains percentages of responses of 20 teachers.

Following is the table which shows scores that are taken by converting responses in to scores according to following scale;

Sr. No	Pair of letters	Scores of 20 teachers					Total
		Often (Aksar)	Usually (Aam Taur Pur)	On & off (Kabhi kbhar)	Rarely (Bhot hi kum)	No (Nhi)	
1	b and d	75	12	6	-	-	93
2	q and p	25	4	27	6	2	64
3	o and a	10	-	6	8	12	36
4	e and i	-	-	3	12	13	28
5	y and g	5	-	6	6	14	31
6	f and t	15	4	12	8	8	47
7	d and a	-	4	3	6	15	28
8	e and c	10	4	15	8	8	45
9	q and d	5	-	6	6	14	31
10	k and h	5	4	-	4	16	29
11	i and l	10	4	9	20	3	46
12	n and m	-	20	21	6	5	52
13	w and m	10	12	6	4	11	43
14	u and n	5	12	18	6	7	48
15	u and v	20	4	12	12	5	53
16	w and v	30	-	15	3	8	56
17	a and e	-	4	3	6	15	28
18	c and k	-	8	6	6	14	34
19	j and g	10	8	3	14	8	43
20	Any other letters which children confuse? No body mentioned any pair of letters						

Table Showing Scores**Graphic Representation of Pairs of Letters and their Respective Scores**

Sr. No	Pair of confusing letters	Total Score
1	b and d	93
2	q and p	64
3	w and v	56
4	u and v	53
5	n and m	52
6	u and n	48
7	f and t	47
8	i and l	46
9	e and c	45
10	w and m	43
11	j and g	43
12	o and a	36
13	c and k	34
14	y and g	31
15	q and d	31
16	k and h	29
17	a and e	28
18	d and a	28
19	e and i	28

Discussion on overall results

By analyzing the questionnaire it was concluded that b-d pair cause maximum confusion in the minds of students of Nursery class (average age range = 4 to 5 years) as this pair got maximum score of 93, p-q is the pair that got 2nd highest score of 64 while pair of w-v is at the 3rd number as far as confusion is concerned because it got score of 56. Pairs of u-v and n-m are very close to each other with scores of 53 and 52. Experienced teacher know more about the letter confusion among children. In response to open ended question about any other pair on which children face confusion, no body out of 20 told any pair, it is a sign that the questionnaire is a comprehensive one and covers most probably all the possible pairs on which children might confuse the letters. Very interestingly pair of a and d got low score, apparently it seems that both are similar and students might confuse them but it is not the case. In detail research should be conducted at it.

CONCLUSION

Some schools were teaching alphabet through phonics so their teachers were of the opinion that children confuse sound of 'c' (kh) with sound of 'k' so they said that children confuse 'c' with 'k'. Schools which teach alphabet with the names, their teachers did not mention about the confusion between 'c' and 'k'. It is suggested that in future, two separate researches should be conducted one on schools teaching alphabet through sounds i.e., through phonics and one on schools that teach alphabet through names. Sample should be the larger one. Govt. schools

should be added in the sample. In spite of best of efforts, related literature could not be found in excess, more time and effort should be done in future.

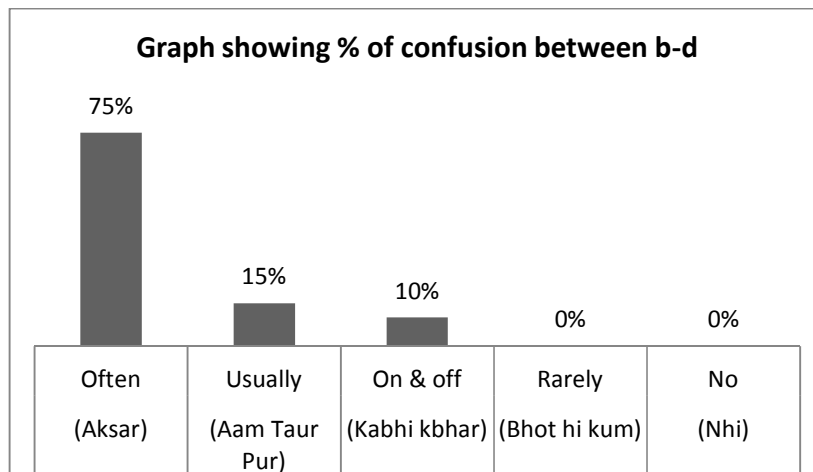
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Annexure

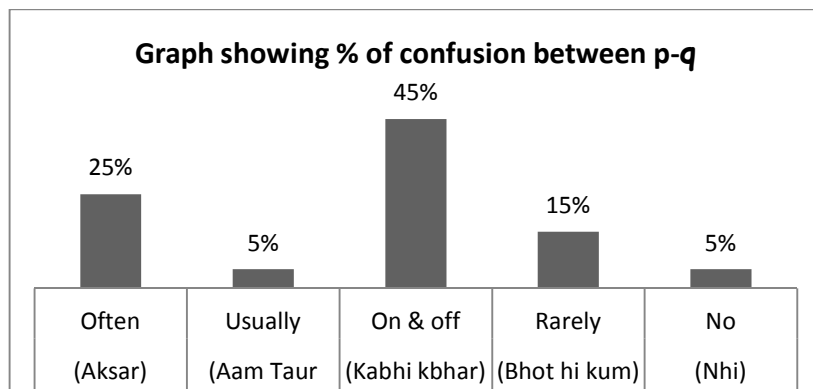
Pair wise discussion on the results

Ab-d



Graph shows that 75% of the Nursery class students confuse b with d very often, 15% usually and 10% on & off. b-d confusion has the highest frequency to occur.

p & q



Graph shows that students have the inclination to confuse p with q.

o & a

