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Full Length Research Paper

Evaluation of the reading habits of Indian students (reading aloud and reading silently) from low, middle and high class schools

Lalit Gehlot^{1*}, Hailah A Al-Khalaf^{2,3} and Himani Gehlot¹

¹English Department, Swami Keshvanand Institute of Technology, M & G, Jaipur (SKIT), Saudi Arabia.

²Faculty of English Language, Princess Nourah bint Abdulrahman University, in Riyadh, Saudi Arabia.

³Global Institute of Engineering (GIT), Jaipur, India.

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Language acquisition and memory models are created more quickly in the brain in early childhood. If reading habit is cultivated in children early, it will enhance their language skills and perception. This study aims to evaluate the conventional practices of reading habits in Indian children from lower, middle, and upper socio-economic backgrounds and to suggest some new methods based on the results of a survey using semi-structured questionnaires. Generally, reading habits comprise: 'reading aloud' and 'silent reading'. Surprisingly, parents do not know the minuscule details of these two categories of reading habits like the power of reading to build confidence in children or to improve their comprehension of books and many matters in life. This study reviews recent research work in this direction and recommends that there should be strong consciousness to develop children's reading habits, and help them to know first and foremost the vocabulary of all subjects before dealing with the contents of the subjects. It also recommends 'Intensive' and 'Extensive' studies for children to develop reading habit and linguistic competency for comprehending English as Lingua Franca.

Key words: Reading, perception, language, learning, vocabulary, libraries, visual Thesaurus, picture perception, parenting.

INTRODUCTION

Reading habit can help children to break through class barriers at different stages of their life. It is a foundational tool for both early education and higher education. National Reading Panel in India is informative on Sustained Silent Reading and shows the substance of reading habit (National Institute of Child Health and Human Development, 2000). A child generally shifts from an early-age conventional loud reading to the quiet

reading stage. Hence, it is important to know the features of both. Reading aloud is central for developing oratory skills. In extensive technique of reading, a reader does not think about the grammar or vocabulary of the text but only focuses on the flow to move over the text quickly. In intensive reading, it is not doable to read aloud word to word as the locus remains on vocabulary and grammar, so silent reading comes into practice unanimously. Loud

*Corresponding author. E-mail: Lalitgehot23@gmail.com. Tel: 91+ 9261159955.

reading is slower and silent reading is speedy in nature. Loud reading and silent reading have high magnitude and mostly go hand in hand. For instance, to remember facts, reading aloud is preferred for all the age groups. whereby children can be instructed to read their lessons silently or run over the material in low voice for rapid reading of bulky narrative material.

It is advisable for a child to read aloud until he becomes proficient in reading, thereby can develop strong comprehension and the art of pronouncing words. Moreover, this. This enables children to develop strong concentration power. After a child is perfect in reading out loud, he can then enjoy silent reading, which is incredibly faster and fruitful. One of the most famous silent reading approaches is Drop Everything and Read (DEAR) by Daniels et al. (2000). In this approach, a teacher gives a fixed time for voluntary reading under supervision and later probably gets feedback from it. Observing the decline in reading habit, according to Osborn and Lehr (2003), is called 'the Matthew effect. The Matthew effect is a theory that affluent readers become more productive, and poor readers have constant poor perception of their reading ability. Therefore, children, who are good readers, in all probability read more, whereas children with poor reading habit read a little. This theory seems very true to approach as this tendency is common among children.

Kaisen (1987) defines Sustained Silent Reading (SSR) as a "supplemental reading program in which teachers and students alike choose and read books silently for a specified period without giving reports to prevent them from enjoying the reading." This kind of practice enhances the opus of personality. There are various vital experimental assertions popularly linked to reading aloud and silently. Some people believe that reading aloud is a waste of time because it may cause the reader not to comprehend what is being read. But other views claim that silent reading causes distractions. However, it is interesting to debate over the best practices to adopt for the development of children. This research provides empirical and coveted facts based on current reviews to derive and emphasize some stratagems. Therefore, this work aims to find the impact of reading habit on children's growth, the role of parents in inculcating reading habits in children, the importance of teachers in supporting children to read chosen materials, the connection between the habit of reading aloud and silently and the latest tools and techniques used for reading aloud and silently.

Grey (1885-1960) was an American educator and literacy advocate. Gray said that reading is a form of experience and identified 289 factors which affect the readability and they were categorized under four headings, Content, Style, Format and Feature of organization (Grey and Bernice, 1935). Indeed, good reading habit promotes promotes 'self-education.' Besides, other studies vocalize that reading habits

influence writing skills, improve one's acumen and right attitude. Gray infers readers by their eye movements while they read something. This assertion is given in his research work, *The Teaching of Reading* (1957). It says that "An analysis of records of eye-movements in reading reveals that the key attitudes and skills involved in reading are similar all over the world irrespective of differences in language and culture."

Intonation is important while reading out loud. It helps one to learn something with solidarity and it improves the flow of the written text. Tone pumps up life into spoken words. It is challenging to maintain the desired mood of content while uttering without sifting the meaning. Intonation carries broader cultural meanings. People do not like to use intonation in speeches because they do not want to be censured for using the wrong tone. They follow the grave tone of their speech.

It is said that, 'Every utterance always puts the speaker in a position of 'ally or witness,' friend, or enemy...The voice can produce itself on the basis of 'different fundamental tones' that depend on the power relations in the 'public space' where it evolves' (Lazzarato, 2009). These are aspects of reading aloud and silently: including punctuation marks and writing style like italics and bold used to emphasize a particular word or phrase or any specific articulation like tilde or emphasis mark over words. The knowledge of diacritics is crucial to acquire good reading skill with good intonation. Reading aloud makes the effects of tone to become more pronounced, which is not possible in silent reading. Except for emoticons (used in internet surfing) and diacritics, punctuation marks are used to indicate a lot of things. Thus, it produces even the silent text aloud without voice or sound. So, what is needed is to identify all the things which can only be reflected by reading aloud and those things which still have effects when we are reading silently. The second is the aural of memories evoked in us while listening to a word the second or third times at a different place or anywhere like TV or Radio. Reading aloud helps us to keep the memory of the word for a longer time than silent reading. Therefore, any critical words can be memorized for high retention.

The third is an intonation-architectural pattern in which if we are familiar with the syntactic design of a language, then it is even easy for us to comprehend the meaning of new words which we are not familiar with. This is the native approach for a learner. Thus, identifying the signs and symbols is important for reading aloud or silently, like punctuation marks, italicizing, emoticons including memory retention by reading aloud and intonation for communicating the real meaning without knowing the tough words (as in Extensive reading). These are the watermark areas in the process of reading aloud or silently. The processes of reading aloud and silently are intertwined factors that unquestionably affect each other. For a model, reading something to try out its conversational power by repeating it aloud will improve

the easiness in reading the text. If we do not get the feel-good flavor in the mouth and ears while reading any text, then the text will not be simple.

Elbow (2010) mentions John Schultz in his constructive work *Story Workshop* that reading aloud improves written texts. Andrea Lunsford has been teaching "Writing for Radio" at Stanford about the culture of Great Britain; "'her reading aloud' improves her listeners' reading skills. Jenifer Auger has a straightforward technique where if any student is found writing silently, then she compels this student to read aloud while writing. On the other hand, the great philosopher Plato stopped poetry recitation because he foresaw the danger of distraction readers under the force of rhyme and rhythm for a reader.

Reading aloud has its pros and cons, as in the case of reading silently. None can be ignored by just preferring one over the other. Finding the inter-dependence between reading aloud and reading quietly can produce good results. The interconnectivity between reading aloud and reading silently also touches upon the aspect of likeness. A reader might like the harsh words of rapping; other persons might dislike them. Sometimes, reading aloud proves to be a bottom-up approach due to the pressure of mugging up everything. In searching the different types of reading styles, the conventional methods are found in the form of Loud Reading (Extensive), Silent Reading (Intensive) and Supplementary Reading (Extensive).

Indian Education Commission (1964-66) prefers Extensive Reading, according to Kothari (2016). This type of reading is also known as rapid reading or independent reading. While reading aloud, the adequate pace works as a critical factor to become an excellent loud reader or silent reader because one has to set the variation in reading speed based on the complexity of the text. A report on the portal of bhojvirtualuniversity.com mentions Prof. Palmer stating that the word is too small as a unit of speech, and the sentence is too long as a unit to be read at a time. It shows that we need proper training to improve our reading skills. There are three popular techniques used to improve children's reading skills: first, pace and pause; second, correcting pitch range, and third, proper articulation.

Biemillera renowned researcher in the field of children's reading habits. Biemiller's work on reading is the most cited in the Reading Research Quarterly (Geva (2009). Biemiller and Levin did a research on "reading speed." Biemiller's six years' research shows that students who read slowly pronounce and comprehend text better. Children who take a longer time to identify words may find reading to be more difficult. Soboleski (2011) quoting Juel (1988) reveals how poor readers tend to become poor writers and poor listeners. Pikulski and Templeton (2004) citing Cunningham and Stanovich (1998) showed there are strong connections between vast reading and vocabulary knowledge. They say that children acquire more vocabulary from children's books than from adult

books or television programmes. Bryan et al. (2003) citing Daniels et al. (2000) say that fluency in reading, vocabulary development, and intelligence can be enhanced when readers read more. There are several aspects of reading habit but the major debate is on reading aloud and silent reading.

MATERIALS AND METHODS

Sample and population

This work surveys the lower, middle, and upper-class students learning at different environments in India. In this research work, the reading habit of these different classes of children (Lower, middle and upper) will be analyzed. Data were collected from the various economic classes of schools in Rajasthan, India. 10 students were selected from each socio-economic section and in total 30 students are selected for the survey. A wide data collection from many students was avoided for the sake of in-depth details and time constraint.

Method

A longitudinal study was done to obtain qualitative data. Samples were taken from the same children or teachers at two different time periods, and they were compared. If there was any significant difference in the collection of two samples, then the data were discarded. If the two collected samples are almost the same, then the data was processed.

The samples were taken at two different time periods. This made the respondents not to remember the previous data given earlier. In November 2018, the first sample was collected from the schools, and then in February 2019, the second sample on the same questionnaire was collected. Around 20% of the samples did not match with the first survey data when compared. These data were removed from the processing to obtain accurate results.

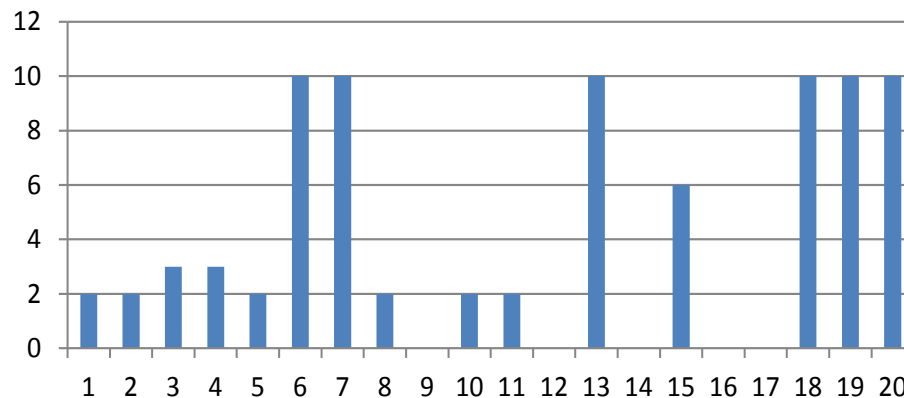
Impact of reading habit on children

Cultivating reading habit in children increases their vocabulary, helps them read a new text well and develops their understanding of worldly affairs. The way around approach can be used where children are given related vocabulary beforehand. An initial experiment was done with the children before the data were collected twice. Students from the different schools (6 to 9 years old) were told a story. They were given a hint of the story plus its essential vocabulary in a handout. Also, they were asked some open-ended questions to prepare them for the experiment. The facilitator read the story loudly using the proper intonation. This process of providing related vocabulary in advance to these children led to excellent responses from them. It was a kind of pre-activity with the students. Providing related vocabulary to the students arose their interest in knowing the entire story and participating in the experiment. Also, the right intonation used by the story teller improved their comprehension. Their familiarity with the tale motivated them to want to learn and participate in the experiment. It is worth mentioning that pre-availability of data works universally for all irrespective of any standard or level of education.

Children adopt pristine vocabulary easily as they register new things fast. Similarly, bedtime stories play a key role in the development of anyone's language competency. Storytelling habit of parents helps their children to comprehend the outer world easily with a balanced perspective than their own first-hand unguided

Table 1. Result of rural area test of 10 selected students.

Questions	Q.1	Q. 2	Q. 3	Q. 4	Q. 5	Q.6	Q. 7	Q. 8	Q. 9	Q.10
Number of students who gave the correct answer	2	2	3	3	2	10	10	2	0	2
Questions	Q. 11	Q. 12	Q. 13	Q. 14	Q. 15	Q. 16	Q. 17	Q. 18	Q.19	Q. 20
Number of students who gave the correct answer	2	0	10	0	6	0	0	10	10	10

**Figure 1.** Number of total students who gave the correct answer: (Rural Background Students) X: Qs Y: no of students.

premature approach. In the beginning years of a child, a child is prone to receive conceptual thoughts which may get perfected with experiential learning later on in life. After this functional beginning, samples were collected from the students of decided age- group to draw meaningful data.

Gillett and De Luce (2019) shows that in America, especially the low-income families are more interested in the reading habit of their children and this is which is totally in contrast with India. In USA, parents tell stories at least four days in a week. This is a conscious effort made by American parents, which a developing country like India needs urgently. Vocabulary has a considerable role in developing the reading habit of children. Technology has also paved the way for children to expand their reading habits. There are many devices that promote shared reading habit such as Vocabulary Acquisition Devices based on useful conceptual thoughts; for instance Noam Chomsky gave the concept of Language Acquisition Device (LAD) in 1960 for the cognitive development of children.

With support from trained teachers, parents, or librarians, children perform better in their reading practice. Nicole (2012) quoting Whitehurst et al. (1988) developed a system to train adult facilitators to give a reliable leaning platform to children. This study prefers dialogic reading where a child is exposed to open-ended questions. The trained teachers, parents, and librarians were better motivators but the result obtained was not very optimal.

Reading aloud becomes obligatory for children under the age of five. This is because the sounds they hear in any animated video or from their teachers in a story like the sound of a bird or any animal leaves a lasting impression on their psyche during childhood. If you produce the sounds of a mouse or squirrel "Squeak ...Squeak", bees or flies "Buzz....Buzz" , fox or puppy 'yelps' bird or nightingale "Warble... Warble" before kids, it makes the birds, animal and things real to them. The whole process ultimately

contributes to make children interested in reading the text aloud. Producing awkward sound is precarious for the leaning of children as they must learn universal concepts. In Indian families, the parents are unaware of the English sounds of animals and birds and knowing the correct meanings and sounds of words increases their chances of getting connected to reading material and helps them to know all subjects better. A vocabulary test in the form of semi-structured interview was conducted to know whether the students recognize the name of off-springs of animals or not for primary school children (Annexure 1).

RESULTS

It is observed in the test that the students who know useful vocabulary are the children of well-educated parents, and these children are in the habit of reading. Moreover, they do not fear public speaking or to give their opinion on any situation. From the test it is seen that the lower class students are sure of the common questions they were asked, they could not answer the tough questions at all and have good knowledge of ground-level things (Table 1 and Figure 1). It was found that the middle class students could answer a few tough questions, they were less sure of few common questions and had insufficient mixed knowledge of tough questions (Table 2 and Figure 2). For the high class students, some of them could answer all the tough questions, they were sure of common questions and were not ignorant students (Table 3 and Figure 3).

Table 2. Result of middle-class school's test of 10 selected students.

Questions	Q.1	Q. 2	Q. 3	Q. 4	Q. 5	Q.6	Q. 7	Q. 8	Q. 9	Q.10
Number of students who gave the correct answer	5	5	4	4	3	8	8	3	0	2
Questions	Q. 11	Q. 12	Q. 13	Q. 14	Q. 15	Q. 16	Q. 17	Q. 18	Q.19	Q. 20
Number of students who gave the correct answer	2	0	8	0	6	0	0	8	8	7

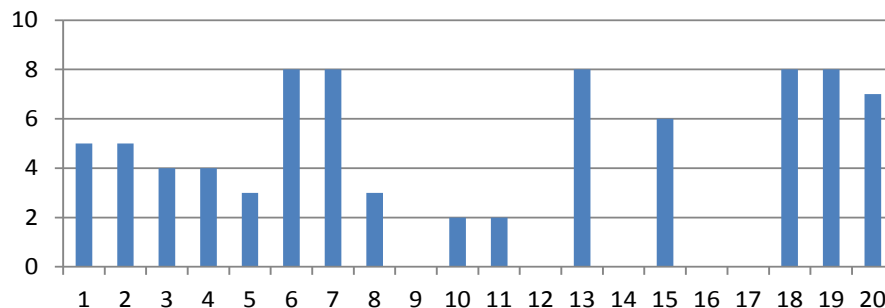


Figure 2. Number of Total Students Who Gave the correct Answers: (Middle Class Family Students)X: Qs Number No. Y: No of students.

Table 3. Result of high-class school's test of 10 selected students.

Questions	Q.1	Q. 2	Q. 3	Q. 4	Q. 5	Q.6	Q. 7	Q. 8	Q. 9	Q.10
Number of students who gave the correct answer	6	6	5	5	4	10	10	5	2	4
Questions	Q. 11	Q. 12	Q. 13	Q. 14	Q. 15	Q. 16	Q. 17	Q. 18	Q.19	Q. 20
Number of students who gave the correct answer	2	1	10	1	6	2	1	10	10	9

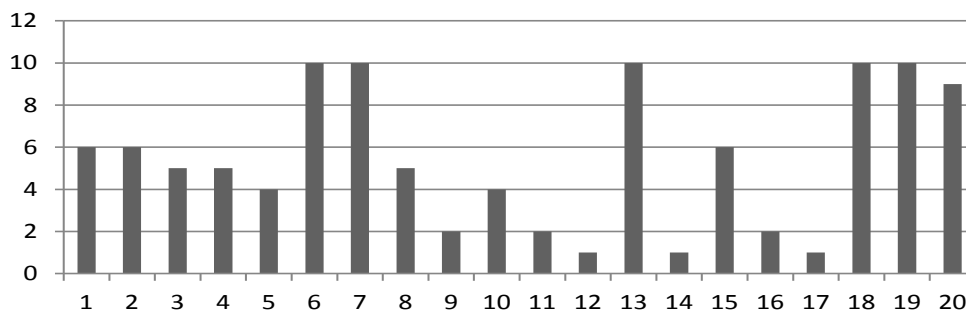


Figure 3. Number of total students who gave the correct answer: (Rich Background Students) X: Qs numbers Y: No of students.

The result of the three-level tests shows that students who perform well are those taught by their parents and learned teachers. There is no lack of talent in any of the social classes in India. But, those children whose vocabulary is well developed in primary school do better and also perform well at the secondary and tertiary levels. To inculcate reading habit in children, vocabulary development plays a vital role. It is not limited to learning

English language alone but to all subjects, be it Mathematics or History. The students from all the social classes could answer the universal basic questions, but the middle class students could answer them slightly; the high-class school could answer the tough questions greatly. The middle or lower - middle class students who unexpectedly could answer the tough answers show that they have good reading habit. This helps to set them

apart from their peers.

In primary school, a kid must know the vocabulary of all the distinct subjects more than any other details of the respective development. Mere teaching of the child cannot help to develop his reading habit. Teaching children words with their real etymological meanings can help to build in them confidence. Semi-structured interviews were also conducted with the same group of students' (Annexure 2).

DISCUSSION

In response to question no 1, "Are you in the habit of reading general articles?", most of the students said "no" except few. It is a clear sign of poor reading habit at the early age of a child. Regarding question 2, "Do you indulge in in-depth reading for hours?", the rural and semi-urban school students did not understand the meaning of in-depth reading. A few students from the high-class expensive school understood it.

Regarding question 3, "Do your parents like to read a lot?" the students said their parents do not know the importance of reading. Their parents do not read enough and also do not encourage their wards to form good reading habits. The parents of the expensive school students read different kinds of books as their regular habit, unlike the low-income families where the priority of earning a livelihood reduces the chance of developing any such intellectual habit of reading. When asked question 4, "Do you like reading aloud?" primary school pupils said that they love reciting nursery rhymes with good music. That means that at early stage, all the categories of students like to read aloud, and this is a positive point. In the later stage, they feel shy to read out loud their books as they are not rhythmic. The content is more prosaic with complex content which needs intense silent reading.

The students displayed total disinterest when asked question 5, "Do you like reading silently?" the students said they are not interested at all in reading silently. It was observed that they like oral practices more. So, it is recommended that a new curriculum full of phonics can be generated with the preciseness of vocabulary for the primary class students for all subjects.

Students expressed helplessness when confronted with question 6, "Do you collect or find good books and articles to read?" the students said no, as the primary and secondary schools do not have rich libraries explicitly developed for kids in all the three different levels of schools. Children's libraries at home or schools would bring a revolutionary change in developing reading habits.

Students responded positively to question 7, "Do you think reading habit can give you more confidence?" the students said that they feel good whenever their teachers guide them in reading story books. They get easily distracted and lose interest in reading if the reading exercise is not moderated by a teacher with relevant

pictures and sounds.

Students seemed to be perplexed by question 8, "Do you think reading habit can give you the right attitude to live a prosperous life?" the students answered that they do not know the connection between reading habit and prosperity. We qualitatively observed that if children get ample support from parents and teachers then they surely perform well. In this study, it is discussed below the materials, methods and techniques that can be used to build and develop the reading habits of students.

The correct answers of the questionnaire (Annexure 1) are in Table 5. Focusing on the building confidence in the children can be easily achieved using the simple model (Figure 4) which connects the reading habit to the confidence and to prosperous life.

Study materials

Promotion of mutual reading devices, advocating team writing, access to children specific libraries, access to vocabulary building laboratories, access to home libraries, authentic books for picture perception like Van Leeuwen and Jewitt's (2000) 'Handbook of Visual Analysis' is beneficial to theoretical and methodological development', Online Visual Thesaurus (<https://www.visualthesaurus.com>).

Models

Formation of some models to show children that reading habit can make them more confident and prosperous. In fact some stories can be weaved from this (Figure 4). The government can provide children-oriented software(s) or web portals free to schools as well as parents. For instance, "Dell Foundation" has made its first two investments in education-based startups: Report Bee and Guru-G. Kumar (2016) says that electronic governance (e-governance) has played a crucial role in the enhancement and development of the higher education system of Uttarakhand in India. This concept can also be used for children's literature.

Teaching techniques

There are several teaching techniques that can be used to enhance children's reading like Assumption Busting, Brain-Storming, Reverse Brain-Storming, Concept Mapping, Story Boarding on Walls, Incubation, Random Input, Questioning, Slip Writing, Laddering, Brain-Sketching, and Mystery Spot. For new teaching techniques, Loreto Day School, Calcutta, India won the Padam Shree Award in India. In this school, a teacher can be found teaching English with printed material on the wrapper of a toffee or morphed Hindi names in English sentences as 'Manju, the hen....' at the place of 'Mary, the hen...'.

Table 4. British National Corpus (BNC).

Functional words	Type	Frequency
The	Determiner	61847
Of	Preposition	29391
And	Conjunction	26817
A	Article	21626
To	Infinitive	16284
It	Pronoun	10875
To	Preposition	9343

Table 5. Answers of the Annexure 1 question paper.

Q.1	Q. 2	Q. 3	Q. 4	Q. 5	Q.6	Q. 7	Q. 8	Q. 9	Q.10
A	B	C	D	A	B	C	D	A	B
Q. 11	Q. 12	Q. 13	Q. 14	Q. 15	Q. 16	Q. 17	Q. 18	Q.19	Q. 20
C	D	A	B	C	D	A	B	C	D



Figure 4. Model for inculcating reading habits.

Tricks for reading aloud

To support reading aloud at the early stages of learning, “Infographics or VAK (Visual, Audio, and Kinesthetic-Kinesthetic) can be used. They are materials that can be felt. BBC recommends that students use Prezi software to prepare presentations rather than using traditional software. The web portal of Pinterest is also good to do group tasks.

There is an official list of word frequency that can be useful for children to deal with only those words, which are frequently used in writing and speech to improve their reading skills. The corpus tools of frequency lists and online concordances are used to get the natural collocation pattern of high-frequency lexis. British National Corpus (BNC) frequency list given by Leech et al., (2001) is convenient to find the list of words that have high frequency (Table 4). The most common colligations and collocations can be easily traced with this from the list of those lexical words which are used at high frequency. There is concordance software of Brigham Young University (2012). It shows the highest collocation and colligation of the top most frequency words. Thus, there are various activities that are based on the most commonly used words for the students, and it affects their reading speed. New Total English Starter Student's Book, written by Jonathan Bygrave, Pearson Education Limited (2012) is highly used for such activities. Synthetic phonics is also used to help students pronounce words

clearly while reading aloud like:

/w-air-d-i-j-uh-h-oh/ - Where do you go?
 /h-ue d-i-j-uh-g-oh-w-i-th/ - Who did you go with?

A Bulgarian psychotherapist, Dr. Georgi Lozenoves developed a teaching method called ‘Suggestopedia’ (Georgi, 2013). It is also known as pseudoscience. It helps students to learn by eliminating barriers out of their mind. It is the application of suggestions for students. A show organized in Las Vegas Called Consumer Electronics Show (CES) showed the range of devices from 3d printer to smart watches that can be used for students. Compressed archive scanners like Doxie Flip Cordles Flatbet Photo and scratch pad scanner are utilized to arrange notes. Different gadgets like duplicate and Olympus which accompany voice recorders can be used to record all the English addresses. The broad level cognitive philosophies like Vygotskian, Chomskyan, and Piagetian principles are also used to improve reading skills of students.

A pragmatist approach can be used while reading aloud to get a positive result rather than getting exhausted and being distracted by the loud voice. Pragmatists are keen on trying out ideas, theories, and techniques to see if they work in practice. They positively search out new ideas and use every opportunity to experiment with applications” (Cantina and Flores, 2017). The following techniques are useful to develop high-level reading skills:

Use of one's natural pace, stressing a particular word, using pauses, maintaining fluency, keeping the pronunciation correct, getting the rhythm (Neither fast nor slow), and avoidance of long pauses.

Tips for reading silently

The popular technique used for Sustainable Silent Reading (SSR) is also called DIRT (daily independent reading) or DEAR (drop everything and read). According to Ray (2012), there is no scientific study that can prove the benefits of SSR. It is a technique where every day or every week, a child chooses any material to read for 10 to 15 min. According to our teaching and reading experience, this method can help children gain confidence and have awareness of the outer world.

Recommendations for parents

Parents should play the following roles in inculcating reading habit in their children:

- 1) Parents should build a small library at home age appropriate material (that is, children's books).
- 2) They should take their children to different libraries for a visit.
- 3) They should generate some extraordinary vocabulary archives for the children or use ready-made authentic materials.

Recommendations for the school

The school should do the following to build confidence in children to read more

- 1).The school should establish a children-oriented library.
- 2). It should conduct activities connected to the cultivation of reading habits.
- 3). It can develop a specific vocabulary room that shows essential words on the walls and provide devices for improving vocabulary with pictures.

Specific children's libraries should be developed. The selection of books must be made by the team of children education experts or researchers with national societies like NCERT in India. Schools can develop vocabulary developing laboratories for children, providing all the possible pictorial materials or in the form of audio-video focused on improving the children's vocabulary.

General recommendations

- 1). Good vocabulary increases reading habits, so new ways to form vocabulary like visual thesaurus can be

generated to arouse children's interest.

2). The reading materials should consist of the country's history created for the early stage of learning. This would help the students to know more about their own country and at the same time improve their English language competency. At the later stage, the child should be exposed to world literature. This would be the inductive style of learning, which moves from a smaller part to the broader role of learning about one's culture.

3). Some videos can be generated on the exact sound of birds and animals to give a loud rhythmic leaning.

4). A slight touch of humor is a must for primary and secondary students to learn.

5). The materials used for teaching should contain an equal ratio of pictures and text for the children. First, some photographs can be shown, and then the text should be emphasized.

6). A new phonic-curriculum can be generated with the preciseness of vocabulary for primary school students.

Conclusion

It is important to understand that loud reading is important at primary level education, and silent reading is unavoidable at secondary or tertiary level of education. Loud reading helps a child to focus on the reading script and keeps the outer world silent. Silent reading makes the subconscious mind more active though there looms a danger of getting distracted from the external world in the form of physical barriers. Reading silently opens the inner conscience to talk loudly without using any word.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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ANNEXURE

Annexure: 1

Test Question Paper: Created by the author.

(1) What is the young of donkey?

A Foal/Colt/ Filly B. Cub C. Caterpillar D. Heifer

(2) What is the young of Bear?

A Foal/Colt/ Filly B. Cub C. Caterpillar D. Heifer

(3) What is the young of Butterfly?

A Foal/Colt/ Filly B. Cub C. Caterpillar D. Heifer

(4) What is the young of Cow?

A Foal/Colt/ Filly B. Cub C. Caterpillar D. Heifer

(1) What is the young of Deer?

(a) Fawn/Calf/Kid/Pricket/Brocket (M)
(b) Pup/Puppy/ Whelp C. Duckling D. Foal

(1) What is the young of Dog?

(a) Fawn/Calf/Kid/Pricket/Brocket (M)
(b) Pup/Puppy/ Whelp C. Duckling D. Foal

(1) What is the young of Duck?

(a) Fawn/Calf/Kid/Pricket/Brocket (M)
(b) Pup/Puppy/ Whelp C. Duckling D. Foal

(2) What is the young of an Elephant?

(a) Fawn/Calf/Kid/Pricket/Brocket (M)
(b) Pup/Puppy/ Whelp C. Duckling D. Foal

(1) What is the young of Fish?

(a) Minnow B. Tadpole C. Cub D. Kid, Yearling

(1) What is the young of a Frog?

(a) Min now B. Tadpole C. Cub D. Kid, Yearling

What is the young of Fox?

(a) Minnow B. Tadpole C. Cub D. Kid, Yearling

(1) What is the young of Goat?

(a) Minnow B. Tadpole C. Cub D. Kid, Yearling

(1) What is the young of Goose?

(a) Gosling B. Leveret C. Chicken, Pullet D. Colt, Foal(M) Filly(F)

(1) What is the young of Hare?

(a) Gosling B. Leveret C. Chicken, Pullet D. Colt, Foal(M) Filly(F)

(1) What is the young of Hen?

(a) Gosling B. Leveret C. Chicken, Pullet D. Colt, Foal(M) Filly(F)

(1) What is the young of Horse?

(a) Gosling B. Leveret C. Chicken, Pullet D. Colt, Foal(M) Filly(F)

(1) What is the young of Kangaroo?

(a) Joey B. Cub C. Peachicken D. Pigling/Piglet/Shoat/gilt(f)

(1) What is the young of Lion?

(a) Joey B. Cub C. Peachicken D. Pigling/Piglet/Shoat/gilt(f)

(1) What is the young of Peacock?

(a) Joey B. Cub C. Peachicken D. Pigling/Piglet/Shoat/gilt(f)

(1) What is the young of a Pig?

(a) Joey B. Cub C. Peachicken D. Pigling/Piglet/Shoat/gilt(f)

Annexure: 2

Research Questions

Semi-Structured Interviews of students

Sample Questions of Annexure 2.

Q1. Are you in the habit of reading general articles?

A Yes

B NO

C. thinking to Start

Q2. Are you interested in doing in-depth reading for hours?

A Yes

B NO

C. thinking to Start

Q3. Do your parents like to read a lot?

A Yes

B NO

C. thinking to Start

Q4. Do you like reading aloud?

A Yes

B NO

C. thinking to Start

Q5. Do you like reading silently?

A Yes

B NO

C. thinking to Start

Q6. Do you collect or find good books and articles to read?

A Yes

B NO

C. thinking to Start

Q7. Do you think reading habits can give your confidence?

A Yes

B NO

Q8 Do you think reading habits can give you the right attitude to live a prosperous life?

A Yes

B NO

Full Length Research Paper

Metaphoric perceptions of the administrators on ARTAS held within the scope of PISCTES project

Uğur Gürkan

Department of Psychological Counseling and Guidance, Faculty of Necatibey, Balıkesir University, Turkey.

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Millions of Syrians live under temporary protection in Turkey. However, there are some problems in their integration into the education system. For the integration of Syrian students into Turkish education system, the Ministry of National Education in Turkey (MoET) initiated a Project called “Promoting Integration of Syrian Children into Turkish Education System” (PICSTES) and “Awareness Raising Training for Administrative Staff” (ARTAS), which are supported by the European Union. The aim of this study is to determine the perceptions of the administrators who have participated in ARTAS that was held within the scope of PISCTES through metaphors. Content analysis method was used in the research. The participant group of this study consists of 297 administrators (281 males and 16 females). They work in 21 different provinces. The average working year of the participants is 10.23 and the average age is 43.99. As a result of the research, 62 metaphors were obtained after the analysis of the valid metaphors developed by the administrators regarding the “PISCTES Project: ARTAS Training”. These metaphors were classified under 7 different conceptual categories. The results indicate that refugee students should not study in separate classes or schools but instead the supportive teaching courses for the students and their families should be fostered and the in-service training for administrators and teachers should be given more importance.

Key words: Syrian children, Promoting Integration of Syrian Children into Turkish Education System (PICSTES), Awareness Raising Training for Administrative Staff (ARTAS), metaphor analysis.

INTRODUCTION

As represented in international literature, the protection provided for the Syrians coming to Turkey with a mass influx is the ‘Temporary Protection’. Turkey fulfills three basic elements of the temporary protection including; 1) admission to the country of refuge, 2) respect for the principle of non-refoulement and 3) fulfillment of basic and urgent needs of refugees. According to the data served by Ministry of Interior Directorate General for

Migration Management (MIDGMM) in 2020, there are more than 3.5 million Syrians under temporary protection in Turkey. Based on the data, Turkey has hosted more than two hundred thousand Syrians in temporary refugee shelters settled in 10 cities until now. Besides health, education and food aid are provided to more than 3 million Syrian refugees living outside the temporary refuge shelters. As such Turkey has given a number of

E-mail: ugurkan@hotmail.com.

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rights to the Syrian citizens under the Temporary Protection Regulation with protection and support under the Temporary Protection Identity Document (PMDEMP, 2014a).

The protection and support for refugee as documented in many rights, services and assistance, such as access to the acceptance regulations within the scope of non-refoulement principle and fulfillment of basic and urgent needs of the refugees (UNHCR, 2020) can be said that the main function of temporary protection regulation of Turkey accommodating the Syrians is to secure the wellbeing of Syrians who had fled armed conflict. The total number of Syrians in Turkey reported to be more than 3.5 million, mainly under 18 years age group categories constitute about 1.5 million refugees living in Turkey (MIDGMM, 2020). However, Turkey, with its historical mission, has been concerned to this inhuman treatment in Syria and has been the most generous country in terms of providing humanitarian assistance to the Syrian citizens affected by the tragedy and living not only in temporary refuge shelters within the borders and in various cities of Turkey but also in temporary refuge shelters within the Syrian borders and in various cities of Syria (MIDGMM, 2020; PMDEMP, 2014b).

The attendance of children in schools during such situations as war and disaster is not only their legal rights but it also helps them to cope with traumatic experiences (Kolucki and Lemish, 2011; UNICEF, 2019). School administrators and teachers play a major role in ensuring that students are in a healthy school environment. Eren (2019) reported that creating a safe and hospitable school environment is the duty and responsibility of the school. In the report prepared by Kılıç and Özkor (2019) it was found out that Syrian students see school principals and teachers as a supporting mechanism. When the studies conducted by Börü and Boyacı (2016) and Yaylacı et al. (2017) were examined, it was seen that the administrators in this study paid attention to the needs of the Syrian students and they carried out studies for this purpose. The administrators denoted that “they take care of their students” which verifies the metaphor that the Syrian students see them as their ‘fathers’. In the study carried out by Taşkın and Erdemli (2018), it was pointed out that Syrian students were respectful to the administrator’s which was driven from their speeches.

In many studies (Özer et al., 2016; Gencer, 2017; Yaylacı et al., 2017; Eren, 2019), there was a general coordination problem regarding the education of Syrian students and it was emphasized that the regulations are not sufficient (Şimşek and Kula, 2018). Institutions and school administrators have important duties in overcoming these problems. It also revealed the necessity of trainings organized for school administrators (Culbertson and Constant, 2015; Tanrikulu, 2017).

The problems of expression of Syrian students at the points where they had difficulty in expressing themselves were discussed in the study conducted by Kardeş and

Akman (2018). Expression problems made by Syrian students who already had traumatic experiences even more worried and anxious. In addition, school administrators and teachers had an additional duty to solve the problems experienced in expressing oneself especially due to the language barrier. The teachers who participated in the same study stated that the teachers working with Syrians did not have any knowledge and experience to work with this group. They argued that in-service trainings for teachers working with migrants should be organized in order to overcome this deficiency. In addition, it was seen that teachers working with Syrian students thought administrators as a solution channel when they had a problem (Kılıç and Özkor, 2019). The role of the in-service trainings is important for the administrators to have the skills to perform the mediation role here in a beneficial way for the students (Levent and Çayak, 2017). In the study conducted by Gencer (2017), it was emphasized that more holistic studies should be performed in order for the students to survive and adapt to this process in a healthy way. Similar findings were found in the studies conducted by Uzun and Bütün (2016) and Pastoor (2015).

In the studies carried out by Gungor and Senel (2018), Taskin and Erdemli (2018), Eren (2019), the opinions of the teachers and refugee students were taken. According to these opinions, it was found out that the students did not get enough psychological support, and the students and parents who were able to receive it were not followed up regularly. Karataş and Baloglu (2018), and Kardeş and Akman (2018) emphasized the necessity of psychological counseling services to refugee students and their parents in order to reduce compliance problems. In addition, Şirin and Rogers-Şirin (2015) stated that the psychological support to be given to refugee students would not only facilitate the adaptation process of the students. Similarly, in the study of Akay et al. (2018), it was emphasized that it would play a role as a support mechanism in overcoming problems such as non-attendance or drop-out of school.

Millions of Syrians who have migrated to Turkey face force majeure with multi-dimensional problems regarding integration of Syrian children into the education system. Thus, this problem has gained importance in the eye of the Ministry of Education in Turkey (MoET, 2014), just as in many countries, organizations and institutions that are to provide humanitarian aid (Castles, 2000; Erdoğan, 2014; Durmuş and Baş, 2016). In order to support access of Syrian citizens under temporary protection to the education in Turkey, numerous public and private institutions and organizations are putting measure in place within the framework of human rights. In actualization of this measure, MoET has conducted many studies on Syrian children (UNHCR, 2020; UNICEF, 2019). In this study, ARTAS (Awareness Raising Training for Administrative Staff) by MoET supported by the European Union was focused on. Within the scope of the

project, the following studies are carried out; 1) Increasing access of Syrian students to the education system, 2) Improving the quality of education provided to Syrian students, and 3) Improving the operational capacity of educational institutions and staff. According to the literature survey, no metaphorical study was reported on determining metaphorical perceptions of administrators about "ARTAS that was held in 2018 within the scope of PICSTES Project" (APP). It is believed that determining the perceptions of the administrators will affect further studies to promote the integration of the Syrian children into Turkish Education System. Therefore, this study will make a great contribution to the literature and provide an insight to the other studies addressing this subject.

This study reveals the perceptions of administrative staff participated in the APP through metaphors and categories under which these metaphors are grouped. The following questions are investigated:

- (1) What are the metaphors developed by the administrators participating in the PICSTES training?
- (2) Which conceptual categories can be used to list the metaphors developed by the participants?

METHODOLOGY

In this study, one of the qualitative research methods, phenomenology design was used. In this approach, cases that the authors are aware of but do not have detail understanding on were investigated. The aim of the phenomenology approach is to present and interpret individual perceptions about a case in general (Yildirim and Simsek, 2018). The data analysis was carried out within the scope of qualitative research tradition. The content analysis technique was used to analyze the "Metaphorical Perception Writings" filled by the participants. The metaphors determined from the content analysis and the categories based on the similarities, simulation direction and semantic relations between them related to these metaphors were arranged according to certain concepts and themes.

Research setting and study population

The participant group of this study consisted of 297 administrators, both male and female. They were working with at least 15 Syrian students in their schools and they were from 21 different provinces in 10 different cities. Participants were selected among the staff participated in APP. They participated in the study voluntarily.

Data collection and analysis

For data collection, "Metaphor Analysis Form" and "Demographic Information Form" prepared by the researchers. The research data were collected during the ARTAS. Prior to the dissemination of the forms, the participants were given brief information about the metaphor concept. The participants who were willing to participate in the research voluntarily were asked to complete "PICSTES Antalya training is as/like, because" statement in order to determine metaphors about ARTAS. They were asked to write these statements with their own hand scripts onto the sheets given to them. These sheets and documents were accepted as basic data

sources for the research and used in the content analysis. A demographic information form was prepared to determine the status of the participants in terms of age, gender, province, type of their institution and seniority variables. A five-stage process was followed in the metaphor analysis. For this purpose, similar studies in the literature were utilized (Turnage, 2013; Durmuş and Baş, 2016; Uzun and Özcan, 2017). The stage processes include (1) Coding and elimination, (2) Sample metaphor compilation, (3) Categorization, (4) Validity and reliability testing and (5) Transfer of data to computer environment. The first process of coding and elimination stage, metaphor analysis forms and demographic information forms that were filled by the participants were examined. Seventeen forms were incomplete and incorrectly filled and the unanswered questions were not included in the analysis. The forms that were filled appropriately were numbered according to the participant codes, and the data were transferred to the SPSS software. In the second process of stage sample metaphor compilation, metaphors were primarily evaluated in two categories, positive and negative.

After this process, the grouped metaphors as positive and negative were listed and analyzed by comparing the common features and similarities with other metaphors. For this purpose, a 'sample metaphor' list was formed, which was thought to best explain the metaphor, using the participants' forms. This list was developed to be (a) used as a source of reference and (b) to verify the data analysis process and comments about the research (Schmitt, 2005). In addition, at this stage, (i) corresponding metaphor, (ii) corresponding simile and (iii) relationship between them were analyzed in the mental image that participants wrote (Yildirim and Simsek, 2018). In this process, 13 participants were excluded since their comments were not relevant to PICSTES Antalya training, and 9 participants were excluded because they did not use metaphors in their writings. Consequently, a total of 22 forms were excluded in this stage which was agreed with the expert. Including the ones eliminated in the first stage, a total of 39 participant forms were excluded. After these forms which did not meet the scientific criteria, 60 metaphors were obtained related to ARTAS. A list of the obtained metaphors was created.

This list was primarily used as a reference source for grouping the sample of metaphors. In the third categorization process stage, data was evaluated according to the common characteristics of the semantic relations adopted by the participants related to ARTAS. For this purpose, based on the sample metaphor list prepared in the second stage, each metaphor image was associated with a suitable theme according to the corresponding metaphor, the simile and the comparison between them. As a result, 7 different conceptual categories were obtained related to the metaphors. In the fourth validity and reliability testing process stage, firstly, analysis of the data stage was detailed to provide validity of the research. Secondly, the metaphors obtained and the samples selected from the participants were presented in the findings section. In addition, "the correspondence direction" is described in the metaphor categories. In the reliability test of the study, the metaphors obtained were independently coded and the opinions of three experts including an assessment and evaluation expert, a psychological counselor and a sociologist were used to categorize them. The categories evaluated according to expert opinions and lists of coded metaphors in these categories were finalized after revision. Finally, the list prepared by the researchers and the list organized by the experts were compared to determine the number of consensus and disagreement. The reliability of the study was calculated by using the obtained ratios in the formula which was formulated by Miles and Huberman (2013), "(Reliability= consensus/(consensus + disagreement))x100". As a result of the reliability analysis, disagreement was formed on 5 metaphors (salad, Mexican wave, gesture, cake, and air). According to Saban (2008), the reliability of the research is confirmed in cases where

Table 1. Participants' demographic information.

City	F	%	Institutions	f	%
Konya	13	4.40	Preschool	8	2.70
İzmir	60	20.2	Primary School	208	70
Kahramanmaraş	64	21.5	Secondary School	49	16.5
İstanbul	24	8.10	High School	16	5.40
Kayseri	96	32.3	District Directorate	16	5.40
Bursa	4	1.30			
Gaziantep	24	8.10			
Kırıkkale	4	1.30	<i>Gender</i>	f	%
Karaman	4	1.30	Male	281	94.6
Diyarbakır	4	1.30	Female	16	5.40
Total	297	100			

the compliance between the expert and the researcher assessments is 90% or more. In this study, the reliability calculated as follows: [Reliability= $((62)/(62 + 5)) \times 100 \Rightarrow$ Reliability = 92.54%]. In the fifth and final process stage, the data were recorded in the computer files and the number of participants (f) representing metaphors and conceptual categories, and percentage ratios (%) were calculated using a computer software.

RESULTS AND DISCUSSION

The distribution of the administrators according to their institutions was 8 (2.70%) Kindergarten, 208 (70%) Primary School, 49 (16.5%) Secondary School, 16 (5.40%) High School and 16 (5.40%) District Directorate of National Education. The average working year of the participants was found to be 10.2 and the average age was 44.0. The information about the participant group was provided in Table 1. In order to give more information about the participants, encodings were used after the citations in the findings section. A sample coding was provided below:

Coding Formula: List order (1-296) + Gender (M-F) + (Institution of staff) (1-5)

(a) + (b) + (c)

Sample coding: A female staff in a preschool with a list order of 180 is coded as [180F1].

Metaphors created by staff participating in ARTAS

The valid metaphors, the number of participants (f) and percentage ratios are shown in Table 2. In this context, 60 metaphors are found be relevant to ARTAS. Some of these metaphors are: 1) holiday (f = 36, 12.1%), 2) medicine (f = 17, 5.70%), 3) light (f = 11, 3.70%), 4) candy (f = 9, 3.0%), 5) solidarity (f = 8, 2.70%), 6) intensive program (f = 8, 2.70%), 7) sun (f = 8, 2.70%) and 8) opportunity (f = 8, 2.70%).

A total of 62 valid metaphors were obtained in terms of

the participant group; 27 of them are given in Table 2. According to the frequencies of the metaphors used by participants, the top five metaphors were; holiday, medicine, light, candy and solidarity. It was found that, while 55 of these metaphors have positive perception, 7 had negative perception. It was observed that the administrators did not use animal images in the use of metaphors. Instead, they used plant, food, item and emotional and social images to indicate positive perceptions. In order to express their negative perceptions, generally they preferred to express their thoughts directly, instead of using metaphors. It was also noticed that they participated in such a metaphorical study for the first time.

In which conceptual categories can the metaphors developed by the participant group be grouped?

The findings about the conceptual categories developed according to the metaphors created by the participant group were presented in Table 3. The metaphors obtained from the analysis of the valid metaphors developed by the administrators about the ARTAS were gathered under 7 different conceptual categories. These conceptual categories were named as follows in the order of frequency and percentage: (1) Relaxation / holiday / motivation, energy source (f = 88, 29.6%), (2) educatory / sweet (f = 60, 20.2%), (3) guiding (f = 44, 14.8%), (4) life support (f = 28, 9.40%), (5) negative thoughts (f = 28, 9.40%), (6) butterfly effect / solidarity (f = 25, 8.04%), and (7) both training and holiday (f = 24, 8.10%) as shown in Table 3. Detailed descriptions of these categories were presented with percentages in Table 4. The metaphors given in the tables are given in alphabetical order.

As shown in Table 4, there were 14 different metaphors in the "Relaxation/Holiday/Motivation, Energy Source" category specified by 88 of staff (29.6%). According to the order of frequencies and percentages of metaphors in this category, the most commonly used image was the

Table 2. The metaphors created, the number of participants and percentage rates.

Order	Metaphor	f	%
1	Holiday	36	12.1
2	Medicine	17	5.7
3	Light	11	3.7
4	Candy	9	3.0
5	Solidarity	8	2.7
6	Intensive program	8	2.7
7	The sun	8	2.7
8	Opportunity	8	2.7
9	Training section is too long	7	2.4
10	Awareness	7	2.4
11	Breath	6	2.0
12	Course	6	2.0
13	Seminar	6	2.0
14	Both training and holiday	5	1.7
15	Camp	5	1.7
16	Holiday	5	1.7
17	Mexican Wave	5	1.7
18	Doctor	5	1.7
19	Training	5	1.7
20	Reference Book	5	1.7
21	Candle	5	1.7
22	Guide	5	1.7
23	In-service training	5	1.7
24	Helpful	5	1.7
25	Honey	5	1.7
26	Turkish Bath	5	1.7
27	A newly charged battery	5	1.7

Table 3. Conceptual categories formed by metaphors of participants about Syrian defectors and refugees.

Conceptual categories	f	%	
1	Relaxation / holiday / motivation, energy source	88	29.6
2	Educatory / sweet	60	20.2
3	Guiding	44	14.8
4	Life support	28	9.40
5	Negative thoughts	28	9.40
6	Butterfly effect / solidarity	25	8.40
7	Both training and holiday	24	8.10
	Total	297	100

holiday with 36 participants (40.9%), followed by images linked to "honey" (f = 5, 5.70%), "vitamin C" (f = 3, 3.40%) and "a newly charged battery" (f = 5, 5.70%) associated with energy source. Other images were generally associated with the fact that they were lucky and their motivation increased. It was found out that the images in this category were generally defined by the

staff as fulfilling their relaxation, holiday, energy storage and escaping stress. This finding showed that the staff of the MoET had an intense working routine and it was thought that fulfilling the holiday and relaxation needs of teachers and staff would improve their efficiency and motivation and strengthen their loyalty to the organization. The medicine metaphor was included in both "life

Table 4. The metaphors related to “recreation / holiday” category.

Category	%	Metaphor	Simulation direction	f	%
Relaxation / holiday / motivation, energy source	29.60%	Antidepressant	Keeps the person away from stress	4	4.50
		Honey	Energy	5	5.70
		Jackpot	Who gets lucky, he is happy one	4	4.50
		Vitamin C	Provided quite energy	3	3.40
		Waterman watering the thirsty heart	We were having very troublesome processes in the provincial organization	4	4.50
		Turkish bath	Relaxing	5	5.70
		Medicine	It's like a medicine against the intense work pressure	4	4.50
		Gesture	The service to sacrificing administrators is a noteworthy beauty	4	4.50
		Cream /Medicine	We get rid of the stress of the school and Syrians even just a week but, we relaxed	4	4.50
		The winter sun	It warmed us up in the middle of the term	4	4.50
		Dream	I recover myself	2	2.30
		Palace	Provided a rest for the mind	4	4.50
		Holiday	Because it makes us get rid of stress / the environment is scrumptious / gives a holiday feeling / increasing motivation / like a medicine	36	40.9
A newly charged battery	The depleted battery must be recharged.	5	5.70		
Total				88	100

support” and “both training and holiday” categories. However, as the relationship between the metaphor and the smile is considered, the reason for evaluating this metaphor in the “relaxation/holiday/motivation, energy source” category was not relevant to PISCTES, but rather this metaphor was used for their drained energy, motivation, fatigue, intensive work load and escaping stress. The relationship about the “medicine” metaphor was defined by participants as follows: “ARTAS is like an antidepressant, because it keeps the person away from stress” [85M1]; “ARTAS was like a medicine, because it was a medicine used against the intense work pressure” [194M2]. Some other examples suggested by the participants about this category were as follows: “ARTAS was like a cream/medicine, because even just for a week, we moved away from the stress of Syrians and got refreshed” [198F1]; “ARTAS was like a dream, because I recovered myself” [21M1]; “ARTAS is like a gesture, because the service to sacrificing administrators is a noteworthy beauty” [149M3]; “ARTAS is like a Turkish bath, because it is relaxing” [207M4].

It was seen that the metaphoric perceptions of the staff about the ARTAS were primarily positive and there were images that they had used to express their appreciations. This finding showed that the staff of MoET had an intense working routine and it was thought that fulfilling the holiday and recreation needs of teachers and staff would improve their efficiency and motivation and strengthen their loyalty to the organization. This education, which was perceived as a “favour” of the state, was also

important in terms of the empathy of recognizing “this difficult job performed by them” by official authorities.

As can be seen in Table 5, different metaphors were stated by 60 staff (20.2%) in the “Education/Sweet” category. According to the order of frequencies and percentages of metaphors in this category, the images were generally regarded as food with pleasant flavors like “toffee apple, candy, cake” or “course, seminar, getting valuable information, an opportunity to earn awareness”. From the metaphors examined, candy was in the first place with 9 participants (15%); with the addition of the pleasant flavored foods such as cake (f=1, 1.70%), toffee apple (f=2, 3.30%) and salad that has different tastes (f=2, 3.30%), a total of 14 participants represented 23.3% of this category. In the second place the “opportunity” (f = 8, 13.3%) was seen; in the third place outstood the “awareness” (f=7, 11.7%); and the other metaphors in this category related to getting new information were “course” (f = 6, 10%), “seminar” (f = 6, 10%), “useful” (f = 5, 8.30%), “in-service training” (f = 5, 8.30%), “diamond” (f=1, 1.70%). Total percentage of these metaphor groups is 38.3%. In addition to these, other metaphors used by participant staff were “flower” (f=3, 50%) and “a multi-colored article” (f=1, 1.70%).

The experts suggested different opinions for the metaphor “PISCTES ARTAS is like a toffee apple, because outside is sweet, inside has a different taste.” [290M2]. As a result, it was determined that the “toffee apple” metaphor would be more appropriate to be included in this category rather than negative conceptual

Table 5. The metaphors related to “Education/Sweet” Category.

Category	%	Metaphor	Simulation direction	f	%
Educatory / sweet	20.20%	Flower	Growing flowers is a fine work.	3	5.0
		A multi-colored article	It is remarkable	1	1.70
		Course	Teaches	6	10.0
		Toffee apple	The outer side is sweet, the inner side has a different taste.	2	3.30
		Awareness	We have noticed that we are different.	7	11.7
		Opportunity	It's possible for sharing	8	13.3
		In-service training	It has contributed to our development.	5	8.30
		Diamond	We get really valuable information.	1	1.70
		Cake	Loving person learns how to do it better, and which materials he can put in.	1	1.70
		Picnic	Everybody puts what's in his basket. The knowledge is shared.	4	6.70
		Salad	Different people from different cities offer different opinions like different vegetables/ Everyone gives a different taste.	2	3.30
		Seminar	Information about PISCTES has been given.	6	10.0
		Candy	Gives taste to my world.	9	15.0
Helpful	We get some information.	5	8.30		
Total				60	100

Table 6. The metaphors related to “guiding” category.

Category	%	Metaphor	Simulation direction	f	%
Guiding	14.80%	Moonlight	Gives light at night	4	9.10
		Reference book	Find solutions to the problems we face in integration.	5	11.4
		World	It's inclusive	2	4.50
		The sun	It's illuminating	8	18.2
		Light	It's illuminating our path	11	25.0
		Candle	It's illuminating surrounding	5	11.4
		Guide	It's guiding us about the work to be done.	5	11.4
		Wheel	Can't go without it. /it's necessary for the motion of the car	4	9.10
Total				44	100

category because the “toffee apple” is enjoyable, appealing, has different delicious flavors, and has a property that makes apple sweeter when eaten together with its candy. It may be interpreted that “ARTAS is like a candy that gives delicious flavors and can help us on the hard issue of PISCTES”. Some of the other metaphor examples stated by the participants in this category were as follows: “ARTAS is like a salad, because different people from different cities offer different opinions like different vegetables.” [188M1]; “ARTAS is like a cake, because a loving person learns how to do it better, and which materials he can put in.” [77F7]; “ARTAS is like a multi-colored article, because it is remarkable.” [66M3]; “ARTAS is like a flower, because growing flowers is a fine work.” [111M4]; “ARTAS is like a flower because it reminds us that every living thing has the right to life.” [178F2].

In a study conducted by Güngör and Şenel (2018), it

was determined that the activity examples played an effective role in reducing the acculturation stress in both students and their parents. It shows that in-service training can be an important issue in order to overcome negative prejudices due to false information and integrate with the society which supports the findings of this study.

As Tables 6 and 7 shows that different metaphors were stated by 44 staff (14.8%) in the guiding category. According to the frequency distribution of the metaphors in this category, the images used by the staff in the order of frequency and percentage were as follows: “light” (f = 11, 25.0%), “the sun” (f = 8, 18.2%), “reference book”, “candle” and “guide” metaphors were listed on the same frequency: (f = 5, 11.4%), “moonlight” and “wheel” metaphors were listed on the same frequency also: (f = 4, 9.1%) and finally “world” (f = 2, 4.5%). Some of the examples stated by participant staff on this conceptual category were as follows: “ARTAS is like the sun,

Table 7. The metaphors related to “life support” category.

Category	%	Metaphor	Simulation direction	f	%
Life support	9.40%	Doctor	It's a little bit of medicine for our painful wounds.	5	17.9
		Medicine	It began to cure the problems of our Syrian students / There's a bleeding wound.	10	35.7
		Breath	It provides continuation of life	6	21.4
		Parenting to special education students	Parents protect them	2	7.10
		Artificial respiration	It resurrects	4	14.3
		Waterman watering the thirsty hearts	They were thirsty to this subject	1	3.60
Total				28	100

because it is illuminating” [13M1]; “ARTAS is like light, because it illuminates our path” [68F1]; “ARTAS is like the world, because it is inclusive” [231M4]; “ARTAS is like a candle, because it illuminates our surrounding” [222M1].

Regarding the findings of some studies (Sağlam and İksenKanbur, 2017; Kiremit et al., 2018), many of the teachers and school administrators stated that they were not ready to work with refugee student groups and requested in-service trainings for this purpose. During the interviews with teacher groups with refugee students in their classrooms, two opinions were formed: “Syrian students should receive education in separate classes” (Yaylacı, et al., 2017; Eren, 2019) and “Syrian students should continue to receive education in the same class with Turkish students”. It was determined that the administrators and teachers who advocated the education of Turkish and Syrian students in separate classes complained about communication problems. As a basis, they cited the system applied in countries such as Germany and Norway in which foreign students are educated in another class or school until they learn the language of the country of immigration at a basic level (Rousseau et al., 2005; Crul et al., 2017; Van Heelsum, 2017; Madziva and Thondhlana, 2017; Güngör and Şenel, 2018). In the studies conducted by Başar et al. (2018) and Culbertson and Constant (2015), it would make it more difficult for the refugee students to learn Turkish language as it will encourage them to speak in their own language among themselves in separate classes, and instead of long-term parallel education. The students should attend language training courses in the same classes. This is also the case observed in Turkey. The results of this work support the conclusion that the refugee students should not study in separate classes or schools but instead the supportive teaching courses for the students and their families should be fostered and the in-service training for administrators and teachers should be given more importance.

Tables 7 and 8 display that different metaphors were stated by 28 staff (9.4%) in the guiding category. According to the frequency distribution of the metaphors in this category, the images used by the staff in the order

of frequency and percentage are as follows: “Medicine” (f=10, 35.7%), “Breath” (f=6, 21.4%), “doctor” (f=5, 17.9%), “Artificial respiration” (f=4, 14.3%), “Parenting to special education students” (f=2, 7.1%), and “Waterman watering the thirsty hearts” (f=1, 3.6%). Some of the examples stated by participant staff on this conceptual category are as follows: “PISCTES awareness raising training for MoET administrative staff is like a medicine, because it solves the problems of our Syrian students.” [53M5]; “ARTAS is like breath, because it provides continuation of life.” 128M4]; “ARTAS is like a doctor, because it is a little bit of medicine used for painful wounds” [297M2]; “ARTAS is like an artificial respiration, because it resurrects” [96F3].

School administrators and teachers play a major role in ensuring that students are in a healthy school environment. Eren (2019) reported that creating a safe and hospitable school environment is the duty and responsibility of the school. In the report prepared by Kılıç and Özkör (2018) it was found out that Syrian students see school principals and teachers as a supporting mechanism. When the studies conducted by Börü and Boyacı (2016) and Yaylacı et al. (2017) were examined, it was stated that the administrators in this study paid attention to the needs of the Syrian students and that they carried out studies for this purpose. The administrators denoted that “they take care of their students” which verifies the metaphor that the Syrian students see them as their ‘fathers’. In the study carried out by Taşkın and Erdemli (2018) it was found that Syrian students were respectful to them when the administrator’s sentences were analyzed.

This situation could be interpreted as the attitude and thought of an administrator who is aware of his/her responsibilities and tries to do his/her best. During the interviews with the staff, they stated that they considered themselves as a protective father for Syrian children. It was suggested that they had adopted a role not only because of their own will, but also with the influence of Syrian students and parents. Additionally, with the individual interviews, it was observed that most of the administrators preferred to use “ensar” (people from Medina who helped immigrated Muslims) / “muhacir”

Table 8. The metaphors in the “negative thoughts” category.

Category	%	Metaphor	Simulation Direction	f	%
Negative thoughts	9.40%	Training	It's a little long	5	17.9
		Training section is too long	It must end at 13 o'clock	7	25.0
		Air	Neither flows, nor smells	2	7.10
		Accelerated program	A course that should be as long as an educations season is taught just in two hours	8	28.6
		Story	Once upon a time	1	3.60
		Belt	The signature detail was too tight	4	14.3
Total		A colorful balloon	Can blow anytime	1	3.6
				28	100

(immigrated Muslims) image.

Different metaphors were stated by 28 staff (9.4%) in the “negative thoughts” category. According to the frequency distribution of the metaphors in this category, the images used by the staff in the order of frequency and percentage were as follows: “accelerated program” (f=8, 28.6%), “training section is too long” (f=7, 25.0%), “training” (f=5, 17.9%), “belt” (f=4, 14.3%), “air” (f=2, 7.1%), and finally, “story” and “a colorful balloon” were placed in the same frequency and last place (f=1, 3.6%). Some of the examples stated by participant staff on this conceptual category were as follows: “ARTAS is like an accelerated program, because a course that should be as long as an educations season is taught just in two hours” [192M3]; “ARTAS is like a belt, because the signature detail was too tight” [19M1]; “ARTAS is like air, because neither flows, nor smells” [290M1]; “ARTAS is like a story, because it is once upon a time” [36F2]. There has been a difference of opinion among experts on the story metaphor. If one thought about the correspondence of the story metaphor, “once upon a time” could be interpreted as it was too short, or it could also be interpreted as this training was like a story, nothing to do with realities. As a result, it was suggested that this metaphor should be included in the conceptual category of “negative thoughts” in terms of respecting the views of the participants, but it was also stated that this metaphor could be explained in a different way.

Table 9 indicates that different metaphors were stated by 25 staff (8.4%) in the “Butterfly effect/Solidarity” category. According to the frequency distribution of the metaphors in this category, the images used by the staff in the order of frequency and percentage were as follows: “solidarity” (f=8, 32%), “Mexican wave” (f=5, 20%), “mother/mothers' love” and “Summer” (f=3, 12%), “circular and constantly expanding waves formed by the stone thrown into the sea” (f=2, 8%) and “showcase of the bakery” (f=1, 4%). Some of the examples stated by participants on this category were as follows: “ARTAS is like solidarity, because it is necessary to aid Syrian children in a difficult situation” [49K1]; “ARTAS is like

future, because it shapes children” [135M3]; “ARTAS is like circular and constantly expanding waves formed by the stone thrown into the sea, because it starts with a person and spreads around” [260M4]; “ARTAS is like summer, because the fruits will ripen and gather on the way back” [5F2]; “ARTAS is like showcase of the bakery, because you cannot see the bakery's workshop, but there are results of the work” [5F2]. There was a difference of opinion among experts about that the “showcase of the bakery” metaphor should be placed in the “education” conceptual category. As a result, it was suggested that this metaphor should be included in the “butterfly effect / solidarity” conceptual of category.

In the studies carried out by Taskin and Erdemli (2018), Eren (2019) and Kılıç and Ozkor (2019), the opinions of the teachers and refugee students were taken. According to these opinions, it was found out that the students did not get enough psychological support, and the students and parents who were able to receive it were not followed up regularly. Güngör and Şenel (2019) emphasized the necessity of psychological counseling services to refugee students and their parents in order to reduce compliance problems. These studies support our findings that education of administrators will help to improve their attitudes towards Syrian students and reduce their problems.

As seen from Table 10, different metaphors were stated by 24 staff (8.1%) in the “Both Training and Holiday” category. According to the frequency distribution of the metaphors in this category, the images used by the staff in the order of frequency and percentage were as follows: “Both training and holiday”, “camp” and “holiday” metaphors were placed at same frequency: (f=5, 20.8%) “A nice in-service training as well as a nice holiday”, “medicine” and “efficient” metaphors were also placed at same frequency: (f=3, 12.5%). Some of the examples and interpretation direction stated by participants on this category were as follows: “ARTAS was like a camp, because it's both out of the city and has educational content” [166M3]; “ARTAS is like a medicine, because we were a bit away from the intense routine of the school

Table 9. The metaphors related to “butterfly effect / solidarity” category.

Category	%	Metaphor	Simulation Direction	f	%
Butterfly effect / Solidarity	8.40%	Mother/mothers' love	To show the mother's love to children out of the war environment.	3	12.0
		Solidarity	Aid for Syrian children.	8	32.0
		Circular and constantly expanding waves formed by the stone thrown into the sea	It starts with a person and spreads around.	2	8.0
		The future	It shapes children.	3	12.0
		Mexican wave	It starts from here as a wave and spreads throughout the country in waves	5	20.0
		Showcase of the bakery	You can't see the bakery's workshop, but there are results of the work.	1	4.0
		Summer	The fruits will ripen and gather on the way back.	3	12.0
Total				25	100

Table 10. The metaphors related to “both training and holiday” category.

Category	%	Metaphor	Simulation Direction	f	%
Both training and holiday	8.10%	Both training and holiday	We did both holiday and got information.	5	20.8
		A nice in-service training as well as a nice holiday	We both got rid of stress and relieved, and increased our knowledge about Syrians	3	12.5
		Medicine	We were a bit away from the intense routine of the school and realized new things	3	12.5
		Camp	It's both outside the city and has educational content	5	20.8
		Holiday	Out of the classes, rest, sea, swimming pool and eating	5	20.8
		Efficient	Nice place	3	12.5
Total				24	100

and realized new things” [144M2]; “ARTAS is like a nice in-service training as well as a nice holiday, because we both got rid of stress and relieved, and increased our knowledge about Syrians” [266F1]. According to the expert opinions, it was decided that this conceptual category should be stated differently from “education” or “holiday” conceptual categories. While the “medicine” metaphor placed in this conceptual category was also included in the “life support” conceptual category, the recreation in the “relaxation/holiday/motivation, energy source” conceptual category was closer to escaping from the intense work pressure, however, because of “getting information and awareness by training” was also stated by participants, “medicine” metaphor was placed in this category also. Similarly, “holiday” metaphor was also included in this category, because of “training, getting information and learning new methods” aspects were included differently from “relaxation/holiday/motivation, energy source” conceptual category.

During the interviews with teacher groups with refugee

students in their classrooms, two opinions were formed: “Syrian students should receive education in separate classes” (Yaylacı et al., 2017; Eren, 2019) and “Syrian students should continue to receive education in the same class with Turkish students”. It was found out that the administrators and teachers who advocated the education of Turkish and Syrian students in separate classes complained about communication problems.

UNICEF is currently expanding its support to Non-Formal Education (NFE) activities to prevent a “Lost Generation” of Syrian children and in particular invest in the learning of out-of-school refugee children and adolescents.

The Accelerated Learning Programme (ALP) is being implemented in 75 Public Education Centres (PECs) covering 12 provinces. The ALP component of the NFE programme is implemented in collaboration with the Ministry of National Education (MoET). It aims to support 20,000 out of school refugee children to be able to access formal and non-formal education opportunities

after the completion of the ALP two learning levels. After the ALP enrolled students complete each level of the ALP, students are evaluated and successful candidates receive equivalency certificates accredited from MoET that allow them to continue with their education and be integrated into the formal education system.

In the studies conducted by Başar et al. (2018) and Culbertson and Constant (2015), it would make it more difficult for the refugee students to learn Turkish language as it will encourage them to speak in their own language among themselves in separate classes, and instead of long-term parallel education. The students should attend to language training courses in the same classes. This is also the case observed in Turkey. The results of this work support the conclusion that the refugee students should not study in separate classes or schools but instead the supportive teaching courses for the students and their families should be fostered and the in-service training for administrators and teachers should be given more importance (Ohinata and Van Ours, 2012).

In particular, it has been seen that primary and secondary school students behave towards the Syrian refugees in a way affected by the news they see on social media (Başar et al., 2018). In such cases, activities can be organized for students and parents in order to overthrow these prejudices and promote cultural cohesion. In the study conducted by Güngör and Şenel (2018), it was determined that the activity examples played an effective role in reducing the acculturation stress in both students and their parents. It shows that in-service training can be an important issue in order to overcome negative prejudices due to false information and integrate with the society.

Conclusion

In the examination of the metaphorical perceptions of staff participating in ARTAS, seven critical conceptual categories were obtained. These are as follows in terms of frequency and percentage:

(1) Relaxation/holiday/motivation, energy source, (2) educatory/sweet, (3) guiding, (4) life support, (5) negative thoughts, (6) butterfly effect/solidarity, (7) both training and holiday. According to the frequency distribution, "Relaxation/holiday/motivation, energy source" category came in the first order.

The frequently used metaphors by participants are: "holiday", "relaxation", "Turkish bath", "like a medicine", "kept us away from stress", "we stored energy", "I'm like a newly charged battery", "vitamin C", "gesture", "like a cream", "like a winter sun", like a dream", "like a palace", "like a toffee apple", "like a candy", "like honey", "like a camp", "a nice holiday" etc.

The data that emerged in this study once again demonstrated the importance of combined studies that are carried out together with quantitative and qualitative

studies. It can be said that such studies in the summer are more preferred to the studies carried out in the winter, by the effect of the season. No comparison could be made with other studies due to the fact that there are no similar studies reported in the literature on this subject. This study indicates the perceptions of the administrators about ARTAS. The students should attend to language training courses in the same classes. The refugee students should not study in separate classes or schools but instead the supportive teaching courses for the students and their families should be fostered and the in-service training for administrators and teachers should be given more importance. Syrian children are not/cannot get enough psychological support. Increasing the employment of psychological counselor and guidance teachers recruited within the scope of UNICEF projects can be extended and taken as permanent staff. Administrators and teachers do not have sufficient information should be trained.

Overall, it will be significant if the scope of the study can be expanded and the sample group can cover all school administrators working with the Syrian students in Turkey in the future. A further study can be conducted not only with Syrian migrants but also with migrants from different cultures. Studies reflecting the perspectives of migrants on their own situations may also be suggested.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Full Length Research Paper

An analysis of job satisfaction levels of physical education teachers in Ankara, Turkey

Zülküf Erkan Baykara¹ and Rüstem Orhan^{2*}

¹Department of Physical Education and Sports, Graduate School of Health Sciences, Kırıkkale University, Turkey.

²Department of Physical Education and Sports, Faculty of Sport Sciences, Kırıkkale University, Turkey.

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This study was conducted to determine job satisfaction levels of physical education teachers. The population of the study consists of 1953 physical education teachers working in public secondary schools and high schools of the Ministry of National Education (MEB) in Ankara in the 2017-2018 academic year. The sample of the study consists of 265 physical education teachers working in Ankara. Minnesota Job Satisfaction Questionnaire (MSQ) with 20 questions was used as the data collection tool. In addition, a personal information form consisting of 7 items related to the professional and personal information of the respondents was developed. The obtained data were analyzed in SPSS 21 package program. Mann-Whitney U, Kruskal-Wallis H and ANOVA tests were used for data analysis. The findings of the research revealed that the physical education teachers who participated in the study were generally satisfied with their profession. It was also found that gender and marital status had no significant impact on the job satisfaction levels of the physical education teachers ($p>0.05$), while a significant difference was detected between teachers who work in schools where sufficient amount of sports equipment is available and those working in schools that lack enough equipment ($p<0.001$).

Key words: Teaching, physical education teacher, job satisfaction, sport.

INTRODUCTION

A major objective of education is to raise individuals who understand the needs and philosophy of the nation. The important thing is to support the development of the country in all areas. As many institutions and organizations have a role in achieving this goal, the place of educational institutions is especially important. In this role distribution, the contributions of teachers to the education system should be underlined. Teachers are

indispensable actors of educational institutions in the educational process. They are the architects that shape and change the future generations and, accordingly, the structure of the nation. Teachers may encounter many problems related to their profession or due to the conditions of the schools they work at. Unless solutions are found for these problems, job satisfaction levels may decrease. Job dissatisfaction can lead to job absenteeism,

*Corresponding author. E-mail: rstemorhan@gmail.com.

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high turnover rates, demoralization and polarization in relations with employees and managers, which leads to reduced productivity in schools. For this reason, it is important to provide a peaceful working environment so that teachers can demonstrate all their professional skills in the schools they work at. Positive and negative situations affecting job satisfaction should be identified and alternative solutions should be created to eliminate situations that negatively affect job satisfaction. Teachers are the most important weapon in the economic, social and cultural development of a society. Mezirlıođlu (2005) states that teachers need to work happily and efficiently in order to help social development, increase the level of welfare and raise the new generation in a qualified manner.

The Minnesota Job Satisfaction Questionnaire (MSQ) is used to determine how satisfied or dissatisfied respondents are with their jobs. Many factors could be employed to determine job satisfaction, which may affect job satisfaction due to individual differences; thus, assessing a criterion such as job satisfaction requires other variables besides those which are measured by simple questionnaires as they might influence the results.

This study was conducted to determine job satisfaction levels of physical education teachers based on gender, marital status, age, experience, school level, gym availability, and sports equipment availability (Table 1). They rated themselves on 20 questions on a scale from 1 (very dissatisfied) to 5 (very satisfied).

This study is based on 3 hypotheses:

- 1) Gender factor has no effect on job satisfaction levels of physical education teachers.
- 2) Job satisfaction of physical education teachers new in the profession is higher.
- 3) Teachers working at schools with no material shortage are more satisfied.

The findings obtained from the present study proved the accuracy of these hypotheses.

LITERATURE REVIEW

Teaching is a profession that needs specialization in different fields carrying out the duties of governments with respect to the education of individuals and related administrative processes (MEB, 1973). It is a respected profession that transfers the cultural heritage to future generations and educates the qualified and moral manpower of the future of the country. Governments and communities highly depend on teachers.

Teachers, who shape the future by shaping their students, have always played an important role in the development of societies. They are role models for students as every kind of behavior of the teacher inside and outside the class has a great impact on them (Recepođlu, 2013). Therefore, well-educated teachers

with better professional and economic conditions are of high importance for the welfare of society.

One can define education as a branch of science helping to guide and raise generations in line with predetermined goals (Çelikkaya, 1997). Education is a force that changes and improves the structure and dynamics of the society allowing people to live at a higher level of welfare (Bilge, 1989). Adesote and Fatoki (2013) states that education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners.

The main purpose of education systems is to train individuals in accordance with the general structure and philosophy of their countries, thus supporting the development of the country (Koç, 2014). According to Oktaylar (2007), education supports the development of individuals in terms of physical, cognitive, emotional, psychological and social aspects, assists them in self-realization processes and helps them grow up as individuals compatible with society. The main objectives of education are to raise fully equipped individuals who are physically, mentally and emotionally developed as active members of the society contributing to the community in which they live by helping them transfer their culture to the next generations (Sarımsak, 2009).

Physical education is all of the activities aimed at improving one's physical and mental health and motor skills. Physical education helps to raise intelligent and moral individuals with better motor skills that help others, respecting human rights, and following the rules of society (Aracı, 1999). Physical education is a set of activities aimed at the education of the whole personality without competition to increase the level of productivity as much as the age and hereditary capacity of the person allows (DPT, 1977).

Ward (2014) contends that the movement cultures perspective offers a useful conceptual vantage point from which to seek to strengthen the integration of sport and Physical Education.

According to Baykoçak (2002), among the aims of physical education are to improve the physical and mental health of the individuals, to strengthen their willpower and personality, to activate the undiscovered features and creative aspects of the person, to help people evaluate their free time efficiently, and to bring the marginalized people into social life such as criminals and those with disabilities.

Physical education teachers should be disciplined, knowledgeable, and competent in their fields and in the teaching profession. They should be able to communicate effectively with their students and motivate them properly (Tamer and Pular, 2001).

Fan (2015) believes that physical education teachers should also pay attention to the ideological education of the student as well as the development of the body. He indicates that the good relationship between teachers

Table 1. Personal information form.

Variable	Subgroup	N	%
Gender	Male	166	62.6
	Female	99	37.4
Marital status	Married	213	80.4
	Single	52	19.6
Age	25 years and below	6	2.3
	26-30 years	25	9.4
	31-40 years	84	31.7
	41-50 years	93	35.1
	51 years and over	57	21.5
Experience	1-5 years	44	16.6
	6-10 years	50	18.9
	11-15 years	43	16.2
	16-20 years	34	12.8
	21 years and over	94	35.5
Cycle	Secondary	168	63.4
	High School	97	36.6
Is an indoor gymnasium available?	No	165	62.3
	Yes	100	37.7
Does the school lack sports equipment?	No	99	37.4
	Yes	166	62.6

and students affects students' learning behavior and change the concept of student learning. Therefore, it is important to cultivate students' good moral character and to establish the students' will to endure hardship.

Job satisfaction

Business is an effort to produce goods and services for a fee in an organized environment within a limited time. Work is defined as the role that an individual performs as a profession that he/she determines for himself/herself in society. Job satisfaction is the happiness of those who work in business life. Job satisfaction has an affective dimension, so the extent to which the employees have achieved satisfaction can only be defined by their job perspectives (Sabuncuoğlu and Tüz, 1998). Job satisfaction is the financial benefits that an employee gains from the work and the happiness he/she achieves from the creation of a product with the colleagues with whom he/she likes to work in an environment where he/she enjoys working (Çavuşoğlu and Özcan, 2016).

Job satisfaction directly affects the productivity of the institutions, including schools. It is reported that the

quality of education increases or decreases according to job satisfaction levels of school administrators and teachers (Agaoğlu, 2011). Serinkan and Bardakçı (2009) stated that job satisfaction is important for both employees and organizations.

The multidimensional psychological responses related to job satisfaction have cognitive (evaluative), affective (or emotional) and behavioral components (Mouloud et al., 2016). Job satisfaction can also be defined as an attitude based on the positive and negative evaluations individuals hold towards their work (Carson et al., 2016).

Factors affecting job satisfaction: job and job quality, management and evaluation, wages and benefits, promotion and development opportunities, working conditions, interpersonal relations, control, age, seniority, gender, and marital status.

Factors affecting job satisfaction of teachers can be listed as follows (Özkan, 2017):

- 1) Teacher's personality,
- 2) Demographic characteristics of the teacher,
- 3) Level of professional skills and abilities,
- 4) The criteria by which professional success is evaluated and at what level,

Table 2. Comparison of job satisfaction total scores of participants by gender.

Gender	N	Med (min-max)	p
Male	166	78.5 (46-100)	0.339
Female	99	79.0 (24-100)	
Total	265	79.0 (24-100)	

Table 3. Comparison of job satisfaction total scores of participants by marital status.

Marital status	n	Med (min-max)	p
Married	213	79.0 (24-100)	0.627
Single	52	79.5 (40-100)	
Total	265	79.0 (24-100)	

- 5) Professional achievement level,
- 6) Appreciation by superiors,
- 7) Reward methods,
- 8) Wage adequacy,
- 9) The behavior of individuals in the leadership position,
- 10) School facilities. Abraham Maslow's (1943)

Hierarchy of Needs is the most well known of the theories that explain the needs that affect human behavior. Abraham Maslow argued that the most important factor that influences and directs human behavior is needs (Kula and Çakar, 2015). As a result of his research, Abraham Maslow has gathered the needs of people under five headings: physiological, safety, love, esteem, and self-actualization (Yeşil, 2016).

ERG theory was proposed by Clayton Alderfer. Alderfer further developed Maslow's hierarchy of needs by categorizing the hierarchy into his ERG theory (Existence, Relatedness, and Growth) (Başaran, 2008). Unlike Maslow's theory, there are no boundaries and hierarchical order defined by sharp lines between the steps of requirements. Requirements may arise without being bound to any order, and more than one group of requirements can motivate the individual. (Eren, 1998; Eroğlu, 1998).

MATERIALS AND METHODS

Research group

The population of the study consists of physical education teachers who work in public (government) secondary and high schools affiliated to the Ministry of National Education in districts of Ankara. The number of physical education teachers employed in Ankara was found to be 1953. The convenient sample size was calculated to be 235 by using the convenience sampling method. The reason why we employed convenience sampling is that it is a specific type of non-probability sampling method that relies on data collection from population members who are conveniently available to participate in a study. The authors applied the scale to 265 teachers in case unexpected problems might arise.

Data collection tool

The research consists of two parts. The first part includes demographic questions. The second part includes the Minnesota job satisfaction scale which was developed by Weiss et al. (1967), adapted to Turkish by Baycan (1985). Gündüz (2008) calculated the Cronbach's Alpha coefficients as a measure of consistency between items. Accordingly, the reliability coefficient Cronbach Alpha value was found to be 0.93. This value shows that the reliability level of the questionnaire ($0.80 \leq \alpha < 1.00$) is quite satisfactory.

Data analysis

Data analysis was performed by using SPSS 21 package program. The reliability of the data was assessed by the Cronbach Alpha test, which indicated that $\alpha = 0.851$ test result is highly reliable (Alpar, 2017). Mann-Whitney U, Kruskal-Wallis H and ANOVA tests were employed in the analysis of the data. We used the Mann-Whitney U test to compare differences as the dependent variable was not normally distributed.

RESULTS

Table 2 is a comparison of the total job satisfaction scores of the participants by gender according to the Mann-Whitney U test. There was no statistically significant difference with a 95% confidence level ($p=0.359$).

Table 3 shows the comparison of job satisfaction total scores of the participants by marital status according to the Mann-Whitney U test. There was no statistically significant difference with a 95% confidence level ($p = 0.627$).

Table 4 shows the comparison of job satisfaction levels of the participants by age groups according to the Kruskal-Wallis H test. There was a statistically significant difference with a 95% confidence level ($p < 0.038$). In order to determine which age group or age groups the difference arises from, the age groups are compared in pairs and the results are presented in Table 5.

Table 4. Comparison of job satisfaction total scores of participants by age groups.

Age group	N	Med(min-max)	p
25 and below	6	88.0 (77-95)	
26-30	25	82.0 (24-100)	
31-40	84	78.0 (39-100)	
41-50	93	79.0 (46-100)	0.038*
51 and over	57	77.0 (40-100)	
Total	265	79.0 (24-100)	

Table 5. Pairwise comparison of job satisfaction levels of participants by age groups.

Age group	25 years and below	26-30 years	31-40 years	41-50 years	51 years and over
25 years and below	-	0.247	0.001*	0.017*	0.015*
26-30 years	0.247	-	0.013*	0.041*	0.031*
31-40 years	0.001*	0.013*	-	0.084	0.051
41-50 years	0.017*	0.041*	0.084	-	0.960
51 years and over	0.015*	0.031*	0.051	0.960	-

*p<0.05.

Table 6. Comparison of job satisfaction total scores of participants by experience.

Tenure	n	Med (min-max)	p
1-5 years	44	83.5 (24-100)	
6-10 years	50	77.0 (39-98)	
11-15 years	43	79.0 (43-100)	
16-20 years	34	79.5 (46-91)	0.007*
21 years and over	94	76.0 (40-100)	
Total	265	79.0 (24-100)	

Table 7. Pairwise comparison of job satisfaction total scores of the participants by experience.

Experience	1-5 years	6-10 years	11-15 years	16-20 years	21 years and over
1-5 years	-	0.003*	0.029*	0.017*	0.001*
6-10 years	0.003*	-	0.381	0.401	0.990
11-15 years	0.029*	0.381	-	0.996	0.367
16-20 years	0.017*	0.401	0.996	-	0.406
21 years and over	0.001*	0.990	0.367	0.406	-

Table 5 shows the pairwise comparison of the job satisfaction levels of the participants by age groups according to the Mann-Whitney U test. We found that the participants of 30 years of age and younger had higher job satisfaction levels than the others ($p < 0.05$). Table 6 reflects the comparison of the job satisfaction total scores of the respondents according to the Kruskal-Wallis test. A statistically significant difference was found with a 95% confidence level ($p < 0.007$). In order to determine which experience group or groups the difference arises from,

these groups were compared in pairs and the results are presented in Table 7.

Table 7 shows the pairwise comparison of job satisfaction total scores of the participants by experience according to the Mann-Whitney U test. The respondents with experience of 1-5 years were found to have higher job satisfaction levels than the others ($p < 0.05$).

Table 8 compares the scores provided from the responses to the question "Does the school lack sports equipment?" and total job satisfaction levels according to

Table 8. Comparison of total job satisfaction levels with the scores obtained from the responses to the item " Does the school lack sports equipment?"

The school lacks sports equipment	n	Med(min-max)	P
No	99	80.00 (58-100)	
Yes	166	77.00 (24-100)	0.001*
Total	265	79.0 (24-100)	

the Mann-Whitney U test. It was found that there was a statistically significant difference with a 95% confidence level ($p < 0.001$). The teachers working at schools with no material shortage had higher job satisfaction levels than the ones who work at schools where there is a lack of sports equipment.

DISCUSSION

Research has shown that job satisfaction is an important factor that maintains a high level of performance and the low levels of job satisfaction may lead to lower productivity, loss of interest and as well as a low level of organizational commitment. Job satisfaction has a clear impact on physical education teachers' level of organizational commitment. This relationship affects the quality of education and student achievement levels (Mouloud et al., 2016). To conclude, it is stated that there is a significant relationship between psychological well-being, educational satisfaction, and happiness (Demirbatir, 2015).

265 physical education teachers were included in this study. The findings release that total job satisfaction levels by gender do not differ. This is a testament to the fact that women exist as individuals in society and in business life and contribute to country development and education, and that there should be no gender discrimination as women can do their jobs properly against all odds. There are many studies giving similar results in the literature (Tamcahan, 2012; Türkçapar, 2012; Göktaş, 2007; Çavuşoğlu and Özcan, 2016; Arabacı et al., 2005).

There was no difference between the marital status categories in terms of job satisfaction total scores. Türkçapar (2012) and Umay (2015) obtained similar results in their studies in terms of the relationship between marital status and job satisfaction levels. This can be explained by the fact that physical education teachers can separate their personal lives from their professional lives.

One of the results of this study is the fact that participants younger than 30 years of age have higher job satisfaction levels than the others. This suggests that teachers under the age of 30 start the profession enthusiastically and maintain their enthusiasm for a while. Considering the teacher employment policies of the

Ministry of National Education and living conditions in the country, the fact that they have jobs and salaries might have increased their job satisfaction. Mumcu (2014) and Göktaş (2007) also report similar results.

This study also revealed that teachers with the tenure of 1-5 years had higher total job satisfaction scores than the other participants. This might be due to the fact that the new teachers have not yet encountered problems and difficulties related to the profession.

This paper also indicates that teachers with no material shortage have higher job satisfaction. Similar results were reported by Mirzeoğlu et al. (1996). Yüzüak (2006) found that physical education teachers had difficulty processing the curriculum because of the material shortage. This suggests that a lack of necessary sports equipment might lower job satisfaction levels of physical education teachers.

There is a positive relationship between job satisfaction, job performance, and organizational commitment (Mouloud et al., 2016). Skaalvik and Skaalvik (2015) stated that all 34 informants responded to the introductory question about immediate thoughts about working as a teacher by emphasizing high job satisfaction. Ali and Dahie (2015) also found that the level of job satisfaction of the teachers involved in their study was at a high level. Ordu (2016) found in his research that sub-dimensions of diversity management as individual attitudes and behaviors, organizational values and norms, administrative practices and policies together predict the general job satisfaction significantly.

To conclude, the physical education teachers who participated in this research are generally satisfied with the profession and have job satisfaction. However, there are two issues that need to be emphasized: the inadequacy of the number of gymnasiums and the lack of sports equipment. These two issues should be taken into account by the authorities and need to be addressed immediately so that physical education and sports courses can be processed in accordance with the course outcomes in the appropriate environment to increase students' interest and motivation as well as the job satisfaction levels of the physical education teachers.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Full Length Research Paper

The level of readability of the computer sciences textbook among the eleventh grade students in Jordan

Khalid Qudah¹, Mohammed Kh. Muflih^{2*} and Sana'a Sardiah¹

¹Department of Curriculum and Instruction, Faculty of Information Technology Al al-Bayt University, P. O. Box 130040, Mafraq 25113, Jordan.

²Department of Curriculum and Instruction, Faculty of Information Technology, Jordan University of Science and Technology, P. O. Box 3030, Irbid 22110, Jordan.

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This study aimed to identify readability level of computer science textbooks among the Jordanian eleventh grade students. A cross-sectional, descriptive study was conducted. The study population consisted of all eleventh graders of Al-Mafraq education directorate. The study sample comprised 122 male and female eleventh graders, chosen by intended sampling method from two public schools. However, to answer the research questions, the researchers prepared a close test as an instrument to measure the readability levels using three randomly selected texts, which have never been used, from eleventh grade computer science textbook. After validating the instrument, it was administered to the study participants. The following results were reported: Eleventh grade computer science textbook readability levels were classified based on the scores students attained during the test as follows: the independent level of readability (48.9%), followed by depressed level (35.1%) and finally the educational level with (16.1%); the existence of positive statistically significant relationship at ($\alpha \leq 0.05$) level between student achievement in computer subject and its readability level; there were statistically significant differences at ($\alpha \leq 0.05$) level; the eleventh computer sciences textbook readability levels attributable to student's gender, is in favor of females. Based on these results, some recommendations were suggested.

Key words: Readability, computer sciences textbook, eleventh grade.

INTRODUCTION

School curriculum is one of the most important components of the educational process; however, this view differs based on educational systems' development. Furthermore, curriculum is one of the most influential components on learners as it is the major tool in providing knowledge, where it includes all cognitions, concepts, skills and values, as well as all cognitive,

intellectual and affective behavioral goals that are expected to be acquired by students. Therefore; school curriculum and textbook, enjoy a great deal of care of Jordan ministry of education in terms of continuous development and evaluation. The ministry of education introduced and started teaching computer science since 1984 in its secondary schools (Al-Khateeb, 1993).

*Corresponding author. E-mail: morganiteinstitute@yahoo.com.

Furthermore, Marei and Al-Hilla (2001) showed that school curriculum development and evaluation is the optimal means for the improvement of teaching and learning process. However; computer curricula pave the way for students to acquire computer skills; while connecting them to knowledge in the economy, which is the current trend in Jordan (Ministry of Education, 2013)

Developing school textbooks and issuing them in a manner that can be applied in schools, which requires that these books be consistent with students' level and takes into account readers' level and readability of the material in terms of language difficulty and the nature of its presentation.

However, among factors related to readability of the letters' design are: familiarity with words in the written material, frequency of their use of textbooks, sentence order, organization of written material, and dividing them into short sentences, which influence readability level. Furthermore, readability measurement is of great importance, to ensure that students' school materials are consistent with their reading ability. Consequently, student comprehension of the real material is ensured and student feeling of depression will be avoided. Several recent studies including that of AL-Hweiti(2010) and Al-Bordi (2013) conclude that student's achievement drops if their textbooks readability is above their reading level, whatever it is.

Given the importance of computers in our current age and its strong connection with various aspects of labor market, curriculum developers must consider the need to deliver it to students in a manner consistent with their capability to enable them understand it. Thus, the researchers believe that the ministry of education made a successful option in changing the content of computer science curriculum for the eleventh grade to be consistent with their current age. However, this success must be completed by divining its intended objectives which, researchers believe, will depend on students' ability to understand its content as well as ability to deal with it. Therefore, it became important to address eleventh grade computer science textbook readability.

Significance of the study

The current study addressed a very important issue readability level of eleventh grade computer sciences textbook. However, it is beneficial in the following ways:

1. It is consistent with school textbooks and curriculum development; while the evaluation process occurs in Jordanian educational sector.
2. It might help curriculum policy makers and textbooks authors by providing them with readability level of the eleventh grade computer science textbook in Jordan.
3. It might benefit teachers by showing them the readability level of different texts from eleventh grade computer sciences book, which will contribute in

introducing these books based on their readability level.

4. Results of this study might provide educational decision makers feedbacks regarding the degree of eleventh grade computer sciences textbook consistency, with students' level and capabilities.

5. It might help in confronting reading weakness among students in general and in dealing with computer material in particular, as well as enhancing school book with questions and activities that elicit students' intellect.

Objectives of the study

The study aimed at identifying the readability level of the eleventh grade computer sciences textbook as well as identifying the effect of some variables including gender and student achievement on computer science textbooks of eleventh grade reliability level.

The problem of the study

Curriculum and textbooks in this current era have triggered great interest, for the purpose of developing, updating, and enhancing them as well as avoiding shortcomings upon implementation among which have been shown by numerous studies (Al-Momani and AL-Momani (2011) and Al-khaldi (2013)) on different Jordanian school textbook which reported low readability. However, Al-Momani and Al-Momani (2011) suggested the adoption methods to measure school textbook readability and verifying its appropriateness with students' level before adopting them. Moreover, Al-Khaldi (2013) suggested the adoption of readability within school textbooks specifications, thereby; no school texts should be approved for teaching unless their readability level has been determined. Therefore, the current study focuses on the need for curriculum development and updating, while considering a good readability level that enable students understand school textbooks easily.

Furthermore, computer books and curricula witnessed development in the market needs two years ago. In addition, the researcher, who is a computer science teacher, noticed the importance of school text for both teachers and students, the need for school textbooks be consistent with students in terms of difficulty and provide students opportunity to participate through good questions and activities, prompting students' interaction. Therefore, new textbook readability was investigated and first of which was eleventh grade computer sciences textbooks in Jordan. Thus, the research problem seeks to identify the eleventh grade computer science readability level and its relationship with student's gender and achievement level.

Questions of the study

The researcher seeks to answer the following question:

What is the readability level of eleventh grade computer science textbook and what is its correlation with some variables according to the following questions:

1. Does an eleventh grade computer science textbook readability level differ due to students' achievement?
2. Does the eleventh grade computer science textbook readability differ due to students' gender?

Limitations of the study

1. Place constraints: The study was confined to public schools at Al-Mafraq education directorate.
2. Time constraint: The study was conducted during the first semester of the 2017/2018 school academic year.
3. Topic constraint. The study was limited to measuring the eleventh grade computer science texts readability.
4. Human constraints: The study was conducted on a sample of eleventh graders at Al-Mafraq public schools.
5. Generalization of the study results will be constrained by the instrument's psychometric properties as well as subject objectivity in responding to the study instrument.

Definition of terms

Computer science textbooks

The book approved by the Ministry of Educations in Jordan for teaching eleventh graders in schools from 2016/2017 school year, contains four study units for two semesters.

Readability

Degree of ease or difficulty of the readability of the textbook is measured by the score obtained by a student on close test prepared by the researcher.

Close test

A test measuring readability level was done by omitting some words in a systematic way and the student is required to recall them and respondents are classified according to their scores on this test into three levels: Independent, educational and depressed level.

Theoretical framework and previous studies

Origin of readability

Studies on readability originated in the United States during 1940 as a result of nonexistence of textbooks that are appropriate for elementary stage students as they

were studying secondary stage textbooks, in addition to the fact that scientific research tools that were used in solving problems had developed during that period.

Readability concept

Readability is the result of reader's interaction with the reading material; which it expresses the extent of congruence between them as those interested in readability focus their attention on two basic concepts: the first of which is the reading material and different levels of its difficulty, and the other is readers and their various reading levels (Nejadat, 2000). Numerous researchers have provided various definitions for readability, among which is the degree of relative difficulty of scientific texts that students encounter in understanding their content (Bogahoos and Ismail, 2001: 119).

Furthermore, Teimeh and Mannaa (2004) emphasized that readability is the determinant difficulty or ease degree of a text through studying factors that might affect this level such as structures, vocabulary, concepts, and learning desire. (Abu Salit) 2007 believes that credibility has connotations, as it connotes written text clarity level and reader capability level to understand text content, either explicit or implicit information; and more precisely, readability construct refers to relative degree of text difficulty the reader encounter in understanding its content. Finally, Firlar and Temizyurek (2010: 646) define readability as the ability possessed by an individual to understand written text given its, simplicity and writing technicality. So, from these various definitions, readability is a process of analyzing a written text, and then to measure its ease and difficulty as well as factors influencing the success of reading and the understanding written texts.

Importance of the study of readability

Readability is a process of great importance. Authors apply it to textbooks, to help them identify educational materials specifications contained in their book and manner of presentation. It also contributes to communicating educational materials to a large segment of learners possible. However, readability gained increased interest as a result of the proven correlational relationships between high achievement and school textbooks. The readability was prepared according to readability standards (Njadat, 2000).

Factors influencing readability

Readability degree is affected by various factors; some are readers and others, related text. Here is a brief

explanation:

First: Readers related factors:

1. learners' Attitudes and Tendencies:

Among factors influencing text difficulty that are learners related is the issue of their tendencies, non-motivation for learning, since students' tendencies and their likeness of the text are among the important factors directly affecting their understanding of it (BaniSaeb, 2008).

2. Previous experience

A student's previous experience helps him understand a text; a student with rich experience about the subject relates his previous experiences and information contained in the new text (BaniSaeb, 2008).

Text readability degree is influenced with text construction factors in terms of shape content and style; so computationally, linguistically and idea intensity affects text understanding and comprehension.

Methods for measuring readability

Methods and techniques which the curricula developers and authors of school textbooks, as well as researchers can use to measure the degree of readability are numerous as indicated by previous studies. The following explains this:

Descriptive methods

Judgments technique

These are judgments made by a panel of referees on the clarity of material for the reader. This technique is also easily applied and is characterized by simplicity and quick computation. However; among its major drawbacks is variance in referees' experiences and capabilities (Basyouni, 2002). However, among the most widely used techniques is teachers' judgment since they are more suitable and more capable to perform this job for their direct contact with students studying targeted texts compared to others. Thus, they can know students' tendencies, capabilities and previous experiences in judging school textbook readability.

Quantitative methods

Using readability equations methods

These methods are predicting tools used in calculating

word and sentence variables in the written text to determine its difficulty level, the most salient of which are: Dale and shall equation, desk formula, Fry Ravidity Coraph and Fog – gunning formula.

Comprehension test

This test is based on selecting a sample of textbooks. A test is prepared when the comprehension levels are represented as classified by Bloom; translation, explanation and interpretation. However, translation is explaining and rephrasing text in a new form, using new sentences without changing the meaning embedded in the text; while explanation is reorganizing of ideas by the person who wants to translate, in his words; whereas interpretation is the induction of new indirect meaning from the direct explicit text (Saqr, 2001). This test measures general text understanding and reader's capabilities. Thus it is characterized by dealing with the reader directly.

Sentence completion test

This test is suitable to determine comprehension and understanding range, as it is composed of items to be filled by examinees with specific words or phrases, and is characterized by ease of preparation. However, among its drawbacks is the need for great efforts in scoring (Mowkly, 2002).

Close test

A test that requires examinees to deal with a text from which some words are systematically omitted and students are told to rewrite them. Consequently, he scores if he predicts the correct word (Teimeh and Mannaa, 2001). This test is also known as a test measuring readability by systemic omission for words, where student have to recall them.

Text readability levels

Independent level

The level at which a student can comprehend a text without help, and in the current study it is measured by a student attaining a score between 61 to 100% in the completion test.

Educational Level

A level at which a student, can with the teacher's help,

comprehend a text. In the current study, it was measured by students attaining a score between 41-60% in the completion test.

Depressive level

A level at which a student fails to comprehend a text, even with the teacher's help. In the current study, it was measured by student attaining a score between 0-40% on a completion test.

Based on the above mentioned, the researchers think that the readability of the school textbook is the main factor as regard the extent of its benefit. If the author of the textbook takes care of the readability criteria, the students' understanding and achievement level will increase as well.

Previous studies

This section includes some of the previous studies the researchers found in the university library, including AL-AL-Beit, Hashemite, Jordan, and Islamic university Gaza libraries, employing research engines such as Yahoo and Google.

Al-Eisa (2011) conducted a study aimed at measuring the readability of the first middle grade mathematics Textbook in Saudi Arabia and its relationship with student achievement in mathematics. A close test was administered on a sample of (292) students. The results showed a high readability level of this book in general, since majority of the students fell within the independent level as well as a weak correlation between student performance on close test and achievement in math.

Al-Bordi (2013) conducted a study aimed at measuring the second grade science textbook readability level in Saudi Arabia, in addition to determining its relation with students' achievement in science and Arabic Language. Close test was conducted on a sample of (655) students'. Results showed that science textbook readability was under the depressive level. Results also showed a weak correlation between science book readability and student achievement in Arabic Language.

Gyasi (2013) conducted a study aimed at identifying the readability level of secondary school science textbooks. Close test and fog-gunning tests were administered to a sample of (300) students. Results showed that the readability of the science books fell within the depressive readability level. However; they were appropriate for what they were designed for in a moderate fashion.

Al-Khaldi (2013) conducted a study aimed at measuring the ninth grades Islamic education textbooks readability level and identifying if topics sequence is done according to their readability. The study also aimed to find students' gender effect on readability of these books. A close test

was administered to a sample of 393 students. Results showed that textbook fell within depressive level, and no statistically significant differences due to student's gender were found. Finally, results showed that textbook topics were not sequenced according to their readability level.

Sibanda (2014) conducted a study aimed at identifying readability degree of natural sciences textbook for fourth grade in South Africa. Data were collected through interviews with some students and through the administration of close test on a sample of 48 fourth graders. Results showed that fourth grade natural sciences textbooks fell within the depressive readability level.

Abbas (2015) conducted a study aimed at identifying readability level of seventh grade Arabic Language textbook in Jordan. Close test was administered to a sample of 270 students. Results showed that readability of the texts fell within the depressive level. Results also showed that topics in these books were not sequenced according to their readability level. Results also showed statistically significant differences due to students' gender, which is in favor of females, as well as the existence of positive correlation between students' achievement and textbooks readability.

Cardak et al., (2016) conducted a study aimed at evaluating readability of Turkish seventh grade new sciences book and its appropriateness to the age level of students. The study employed flesch, fog –gunning close test and sonmez tests on a sample of 70 male and female seventh graders. Results showed that flesch and fog gunning were not suitable for Turkish languages. Results of close test showed that students cannot understand without teachers' support. However; sonmez results showed that the book was clear and understandable, and this test was the most accurate and appropriate for Turkish language.

Comments on previous studies

The current study is consistent with the studies of Abbas (2015), Al-Bordi (2013), Al-Eisa (2011) in connecting textbook readability with study achievement. Moreover, the study was consistent with the study of Abbas (2015), Al-Khaldi (2013) study in connecting book readability level with student gender, but it differ from Cardak et al., (2016) and all previous studies which investigated the degree of book appropriateness for students age as well in the books of study, which is eleventh grade computer science in Jordan; while other studies addressed other different books. The current study is unique in that it aims to identify the relationship between achievement and readability of the eleventh grade computer science textbooks in Jordan. For the best of the researchers' knowledge, there were no previous studies that addressed the relationship between readability and achievement in computer sciences textbook.

Table 1. Schools and sections from which the sample was chosen.

School	Number of sections	Sections	No. student	Total
The First- Al-Mafraq secondary school for males	3	A	19	60
		B	23	
		C	18	
Al-Mafraq secondary school for female	2	A	33	62
		C	29	
Grand Total				122

Table 2. Text sample selected from the eleventh grade textbook.

Text Number	Title	Part
1	Hard-disk	First
2	Electronic garbage	First
3	Social networks developers authorities	Second

METHODOLOGY

The current study employed correlational methodology because of its appropriateness for its nature, where researchers describe eleventh grade computer science books in Jordan through collecting, analyzing and measuring data; reaching and interpretation of results with the help of study samples tool and statistical processing.

Population of the study

The study population consisted of all the eleventh grade students' in Al-Mafraq public schools, totaling 2561 male and female students. 1206 of them are males and 1355 females. According to Al-Mafraq, directorate of education statistics, 2017/2018, the population also consisted of eleventh grade computer science textbooks, consisting of two parts; however, texts related to programming topics were excluded because they contain symbols and texts in English language.

Sample of the study

The sample of this study was purposely selected from eleventh grade students at Al-Mafraq directorate of education, and consisting of (60) males and (62) females chosen from two secondary schools: one for males which three sections and a school for females of which two sections were selected, the Table 1 below shows this.

As for texts sample, it was represented by the selection of three texts chosen randomly from computer science books for eleventh grade, for the school year 2017/2018. The researchers selected different topics from the two parts of the books, parts which students have never studied before. Table 2 shows such details.

The instrument of the study

The study employs close test to measure computer science readability level for the eleventh grade. The research tool was developed based on previous studies including Al-Bordi (2013) and Abbas (2015). In the following sequence:

Instrument validity

To establish tool's validity, it was submitted in its first draft to a panel of specialized referees in teaching methods and curricula, totaling 8 referees, and was asked to give their opinions regarding texts included in the test in its first version, and their opinions were considered when preparing the final version of the tool.

Instrument reliability

Test reliability was measured using test- retest method, where it was administered on a pilot sample from the population, but not from its sample. The sample consisted of (53) students, (25) females and (28) males, two times within a period of 14 days for the second application. After calculating the reliability coefficient using K R 20 Formula, the Correlation coefficient was (24%).

Test scoring

Each space filled with the correct word was assigned two scores. However, failure to answer correctly, both scores was not given. Scoring was carried out with the help of an experienced scorer to score the test, scoring results of researchers were compared to obtain agreement coefficient between them; however, agreement percentage was 87%.

Additionally, the following division was adopted to classify readability level.

1. Less than (41) scores.... Depressive level
2. (41- 60) score Educational level.
- 3.(61- 100) score.... Independent level.

Procedures of the study

To achieve the study objectives, the following procedures were performed.

1. Identification of research problems and questions.

Table 3. Frequencies and percentages of eleventh grade computer science book readability level.

Readability level	Males		Females		Total	
	number	%	number	%	number	%
Depressive	53	62.4	8	9.0	61	35.1
Educational	13	15.3	15	16.9	28	16.1
Independent	19	22.4	66	74.2	85	48.9
Total	85	48.6	89	51.4	174	100

*F = Frequency.

Table 4. Pearson correlation coefficient between readability and students' achievement.

Variable	Readability level	
Students	Correlation coefficient	*(0.62)
achievement	Statistical significance	(00.00)

* Significant at ($\alpha \leq 0.05$) level

2. Reviewing related educational literature and previous studies related to the subject.
3. Development of close test in its final version.
4. Getting a facilitating task letter from al-Al Beit University addressed to Al-Mafraq directorate of Education.
5. Getting a facilitating task letter from Al-Mafraq directorate of education addressed to public schools' principals to facilitate their application of the study.
6. Administering study text on the sample, scoring the test and giving marks.
7. Getting the assistance of one statistics specialist to analyze data using SPSS.
8. Suggesting some recommendations based on the results obtained.

Variables of the study**Independent variable**

- 1) Gender: it has two levels (male and female).
- 2) Study achievement: has two levels.

Dependent variable

Readability of the eleventh grade computer science in Jordan

Statistical analysis

The study used frequencies, percentage, independent samples T-Test, Pearson correlation coefficient and K-R-20 Formula.

RESULTS**Results related to the first research question:**

"What is the readability level of the eleventh grade computer sciences textbook in Jordan?" to answer this

question, frequencies and percentages of the eleventh grade computer sciences readability were calculated and Table 3 illustrates the results.

Table 3 shows that the highest percentage of subjects' distribution according to readability level of the eleventh grade computer science book, which was 48.9% for independent level, followed by the depressive level (35.1%) and finally the educational level (16.1%).

Results related to the second research question:

"Does readability level of the eleventh grade computer science book differ according to students' achievement?" Table 4 shows results.

Table 4 shows a positive relationship between readability level of the eleventh grade computer sciences book and students achievement. The correlation coefficient was 0.62 and was statistically significant at ($\alpha \leq 0.05$) level.

Results related to the third research question which says:

"Does readability level of the eleventh grade computer science book differ according to student's gender?" to answer this question, Independent Samples T- test was used in an attempt to find student's gender effect on book readability level. Table 5 shows the results.

Table 5 shows difference in readability level of the eleventh grade computer science books due to student gender, where T was (10.27) with a statistical significance at ($\alpha \leq 0.05$) level; indicating the existence of significant difference between male and female students in favor of

Table 5. Results of independent sample T-test for gender effect on readability level.

Gender	Mean	SD	T – value	Statistical Significance
Male	37.16	23.79	10.27	0.00
Female	70.13	18.30		

females suggesting that female readability level was better than that of males.

DISCUSSION

Discussion of the results related to the first question:

“What is the level of the eleventh grade computer science textbooks in Jordan?”

Results showed that majority of the study sample fell within independent level, which was 48.9%, while the remaining percentage was divided between educational level (16.1) and depressive level (35.1%) respectively.

In the light of these findings, it can be concluded that eleventh grade computer science textbooks readability level falls within the independent level, which means that ease coefficient was higher than difficulty coefficient. Thus, this can be attributed to the material content that addressed topics related to the current age and technological developments. Besides, its printing style in terms of letter size, lines' length, margins sizes, quality of paper used and the method of presenting information.

Results of this study were consistent with Al-Eisa (2011) study, where majority of the study sample fall within the independent level, but different from a group of studies in which samples fall within the depressive level; including Momani and Al, Momani (2011), Al-Bordi (2013) Gyasi (2013), Al-Khaldi (2013), Sibanda (2014), and Abbas (2015).

Therefore, the readability of computer science is the determinant of its benefit and nearness of students. Based on these results, it can be said that the eleventh graders in Jordan will achieve success in integrating with computer science books. This will result in increasing their ability to understand its content and benefit from it. This is what the ministry of education in Jordan seeks to achieve during the last three years, from these textbooks.

Discussion of the results related to second research question:

“Does readability level of the eleventh grade computer science textbooks differ due to students' achievement in that subject?”

Results showed a statistically significant positive computer science and readability degree of this book, where (r) was (0.62).

This might be attributed to the fact that previously possessed information by the students' regarding the computer material topics could be suitable and will aid them in the readability test. It can be attributed to the fact that the materials of the computer sciences textbooks for the tenth and eleventh grades contained the innovations of this age which the students are already familiar with at home and school, which might improve their level of readability in the eleventh grade.

Additionally, this might be attributed to the fact that students possess the ability to read and understand computer material of the tenth grade, as well as their ability to recall previous knowledge and information which might help them in achieving these results on the readability test regarding eleventh grade computer science book.

This finding is consistent with Abbas (2015), in that study average has a positive relationship with school textbook readability. However, this study differs from Al-Eisa (2011) and Al-Bordi (2013) in that the relationship between readability and achievement was very weak.

This finding is similar to the results of the studies of Al-Eisa (2011) and Al-Bordi (2013) as well as Abbas (2015) in connecting achievement with the readability level; where Al-eisa connected students' achievement in mathematics with readability mean of the first middle grade in math, and Al-Bordi (2013), which connected achievement with readability in science for the second middle grade and in science, and Abbas prepared (2015) an achievement test for Arabic Language book for the seventh grade and related its results to readability level of the seventh grade Arabic language book. The current study connected the tenth grade computer sciences achievement with the readability of the eleventh grade computer science book.

Discussion of the results related to the third question:

“Does readability level of the eleventh grade computer book differ due to student's gender? Results show statistically significant differences at ($\alpha \leq 0.05$) level in readability level between males and females, in favor of females, among the eleventh graders. This might be attributed to the female superiority over males in their linguistic and comprehension abilities, as well as their high abilities in recalling, and their increased motivation and desire to learn, as well as the nature of the Jordanian

society which give males more freedom than females to stay outside the home while females must remain at home.

Consequently, females spend more time at home than males and this may explain their higher achievement than males. Besides, the females show more commitment to their homework assignment and examinations as indicated by the study of Al-Momani and Al-Momani (2011).

This result is consistent with Al-Momani and Al-Momani (2011), Al-Khaldi (2013), and Abbas (2015) studies.

RECOMMENDATIONS

In light of the above results, the researchers suggest the following recommendations:

1. There is a necessity to conduct more research on readability of the computer sciences textbooks for the rest of the grades.
2. More studies should be conducted on readability of different school textbooks before applying them in the field.
3. More studies should be conducting on readability of various school books to investigate their readability when authoring and developing them as well as before generalizing and applying them.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Full Length Research Paper

Effectiveness of computer-assisted and excursion strategies on senior secondary school students' achievement in Biology towards sustainable development

Margaret Foluso Ayeni

Department of Science Education, Faculty of Education, Ekiti State University, Nigeria.

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This study examined the effectiveness of computer-assisted and excursion strategies on secondary school students' achievement in Biology towards sustainable development. The study adopted quazi experimental research design. The population consisted of all the biology students in public senior secondary schools in South West, Nigeria. The sample for the study consisted of 240 senior secondary year two (SS2) Biology students selected from six schools in the three states from South West Nigeria using multistage sampling technique. The subjects were divided into the two treatments and control groups, that is, Computer Assisted, Excursion and control groups. A forty item multiple choice test on Biology was administered to the students after exposing the experimental groups. The treatment is teaching. Three hypotheses were formulated and tested; the data generated were analyzed using t-test and Analysis of Covariance (ANCOVA). The result showed that the achievement of students in the two experimental groups were better than those in the control group. Students taught with excursion strategy achieved better than those taught with Computer Assisted strategy. Also, location has significant effect on achievement while gender has no significant effect on achievement in Biology. Based on the discoveries, it was recommended that Excursion strategies and Computer – Assisted should be employed in the teaching of Biology as innovative strategies.

Key words: Science students, teaching strategy, research, sustainable development.

INTRODUCTION

One of the values which exalt a nation is education. It is the only legacy a parent can bequeath to a child, which will continue to be with the child forever. Education is one sector that contributes greatly to the development of a nation. No wonder, Gerald et al. (2013) believed that

education is an agent of development that helps any society to fashion and model individuals to function well in any environment.

The area of science and technology is the measure of any nations development as technological growth of a

E-mail: folumargaret67@gmail.com.

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nation leads to both its social and economic development. Ogunleye and Babajide (2011) asserted that the role of science in this era of technological advancements underlines the importance of scientific knowledge in boosting the image and might of a country. Science has become such a crucial device that no nation with an intention to grow in the socio-economic orbit will bear to downplay its knowledge acquisition in schools. Teacher's roles are very vital to the educational development of a nation. The teachers are expected to devise ways of making their students develop positive attitude towards science. The most important thing is for a teacher to get used to teaching methods that will help students to adhere their learning objectives. In fact, teachers occupy an important position in the teaching and learning of any discipline. Obadare (2005) perceived teachers to be considerably imperative for a successful transformation of the educational system and also considers them to be essential to education advancement. Teachers must be aware that many factors contribute to the overall performance of students, such as teacher's methodology.

Seweje and Jegede (2005) mentioned some methods of teaching commonly used for teaching science in schools such as; discussion method laboratory methods; project method; play way method; guided discovery, Computer – Assisted instruction, Excursion methods and concept mapping among others. Each subject taught in secondary schools has its own peculiarity, which must be applied to suit the methodology in order to achieve maximum success in the teaching – learning processes. Sustainable development is the development that meets the need of the present without jeopardizing the capacity of future generations to meet their own need.

Computer-Assisted Instruction (CAI) is an educational medium in which computers are used to convey instructional content or activities. Students learn by interacting with the computer and then feedback is supplied. Asare (2010) opined that with CAI, learning becomes real, details or issues are obtained; learners learn on their own, learning becomes informal, flexible yet dynamic and whole and taking place everywhere, anytime such that learners get up – to – date information. This will give room for students to learn at their convenient time without coarsing them to do so.

Also Serin (2011) ascertained that students using CAI study better and quicker than students learning from chalk-and-talk instruction alone and also retain whatever they learnt for a period of time. Tareef (2014) found out that CAI students practiced more of time-on-task than students who were exposed to traditional instruction or tools, and reported that CAI incorporate adult learners read for self-directedness, readiness to learn, time perspective and utilization of past experience. There are numbers of teaching strategies that employ a constructivist learning theory to some degree, such as excursion – based inquiry. The use of scientific Excursion

in professional development has emerged as one of the more promising approaches of Dickerson and Dawkin (2002). Excursion provided the opportunity for more individual performance (increase certitude, improved social skill and a greater credence in individual efficacy) for students. Some students discovered that learning could be fun, sometimes to their utmost surprise.

Dillon et al. (2005) focused on the use of school field centre and farm grounds, provided proof across in range of subject that children's outdoor learning can include values and beliefs, attitudes and feelings, knowledge and understanding, actions and behaviors, personal development and social development. For many teachers and students engaged in fieldwork, the chances for personal and social development are seen as highly important. Also, due to the memorable nature of the excursion setting, they have positive impact on long-term memory

Statement of problem

In Nigeria education sector, most teachers still find it difficult to adopt some innovative methods in teaching science especially Biology. The teachers shift the blame on the inability of the government to purchase most of the gadgets needed. It was observed that, some methods of teaching seem not to engage students in critical thinking and not often give room for participation. A good classroom activity ought to give room for participation, interaction, co-operation and reflection. The conventional methods lack this qualities and this is a great disadvantage. Students who were taught with conventional method may not be able to solve problems on their own. The skill with which they could solve problem are not usually embedded in conventional methods.

Purpose of the study

The study was to determine the effect of Computer-Assisted and excursion strategies of teaching on senior secondary school students' achievement in Biology.

Research questions

The following research questions were raised to guide the study;

- (1) Would there be any difference in the achievement mean scores of students exposed to Computer Assisted and excursion strategies and their counterpart in control group?
- (2) Would there be any difference in the achievement mean scores of male and female students exposed to Computer Assisted strategies and their counterparts

Table 1. ANCOVA showing achievement mean scores of students.

Source of variation	SS	DF	MS	F cal	P
Corrected model	2354.044	3	784.681	47.642	0.00
Covariate (pretest)	7.977	1	7.977	0.4884	0.488
Group	2295.031	2	1147.515	69.671	0.000
Error	1416.456	236	16.470		
Corrected total	3770.500	239			
Total	36833.000	240			

exposed to excursion strategy?

Research hypotheses

- (1) There is no significant difference in the achievement mean scores of students exposed to Computer Assisted excursion strategies and their counterparts in control group.
- (2) There is no significant difference in the achievement mean score of male and female students taught with Computer Assisted and excursion methods.

RESEARCH DESIGN

The design adopted for the study was quazi experimental, pretest – post test control group which is as follows:

Experimental group I (CAI) $O_1 X_1 O_2$
 Experimental group II (Excursion group) $O_3 X_2 O_4$
 $O_5 C O_6$

Where O_1, O_3, O_5 = pretest observations

O_2, O_4, O_6 = post test observations

X_1 = treatment (CAI)

X_2 = treatment (excursion method)

C = Convention Method

Sample and sampling techniques

The sample for the study consisted of 240 SSII Biology students selected using multi stage sampling procedure from the three states in south-west, Nigeria. Two local government areas were selected using random sampling technique. The six schools used were selected using random sampling techniques. The forty students from each school were made up of twenty girls and twenty boys who were chosen through stratified sampling from the SS2 class of each school.

Research instrument

The research instrument used for the study was Biology Achievement Test (BAT). It consisted of forty multiple choice test items based on the selected topics in Biology. Also, adopted Computer Assisted Instruction packages were used.

Experiment procedure

The students that participated in the study were randomly

designated to the two treatment groups while the pretest was given to them. The first treatment group was instructed using Computer Assisted package while the second treatment group was instructed by taking them out to the site applicable to the topic chosen. The control groups were left with the normal classroom teaching (conventional method). The treatment was lasted for six weeks. The Biology achievement test was administered to know the effect of the treatment given.

RESULTS

H_{O1} : There is no significant difference in the achievement mean scores of students taught with Computer – Assisted excursion strategies and their counterpart in control group.

Table 1 illustrates that there is considerable difference in the achievement mean score of students taught with Computer – Assisted, excursion strategies and those in control group. $F_{cal} = 69.671$; $p < (005)$. The null hypothesis was rejected which implies that there is considerable difference in the achievement mean scores of students in the three groups.

In order to ascertain the efficacy of the treatment on students' achievement in Biology, Multiple Clarification Analysis was carried out. The result is given in Table 2. Table 2 shows that students taught using excursion strategy had the highest adjusted mean score of 29.26 (22.86 + 6.40) in Biology achievement test. The Computer- Assisted strategy group had an adjusted mean score of 24.73 (22.86 + 1.87) while those in control group had the least adjusted mean score of 14.59 (22.86+ (-8.27). This implies that Excursion and Computer -Assisted strategy is enhance students' achievement in Biology. The treatment accounted for 68% ($\eta^2 = 0.68$) of the observed variance in students' achievement in Biology.

H_{O2} : There is no significant differences in the achievement mean score of male and female students taught with excursion ad Computer – Assisted strategies.

Table 3 shows that F_{cal} (1.709) is less than F_{tab} (3.86) at 0.05 level of significance. The null hypothesis is not rejected. This implies that there is no significant variance in the achievement means scores of male and female students taught with excursion and Computer-Assisted strategies.

Table 2. Multiple Clarification Analysis(MCA) showing the achievement of students in Computer-Assisted, Excursion and control groups.

Grad mean = 22.86						
Variable + category	N	Unadjusted deviation	Eta	Adjusted for independent + covariate	Beta	
Control	80	-8.87		-8.27		
Computer – Assisted strategies	80	1.80	0.68	1.87		
Excursion strategies	80	6.46		6.40	16	
Multiple R				0.165		
Multiple R				0.018		

Table 3. ANCOVA showing achievement mean scores of student in the excursion and Computer – Assisted strategies by gender.

Source	SS	DF	MS	F cal	F tab	P
Corrected model	3228.241	6	786.062	28.433	2.68	0.000
Covariate (pretest)	1262.874	1	1062.874	38.746	3.86	0.582
Gender	8.86	1	8.86	4.46	3.86	0.254
Group	1946.431	2	1946.431	64.738	3.86	0.000
Gender group	52.828	1	52.828	1.709	3.86	0.014
Error	8872.745	231	32.684			
Corrected total	9896.268	239				
Total	168684	240				

DISCUSSION

The findings of the study demonstrated that there was significant difference in the achievement mean score of the group guided with excursion, Computer- Assisted and conventional strategies. This indicates that there was an improvement in the achievement of students resulting from their exposure to treatment. This implies that excursion strategies enhance student's achievement in Biology. This is in agreement with Dickerson and Dawkin (2002). They asserted that the use of scientific excursion in professional development as emerged as one of the more promising approach. Also Dillon et al. (2005) believed that due to the memorable nature of the excursion setting, teachers and students have positive impact on long-term memory. Also, it is in agreement with Serin (2011) that students taught with Computer-Assisted strategy study better and quicker than students learning from chalk-and-talk instruction alone and also retain whatever they learnt for a period of time. The discoveries of their research further revealed that gender had no crucial effect on students' achievement in Biology. This implies that female students are found to be as good as their male counterpart. This is in agreement with Babajide (2010) who found out that gender has no significant influence on achievement in science.

Conclusion

Based on the findings of the study students exposed to

excursion and Computer-Assisted strategies had a remarkable improvement in their achievement. This implies that the use of these strategies would be very effective and efficient in enhancing students' achievement in Biology.

Recommendations

Based on the discoveries gathered from the study, it was recommended that Usage of innovative strategies such as excursion and Computer – Assisted strategies should be adopted by science teachers in all secondary schools. Government should organize and sponsor teachers to attend workshops, seminar and conferences on the use of innovative strategies. Science teachers should try as much as possible to be up and doing in the area of using innovative instructional materials to impact knowledge to students.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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