



RESEARCH PAPER

Diagnosis of Alternative Conceptions Among Second Language Learners: A Case Study

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ABSTRACT

Ideas those are constructed without having any previous knowledge of the subject is not essentially false but can be said as alternative, original or pre concepts. The present study was conducted to diagnose alternative conceptions and to explore its best possible reasons in writing second language at secondary level. The present study was a case study. Diagnostic tests and interviews were used as research tools. The 300 second language learners of 9th class were selected purposively as sample for test and 15 learners for semi structured interview. Data was analyzed qualitatively using thematic approach. Moreover, data triangulation was used to compile the results of test and interview. Poor listening, interference of mother language and traditional teaching methodology were major reasons of these alternative conceptions. It was recommended that there would be proper environment for learning a second language and constructivist-teaching strategies should be employed.

Introduction

An alternative conception is an intellectual demonstration, which is different with appropriate logical concept. There are two types of alternative conceptions one is experiential and other is instructional. Experiential alternative conception is meant for understandings that a learner gains with daily communications and experiences whereas instructional alternative conceptions are transferred through some proper media. Furthermore, for second language learners it has become difficult to write a paragraph in this language because they need to develop effective ideas and interpretation of these ideas to understand texts. For this,

learners need to keep a lot of vocabulary in their mind. Punctuation and grammatical rules play vital role for second language writing. Well-educated and skilled persons are able to write a good paragraph by using vocabulary and rules of grammar (Alkhalifa, 2006). Research studies explored that writing skill requires deeper knowledge of grammatical structures as compare to speaking skill. Writing with practical and communication sense includes typical characters, which covers the whole language learning process (Mehrabi, 2014)

Additionally, in 21st centuries, English has become the medium of teaching in our schools. Despite all the efforts invested to make English popular among Pakistani language learners, the outcomes could not according to the authorities' expectations. It is a common process that teaching and learning of English language in Pakistan is not satisfactory. Many researchers have proved that different factors are responsible in this process. The researchers try to examine all existing researches which investigated the problems of learning English in Pakistan to remove these factors and to indicate these existing problems. It is also try to explain what can be done to improve this situation (Khan & Khan, 2016).

Moreover, according to the results of research studies, writing is a better and effective way of communication in our age. Everyone tries to express oneself through experiences, views, ideas and words. Words are not enough for a paragraph grammar and punctuation is also necessary. It is the ground reality that speaking English is difficult, but on the other hand, writing English is an intricate and active skill. For writing, we shall follow spelling, grammar and punctuation (Johnstone & Selepeng, 2001). Only few people can spin out high quality writing in English in first time. It is necessary for good writing, readings many times, think repeatedly and sometimes quite wide revising. Many learners create alternative conceptions and misjudge what a good writing requires understanding that it is a very simple procedure, but in fact it is an intricate and difficult. Many learners do not write assignments, expecting to sit down and write a good draft easily. Thus, they do not think that they are able to write and have no much time to repeat, correct the directorial plan and write their own argument (Calkins, 1986; Bruner, 1990).

Several studies suggested that language is a significant wellspring of correspondence among people. Here and there, it can create alternative conceptions, for example, when a specialized term has a relationship from regular daily existence that do not coordinate the logical significance or when it is utilized allegorically, or is deluding. Instructing may itself be the wellspring of learners' alternative conceptions. This may either be on the grounds that learners' don't understand when such showing gadgets as relationship, models, allegories and humanoid attributions are being utilized to help and make the new well-known, thus take these portrayals too truly; or on the grounds that alternative conceptions are educated. Research has indicated that some alternative conceptions right now territory are found broadly among student teachers recommending that some alternative conceptions are in effect straightforwardly educated to new ages of

students by their instructors (Taber, 2015; Coll & Treagust, 2001a; Coll & Treagust, 2001b; Garnett & Treagust, 1992).

Research studies explored, Learners of today are very diverse from the learners of the past; however, there is a thing that is common in them is the alternative conceptions. In every area under discussion, there are wrong concepts that are thought to be correct. It is human nature to try to understand how everything can fit into their place. These thoughts will consist of whatever gives intellect to us. Everyone in our world makes his own predications about the working way this world; these are easy to solve confusions of life. It is very important that predications are only predictions, and it is not more than anyone discovering a plan that tries to make clear confusions. These are alternative conceptions, which often guide to false ideas that may stop further learning of the matter (Pragle, 2010; Alkhalifa, 2006).

Cummins (1984) discussed the reasons behind the alternative conceptions and explored that second language learners usually concentrate on the superficial sources that come to their mind. These dynamics include the factual distortion they receive from family, teachers, friends, print, and electric media. Vygotsky (1978) proposed that the role of language in the development of understanding could be explained in two ways: First, language accommodates a medium for learning. This means that learning takes place in a social context and social communication is the spirit of learning. Second, language is an instrument that helps the learner to construct a way of thinking. Vygotsky (1978) considers that students understand when social experience is internalized. The learners transform the understanding at social level (inter psychological), and then at individual level (intra psychological). Vygotsky (1978) describes that students cannot understand without language and proper understandings of words. When students try to understand the concepts and facts in second language, they usually develop misconceptions or tentative conceptions. These alternative conceptions might lead to future alternative conceptions. Akram, Surif, and Ali (2014) reported the factors that caused alternative conceptions in the minds of second language science learners of Pakistan. These factors comprised of misunderstanding of language, absence of teaching materials, memorization, large number of students in the classes, and non-participation of students. Bird (1995) reported that second language learners showed poor performances in the science examinations than other students. Akram (2014) investigated that language confusion is an important factor that causes alternative conceptions among secondary students and recommended further researches in Pakistan to explore the role of language in alternative conceptions. Therefore, the present study was designed to diagnose alternative conceptions and to explore the best possible reasons behind the alternative conceptions in writing second language at secondary level.

Materials and Methods

The present study adopted a case study design because researcher collected qualitative data about a problem. The targeted population was all second language learners of 9th class in Government Technical High School Bahawalpur. Three hundred learners were selected randomly. Diagnostic test was administrated in this study. Test was validated by five expert English teachers. Test was used to diagnose alternative conceptions among those learners who have taught the lesson “Three days to see”. The contents of test items were determined by considering English curriculum and textbook of nine grades. The questions in diagnostic test were developed in view of the alternative conceptions of learning second language, which were mentioned in the earlier researches. Collected qualitative data was analyzed using thematic approach. With the help of interviews of teachers and learners, themes and sub theme were made to achieve objectives of the present study. For the confirmation of credibility, crosschecking of themes was done (Creswell, 2009).

Diagnostic test and interview protocol was used as instrument in this study. Test is taken from the lesson “Three days to see” written by Halen Keller. The diagnostic test for the present study was consisted on five questions which were open ended gave to diagnose learners’ alternative conceptions in writing second language. Table 1 consisted of test items. Table 1 consisted on test items that were taken from a lesson, “three days to see”. Those students, who had taught this lesson, were given diagnostic test and after solving it were checked and alternative conceptions were diagnosed.

Table 1
Test Items

Sr. No	Statement
1	What make you feel that author is sad and depress?
2	Describe thought expressed by the author in the first paragraph?
3	Who was Helen Keller
4	How do you get impression that Helen Keller was a great admirer of nature
5	How do you get impression that Helen Keller was sad

The questions in interview were developed keeping in view of the alternative conceptions of learning second language, which were mentioned in the earlier researches. Table 2 consisted on questions of interview protocol.

Table 2
Questions of interview protocol

Serial No	Questions of interview protocol.
Q (1) -	What are common mistakes in writing second language?
Q (2) -	Why do the learners do these mistakes in writing second language?
Q(3) -	What are causes behind these mistakes?
Q(4) -	Is school environment helpful for teaching second language?
Q (5) -	What are A.V. aids available in school for teaching second language?
Q (6) -	Is mother tongue a hindrance in learning second learning?
Q (7)-	What strategies should be adopted to minimize these Mistakes?
Q (8) -	How can a teacher help the learners to get rid of these mistakes in writing second language?

Conclusions

Collected qualitative data was analyzed using thematic approach. These were the results of diagnostic test, which was used for diagnosing the alternative conceptions among second language learners. Themes were illustrated in the following tables. Table 3 consisted of alternative conceptions of spellings to be investigated from second language learner in writing skill.

Table 3
Spelling Alternative conceptions

Test Items	Spelling Alternative conceptions	
1	Alternative conceptions Correct conceptions	Thet, aithor ,world,excellent ,das, se, frind that , author , word , excellent, day ,see, friend
2	Alternative conceptions Correct conceptions	Semetry, nat, fell ,excelleant, role symmetry ,not ,feel ,excellent ,rule
3	Alternative conceptions Correct conceptions	Genious, inellgent ,belined, amoricana ,admiter Genius ,intelligent ,blind ,American ,admirer

Table 4 consisted of alternative conceptions of grammar to be investigated from second language learner in writing skill.

Table 4
Grammar Alternative Conceptions

Test Items	Grammar Alternative Conception	
1	Alternative conceptions Correct conceptions	Asked him, she becom, he feels, His friend visit Asked her ,She became ,She feels, Her friend visited

2	Alternative conceptions Correct conceptions	As if we death,I would be,he live, we would be As if we die, It would be, She lives, we should be
3	Alternative conceptions Correct conceptions	Halen keller is a lady,he was a great lady,he was blind Halen keller was a lady ,She was a great lady ,She was blind

Table (5) consisted on alternative conceptions of Syntactic order to be investigated from second language learners in writing.

Table 5
Syntactic order alternative conceptions

Test Items	Syntactic order alternative conceptions	
1	Alternative conceptions Correct conceptions	I thought that would, the author sad, the feel that, the sad and depressed, what was make I thought that it would be ,The author is sad ,She feels that The author is sad and depressed ,What make you feel that
2	Alternative conceptions Correct conceptions	the author that ,that the excellent role, if we shall tomorrow as if we die tomorrow, the author that, Sometimes I thought that it would be an The author said that , That it would be an excellent role ,If we shall die tomorrow ,As if we shall die tomorrow
3	Alternative conceptions Correct conceptions	we shall be tomorrow, Halen Keller born in, the find the forest, Helen Keller was a set We shall be die tomorrow, Halen Keller was born in She find the forest, Halen Keller was a leady

Table (6) consisted on alternative conceptions of preposition to be investigated from second language learners in writing.

Table 6
Prepositional alternative conceptions

<i>Test Items</i>	<i>Prepositional alternative conceptions</i>
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1	Alternative conceptions	She asked nothing to particular, Her friend said nothing is particular
	Correct conceptions	She asked nothing in particular, Her friend said nothing in particular
2	Alternative conceptions	she feels that symmetry, To live each day if we die, the author said this is an excellent
	Correct conceptions	She feels the symmetry of, To live each day as if we die, The author said that this is an excellent
3	Alternative conceptions	Halen keller became deaf and blind the age of 19 month, he live die who helped her to peaceful life, she like feel to, delicate symmetry to the leaf, she feel to smooth skin of grass
	Correct conceptions	Halen keller became deaf and blind at the age of 19 month, He live to die, Who helped her for peaceful life, She likes to feel, Delicate symmetry of the leafs She can feel the smooth skin of grass

Table (7) illustrated the whole picture of alternative conceptions in learning the second language. Table (7) shows the percentages of learners' alternative conceptions in learning second language. It is clear from the data that 17% learners showed Spelling alternative conceptions, 0.08% showed grammar alternative conceptions, 0.04% showed Syntactic order alternative conception and 0.02% showed prepositional alternative conception.

Table 7
Percentage Alternative Conceptions

Items	Percentage alternative conceptions			
	Spelling alternative conceptions	Grammar alternative conceptions	Syntactic order alternative conceptions	Prepositional alternative conceptions
1	21	15	07	03
2	25	10	09	05
3	13	07	01	0
4	14	10	05	04
5	14	01	0	0
Total	14	42	22	13
%	87	0.08%	0.04%	0.02%
	17%			

Best Possible Reasons behind Alternative Conceptions

Statements about alternative conceptions put before learners during interview. All expected information from learners' accepting of alternative conceptions and associated concepts were collected with the help of recorded questions related to their answers to core questions. It was asked to learners to give detail answers about mistake in their interview question. During interviews, learners' answers of question were recorded, judged and organized in categories and themes were developed. While presenting the findings of interview (R) was used for researcher, (S) was for student, and (T) was used for teachers. Spelling, Grammar, prepositional, use of verb and syntactic order were main alternative conceptions. After analysis of responses, four major themes were made. Detail of these themes along with related evidences is given below:

Poor listening

Poor listening is a major cause of alternative conception. Related answers of respondents are as below.

R: You write spellings of make as mak.

S3: I listen as.

R: From where you listen.

S5: I listen from my teacher.

R: You write poet see?

S2: I write it.

R:Why do you write this?

S2: I write this because poet is singular.

R: Why did this mistake occur?

S3: These occurred because of listening.

R: You mean you cannot listen truly?

S3: Yes

R: How many type of alternative conceptions students do while writing English?

T1:there are three main types of alternative conceptions .

R. Please explain them.

T1: These are spelling, grammarand syntactic order alternative conceptions.

R: What are major reasons of these alternative conceptions?

T1: Poor listening is major reason of these alternative conceptions.

Majority of respondents expressed that they wrote the spellings of words as they speak and as they listen. Some of respondents expressed that they wrote wrong spellings of words because they forgot.

Traditional Teaching Methodology

Traditional teaching methodology is a major cause of alternative conception. Traditional teachers who teach with their old develop alternative conceptions. For example, related answers of respondents are as below.

R: what are spellings of word poem?

S1: Peom.

R: From where you learn?

S1: I learn these from my teacher,

R: You have written spellings of bank as banke. These are right.

S5: Yes

R: From where you listen.

S5: I listen from my teacher.

R: What happens when you listen from your teacher?

S5: I learn it and make it part of my vocabulary.

R: What are spellings of word see?

S6: Se.

R: From where you learnt?

S6: I listen these from my teachers.

R: Do you know there are many words their spellings are not according to their sounds.

S6: I did not know.

Learners told that their teachers taught them with old methods and poor accent. This research study confirmed the findings of previous studies (Akram, Surif & Ali, 2014) that traditional teaching methodology is a major cause of alternative conceptions in writing English.

Interference of Mother Language

Interference of mother language is a major cause of alternative conceptions in writing English. Learners told that some teachers use mother language in class and they teach them first in their mother language and then translate it into second language.

R: In your test, you write he was Helen Keller?

S6: Yes

R: Why did you use he instead of she?

S6: I thoughtHelen Keller was a man.

R: What is major reason of these alternative conceptions?

T3: Interference of mother language is a major reason of these alternative conceptions.

Interference of mother language is a major cause of alternative conceptions in writing English. Learners told that some teachers used mother language in class and they thought first in their mother language and then translate it into second language.

Discussion

Second language learners possessed different alternative conceptions for writing skill of English. There are various types of alternative conceptions. One important area in writing second language in which learners possessed more alternative conceptions was spellings of words. It was found that those learners that "thanks instead of thinks" did alternative conceptions. Those unacceptable ideas also proved that learners puzzled and forgot while writing second language. Earlier researches proved that learners confused while writing second language and thought as if they feel instead of feel (Taber, 1997; Coll & Treagust, 2001a; Coll & Treagust, 2001b; Johnstone & Selepeng, 2001). This unique outcome for learners' misunderstanding of ideas is similar with the idea that was explained in the

researches of (Pragle, 2010; Bird & Welford, 1995; Peterson & Treagust, 1989) who claimed that learners generally confused with the sound of words. The possible reason for learners' alternative conceptions is that learners could not understand the exact pronunciations and accent. In the same way, it can be fulfilled that they could not recognize what is a syntactic order. Another possible reason for these alternative conceptions is that learners confuse about the rules of grammar because they largely be inclined to learn information or ideas. This could be a predetermined outcome of traditional methods which were usually used by English instructors to educate whole subjects concerning in the overfull set of courses in Pakistan. Teacher did not force the information or ideas suitably to educate whole subjects at the last part of the classes. This might be another basis or reason for learners' uncertainty about English.

The second spot of writing English in which learners possessed alternative conceptions was how spellings of English words. It was found that this alternative conception was held by learners who stated that they listen wrong spellings of words in their answers in test. The conversation held in the former part also explains best possible reasons of alternative conceptions why alternative conceptions are formed. In calculation, one best reason for these alternative conceptions may be learners cannot understand rules of grammar. If they could understand rules of grammar, they will write properly. Another reason behind alternative conceptions was knowledge of teachers. Poor knowledge of teachers develops misunderstandings of the knowledge. Furthermore, Bogaards and Laufer (2004) claimed that learners' misunderstanding might be a big reason. It was found that best reasons of these alternative conceptions were same. Best possible reasons for learners' alternative conceptions related to writing English are as follows: poor listening, traditional teaching methodology, interference of mother language and education of teachers.

Recommendations

In the light of conclusions of the present study, following recommendations are made.

- Expert trainers should arrange training of English teachers who are teaching secondary school classes. English teachers should use proper accent and correct pronunciations.
- The results of the study recommend that teachers should teach student parts of speech carefully and encourage them to use English dictionary to enhance their vocabulary and grammatical knowledge of English language.
- Furthermore, study also recommends that teachers should use direct method in class and motivate students to use English for communication and write their applications in this language.

- The present research was conducted at secondary school level. More researches needed to be conducted at higher secondary school level and at elementary level.
- On considering the corpus of alternative conceptions research, the more researches should be carried out in diagnosing the alternative conceptions and its reasons in mathematics and basic science subjects like physics, biology, and computer science at secondary school level.
- Moreover, the results of this study recommend that teachers should use constructivist-teaching strategies instead of traditional teaching methods.

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