BASE FOR
ELECTRONIC
EDUCATIONAL
SCIENCES

Base for Electronic Educational Sciences

Dear Readers,

This issue of BEDU Journal consists of the scientific studies prepared in education fields. The objective of BEDU Journal is to share distinctive, original and high-quality scientific publications with our distinguished readers and to present them for the benefit of the interested people. The journal fulfills the criteria for academic appointment and incentives and has been published regularly since 2020. We would like to express gratitude to the colleagues, authors, referees and members of the editorial board who made scientific and academic contributions to the journal, and we are anticipating their future contributions.

I would like to thank my colleagues who have contributed to the journal with their articles.

Prof. Dr. Ahmet AKKAYA
Editor

Base for Electronic Educational Sciences (BEDU)

E-ISSN: 2718-0107

Plagiarism program in which articles are scanned

SCREENED BY
✓ iThenticate®
Professional Plagiarism Prevention

Base for Electronic Educational Sciences (BEDU)

E-ISSN: 2718-0107

Base for Electronic Educational Sciences (BEDU)

E-ISSN: 2718-0107

CONTENTS

The Effect of Semantic Context and the Task Types on Turkish EFL Learners Use of English Articles: A Comparison of Pre-Intermediate and Intermediate Level Learners

Meric Akkaya Onal [1] iD

ᵃ Anadolu University School of Foreign Languages
merica@anadolu.edu.tr

Abstract

This study investigated the use of English articles in five semantic contexts by pre-intermediate and intermediate level Turkish EFL students at a state university. Specifically, it explored a) whether the accuracy of article use by the students varied with respect to the types of noun phrase (NP) contexts b) the types of errors committed by the students in using English articles, and c) whether the accuracy of article use varied with respect to the proficiency levels and the tasks that the participants carried out. The data were collected through two task types: a multiple-choice (MC) task and a written production task. The results of these tasks revealed that the accuracy of article use by students varies with respect to the types of NP contexts in both the multiple-choice task and the written production task. Moreover, each proficiency level tended to omit or substitute the articles when they make a mistake. However, the variety and frequency of these errors depended on the proficiency level of the students, type of the NP contexts, and the tasks that were given to the students. The study also revealed that the accuracy of article use varied with respect to the proficiency levels, and the tasks that were given to the students.

Key words: Article, definite article, indefinite article, noun phrase (NP), NP types, NP contexts, omission and substitution

---

[1] Corresponding author. *E-mail address*: merica@anadolu.edu.tr

Introduction

The English article system, which has been frequently used, is one of the most challenging language structures for both English as a Foreign Language (EFL) and English as a Second Language (ESL) learners. In previous studies ESL learners' acquisition of the English articles has been ascertained as a tough process (Huebner, 1983; Ionin et al., 2008; Master 1987; Parrish, 1987; Pica, 1985; Robertson, 2000; Thomas, 1989). Master (2002) associated this difficulty with the three distinctive features of the article system. First of all, the articles (a, an, the and Ø - zero article) are the most frequently occurring function words. Therefore, the conscious use of articles in the course of sustained use of the target language, such as conversation, is a demanding task to perform. Secondly, since function words are normally unstressed, it is difficult for learners to notice them as input. Last, the article system has multiple functions, which requires learners' great efforts to decide over the correct article to use for each case. Not only ESL learners but also ESL teachers predicated the difficulty of using correct articles in English (Covitt, 1976; cited in Celce-Murcia & Larsen-Freeman, 1983; Han, Chodorow & Leacock, 2006). Moreover, the speakers of article-less languages may have more difficulty in choosing the correct article use compared to the speakers of languages which have article system (Yoon, 1993). Turkish context is one of the EFL settings consisting of such learners as Turkish and English do not have a one-to-one correspondence with regard to the article system.

Background

The acquisition of English articles is a difficult process for most of the EFL and ESL learners. Many studies (e.g., Huebner, 1983; Master, 1987; Parish, 1987; Thomas, 1989; Murphy, 1997; Leung, 2001, among many others) have revealed that L2 English learners make errors in using English articles such as omitting, overusing and/or misusing. Although this case was examined in Turkish context, the researchers mostly investigated the use of English articles either with one proficiency level (e.g., Ürkmez, 2003) or with two or more proficiency levels which are not close to each other (e.g., Önen, 2007) and with a limited number of participants, or the limited types of NP environments as in Yılmaz's (2006) study. Moreover, to my knowledge, there has been no recent study on the use of the English articles considering five types of noun phrase (NP) environments through a receptive and a productive task conducted with Turkish tertiary level students who are considered as "independent users" according to the Common European Framework of Reference (CEFR).

English article system

When English article system is taken into account, basically, two marking terms are used: definiteness and indefiniteness. English uses free prenominal morphemes to indicate the definiteness and indefiniteness of a noun phrase (NP). In general, 'the' marks definite nouns, and 'a' marks indefinite ones. The definite article in English displays that the NP is familiar and identifiable by both the speaker and hearer, and will be demonstrated as [+/-speaker] and [+/-hearer]. That the noun refers to a particular example of something indicates the major use of the definite article *the* (Richard, Platt, & Platt, 1992). They also pointed out that when a noun refers to something general or when the speaker has not something identified the noun yet, then the indefinite article *a/an* is preferred, as in the following example:

(1) I bought *a* book and *a* DVD. *The* book was about an immigrant's life and *the* DVD was about a fictional future life in another planet.

In this example the two entities, *book* and *DVD*, are initially known only to the speaker and are introduced with an indefinite article (*a* book, *a* DVD). If the speaker mentions about the same entities in subsequent phrases or sentences, one or both entities require the use of a definite article. The main reason for this is that the entities now constitute shared knowledge between the speaker and the hearer, [+speaker] and [+hearer], and they are part of the common ground. That is to say, familiarity is established through linguistic means, namely the definite phrases signal referents available in the previous linguistic context with the use of indefinite noun phrases.

Definite articles can also have associative uses named as bridging uses, whereby a

referent becomes definite without previous introduction into discourse but by reference to shared world knowledge between the speaker and the hearer, as in (2):

(2) Jane wanted to open a jar. She removed the lid and scooped out some jam.

In (2), although the definite NP *the lid* constitutes a first mention definite expression, since it is shared world knowledge between the speaker and the hearer, the definite article is used with the entity *lid.*

Indefinite NPs in English can also take a non-referential reading as in (3):

(3) I would like a pen to fill the form.

In (3) the entity denoted by the indefinite NP is not known to either the speaker or the hearer. It refers to an unspecified pen that has the property of belonging to the class of 'pens' rather than to a specific pen.

Certain noun phrases sometimes do not refer to particular individuals/objects, and considered as non-referential. These non-referential NPs can also constitute complements of predicates such as be or have, as in (4) below:

(4) A referee has a whistle.

In this context, the noun phrase a whistle is part of the predicate have + indefinite NP and is within the scope of another indefinite noun phrase a policeman. This is called the predicational use of indefinite articles, and in such uses, the entities denoted by the two NPs are in an associative relationship because it is shared world knowledge that referees have whistles.

Sometimes, certain nouns do not require an article at all. In that case the *zero article* is used. Yotsukura (1970) suggests there were two types of *zero article.* He found it necessary to separate two types of noun phrases (NP) occurring without tangible articles, which he defined as the *zero forms.* This is in parallel with the opinion of Sinclair (1991), Master (1997) and Chesterman (2005), who separated *zero article* (indefinite, with mass and plural) and *null article* (definite, with singular proper nouns and some singular count nouns). The following sentences underpin the differences:

(5) *Elephants* are huge animals.

(6) I can see *Jupiter* tonight.

In (5) *elephants* are used in plural form and in indefinite context, therefore, does not need any article, which is defined as zero article. However, in (6), as *Jupiter* is a definite proper noun, the use of article is named as null article.

1.1. NP environments in English

The articles *the, a(n),* and Ø do not merely convey a lexical meaning. Instead, they mark definiteness, genericness, and referentiality. Thus, the acquisition of these articles needs to be examined together with the noun phrase (NP) contexts for the appearance of articles. Bickerton (1981) was the first researcher who employed the classification of the semantic function of an NP and made a significant contribution to the existing literature. He proposed two discourse features of referentiality. The first one was whether the noun has a specific referent [+/- SR], and the second was whether it is known by the hearer [+/- HK]. Huebner (1983, 1985) developed a system of analysis based on Bickerton's distinctions ([+/- SR], [+/- HK]). Taking these two binary features into consideration, he classified the semantic functions of the NPs into four types: Type 1 [-SR; +HK], Type 2 [+SR; +HK], Type 3 [+SR; -HK], and Type 4 [-SR; -HK]. His classification focuses not only on the presence or absence of articles in obligatory contexts, but also on the semantic types of NPs and the article usage for each type. His classification as well as idiomatic and conventional uses of *a/an, the* and *Ø,* which were classified as Type 5 by Butler (2002), Ekiert (2004), and Thomas (1989), constituted the core classification of this study (See Figure 1).

2. Type 1	3. [-SR; +HK]	4. generics
5. Type 2	6. [+SR; +HK]	7. referential definites
8. Type 3	9. [+SR; -HK]	10. referential indefinites
11. Type 4	12. [-SR; -HK]	13. non-referentials
14. Type 5	15. idiomatic and conventional uses of a/an, the, and Ø	

Figure 1. NP Types

In Type 1, which is considered as - Specific Referent, + Hearer Knowledge ([-SR; +HK]), nouns are called generics. A generic noun refers to all or most members of an entity that can be identified by the hearer from general knowledge. All three articles a/an, the, Ø may take place in this type as all of them may express generic meaning, as in the following example:

> A cat likes mice.
>
> The cat likes mice
>
> Ø Cats like mice.

In Type 2, which is considered as + Specific Referent, + Hearer Knowledge ([+SR; +HK]), nouns are called referential definites. These referential definites can be categorized as previous mention, specified by entailment, specified by definition, unique in all contexts, and unique in a given context, and all of these categories require *the*, as in:

> The shade on this lamp is really ugly.
>
> I saw a strange man standing at the gate.
>
> There are nine planets travelling around the sun.
>
> We rented a boat last summer in Antalya. Unfortunately, the boat hit another boat and sank.

Type 3 is considered as + Specific Referent, - Hearer Knowledge ([+SR; -HK]), and nouns are called referential indefinites as these nouns are mentioned for the first time and their referent is identifiable to the speaker but not to the listener. They are marked with *a/an* or *Ø*.

> I keep sending Ø messages to him.
>
> My computer has a new sound card.

Type 4 is considered as - Specific Referent, - Hearer Knowledge, *and represented* as [-SR; -HK]. These are called non-referentials, and marked with *a/an,* and *Ø*. The difference between Type 3 and Type 4 is that in Type 4 nouns are nonspecific for both the speaker and the listener.

> Love and hate are Ø two extremes.
>
> What's the sex of your baby? It's a boy.

Finally, Type 5 comprises idiomatic expressions and conventional uses of all articles, *a/an, the* and *Ø,* as in the following examples:

> Sally Ride was the first American in Ø space.
>
> Writing letters is a pain in the neck.

Studies on the article acquisition by L2 learners

The accuracy on the use of English article system has been explored several times in the literature. Yet, despite having extensive research on the L2 acquisition of articles (Chaudron & Parker, 1990; Butler, 2002; Jarvis, 2002; Kharma, 1981; Liu & Gleason, 2002; Mizuno, 1999; Yamada & Matsuura, 1982; Yoon, 1993), it is undeniable that some of the researchers were mainly interested in the acquisition of articles rather than the acquisition of the grammatical morphemes in general (e.g., Master, 1987; Parrish, 1987; Tarone & Parish, 1988; Thomas, 1989). The early studies looked mostly into the presence or absence of articles in obligatory contexts. However, Huebner (1983) opened up a new avenue of research on L2 article acquisition by employing Bickerton's (1981) noun classification system. Butler (2002), who employed Huebner's (1983) semantic wheel, was another researcher who focused on the reasons of difficulties that Japanese EFL learners faced while acquiring the English articles. Ekiert (2004) also emphasized the difficulty of acquiring these articles, and claimed that this difficulty might vary according to the level of the learners. For some researchers including Hiki (1991), Butler (2002) and White (2009), the learners' finding the use of articles in accordance with the countability challenging is the chief reason of this difficulty.

Liu and Gleason (2002) were the other leading researchers who investigated the acquisition of the definite article by ESL learners. They examined the nongeneric use of the definite article *the* in four categories, and claimed that ESL students acquire situation use first, cultural use last, and structural and textual uses in between. Also, in the process of the acquisition of *the*, the more proficient an ESL learner, the less underuse of obligatory use of *the* was observed. Trenkic (2014), another prevailing researcher, suggested that structures that are difficult to process in comprehension are often the same ones with which L2 users struggle in production. There are two main reasons why L2 grammar may not be processed in a target-like way. The first is language transfer vis a vis learners' extensive experience with their first language (L1) may influence how they process aspects of L2 grammar. In addition to the L1-specific transfer effects, L2 processing may generally be less automatic and more resource-draining than L1 processing.

Among these researchers, it was Master (1997) and Parish (1987) who posited that Ø article dominates in all environments for articles used by L2 learners, particularly the ones whose L1s lack articles. Parrish (1987) proposed that the Ø article was acquired first, followed by the definite article, and finally the indefinite article. In a similar vein, Master (1997) concluded that, "the first article that seems to be acquired by [-ART] speakers is Ø" (p. 216). He also reports that the overuse of Ø decreases with an increase in proficiency level, although the overuse of Ø persists more than overuse of the other articles. Liu and Gleason (2002) reexamined Master's data and offered a new interpretation of the overuse of the Ø article and underuse of *the*. They suggested that the reason for this was that the two articles, namely Ø and *the*, are acquired rather late (p. 5). The hypothesis was justified by Young's (1996) data on the use of articles by Czech and Slovak [-ART] learners of English, and he claimed that this problem persevered even at the more advanced stages. In a similar vein, on the basis of a study conducted with Turkish EFL learners, Ürkmez (2003) suggested that the Ø article was the most overgeneralized, and *the* was the second most overgeneralized article. On the contrary, Yılmaz (2006) pointed out that definite contexts are perceived earlier than indefinite contexts.

Chan (2019) investigated the use of English articles and the types of errors Cantonese learners made in their free writing tasks. The findings revealed that over-extension, a superfluous use of article, and under-extension, the omission of an article, occur the most while almost no co-occurrence errors, the occurrence of an article with another determiner, were detected.

Qian, Li and Cheng (2021) examined the accurate use of articles (a, the and Ø) two different levels (Low and Medium) of Chinese EFL learners via three tasks. Both groups demonstrated accurate usages in definiteness and specificity contexts rather than zero-licensing contexts. Also, the researchers found inconsistent results in the sense of the

proficiency level on the variability in learners' article selections.

However, the acquisition of the English article system has still been an issue to be investigated. The previous comparative studies mainly targeted the low and advanced level learners' acquisition of the articles. Yet, pre-intermediate and intermediate level learners' use of these articles might be of importance, especially in Turkish context, which lacks the overt use of articles. Thus, the following research questions were inquired to be able to find out the accurate use of English articles considering the five semantic environments:

1. Does the accuracy of article use by Turkish EFL learners vary according to the five types of noun phrase contexts?

    a. Does the accuracy of article use by Turkish EFL learners vary with respect to proficiency level?

    b. Does the accuracy of article use by Turkish EFL learners vary according to the tasks?

2. What type of errors do Turkish EFL learners commit in these five article contexts?

    a. Specifically, do they tend to omit and/or substitute the articles?

Methodology

Participants

A homogenous group of 50 Turkish EFL learners volunteered to participate in the study. The half of the participants were pre-intermediate and the other half was intermediate level learners, all of whom were at tertiary level and studying at Anadolu University School of Foreign Languages at the time of data collection. The reason for choosing pre-intermediate and intermediate level students was that the lower level students, particularly the beginner and elementary level learners, did not have enough competence and knowledge on the use of English article system as they were not instructed on the acquisition of these articles specifically. Therefore, it seems useless to explore the accuracy of the use of these articles by these lower level language learners. Pre-intermediate level group was consisted of 14 male and 11 female students. On the other hand, intermediate level group comprised 15 male and 10 female students. The level of the participants was determined at the very beginning of 2017-2018 Fall term with a proficiency test based on the Global Scale of English (GSE). GSE is a scale from 10 to 90, which pinpoints the four skills; speaking, listening, reading and writing as well as grammar and vocabulary, and can be regarded as an extension of Common European Framework of Reference (CEFR). Pre-intermediate level refers to B level on this scale, whereas intermediate level refers to A level at AUSFL context.

Instruments

In order to analyze the use of English articles by the participants, two types of instruments were utilized. The first one was a multiple-choice task (MC), in which the participants chose the correct article *a/an, the* or *Ø* (See Appendix A). MC task consisted of forty-four sentences, and seventy-five obligatory uses of these articles across five NP types; namely, fifteen instances for each type of NP appeared in the task. The learners were given twenty minutes to complete the task. The task was piloted and applied by Önen (2007) at Pamukkale University with 45 EFL learners. The task items were adapted from Ekiert (2004), who adapted the items from Butler (2002), Liu and Gleason (2002) and Master (1994). Also, two of the sentences were adapted from Murcia & Freeman (1999) and Hawkins (2001). The second data tool was a written production task. The students' writings were downloaded from an online platform called Turnitin where they uploaded their written tasks in due course. As the syllabus for each level was designed accordingly, the tasks were not identical. For the pre-intermediate level, students' writing task on "writing about a new experience" were collected, and for the intermediate level, students' writings on "writing a story" were gathered (See Appendix C and D for sample student written tasks). Since these two tasks were similar to one another among the other tasks, they were deliberately chosen as the second data tool for this study.

Procedure and Data Analysis

The data gathered from the MC task were collected within the 12th week of the Fall term. The participants were given twenty minutes to complete the task. All of the students took the task in their own classes under their class teachers' supervision. The papers were grouped according to the level of the participants. Meanwhile, the participants' writing tasks were downloaded from the Turnitin and grouped according to the levels. Each MC paper was assigned a number, and the same numbers were given to the same students' written production tasks. In short, each number of the two tasks represented the same participant. The MC task answers were analyzed with the help of an answer key, which was prepared beforehand (See Appendix B). The number of correct uses of each student from each group as well the misuse and the missing answers in the five NP contexts were calculated and entered into Statistics Package for Social Sciences (SPSS) to be able to obtain the frequencies of the uses. In addition, the difference in the accurate use of these articles between two groups was also evaluated.

For the written production task, first of all, the writings of each student were downloaded and then, the accurate, misused and missing articles in these five NP contexts were calculated. In order to obtain better results, two experienced colleagues, working at the same institution followed the same procedure, and examined all of the papers one by one. In order to set the standard among these three instructors, first of all, a norming session was organized, which took approximately one hour. The instructors and the researcher came together and looked into two different writing tasks from each group. We analyzed the writings in terms of accuracy, misuse and missing article by using color-codes (See Appendix C and D). The instructors crosschecked their answers to see whether there was any mismatch. Later, each instructor analyzed each student's paper in two days and came together to check the final results for each student's paper. If there was any mismatch, we negotiated and came up with a common consensus. While analyzing the data, first of all, the required articles in five NP contexts in each paper were determined, and then the data gathered were entered into SPSS. For each written task, first the number of the NP context was entered. Next, the article required in that context and the article used by the participant was entered, which lead to see whether the students omitted the necessary article, or substituted it with another one. As a final step, the number of the accurate and inaccurate uses of the articles as well as the omission and the substitution errors were counted.

Results and Discussion

This study investigated the use of English articles in five semantic contexts by pre-intermediate and intermediate level Turkish EFL students through two instruments: a multiple-choice test and a written production task. For the first research question and its sub-questions, which attempted to find out the accurate use of the articles in five types of NP contexts, and whether the accuracy of use vary with respect to the level and tasks, both the MC tasks and the written production tasks were analyzed.

For the MC tasks, when intermediate level students' accuracy was taken into account, the results of the study indicated that in all NP contexts, the accurate uses were higher than the misuses (See Figure 2). To be more specific, in Type 1 [-SR; +HR], although 23 items were missing, students gave 235 accurate and 117 inaccurate answers to the items. In Type 2 [+SR; +HR], there were only 9 missing answers, and the students performed much better than Type 1 as they gave 58 inaccurate answers and 308 accurate answers. When Type 3 [+SR; -HR] is examined, it can be concluded that the participants performed the best in the use of articles in this semantic context with a number of 348 accurate, 25 inaccurate and 2 missing answers. For the fourth type, Type 4 [-SR; -HR], the participants performance was very similar to the one in the use of Type 2 with a number of total 305 correct, 64 incorrect and 6 missing answers. Students accomplished the least success in the use of the last NP context, Type 5, which included idiomatic or conventional uses, with 217 accurate, 135 inaccurate and 23 missing answers.
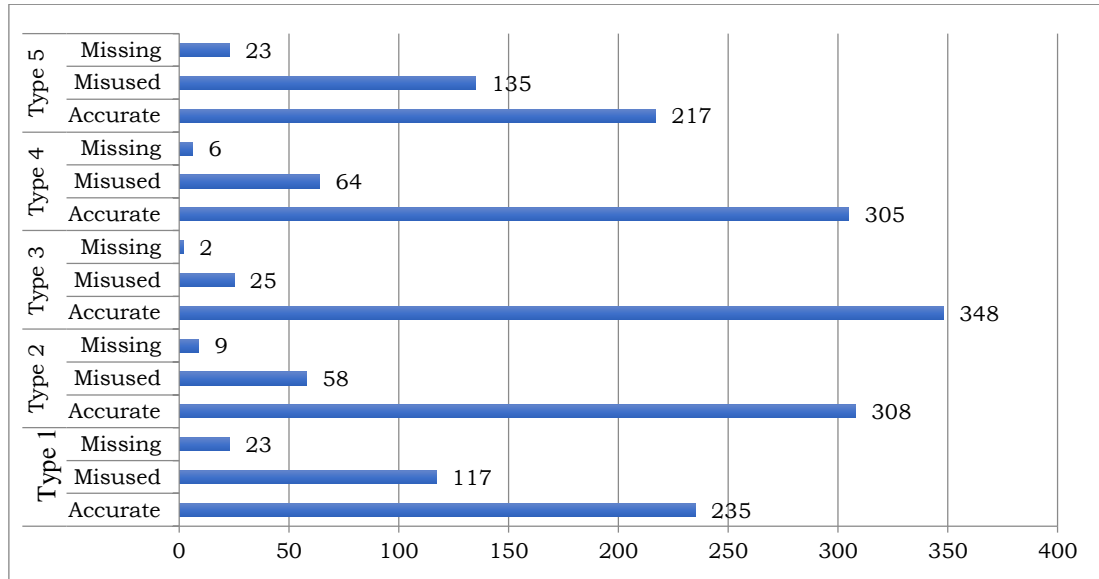
Figure 2. Use of Articles by Intermediate Level Learners in the Multiple-Choice Task

The data generated from the performance of the pre-intermediate level learners in MC task was reported in Figure 3. Except Type 5, participants' accurate performance was higher than the misused and missing ones. In terms of the first type, Type 1 [-SR; +HR], participants answered 206 items accurately, 151 items inaccurately and did not answer 18 items at all. For Type 2 [+SR; +HR], there were 271 correct, 92 incorrect and 12 missing items. Similar to the intermediate level learners, pre-intermediate level students gave more accurate answers to Type 2 questions when compared to Type 1. As in intermediate group, the findings displayed that the best performance was seen in Type 3 [+SR; -HR] with 297 correct, 72 incorrect and 6 missing answers. The scores in Type 4 [-SR; -HR] were similar to the scores in Type 2 as there were 275 accurate, 87 misused and 13 missing items. Only in Type 5, which was defined as idiomatic or conventional uses, the misused items outweighed the accurate ones. Particularly, students gave 161 correct and 198 incorrect answers as well as 16 missing answers.

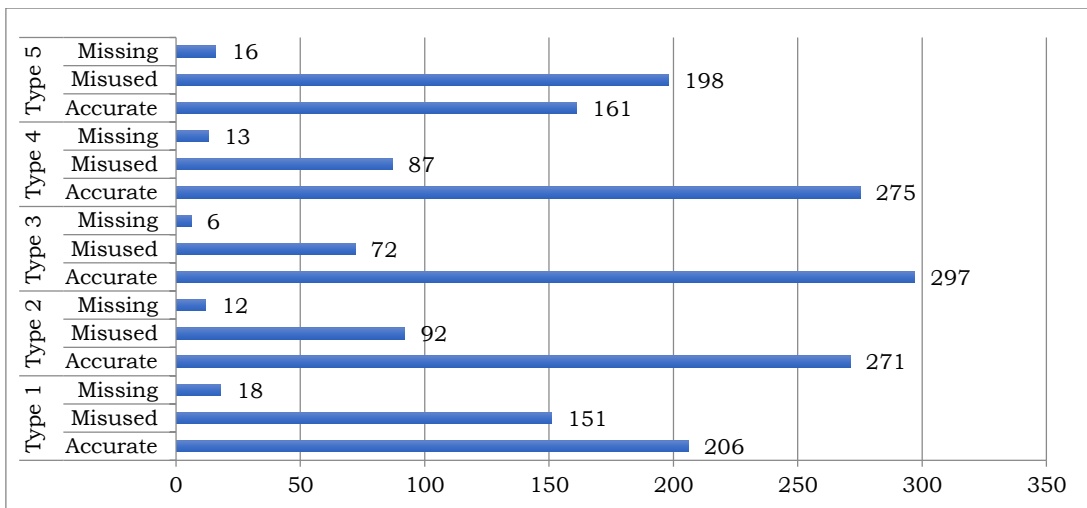*Figure 3.* Use of Articles by Pre-Intermediate Level Learners in the Multiple-Choice Task

Although Master (1997) and Parish (1987) claimed that zero article dominates in all environments for articles used by L2 learners, particularly the ones whose L1s lack articles, the participants' performance was relatively good in the Type 2 [+SR; +HR], which is used

with definite article *the.* Yet, Ekiert (2004) claimed that difficulty might vary according to the level of the learners, and for the intermediate level learners the acquisition of the definite article might not be challenging. When Type 3 is examined, it can be concluded that the participants performed the best in the use of articles in this semantic context in both groups. This is in line with Önen (2007), who conducted a research with Turkish university students at different proficiency levels. She found that in all levels, learners did the best in Type 3 [+SR; -HR]. Moreover, the findings of the study were parallel to Ekiert's (2004), who examined the Polish students' use of articles in EFL and ESL settings and Önen's (2007) findings. Furthermore, in both studies, Type 1, [-SR; +HR] and Type 5, idiomatic and conventional uses, were the most challenging uses of English articles. In addition, Liu and Gleason (2002) also suggested that the use of definite article *the* was the most challenging in cultural use, which was in consonance with the findings of the current study.

For the written production tasks, the data in the current study suggest that the intermediate level learners performed best in the use of Type 2 [+SR; +HR], with a number of 187 accurate instances though there were 40 missing obligatory uses. It was followed by Type 3 [+SR; -HR], Type 5, Type 4 [-SR; -HR], and Type 1 [-SR; +HR], from the highest to the lowest in terms of accuracy (See Figure 4).
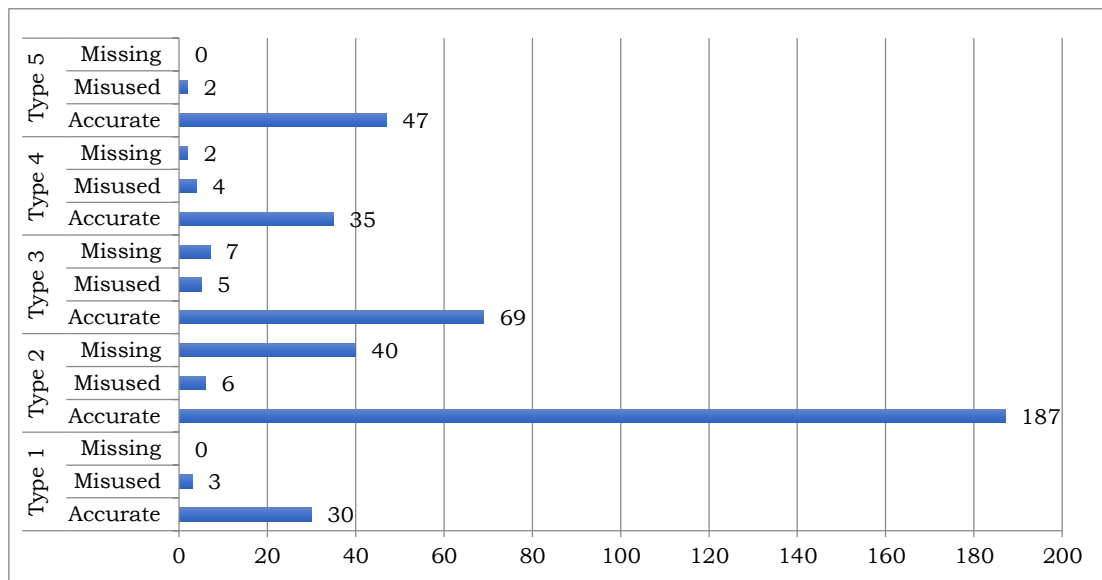
Figure 4. Use of Articles by Intermediate Level Learners in Written Production Task

The pre-intermediate level learners, on the other hand, displayed similar performance in the use of Type 2 and Type 5, which gained the highest accurate scores (52 correct instances) among other NP types. This was followed by Type 3 (32 instances), Type 1 (31 instances) and Type 4 (23 instances), from the most accurate to the least.
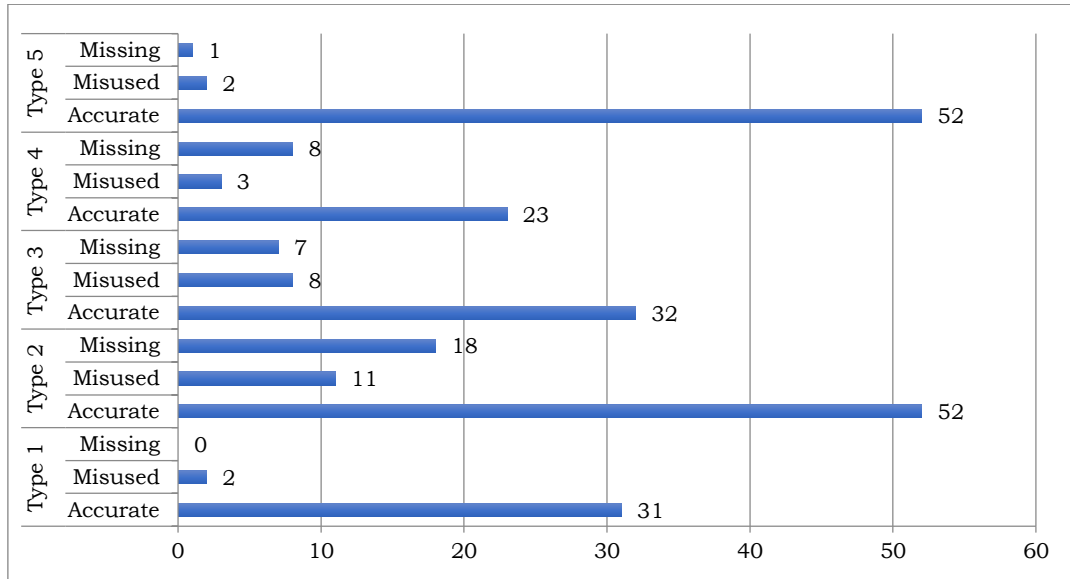
Figure 5. Use of Articles by Pre-Intermediate Level Learners in Written Production Task

In order to answer the question (1a), which inquired whether the accuracy of article use by Turkish EFL learners vary with respect to proficiency level, the answers to the MC and written tasks of each group were analyzed and compared (See Figure 6 and 7). When the MC scores were taken into account, it can be inferred that even though the number of the missing items was quite similar in each group, 63 missing items in intermediate and 65 in pre-intermediate, the intermediate level students performed better than the pre-intermediate level learners in all NP types. The findings were in agreement with Ekiert (2004), who suggested that the difficulty in acquiring the article system might vary with respect to the proficiency level of the learners. Likewise, when written production task scores were compared, it can be concluded that the intermediate level learners performed better than the pre-intermediate level participants except in the use of Type 5. Pre-intermediate level learners did slightly better than the intermediate level participants.

Figure 6. Use of Accurate Articles in the Multiple-Choice Task Across Levels
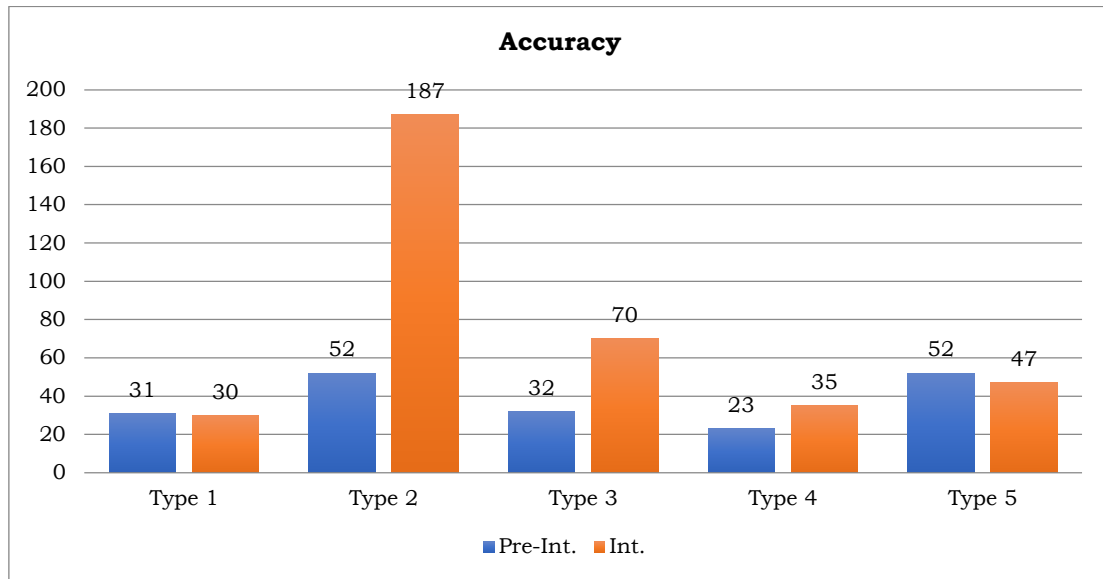
Figure 7. Use of Accurate Articles in Written Production Task Across Levels

As suggested by various researchers (e.g., Hiki; 1991, Butler; 2002; Ekiert, 2004 and White, 2009), the proficiency level plays an important role on the accurate choice of English articles. Specifically, learners who are more proficient are expected to master the use of articles better.

For the question (1b), which explored whether the accuracy of the article use by Turkish EFL learners vary with respect to the task type, both MC scores and written production scores were examined and compared (See Figure 6 and 7). The results of the data yielded that in MC the most accurate answers were employed in the use of Type 3, whereas in written production task, both groups performed better in using Type 2. The reason for this could be the former task was a receptive one and the latter task was a productive one. This may be because, as Trenkic (2014) proposed, L2 structures that are difficult to process in comprehension are often the same ones with which L2 users struggle in production.

In order to answer the second research question and its subquestion, which inquired whether the participants tended to omit and/or substitute the articles, the written production tasks were examined. The results demonstrated that the participants did not miss any obligatory uses in the use of Type 5 and Type 1. Yet, the highest missing score was obtained in the use of Type 2, with 40 instances, followed by Type 3 and Type 4 respectively. The highest misuse was reported in the use of Type 2, followed by Type 3, Type 4, Type 1 and Type 5, respectively (See Figure 4, 5, 6 and 7). The pre-intermediate level students were examined, it can be inferred that they did not miss any obligatory uses in the use of Type 1, and there was only one instance displayed in the use of Type 5. Yet, the highest missing score was obtained in the use of Type 2, with 18 instances, followed by Type 4 and Type 3, respectively. The highest misuse was reported in the use of Type 2, followed by Type 3, Type 4, and Type 1 and Type 5 in a similar amount (See Figure 4 and 5).
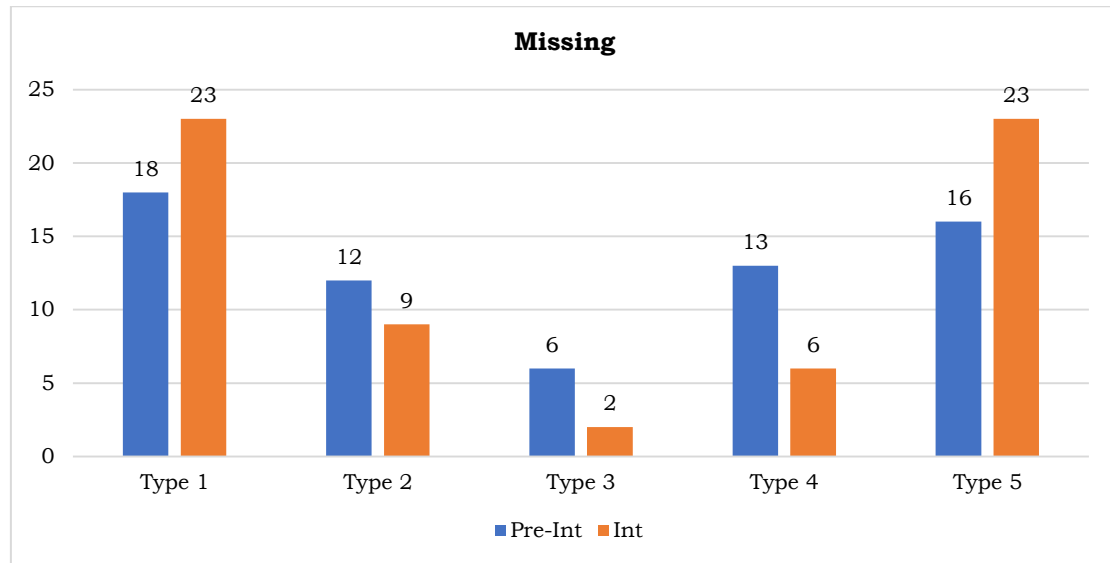
Figure 8. Use of Missing Articles in the Multiple-Choice Task Across Levels
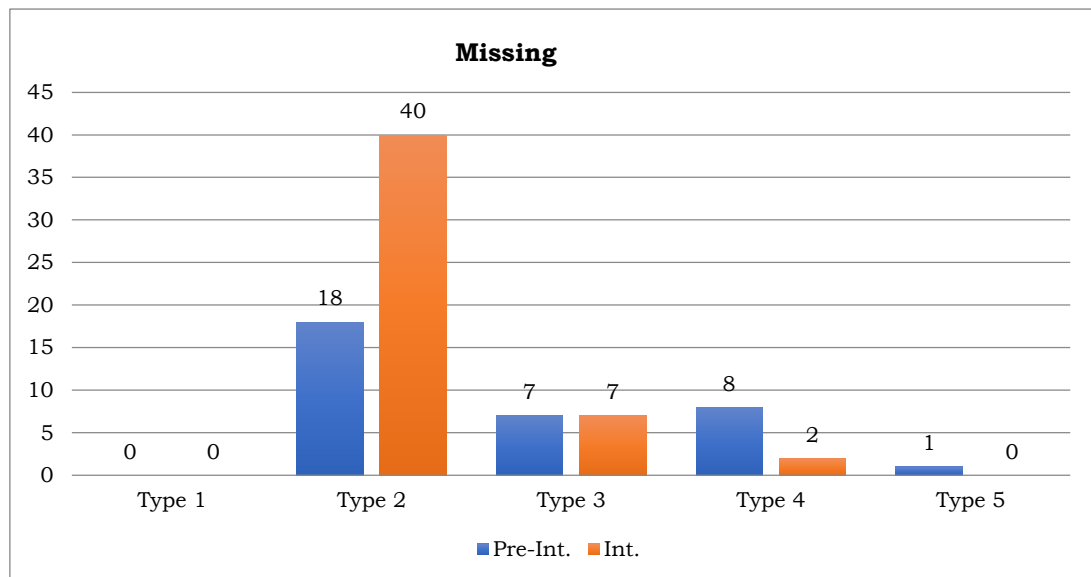
Figure 9. Use of Missing Articles in Written Production Task Across Levels
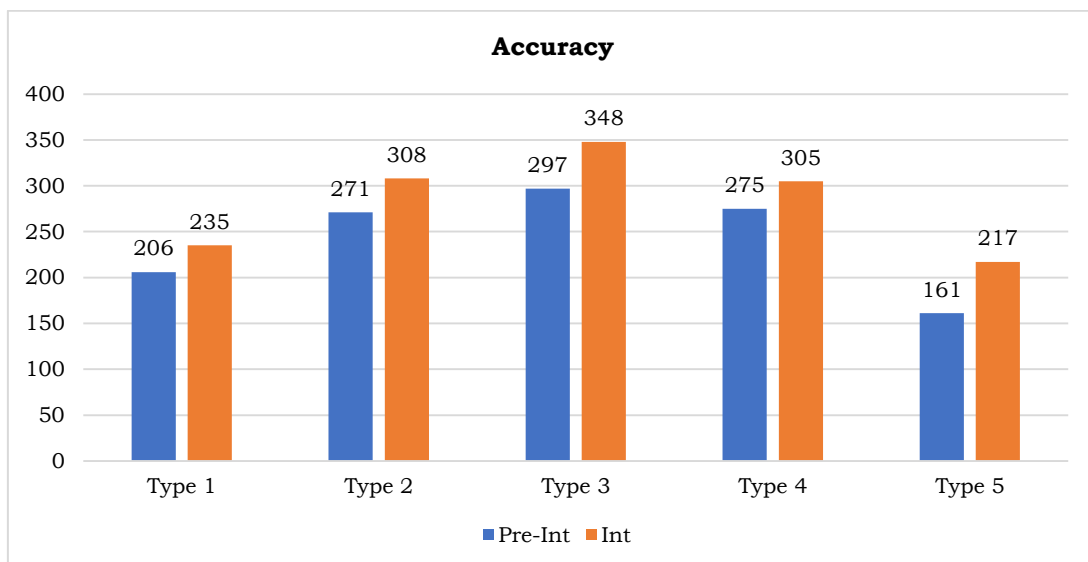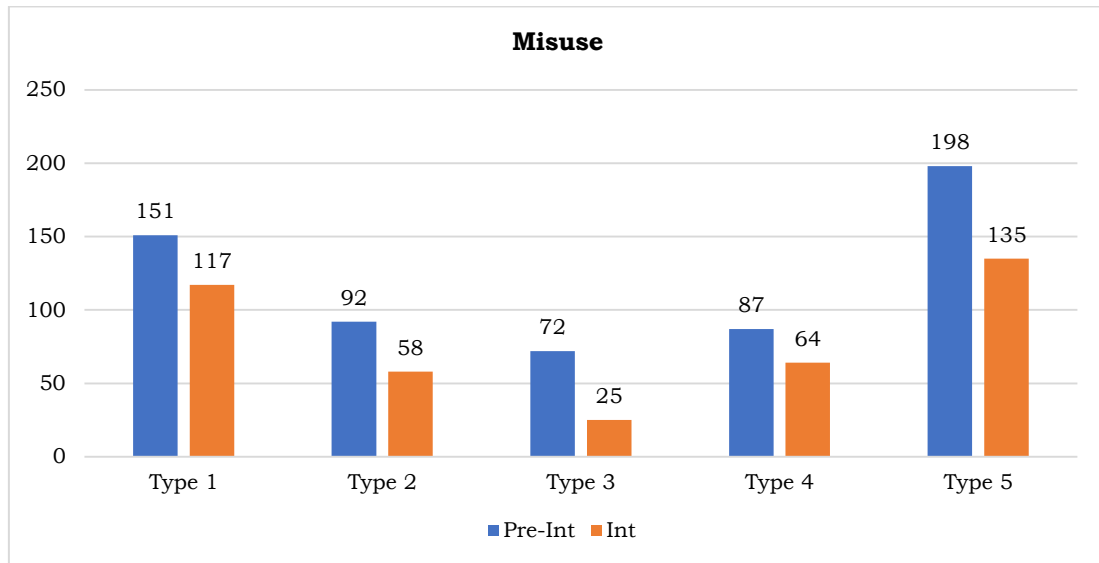
Figure 10. Use of Inaccurate Articles in the Multiple-Choice Task Across Levels
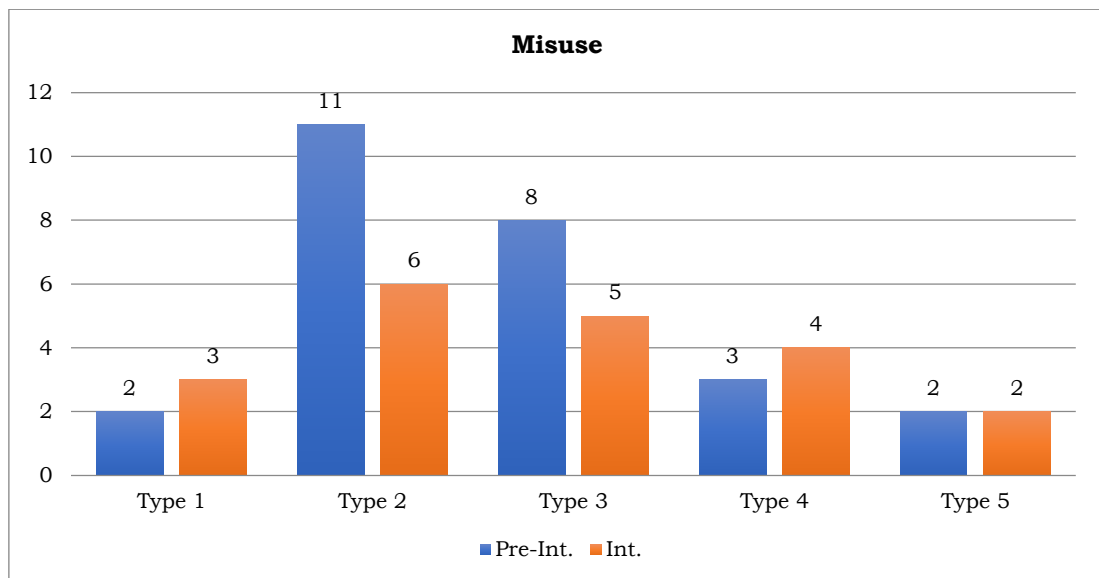
Figure 11. Use of Inaccurate Articles in the Written Production Tasks Across Levels

On the contrary to the MC scores, in which Type 3 had the highest score among other NP types, in written production task, the both groups used Type 2 more accurately. That is, it can be concluded that both pre-intermediate and intermediate level learners used the definite article *the* more than the others, thus, performed better. The reason may be because the was emphasized more in the language classrooms, especially when the native languages of the learners do not have any article system. Although Ekiert (2004) claimed that difficulty might vary according to the level of the learners, and for the pre-intermediate level learners, similar to the intermediate students, the use of the definite article was not that challenging, which is in line with the findings of Qian, et. al. (2021). Furthermore, in both groups, the highest misuse was observed in the use of Type 5. The reason for this can be the learners' lacking cultural knowledge of the target language, and is in line with Liu and Gleason (2002). They underpinned that the use of definite article *the* was the most challenging in cultural use.

Conclusion

This study investigated the use of English articles in five different semantic contexts through two task types: a receptive and a productive task. The participants were pre-intermediate and intermediate level EFL learners studying at Anadolu University School of Foreign Languages. The data yielded by this study provide convincing evidence that the proficiency level plays an important role on the accuracy of article selection. Also, the most challenging article use was observed in Type 5, which was used in idiomatic and/or conventional uses of a/an, the and zero article. This finding was in line with Liu and Gleason (2002) and Önen (2007). Furthermore, it can be inferred that the participants tended to omit or substitute data when they made mistakes in the use of articles.

As for the limitations of the present study, it should be noted that only a limited number of participants took part in the study, which made it difficult to make generalizations about the use of English article system. Another limitation could be the data instruments. As for the written production tasks, may be because of the task type, which was writing about an experiment and writing a story, the distribution of the instances of five NP types was not equal. In future studies, it would be wise to gather more written data so as to obtain more various NP environments.

The English article system is considered as one the most difficult structural elements of English grammar for ESL and EFL learners in acquiring English. It is obvious that the acquisition and the correct use of English articles are among the most problematic structures for most ESL learners (Chodorow, Gamon & Tetreault, 2010; Liu & Gleason, 2002; Master, 1990). If the learners' native language lacks overt articles, or employs only one or two of them, it leads to extra difficulties for them in acquiring the English articles, as in the case of Turkish context. Some studies as in Murphy (1997) and Robertson (2002) acknowledge the articles' being *unteachable.* The reason for this could be the inability to process L2 morphosyntactic information in a target-like manner, particularly in productive tasks. As Trenkic (2014) claimed learners have the same amount of difficulty in comprehending the structure process and producing the language; and one reason may be the negative L1 transfer. In particular, learners' extensive experience with their first language may influence how they process aspects of L2 grammar.

Another reason might be the lack of clear-cut rules for article selection. Therefore, it could be better for course designer and language teachers to give more attention to the article rules and their semantic environments. Another reason might be most Turkish EFL learners do not seem to understand the logic behind English articles and thus commit many errors while using them. In addition to this problem, some Turkish EFL teachers may also have trouble with English articles, possibly because they face difficulties in identifying their students' errors in article usage, determining the causes of these errors. Thus, the English teachers need to be more cautious when teaching the English article system.

References

Bickerton, D. (1981). *Roots of language.* Ann Arbor: Karoma.

Butler, Y. (2002). Second language learners' theories on the use of English articles: An analysis of the metalinguistic knowledge used by Japanese students in acquiring the English article system. *Studies in Second Language Acquisition, 24,* 451-480.

Celce-Murcia, M., & Larsen-Freeman, D. (1983). The Grammar Book: An ESL/EFLTeacher's Course.

Chan, A. (2019). Typology and contexts of article errors: Investigation into the use of English articles by Hong Kong Cantonese ESL learners. *International Review of Applied Linguistics in Language Teaching*, (1). https://offcampus.anadolu.edu.tr:2206/10.1515/iral-2018-0268

Chaudron, C., & Parker, K. (1990). Discourse markedness and structural markedness: The acquisition of English noun phrases. *Studies in Second Language Acquisition*, *12*(1), 43-64.

Chesterman, A. (2005). *On definiteness: A study with special reference to English and Finnish* (Vol. 56). Cambridge University Press.

Chodorow, M., Gamon, M., & Tetreault, J. (2010). The utility of article and preposition error correction systems for English language learners: Feedback and assessment. *Language Testing*, *27*(3), 419-436.

Covitt, R. I. (1976). *Some problematic grammar areas for ESL teachers* (Doctoral dissertation, University of California, Los Angeles).

Dulay, H., Burt, M., & Krashen, S. (1982). *Language two.* Oxford: Oxford University Press.

Ekiert, M. (2004). Acquisition of the English article system by speakers of Polish in ESL and EFL settings. http://www.tc.columbia.edu/tesolalwebjournal/Ekiert2004.pdf

Goad, H., & White, L. (2009). Articles in Turkish/English interlanguage revisited. *Second language acquisition of articles: Empirical findings and theoretical implications. John Benjamins Publishing*, *49*, 201-232.

Han, N. R., Chodorow, M., & Leacock, C. (2006). Detecting errors in English article usage by non-native speakers. *Natural Language Engineering*, *12*(2), 115-129.

Hawkins, R. (2001). *Second language syntax: A generative introduction.* Oxford: Blackwell Publishers.

Hiki, M. (1991). *A study of learners' judgments of noun countability*. Indiana University.

Huebner, T. (1979). Order-of-acquisition vs. dynamic paradigm: A comparison of method in interlanguage research. *TESOL Quarterly, 13,* 21-28.

Huebner, T. (1979). *A longitudinal analysis of the acquisition of English.* Ann Arbor: Karoma.

Ionin, T., Zubizarreta, M. L., & Maldonado, S. B. (2008). Sources of linguistic knowledge in the second language acquisition of English articles. *Lingua, 118*(4), 554-576.

James, C. (1998). *Errors in language learning and use: Exploring error analysis.* New York: Longman.

Jarvis, S. (2002). Topic continuity in L2 English article use. *Studies in Second Language Acquisition, 24,* 387-418.

Kharma, N. (1981). Analysis of the errors committed by Arab university students in the use of the English definite/indefinite articles. *IRAL: International Review of Applied Linguistics in Language Teaching, 19*(4), 333.

Lee, P. (1996). *The Whorf theory complex: A critical reconstruction.* Amsterdam, Philadelphia: John Benjamins Publishing Company.

Liu, D., & Gleason, J. L. (2002). Acquisition of the article *the* by nonnative speakers of English: An analysis of four nongeneric uses. *Studies in Second Language Acquisition, 24,* 1-26.

Master, P. (1987). Generic the in scientific American. *English for Specific Purposes, 6*(3), 165-186.

Master, P. (1990). Teaching the English articles as a binary system. *TESOL Quarterly, 24,* 461-498.

Master, P. (1997). The English article system: Acquisition, function, and pedagogy. System, 25(2), 215-232.

Master, P. (2002). Information structure and English article pedagogy. *System, 30*(3), 331-348.

Mizuno, M. (1999). Interlanguage Analysis of the English Article System: Some Cognitive Contraints Facing the Japanese Adult Learners. *IRAL, 37*(2), 127-152.

Murphy, Susan. 1997. Knowledge and production of English articles by advanced second language learners. Ph.D. dissertation, University of Texas at Austin.

Önen, S. (2007). *EFL students' use of English articles at different proficiency levels: a comparison of context and task type* (Doctoral dissertation, Bilkent University).

Parrish, B. (1987). A new look at methodologies in the study of article acquisition for learners of ESL. *Language Learning, 37,* 361-83.

Pica, T. (1983a). Adult acquisition of English as a second language under different conditions of exposure. *Language Learning, 33*(4), 465-497.

Pica, T. (1983b). The article in American English: What the texts don't tell us. In N. Wolfson & E. Judd (Eds.), *Sociolingusitics and language acquisition.* (222- 233). Rowley, MA: Newbury House.

Qian, L., Li, K. & Cheng, Y. Variability in Article Use Among Chinese EFL Learners: Effects of Semantic Contexts, Proficiency and Discourse-Mode. *J Psycholinguist Res* (2021). https://doi.org/10.1007/s10936-021-09821-z

Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1972). *A grammar of contemporary English.* London: Longman.

Quirk, R., Greenbaum, S. (1990). *A student' s grammar of the English Language.* London: Longman.

Richards, J. C. (1974). A non-contrastive approach to error analysis. In J. C. Richards (Eds.), *Error analysis: Perspectives on second language acquisition,* (pp. 172-188). London: Longman. (Reprinted from English language teaching, 25(3), by Oxford University Press, 1971, London.

Richards, J. C., Platt, J., & Platt, H. (1992). Dictionary of language teaching & applied linguistics. *Essex: Longman.*

Robertson, D. (2000). Variability in the use of the English article system by Chinese learners of English. *Second Language Research, 16,* 135-172.

Sinclair, J. (1991). *Corpus, concordance, collocation.* Oxford University Press.

Takahashi, T. (1997). Japanese learners' acquisition and use of the English article system. *Edinburgh Working Papers in Applied Linguistics, 8,* 98-110.

Tarone, E., & Parish, B. (1988). Task-related variation in interlanguage: The case of articles. *Language Learning, 38,* 21-44.

Thomas, M. (1989). The acquisition of English articles by first- and second-language learners. *Applied Psycholinguistics, 10,* 335-355.

Thompson, A. J., & Martinet, A. V. (1987). *A practical English grammar* (4th ed.). Oxford: Oxford University Press.

Trenkic, D., Mirkovic, J., & Altmann, G. T. (2014). Real-time grammar processing by native and non-native speakers: Constructions unique to the second language. *Bilingualism: Language and Cognition, 17*(2), 237-257.

Ürkmez, S. (2003). *Article use in the compositions by Turkish EFL students.* Unpublished master's thesis. Uludağ University, Bursa.

Whitman, R. L. (1974). Teaching the article in English. *TESOL Quarterly, 8*, 253- 262.

Yamada, J., & Matsuura, N. (1982). The use of the English article among Japanese students. *RELC journal, 13*(1), 50-63.

Yılmaz, G. (2006). *L2 acquisition of the English article system by Turkish learners.* Unpublished master's thesis. Boğaziçi University, Istanbul.

Young, R. (1991). *Variation in interlanguage morphology.* New York: Peter Lang.

Yoon, K. K. (1993). Challenging prototype descriptions: Perception of noun countability and indefinite vs. zero article use. *IRAL-International Review of Applied Linguistics in Language Teaching, 31*(4), 269-290.

Yotsukura, S. (1970). The Articles in English: A Structural Analysis of Usage. Janua Linguarum, Series Practica 49.

Appendix A - Multiple Choice Task

Değerli Arkadaşlar,

Bu anket sizin İngilizce'de yer alan tanımlılıkları kullanımınızı ölçmek için hazırlanmıştır. Katılımınız için teşekkür ederim.

Öğr. Gör. Meriç Akkaya

Önal

Name: Date:

Group:

Read the sentences and choose the correct article (*a/an - the- Ø*) for the given contexts. The symbol Ø refers to the zero article, when no article is used. If you believe there is more than one possibility, circle the most appropriate answer.
(Cümleleri okuyunuz ve doğru cevabı yuvarlak içine alınız. Ø sembolü tanımlılığa gerek olmadığı anlamına gelmektedir. Eğer birden fazla olaslılık olduğunu düşünüyorsanız, lütfen size en yakın gelen cevabı işaretleyiniz.)

1. Did you hear that Fred bought (**a/an - the - Ø**) car? However, because of some financial problems he had to sell (**a/an - the - Ø**) car.

2. What is (**a/an - the - Ø**) sex of your baby? It's (**a/an - the - Ø**) boy!

3. (**A/An - The - Ø**) Language is (**a/an - the - Ø**) great invention of (**a/an - the - Ø**) humankind.

4. There are (**a/an - the - Ø**) nine planets traveling around (**a/an - the - Ø**) sun.

5. Could you please pass me (**a/an - the - Ø**) salt? Sorry, I can't reach it.

6. In (**a/an - the - Ø**) 1960s, there were lots of protests against (**a/an - the - Ø**) Vietnam War.

7. (**A/an - The - Ø**) Cat likes (**a/an - the - Ø**) mice.

8. I'm going to buy (**a/an - the - Ø**) new bicycle.

9. He has been thrown out of (**a/an - the - Ø**) work, and his family is now living (**a/an - the - Ø**) hand to (**a/an - the - Ø**) mouth.

10. We rented (**a/an - the - Ø**) boat last summer in Antalya. Unfortunately, (**a/an - the - Ø**) boat hit another boat and sank.

11. I saw (**a/an - the - Ø**) strange man standing at (**a/an - the - Ø**) gate.

12. I keep sending (**a/an - the - Ø**) messages to him.

13. All of (**a/an - the - Ø**) sudden, he woke up from his coma.

14. I like to read (**a/an - the - Ø**) books about (**a/an - the - Ø**) philosophy.

15. (**A/an - The - Ø**) Love and (**a/an - the - Ø**) hate are (**a/an - the - Ø**) two extremes.

16. Your claim flies in (**a/an - the - Ø**) face of all (**a/an - the - Ø**) evidence.

17. (**A/an - The - Ø**) Tiger is (**a/an - the - Ø**) fierce animal.

18. My computer has (**a/an - the - Ø**) new sound card.

19. I don't have (**a/an - the - Ø**) car, but I'm planning to buy one soon.

20. (**A/An - The - Ø**) French are against (**a/an - the - Ø**) war in Iraq.

21. Last month we went to (**a/an - the - Ø**) wedding. (**A/An - The - Ø**) Bride was beautiful.

22. I look after (**a/an - the - Ø**) little girl and (**a/an - the - Ø**) little boy on Saturdays.

23. (**A/An - The - Ø**) Horse I bet on is still in (**a/an - the - Ø**) front.[1]

24. I think she is at (**a/an - the - Ø**) end of her rope.[1]

25. Jane bought (**a/an - the - Ø**) ring and (**a/an - the - Ø**) necklace for her mother's birthday. Her mother loved (**a/an - the - Ø**) ring but hated (**a/an - the - Ø**) necklace.

26. Steve's wedding is in (**a/an - the - Ø**) two weeks and he is getting (**a/an - the - Ø**) cold feet.[1]

27. There is (**a/an - the - Ø**) orange in that bowl.[1]

29. Sally Ride was (**a/an - the - Ø**) first American woman in (**a/an - the - Ø**) space.

30. Writing (**a/an - the - Ø**) letters is (**a/an - the - Ø**) pain in (**a/an - the - Ø**) neck for me.[1]

31. I would like (**a/an - the - Ø**) cup of coffee, please.

32. (**A/An - The - Ø**) Shade on this lamp is really ugly.[1]

33. This room has (**a/an - the - Ø**) length of 12 meters.[1]

34. (**A/an - The - Ø**) Water is essential for (**a/an - the - Ø**) life.[1]

35. I ordered (**a/an - the - Ø**) bottle of wine for us.[1]

36. (**A/an - The - Ø**) Telephone is (**a/an - the - Ø**) very useful invention.

37. We don't know who invented (**a/an - the - Ø**) wheel.[1]

38. He used to be (**a/an - the - Ø**) lawyer.

39. I'm in (**a/an - the - Ø**) mood to eat (**a/an - the - Ø**) hamburger.[1]

40. He is as poor as (**a/an - the - Ø**) mouse.[1]

41. Do you have (**a/an - the - Ø**) pen? I lost mine yesterday.[1]

42. He can be very dangerous. Always keep (**a/an - the - Ø**) eye on him.

43. (**A/an - The - Ø**) Rabbits can cause problems for (**a/an - the - Ø**) gardeners.[1]

44. I saw (**a/an - the - Ø**) funny looking dog today. I have never seen one like that before.

Appendix B - Multiple Choice Task – Key

1. Did you hear that Fred bought **a** car. However, because of some financial 1.[Type 3]

problems he had to sell **the** car. 2.[Type 2]

2. What is **the** sex of your baby? It's **a** boy! 3.[Type 2] 4.[Type 4]

3. **Ø** Language is **a** great invention of **Ø** humankind. 5.[Type 1] 6.[Type 4] 7.[Type 1]

4. There are **Ø** nine planets traveling around **the** sun. 8.[Type 4] 9.[Type 2]

5. Could you please pass me **the** salt? Sorry, I can't reach it. 10.[Type 2]

6. In **the** 1960s, there were lots of protests against **the** Vietnam War. 11.[Type 5] 12.[Type 2]

7. **A / the** Cat likes **Ø** mice. 13.[Type 1] 14.[Type 4]

8. I'm going to buy **a** new bicycle. 15.[Type 4]

9. He has been thrown out of **Ø** work, and his family is now living **Ø** hand to 16. [Type 5] 17.[Type5]

Ø mouth. 18.[Type 5]

10. We rented **a** boat last summer in Antalya. Unfortunately, **the** boat hit

19.[Type 3] another boat and sank. 20.[Type 2]

11. I saw **a** strange man standing at **the** gate. 21.[Type 3] 22.[Type 2]

12. I keep sending **Ø** messages to him. 23.[Type 3]

13. All of **a** sudden, he woke up from his coma. 24.[Type 5]

14. I like to read **Ø** books about **Ø** philosophy. 25.[Type 3] 26.[Type 1]

15. **Ø** Love and **Ø** hate are **Ø** two extremes. 27.[Type 1], 28.[Type 1], 29.[Type 4]

16. Your claim flies in **the** face of all **the / Ø** evidence. 30.[Type 5] 31.[Type 1]

17. **A / the** Tiger is **a** fierce animal. 32.[Type 1] 33.[Type 4]

18. My computer has **a** new sound card. 34.[Type 3]

19. I don't have **a** car, but I'm planning to buy one. 35.[Type 4]

20. **The** French are against **the** war in Iraq. 36.[Type 2] 37.[Type 2]

21. Last month we went to **a** wedding. **The** Bride was beautiful. 38.[Type 3], 39.[Type 2]

22. I look after **a** little girl and **a** little boy on Saturdays. 40.[Type 3] 41.[Type 3]

23. **The** Horse I bet on is still in **Ø** front. 42.[Type 2] 43.[Type 5]

24. I think she is at **the** end of her rope. 44.[Type 5]

25. Jane bought **a** ring and **a** necklace for her mother's birthday. Her mother 45.[Type 3], 46.[Type 3]

loved **the** ring but hated **the** necklace. 47.[Type 2] 48.[Type 2]

26. Steve's wedding is in **Ø** two weeks and he is getting **Ø** cold feet. 49.[Type 4] 50.[Type 5]

27. There is **an** orange in that bowl. 51.[Type 3]

28. **A / the** Paper clip comes in handy. 52.[Type 1]

29. Sally Ride was **the** first American woman in **Ø** space. 53.[Type 2] 54.[Type 5]

30. Writing **Ø** letters is **a** pain in **the** neck for me. 55.[Type 4], 56.[Type 5], 57.[Type 5]

31. I would like **a** cup of coffee, please. 58.[Type 4]

32. **The** Shade on this lamp is really ugly. 59.[Type 2]

33. This room has **a** length of 12 meters. **60.**[Type 4]

34. **Ø** Water is essential for **Ø** life. 61.[Type 1] 62.[Type 1]

35. I ordered **a** bottle of wine for us. 63.[Type 3]

36. **The** Telephone is **a** very useful invention. 64.[Type 1] 65.[Type 4]

37. We don't know who invented **the** wheel. 66.[Type 1] [SEP]

38. He used to be **a** lawyer. 67.[Type 4] [SEP]

39. I'm in **the** mood to eat **a** hamburger. 68.[Type 5] 69.[Type 3] [SEP]

40. He is as poor as **a** mouse. 70.[Type 5] [SEP]

41. Do you have **a** pen? I lost mine yesterday. 71.[Type 4] [SEP]

42. He can be very dangerous. Always keep **an** eye on him. 72.[Type 5] [SEP]

43. **Ø** Rabbits can cause problems for **Ø** gardeners. 73.[Type 1] 74.[Type 1] [SEP]

44. I saw **a** funny looking dog today. I have never seen one that before. 75.[Type 3] [SEP]

Appendix C - Sample Pre-Intermediate Level Student Written Production Task

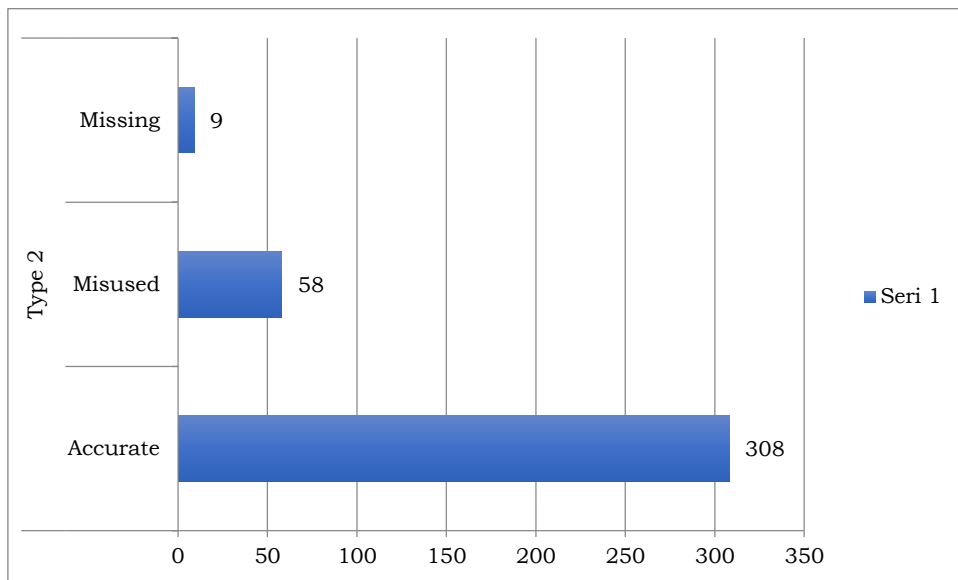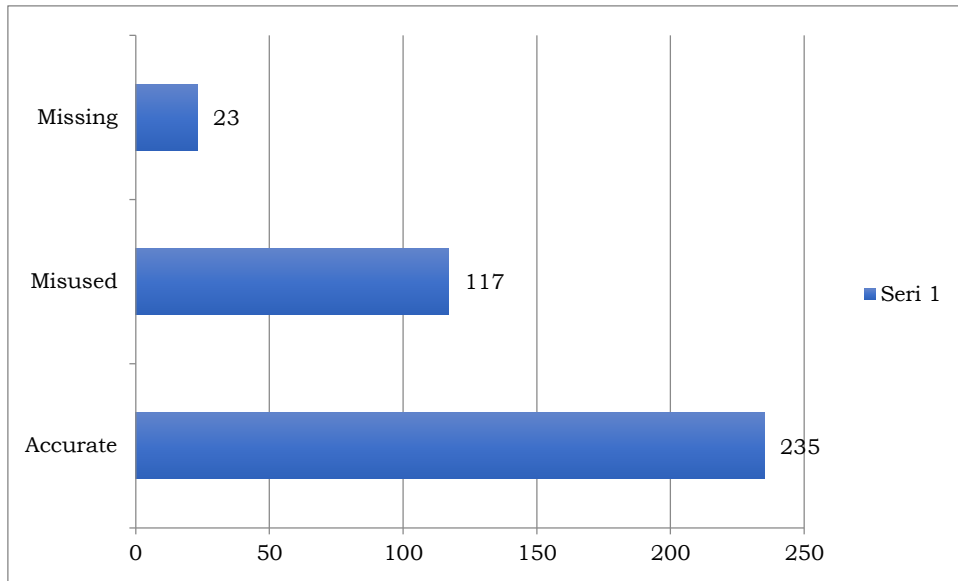| TASK 7	Writing
Description	Write a paragraph about a new experience (e.g. when you moved to a new place/ started a new course/job/hobby). Consider the following questions: 1. What did you experience? 2. Whom did you meet? 3. How did you feel? 4. Did you have any problems? What did you do about them? 5. How do you feel now? 　　Write 100-120 words.

Appendix D - Sample Intermediate Level Student Written Production Task

TASK 3	Writing a story

Description
 	
turnitin
	Choose one of the story beginnings below and write a story.
	
	    • *It was 7 pm. Erica and her son Sam were preparing dinner. They heard the doorbell ring. Before Erica could stop him, Sam ran to the door and opened it. .....*
	    16.
	    • *I never much cared about having a boyfriend/girlfriend. I really couldn't understand why it was so important for my friends. But one day .... walked into the classroom. ....*
	    17.
	    • *When she looked at the old photos, she realized how old she had gotten and how much time had passed - and what an interesting life she'd had. ....*
	    18.
	    19.
	
	Write 180-200 words.

Outcomes	Can narrate a story demonstrating a range of language within a simple linear sequence
Task Requirements	narrative tenses expressions of time, nouns with prepositions and fixed expressions linkers, *as soon as, while, during, until, by the time* appropriate punctuation organization
	Uninvited Guest It was 7 pm. Erica and her son Sam were preparing dinner. They heard the doorbell ring. Before Erica could stop him, Sam ran to the door and opened it. When he opened the door , they came across a small space shuttle. They was very shock. It was out of order and broken . When they went near its , voices were coming from behind the garden still. They went behind the garden and they were very frightened . They had never seen anything like that in their lives. It was a live but it didn't belong to the world . It could have been an alien . It had got three big eyes, two antennas and a small noise.It was not in a good situation. As soon as they realized the seriousness of the situation , they took it home. After that, they looked at its wounds, while it was regaining consciousness. It didn't make a sound until they talked. It must be multilingual because when they started talking , it was trying to communicate with them. After a few minutes , it told them what they needed to do . It wanted to bring space shuttle . It explained to them how to repair it . As soon as they repaired the machine, they heard great noise and doorbell rang. When they opened the door , they saw very big space shuttle . It sounded like this immediately bring our friend . As soon as Erica heard instruction , she brought it. She delivered it to them and they went away quickly . After the event , they have lived the most interesting moment of their lives and they have been suspicious about the reality of this event. Word count: 293

Appendix E - Multiple Choice Task Charts for Level A and Level B

Level A

Type 3: Missing 2, Misused 25, Accurate 348 (Seri 1)

Type 4: Missing 6, Misused 64, Accurate 305 (Seri 1)

Type 5: Missing 23, Misused 135, Accurate 217 (Seri 1)
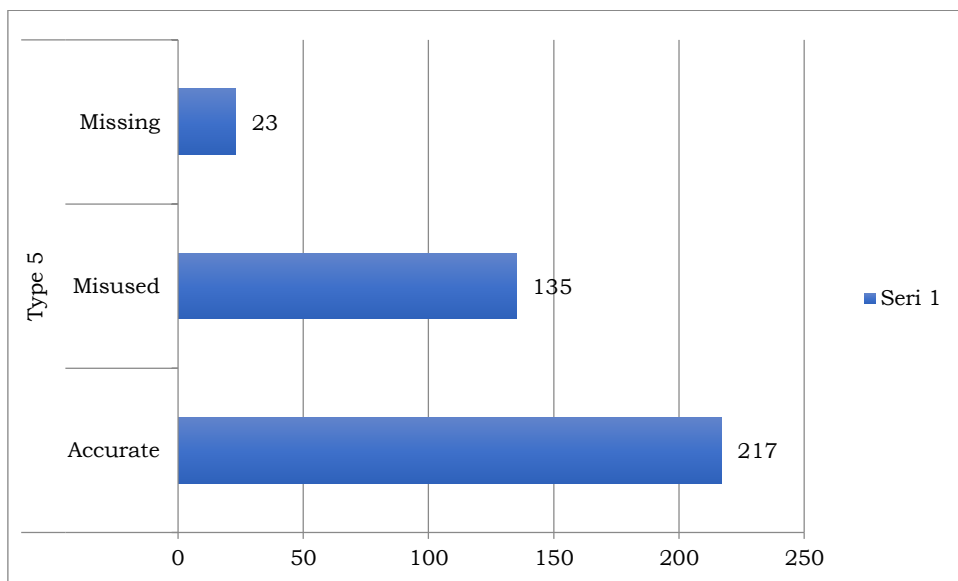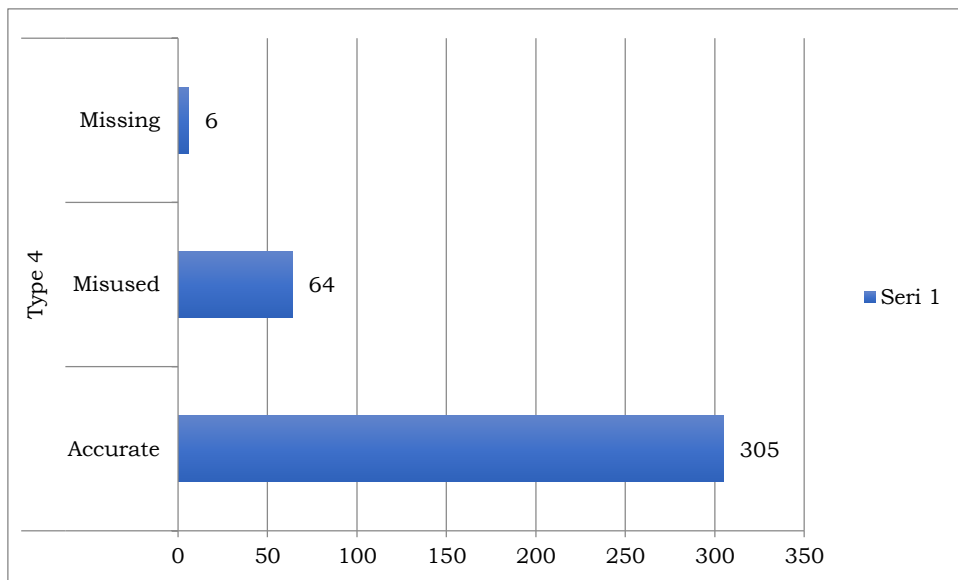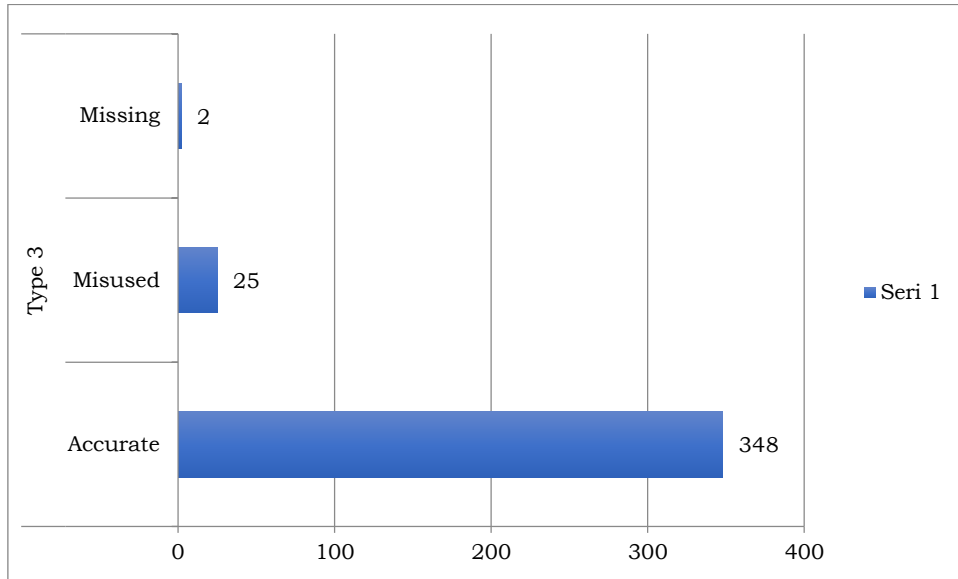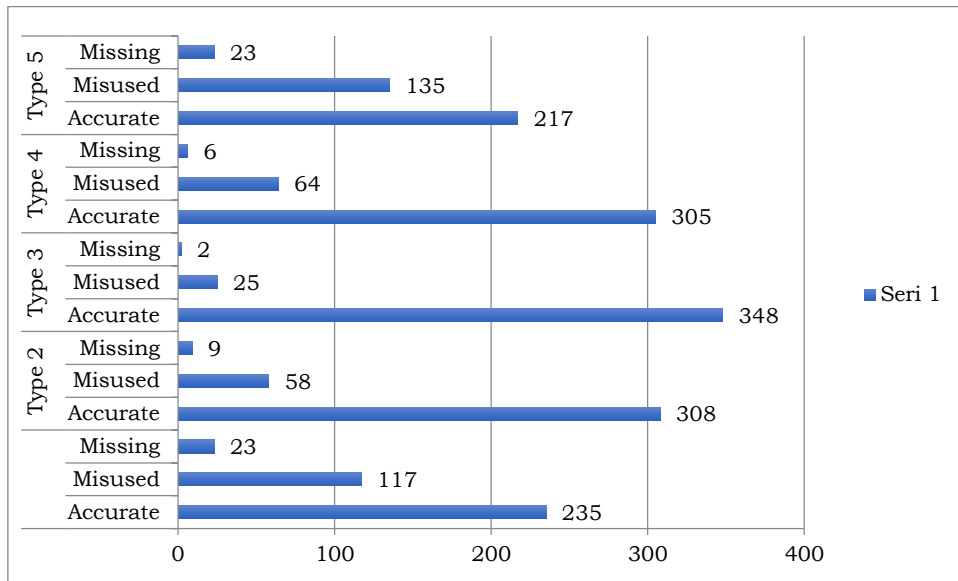
Level B
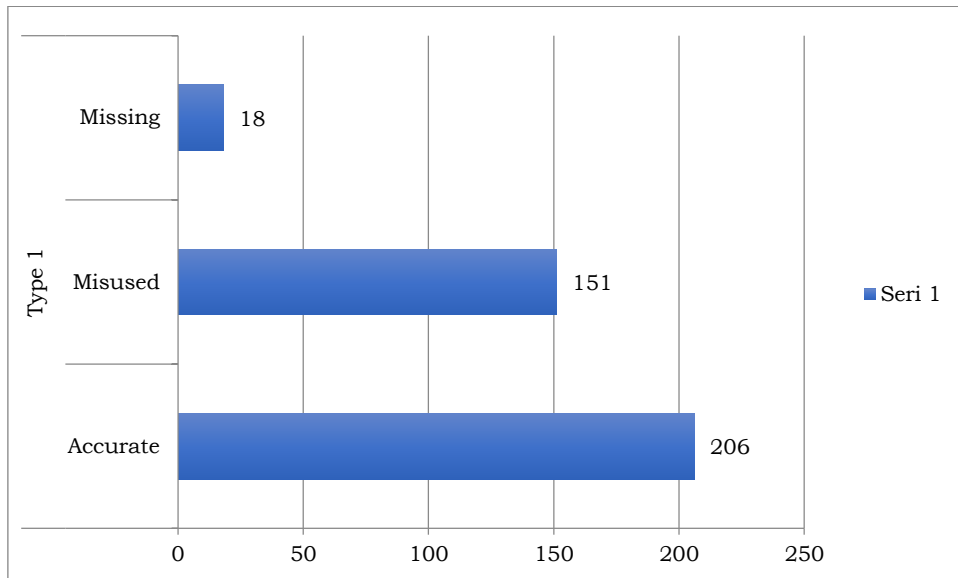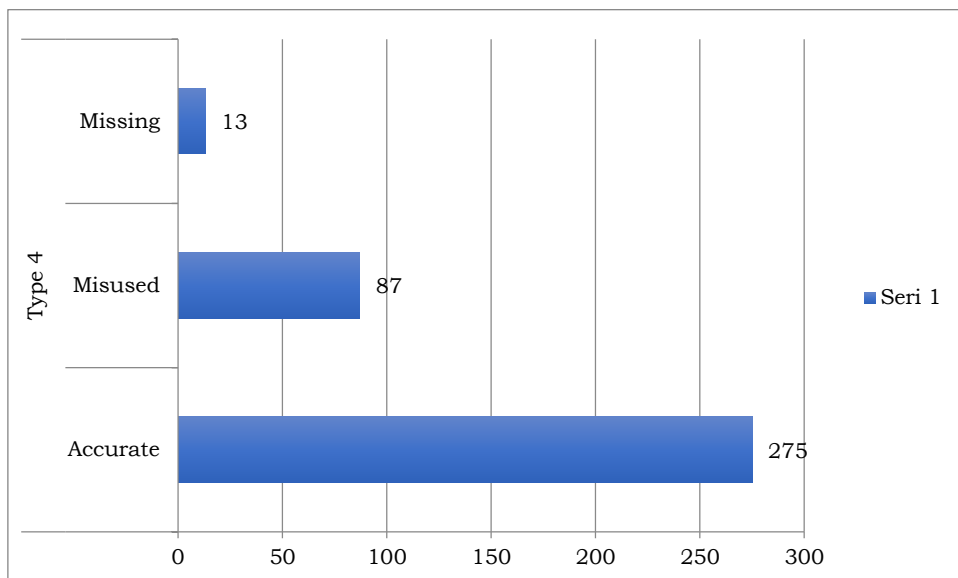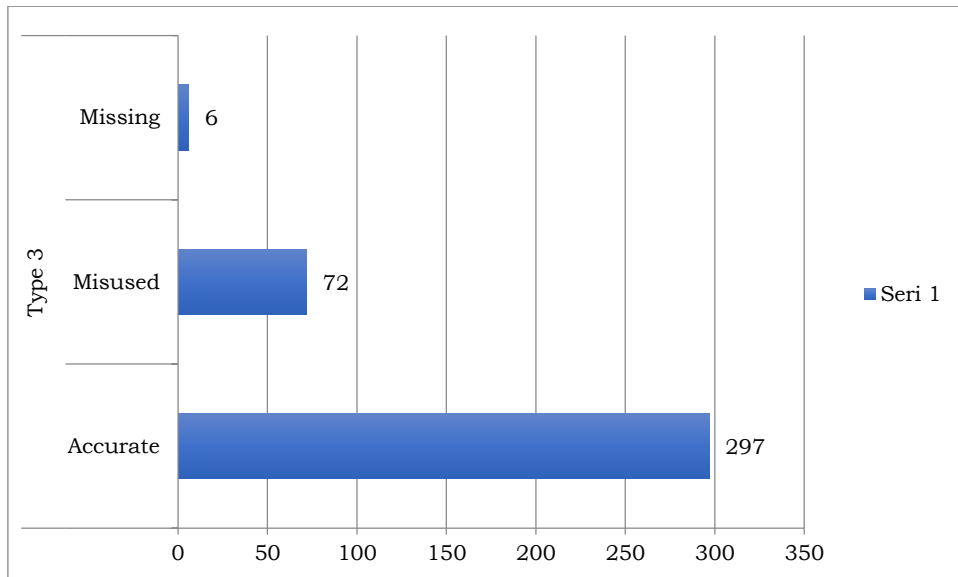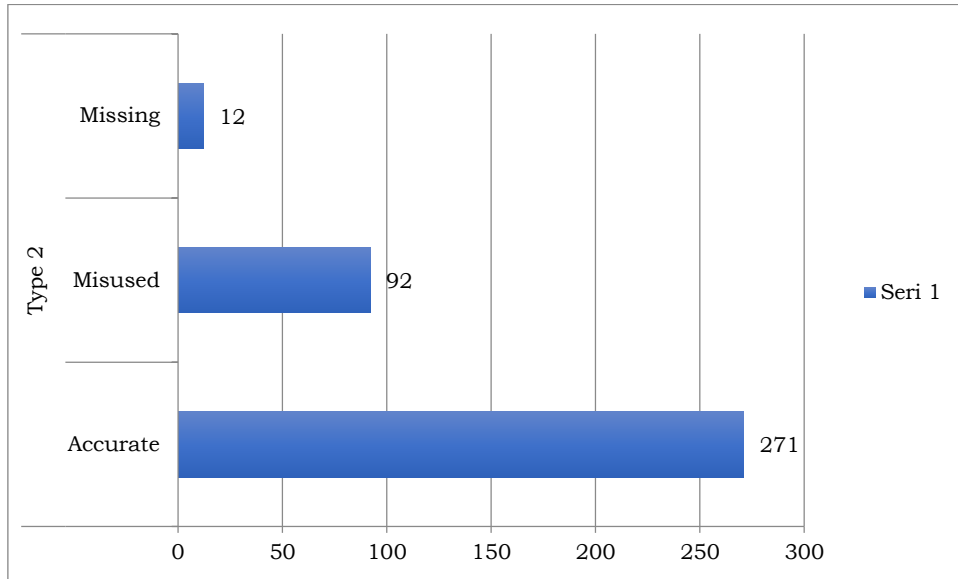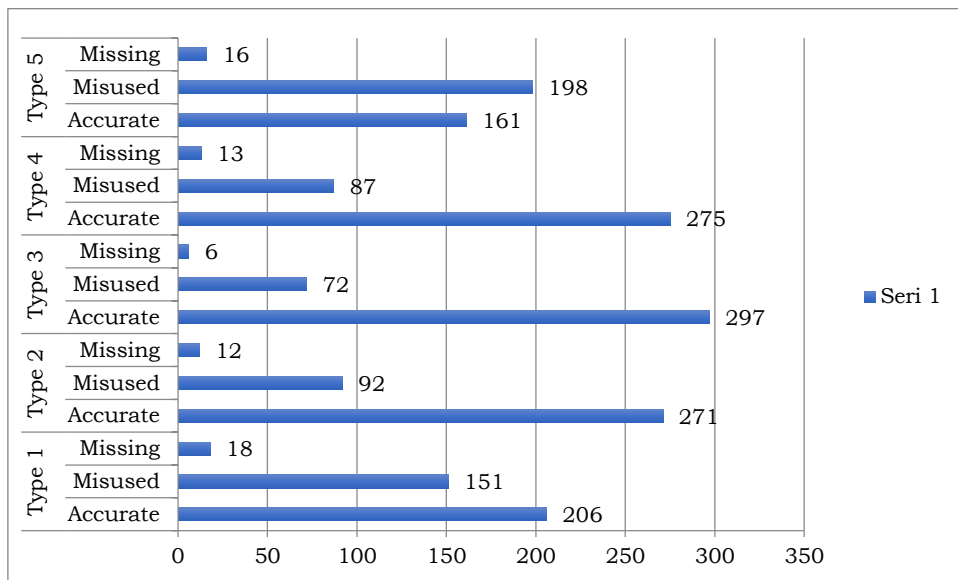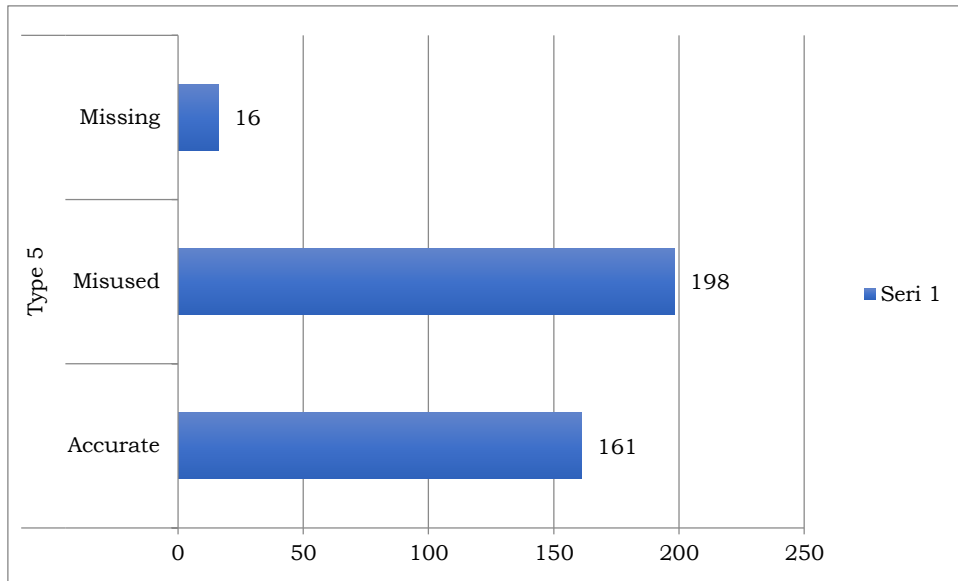
Teachers' View of High School Principals' Support for Meaningful Learning

Khaled Ahmad Ateyeh Alhassanat[a][1] iD

Sonia Abdulfattah Ibrahim Shehadeh[b] iD

[a] Al-Nakhil Secondary School - Negev Sector, Email: khaledal68@gmail.com
[b] Department of Administrative and Financial Sciences, Palestine Technical University Kadoorie, Ramallah Branch – Palestine, Email: Sonia.shehadeh@ptuk.edu.ps

Abstract

We conducted this study to determine the extent "Teachers' View of High School Principals' Support for Meaningful Learning, during the second semester of the academic year 2016-2017, using the descriptive approach. The population consisted of all of the 94 secondary schools in Bethlehem governorate and in Negev Sector. The sample consisted of (240) teacher from both areas. We used the questionnaire to achieve the goals of the study. The results showed that Teachers' View of High School Principals' Support for Meaningful Learning was high with a mean of (3.73) over/out of (5). The result also revealed that there were no statistically significant differences in due to gender and academic qualifications. However, there were statistically significant differences due to years of experience in favor of less than Five and location in favor of Negev sector. In light of the results, we recommended that teachers can replace the traditional assessment to more meaningful assessment, apply technology applications at their work, and encourage the students to use the higher order thinking skills in their daily life. The principal should involve the meaningful learning spirit in building the school vision, and encourage cooperation between teachers rather than competition. The Palestinian Ministry of education should raise the awareness of the local communities about the importance of the meaningful learning at schools, to have more cooperation between the local communities and the schools, Adopting the Negev experience in implementing the meaningful learning theory, in order to apply it at the schools of Palestinian Ministry of education.

Keywords: High School Principals, Meaningful Learning, Palestine, positive psychology, positive education

---

[1] Corresponding author. *E-mail address*: khaledal68@gmail.com

Introduction

Stalheim (1998) forward that life in schools focuses on learning. Teachers and principals learn continually as we teach and carry out our activities. They fight to improve learning environment and to facilitate learning for the students According to Ausubel (1963). People can benefit from technology used in business, health, care, and manufacturing. This technology applied in education even before the spread of the internet. Teachers used to convey this knowledge through lecturing, discussions, and readings. While many teachers, principals and district administrators, use new forms of project-based curricula and performance based on assessment-where students get information from many sources. The role of their teachers is as a coach and manager.

Barron and D-Hammond (2008) pointed out that nowadays many scholars report about the need for powerful leadership where learning focuses on the demands of life to prepare the students for twenty-first-century skills. Teachers help in avoiding the traditional academic approaches and the narrow tasks that are not going to develop students' ability for critical thinking and writing. Educators have to reach the heart of the education process through deliberate attempts to influence cognitive structure to maximize meaningful learning. Sometimes, teachers find it difficult to achieve it without organizing the curriculum to provide for the traumatic introduction of new facts and concepts. Ausubel (1960) believed that what influences learning is what the learners already know. Ausubel believed that deductive reasoning is the key to understanding concepts, principles, and ideas. Therefore, his theory relies on prior. New knowledge added to the events and objects that we already possess. There is a need for the new knowledge to interact with the learner's knowledge structure as opposed to the rote memorization. Ausubel's learning theory was advanced by Gagne (1975) one of the behaviorist theorists. Gagne brought the best of behaviorism and cognitive. Gagne believes that learning results in behavior changes that are observable.

Novak (2002) explained that Ausubel's theory covers the whole learning process from the planning to the assessment and the application. Meaningful learning helps the learner choose conscientiously to integrate the new knowledge that learner already possesses. Scientists who studied human learning agreed that the meaning constructed by human beings at birth is faulty or limited. This faulty and limited meaning can distort new meaning construction. Howland et al. (2012) pointed out that students mostly experienced standardized tests or memorized information. Schools have become testing factories. When students finish the high school they only know how to take tests, students seldom invest their knowledge in attempting to understand the knowledge being tested because the test is done individually.

Through the testing process there will be no need for cooperative learning, students will not develop conceptual understandings, learning to take tests does not result in meaningful learning. Through meaningful learning, students have to be willfully engaged in meaningful tasks as well as engage in active, constructive, intuitional, authentic and cooperative activities. The role of schools is to teach students how to recognize and solve problems. In order to achieve this goal, principals have to recognize and implement the curriculum around the meaningful learning activates.

According to Novak (2011), meaningful learning involves thinking and feeling. Rote learning studies recall information. Students are motivated only when they get the right answer. Whereas in meaningful learning students are rewarded intrinsically and there is usually a higher level of positive affect resulting. In rote learning, teachers tend to simplify the new knowledge and separate it from the real world. While in meaningful learning, teachers teach the new material with context.

Meaningful learning definition

Harpaz (2013) defined meaningful learning as "It is the rebuilding or the reorganization of knowledge that adds to the meaning of experience, and that increases the capacity to direct the course of subsequent experience.

On the other hand, it is a procedure in which the learner offers new meaning to his mental concepts, contents, ideas, insights, positions, attitudes that were learnt in the earlier and opens paths for learning more complex contents in the future.

Vallori (2014) defined the meaningful learning according to Ausubel, "the most important single factor that influences learning is what the learner knew." Therefore, meaningful learning, which implies longer retention than memorizing, occurs when humans relate new concepts to pre-exist familiar concepts. Then, changes are produced in our cognitive structure, concepts are modified and new links are created. It is a useful tool because it enables real learning, it generates greater retention and it facilitates transferences to other real situations.

Wei and Yue (2017,5) defined meaningful learning (as identified by Ausubel in Ausubel, 1963) as the most important learning principle)as a process signified by integrating new concepts and propositions with existing relevant ideas in some substantive ways, within one's cognitive structure.

"Meaningful learning," by definition, involves the acquisition of new meanings. New meanings, conversely, are the end products of meaningful learning. That is, the emergence of new meanings in the learner reflects the prior operation and completion of a meaningful learning process. Ausubel (2000).

The importance of Meaningful learning

Meaningful learning embodies "a distinctive kind of learning process." The learner employs a set to incorporate within his cognitive structure, nonverbal in fashion, in no arbitrary, potential meaningful materials. Meaningful learning does not mean learning of meaningful material. Meaningful material cannot be meaningful learned because it is only potentially meaningful. Meaningful learning should have components that determine the aspect of learning material or be potential meaningfully Ausuble (1963).

It is difficult to demonstrate that meaningful learning has occurred; the only feasible way is an independent problem-solving to check whether the learners comprehend meaningfully the idea they are able to verbalize. Problem solving demands other abilities and qualities to achieve such as, reasoning power, flexibility, perseverance, sensitivity, improvisation and tactical smartness. Ausuel (1968).

Ausuel (1968) pointed out that we can distinguish three distinct phases during meaningful reception learning and retention. First, before potentially meaning material can be learned, it must be perceived; the second phase is the learning- retention process that is observed by a relevant and appropriate inclusive conceptual system. The third phase is the reproduction of the retained information.

Meaningful learning requires both that learners manifest a meaningful learning set and that the learner should potentially absorb the material they are learning. When the learner establishes a meaningful learning relationship between new and established knowledge, then what the learner requires to involve both the nature of the learning task and the nature of particular learners' structure of knowledge, which is a more complicated matter than a meaningful learning set. Meaningful learning is an emergent outcome of the interaction between the ideas to be learned in the instructional material and relevant subsuming ideas in the learner's cognitive structure Ausubel (1963).

Ausubel (1963) add that Motivational factors (enhancing effort, attention and immediate readiness for learning) have a positive effect on ensuing meaningful learning, besides the cognitive variable that influences availability during the retention interval. In addition, the above factors influence the cognitive interactional process in the particular

aforementioned ways through the cognitive variables that determine precision, stability, clarity and discriminability, which emerges new meanings during learning.

Vallori (2014) illustrated the most vital principles in applying meaningful learning. Those are open: work assists all learners to learn, then motivation; they help increase classroom environment and make learners be involved in their tasks. In addition, they must be related to the environment of learners. They are also creative, which reinforces imagination and intelligence. Moreover, they are built on concept mapping, which helps to link and connect concepts. Finally, they are based on educational programs and must be adjusted in considerable to learners with special necessities.

According to Karpicke (2012), through meaningful learning, people have the ability to reconstruct knowledge rather than reproducing it exactly. People do not store the same copies of experiences that reproduce verbatim in retrieval because knowledge reproduced on the basic of present context and available retrieval cues. Understanding the process involved in retrieving and reconstructing knowledge is essential in order to understand learning. Because the act of retrieval itself is a powerful tool for enhancing long term learning. When people reconstruct knowledge, people's expression depends on a retrieval cues available in a given content. In addition, every time people retrieve knowledge, the knowledge is changed, so retrieving knowledge will improve their ability to regain knowledge again in the future. Retrieval is important for understanding learning because all types of knowledge requires retrieval and depends on of retrieval cues.

Novak and Gowing (1984) added "that meaningful learning needs an effective tool to visualize it by using a concept map to better understanding and an assessing concept map as a graphical tool for representing knowledge structure in the form of a graph. The nodes of graph represent concepts. The edge that runs between concepts represent relationships. Concept and relationships between them formulate propositions". (p.5) concept maps require constantly integrated newly acquired concepts and relationships into existing concept maps. It is important that in meaningful learning the concept map can be modified to accommodate the change.

Principals can use the concept map as a tool to improve teaching, concept map-based on assignments has different formats, which has an impact on the outcomes. What makes incorporation of concept map into teaching is feasible: if you use the concept map tools and learning curves, a concept map can be constructed in many different ways Wie and Yue (2017).

How could principals use the theory of meaningful learning effectively? It is important that principals believe in meaningful learning theory as a tool for developing their schools by understanding how knowledge is produced and reconstructed, be certain of the significance of retrieval in implementing meaningful learning and besides, be aware of the concept map. This basic understanding can help principals develop their effectiveness in implementing meaningful learning. In this study, I will draw a picture about the role of the principal in fulfilling meaningful learning in schools, the importance of technology in adopting meaningful learning and the importance of alternative assessment in evaluating students in meaningful learning process.

The role of principals in supporting meaningful learning

Abaya (2016) emphasized that, managing competing tension and dilemmas need a successful leader. A successful leader should be able to run commuting as well as teaching and learning programs. Principals should be able to play the role of facilitators, share goals and trust. Levine (2011). Agreed that, this role enables principals to get of things a lot more easily when they have confidence in their teachers and students they help reinforce experience.

Sharkey et al (2016) sees that, Principals and teachers' great challenge is how to shorten the gap between teachers and students and between students and curriculum. Teachers reported that their work increased student's motivation and engagement. It fostered teacher-student relationship and valued the curriculum recourse.

Khaled Ahmad Ateyeh Alhassanata & Sonia Abdulfattah Ibrahim Shehadehb / Base For Electronic Educational Sciences, 3(1), 29-45.

33

Ng. et al. (2016) stated that, a successful leadership skills should be comprised of conflict resolution, role modeling, team building, vision building (develop a common and shared vision), should include various stakeholders in the process of decision making, develop the professional development tool for leaders and involve parents and community in the process of school improvements.

Miller et al. (2016) explained that researches look for kinds of professional development that develops leaders who can improve teaching and learning and for ways of how to involve teachers in leadership development to implement positive change in their schools.

Eger and Egerova' (2015) showed that, developing a successful educational reform requires effective leaders and managers. Principals can gain skills and knowledge from the experts in educational projects. Educational centers provide principals and deputy head teachers with training programs in labor law, and educational process and school financing. Training is to gain professional competencies. These courses are compulsory provided by the ministries of education.

Camburn et al. (2016) pointed out that professional development for principals should be coherence, which provide principals with authentic collaborative learning and problem-based experience that affects principals' attitudes toward a successful school management. Levine (2011) Added that, any change in schools should be done with more experienced teachers who are going to change their approaches to their work.

Miller et al. (2016) see that if we want to improve school, we need to support and to develop leadership effective: a leader assumes that school is successful when the relationship between school leadership and student successful is makeable. Principals should break with the post norms and start building trust and be collaborate with their staff ,so as to avoid being defensive and tried to the past to ease and support professional development in their schools. Levine (2011).

Ng. et al. (2015) described that principals have to elevate students' achievements, and to be effective instructional leaders, therefore new appointed principals should be provided with formal and informal support while they are applying what they have learnt in the workshops.

According to Eager and Egerova (2015) organizational success depends on the project management, which has grown rapidly worldwide. Principals are paying a lot of attention to projects based on approach, so the principals' role has widened, that is why it is important to develop relevant skills and knowledge. Principals should be aware of technical knowledge and lead team projects successfully; the result of training is to learn how to plan and manage school projects. Principals have to learn how to be effective and manage risks, to minimize the risk of failing, to achieve the project goals, and this factor may be the key that contributes to a project failure.

Fisher et al. (2010) explained that newly appointed principals (NAPs) need continuous professional development to face the impact of globalization on school development. NAPs are more confident when experienced principles work with NAPs as mentor or roles model. NAPs are requested to include programs, to answer challenging questions regarding legal matters of school education and a lawyer is expected to be the speaker. NAPs need firm leadership capability to reinforce themselves to face internal and external challenges.

Ng et al. (2016) added that, it is expected from principals to elevate students' achievements, and to be effective instructional leaders. Therefore NAP should be provided with formal and informal support while applying what they have learnt in the workshops.

Frye (1988) pointed out school administration should be involved in the universities preparation programs. When teachers face problems during their initial year, the teachers are more likely to leave teaching. The involvement of principals in such program can reduce the problem of leaving teaching of the beginning teachers.

Schwartz (1962) added that student- teacher programs play an essential role in developing the programs towards a highly motivated teacher who can run meaningful classes and build positive relations with the school staff effectively. The principals can affect the student-teacher programs positively because this kind of principals' attitude makes friendly impression on the student's teacher program. Principals must recognize that their involvement in student- teacher programs is vital. Principals must build teamwork among the class teacher, student teacher and the supervisor teacher.

Gaps in the Literature

There is a huge gap in applying meaningful learning between the schools in the Negev Sector and Bethlehem governate. Many researchers tackled this issue in the Negev Sector, While schools in Bethlehem governorate lack of researches that study this issue.

The originality of the present study

Principals have an important role in supporting meaningful learning, which has a pronounced positive effect in general. Education in the 21st century greatly needs such an approach in learning. Currently, the principal's role in supporting meaningful learning is still ineffective. The researchers work as high school teachers and feel the importance of the principal's role in supporting meaningful learning in both Bethlehem and Bedouin high schools.

The problem of the study is based on around the main question: To what extent do high school principals in the Bethlehem governorate and Negev Sector support meaningful learning from teachers' point of view?

Aim of the Study

The purpose of the study is to examine teacher perspectives toward the extent to which high school principals in the Bethlehem governorate and Bedouin Sector support meaningful learning. In addition, the study aimed to acknowledge if there are statistical differences in supporting meaningful learning by high school principals in Bethlehem governorate and Bedouin Sector from the teacher perspective.

Research Question

The Main Question: to what extent Teachers' View of High School Principals' Support for Meaningful Learning?

Based on the main question the following sub-question formed:

Is there a difference in the extent Teachers' View of High School Principals' Support for Meaningful Learning due to gender, location, years of experience, academic qualification?

Study Hypothesis

- There are no statistically significant differences at ($\alpha \leq 0.05$) in the means of Teachers' View of High School Principals' Support for Meaningful Learning due to gender.
- There are no statistically significant differences at ($\alpha \leq 0.05$) in the means Teachers' View of High School Principals' Support for Meaningful Learning due to location.
- There are no statistically significant differences at ($\alpha \leq 0.05$) in the means of Teachers' View of High School Principals' Support for Meaningful Learning due to years of experience.
- There are no statistically significant differences at ($\alpha \leq 0.05$) in the means of Teachers' View of High School Principals' Support for Meaningful Learning due to academic qualification.

The Significance of the Study

The importance of the study appears in focusing on a new approach in education, which is Meaningful Learning. According to the researchers' knowledge, this research is the

first to tackle this subject. This study is one of a few studies that make a comparison in fields of education between the Palestinian system and the Negev system.

Definition of Terms

Meaningful Learning: defined by (Ausabel, 2000) "refers to a learning way where the new knowledge to be acquired is in relation with acquire the relation or with previous knowledge" (p 64).

Procedural definition: Meaningful Learning: In order to achieve understanding, any new content should be meaningful, and the learner has to relate it to prior knowledge in a meaningful way by using authentic learning and his own experience.

Bethlehem Governorate: Bethlehem Governorate is one of the largest West-Bank eleven governorates. It occupies 607.8 km2 of mass land and is bordered with Jerusalem Governorate in the North and Hebron Governorate from the South. (page 2)

Bedouin Sector: According to data from the Central Bureau of Statistics, in 2009 the Bedouin (Muslim) people of the Negev numbered 192,800 represent 27.4% of the total residents of the Negev (around 02,600). In 2009, the Bedouin citizens of the Negev constitute 15.6% of the total Arab population of Arab citizens Israel (1,239,230 not as well as the 296,370 Arab residents of East Jerusalem).

Research Design of the Study

The current study adopted the descriptive analytical approach. After collecting the data, the researchers used the analytical-statistical method to answer the question of the study and interpreted the results.

Research Sample

The population of the study consisted of all secondary school teachers in both Bethlehem governorate and the Negev sector. The total Number of teachers was (2463) t and the total Number of the secondary schools was (94). From this population (240) sample of teachers from a random cluster of twenty secondary schools were chosen to respond to the questionnaire.

Table 1.

Statistical Description of the Research Sample According to Demographic Variables

Demographic Variables		Frequency	Percent
Gender	Male	117	49
	Female	123	51
	Total	240	100
Geographical area	Bethlehem	120	50
	Negev Sector	120	50
	Total	240	100
Years of experience	less than 5	95	40
	5-10	56	23
	more than 10	89	37
	Total	240	100
Qualification	Diploma	17	7
	BA	175	73
	Master and above	48	20
	Total	240	100

Instruments

The researchers developed Questionnaire to examine the teacher's attitudes toward the extent to which a principal's in Bethlehem governorate and Negev sector support meaningful learning from teachers' point of view. The researchers developed the questionnaire, which consists of two sections. The first section included personal information about the respondents. The second section included (14) items, to investigate

the role of principals in supporting the meaningful learning" Here are some of the studies that helped the researchers in developing the questionnaire: Moran et al (2010), Allison et al (2015), Wang et al (2004), Bolligar et al (2015). Vermeulen et al (2015), Baran et al (2016). The researchers developed the questionnaire with 5-point Likert scales ranging from strongly agree - strongly disagree. The questionnaires were distributed to 240 teachers.

Validity of Instruments

To ensure that the content of the questionnaire was valid, it was handed to a jury of professional doctors in the field at Al-Quds, Bethlehem, Beir Zait Universities and educators in Negev. The Panel of judges were asked to evaluate the opportunities of the instrument to the whole purpose of the study. They accepted the items and the parts of the questionnaire, but they asked the researchers to follow some modifications. The researchers took these recommendations into amount before issuing the final draft of the tool, then the instrument was distributed to the subject of the study.

Reliability of Instruments

Cronbach's Alpha Value for the questionnaire was (94.6%) which is appropriate for the purposes of the study.

Procedures of the Study

The study carried out in the following manner:

- The relevant literature was reviewed to establish the theoretical background of the study.
- The population was identified and the samples were selected on which the instruments will be applied.
- The questions of the study were put up, depending on previous studies.
- The reliability and validity of the instruments were approved.
- A letter of permission was obtained from the Ministry of education and higher education Directorate of Education/Bethlehem to facilitate the implementation of the research.
- The researchers themselves distributed the instruments on teachers in order to obtain valid and credible results.
- The instrument were distributed and gathered in the Second semester of the scholastic year 2016-2017.
- The data was gathered and analyzed by using SPSS program.
- The researchers explained the information to reveal whether the outcomes agree or disagree with previous studies.

Variables of the Study

- Independent variables: Gender (Female/Male), Geographical area (Bethlehem/Negev), Years of experience (less than 5, 5-10, more than 10), Qualification (Diploma, BA, Master and above).
- Dependent variables: the extent Teachers' View of High School Principals' Support for Meaningful Learning.

Data Analysis

In order to analyze the data, the researchers used statistical Package for social science (SPSS), descriptive statistics (means, frequencies, percentage, and Std. Deviation) and inferential statistics. (Independent T-test, one-way ANOVA, LSD and Cronbach Alpha).

Results related to the first question

To what extent Teachers' View of High School Principals' Support for Meaningful Learning?

Table 2

Means, Std. Dev. and Degrees of the Items of the Questioner

#	Item	N	Mean	Std. Dev.	Degree
4	The principal shows a great respect to the teachers.	240	4	0.9	High
3	The principal encourages presenting new ideas in the meetings.	240	4	0.9	High
1	The principal encourages using different education methods suit the meaningful learning.	240	3.9	1	High
1 3	The principal encourages the teachers to cooperate in establishing new vision and planning the school goals.	240	3.8	0.8	High
5	The principal encourages the cooperation between the administration and the teachers.	240	3.8	0.9	High
2	The principal supports the cooperation in taking the resolution in the school.	240	3.8	1	High
6	The principal encourages the professional development among teachers.	240	3.8	1	High
1 2	The principal prevails appreciation for suggesting ideas to develop the educational process.	240	3.8	0.9	High
8	The principal gives the feedback continuously.	240	3.7	0.9	High
1 1	The principal encourages the teachers to express their opinion in different educational issues.	240	3.7	0.9	High
7	The principal observes the teachers in the classes	240	3.7	0.8	High
9	The principal gives guidance for every new teacher.	240	3.7	1.1	High
1 4	The principal holds regular meetings to cope with the meaningful learning.	240	3.7	1.1	Moderate
1 0	The principal uses the methods of reward and punishment to implement teaching	240	3.6	0.9	Moderate
	Total	240	3.78	0.56	high

Results in this table show that extent Teachers' View of High School Principals' Support for Meaningful Learning is high with a mean of (3.78) out of (5), and also show that the 4th Item [The principal shows a great respect to the teachers] and the 3ed Item [The principal encourages presenting new ideas in the meetings] were both came first with a mean of (4), the 1st Item [The principal encourages using different education methods suit the meaningful learning] came in third its mean (3.9). The 10th Item [The principal uses the methods of reward and punishment to implement teaching] came last its mean (3.6), the 14th Item came before the last Item its mean (3.7).

Results related to the second question

Are there statistically significant differences between the means of the participant's responses duo to gender, location, years of experience, and academic qualification?

To answer this question, the researchers investigated the following hypothesis, which was based on:

Results related to the first Hypothesis

There are no statistically significant differences at (α ≤ 0.05) in the means of participant's responses related to principal's support to meaningful learning due to gender.

To test this hypothesis, the researchers used independent t-test as table (3) shows: The results of independent t-test for the differences in participant's responses related to principal's support to meaningful learning due to gender.

Table 3

Results of the Independent t-Test For Gender Variable

Gender	N	Mean	Std. Dev.	Std. Error Mean	t	df	Sig.
Male	117	3.81	0.59	0.05	0.71	238	0.48
Female	123	3.76	0.52	0.05			

The results in table (III) show that the level of significance for the differences in participant's responses related to principal's support to meaningful learning due to gender is (0.98) this means that there are no statistically significant differences at (a<0.05). thus, the hypothesis is accepted.

Results related to the second Hypothesis

There are no statistically significant differences at ($α ≤ 0.05$) in the means of participant's responses related to principal's support to meaningful learning due to location.

To test this hypothesis, the researchers used independent t-test as table (IV) shows: The results of independent t-test for the differences in participant's responses related to principal's support to meaningful learning due to location.

Table 4

Results of the Independent t-Test For Location Variable

Geographical area	N	Mean	Std. Dev.	Std. Error Mean	t	df	Sig.
Bethlehem	120	3.53	0.42	0.04	-7.62	238	0.00
Negev	120	4.03	0.57	0.05			

The results in table (IV) show that the level of significance for the differences in participant's responses related to principal's support to meaningful learning due to location is (0.00). This means that there is statistically significant differences at (a<0.05). Which results in rejection of the Hypothesis.

By considering the means for both geographical areas, it shows that The Negev has the highest mean (4.2), therefore the statistical differences in favor of the Negev geographical area.

Results related to the third Hypothesis

There are no statistically significant differences at ($α ≤ 0.05$) in the means of participant's responses related to principal's support to meaningful learning due to years of experience.

To test this hypothesis, the researchers used one-way ANOVA- test, table (V) shows: the distribution of the participant's responses related to principal's support to meaningful learning due to years of experience.

Table 5

Means, Std. Dev. and Degrees of the Items For Years of Experience Variable

Years of Experience	N	Mean	Std. Dev.	Degree
Less than 5 years	95	3.89	0.56	High
Form 5 – 10 years	56	3.67	0.60	High
More than 10 years	89	3.73	0.51	High

The results in this table (V) show that there is a clear difference between the means of the three levels for the years of experience. Therefore, the researchers used the One-Way ANOVA test as shown in table (VI).

Table 6

The Results of ANOVA- Test for the Differences in the Participant's Responses Related to Principal's Support to Meaningful Learning Due to Years of Experience

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.13	2	1.07	3.51	0.03
Within Groups	72.15	237	0.30		
Total	74.28	239			

   The results in this table (VI) show that the level of significance for the differences in the participant's responses related to principal's support to meaningful learning due to years of experience is (0.00) this means that there are statistically significance differences at (a<0.05). And thus the hypothesis is rejected.

   To clarify to whom the differences refer to, the researchers used the LSD (the less significant deference's test) as shown in table (VII).

Table 7

The Results of LSD Test for the Participant's Responses Related to Principal's Support to Meaningful Learning Due to Years of Experience

(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Less Than 5	5-10	.22343*	.09295	.017	.0403	.4066
	More than 10	.16469*	.08139	.044	.0043	.3250
5-10	Less Than 5	-.22343*	.09295	.017	-.4066	-.0403
	More than 10	-.05874	.09411	.533	-.2441	.1267
More than 10	Less Than 5	-.16469*	.08139	.044	-.3250	-.0043
	5-10	.05874	.09411	.533	-.1267	.2441

   The result in table (VII) shows that the statistically significance differences were between less than 5 and 5-10 levels and refers to less than 5 level. And between less than 5 and more that 10 levels and refers to less than 5 level.

    Results related to the fourth hypothesis

   There are no statistically significant differences at (α ≤ 0.05) in the means of participant's responses related to principal's support to meaningful learning due to academic qualification.

   To test this hypothesis, the researchers used one-way ANOVA- test, table (VIII) shows: the distribution of the participant's responses related to principal's support to meaningful learning due to academic qualification.

Table 8

Means, Std. Dev. and Degrees of the Items For Academic Qualification Variable

Qualification	N	Mean	Std. Dev.	Degree
Diploma	17	3.79	0.58	High
BA	175	3.79	0.55	High
Master and above	48	3.71	0.57	High

   The results in table (VIII) show that there is a clear difference between the means of the three levels for academic Qualification. Therefore, the researchers used the One-Way ANOVA test as shown in table (IX).

Table 9

The Results of ANOVA- Test for the Differences in the Participant's Responses Related to Principal's Support to Meaningful Learning Due to Academic Qualification

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.270	2	0.14	0.43	0.65
Within Groups	74.01	237	0.31		
Total	74.28	239			

The Results in table (IX) show that the level of significance for the differences in responses related to principal's support to meaningful learning due to academic qualification (0.07) this means that there are no statistically significance differences at (a<0.05). Thus, the hypothesis is accepted.

Conclusion

The study results showed that Teachers' View of High School Principals' Support for Meaningful Learning was high with a mean of (3.73) over/out of (5). The result also revealed that there were no statistically significant differences in due to gender and academic qualifications. However, there were statistically significant differences due to years of experience in favor of less than Five and location in favor of Negev sector.

Dissection of the results of the study

The researchers attributed Teachers' high View of High School Principals' Support for Meaningful Learning to the following: the fact that Principals are spending more time in planning and developing their school these days. Principals are more involved in the teaching process; they are the resident supervisors, instructors, and the role model for their teachers.

The researchers attributed that there are no statistically significant differences with Teachers' View of High School Principals' Support for Meaningful Learning is high due to gender to the following: First, principals provided instructions for both male and female teachers without taking into account gender. Secondly, the Ministry of education in both Governorates provided counseling to all teachers. Thirdly, when universities train teachers, the teachers get the same training. Finally, Male and female teachers carry out their duties and responsibilities according to their experience and qualification.

The researchers attributed that there are no statistically significant differences with Teachers' View of High School Principals' Support for Meaningful Learning is high due to Location to the following: the fact that the ministry of education in Negev adopted the Meaningful Learning Theory four years ago. Therefore, the ministry of education informed the principals about the need to change the way they run their schools. Principals participated in workshops to be trained to apply the meaningful learning program. Many principals in Negev were aware of the needs to equip their schools with the necessary tools such as tablets, computers etc. The principals in the Negev realized the importance of this trend, which is going to move the level of their students from traditional learning to more advance by making learning more meaningful for the students. The universities in Negev shared the ministry's vision in adopting the meaningful learning theory and planned. In addition, the ministry of education gave the students 30% of their final grade for each subject. Students can get the 30% for the meaningful learning tasks. The principals provided guidance to teachers to use the alternative assessment as a tool to evaluate the students. The new teachers who teach in The Palestinian Ministry of Education provide meaningful learning individually. The Palestinian Ministry of Education did not adopt the meaningful learning theory, the principals and teachers did not receive training to accomplish this change, besides, the schools lacked of the tools to attain the meaningful learning needs. Teachers evaluate the students by using the traditional way, which contradicts with the spirit of the meaningful learning theory.

The researchers attributed that there are no statistically significant differences with Teachers' View of High School Principals' Support for Meaningful Learning is high due to years of experience to the following: the fact that the universities played an important role in training the new teachers to adopt meaningful learning as part of their daily work in schools. In addition, the new teachers practiced the components of the meaningful learning such as the alternative assessment, higher order thinking skills and using technology during their years of studies. The new teachers are familiar with the use of smart phones a technology, while, experienced teachers faced problems in adopting technology in their classes. The new teachers are more motivated to carry out the meaningful learning in schools because they can sense the students' progress since they use the same tools in real life with their students. The experienced teachers are often afraid of the change, which means that they have to attend more workshops to learn how to be more involved in meaningful learning program. The experienced teachers needed to adjust their plans to meet with the requirements of the meaningful learning program, which is met most of the time with complaints and doubts about the effectiveness of this program.

The researchers attributed that there are no statistically significant differences with Teachers' View of High School Principals' Support for Meaningful Learning is high due to academic qualification to the following: the fact that Teachers share the same responsibilities and duties in schools while they are performing the same task. Therefore, the academic qualification they have does not make huge difference when teachers do the same work. All the teachers received the same instruction on how to implement the meaningful learning program. Many of the teachers earned their second degree in a different field from their first one, which did not help them much in improving their ways in adopting the meaningful learning program.

Limitations

The current study has the following limitations:

- This population study consisted of the High schools in Bethlehem Governorate and Bedouin sector in the south of Palestine.
- The study was carried out in the academic year (2016-2017) at the second semester.
- The study was limited by the concepts and definitions mentioned in it.

Recommendations

In light of the results, the researchers recommended the following:

Regarding For Teachers

- Teachers (particularly Bethlehem governorate) should replace the traditional assessment to more meaningful assessment through using the Alternative assessment.
- Teachers (particularly Bethlehem governorate) should apply technology applications as part of their daily work.
- Teachers (particularly Bethlehem governorate) should encourage the students to use the higher order thinking skills in their daily life.

Regarding For Principals

- Principals should work more to enhance the meaningful learning program and providing the schools with workshops to train teachers to apply the meaningful learning program effectively.
- The principal should work more to involve the meaningful learning spirit in building the school vision.
- The principal should encourage the cooperation between teachers rather than competition.

Regarding For Decision-makers

- Urging the Palestinian ministry of education to be more concerned about adopting the meaningful learning theory by increasing the schools budgets, providing the needed tools and labs, as such been done at the Negev Sector.
- The Palestinian Ministry of education should raise the awareness of the local communities about the importance of the meaningful learning at schools, to have more cooperation between the local communities and the schools.
- Adopting the Negev experience in implementing the meaningful learning theory, in order to apply it at the schools of Palestinian Ministry of education.

References

Abaya, J. (2016). School leadership challenges along Kenya's borabu-sotik border. *Educational Management Administration & Leadership, 44* (5), 757-774.

Alaa Sadik (2008): Digital storytelling: a meaningful technology-integrated approach for engaged student. *Educational Technology Research and Development, 56* (4), 478-506.

Al-Bashir, Akram and Barham, Essam (2012): Using alternative assessment strategies and tools in evaluating the learning of mathematics and Arabic in Jordan. *Journal of Educational and Psychological Sciences, 13* (1), 241-270.

Al-Harash, Ayed and others (2010): Obstacles to using the e-learning system from the point of view of secondary school teachers in the Koura District. *The Jordanian Journal of Educational Sciences, 6* (1), 27-40.

Allison, P., Gray, S., Sproule, J., Nash, C., Martindale, R., & Wang, J. (2015). Exploring contributions of project-based learning to health and wellbeing in secondary education. *Improving Schools, 18*(3), 207-220.

Anne Nevgiv and Erika Löfström (2006). From strategic planning to meaningful learning: diverse perspectives on the development of web-based teaching and learning in higher education. *BJET, 38*(2), 312-324.

Ausubel, D. G. (2000). Cognitive structure and the facilitation of meaningful verbal Learning. Journal of Teacher Education, 14(2), 217-222.

Ausubel, D. P. (1963). *The acquisition and retention of knowledge: A cognitive view.* Springer Science & Business Media.

Ausubel, D. P. (1968). *The psychology of meaningful verbal learning.* Grune &Stration, INC. New York.

Ausubel, D.P. (1960). The use of advance organizers in the learning and retention of meaningful verbal material. *Journal of Educational Psychology, 51,* 267-272.

Baran, E., Uygun, E., & Altan, T. (2017). Examining preservice teachers' criteria for evaluating educational mobile apps. *Journal of Educational Computing Research, 54*(8), 1117-1141.

Barron, B., & Darling-Hammond, L. (2008). *Teaching for meaningful learning: A review of research on inquiry-based and cooperative learning.* Book Excerpt. George Lucas Educational Foundation.

Bolliger, D. U., Mills, D., White, J., & Kohyama, M. (2015). Japanese students' perceptions of digital game use for english-language learning in higher education. *Journal of Educational Computing Research, 53*(3), 384-408.

Bush, T. (2008):. From management to leadership: semantic or meaningful change?. *Educational management administration & leadership, 36*(2), 271-288.

Camburn, E. M., Goldring, E., Sebastian, J., May, H., & Huff, J. (2016). An examination of the benefits, limitations, and challenges of conducting randomized experiments with principals. *Educational Administration Quarterly, 52*(2), 187-220.

Carrington, V., & Robinson, M. (Eds.). (2009). *Digital literacies: Social learning and classroom practices.* Sage.

Cashman, S., & Gunter, G. (2006). Integrating technology and digital media in the classroom,. Thomason Course Technology.

Chai, C. S., Koh, J. H. L., Tsai, C. C., & Tan, L. L. W. (2011). Modeling primary school pre-service teachers' Technological Pedagogical Content Knowledge (TPACK) for meaningful learning with information and communication technology (ICT). *Computers & Education, 57*(1), 1184-1193.

Daniel T. Bressington et al. (2018). Concept mapping to promote meaningful learning, help relate theory to practice and improve learning self-efficacy in Asian mental health nursing students: A mixed-methods pilot study. *Nurse Education Today,* 60, 47–55.

Deakins, E. (2007). The role of meaningful dialogue in early childhood education leadership. *Australian Journal of Early Childhood, 32*(1), 38-47.

Egalite, A. J., Mills, J. N., & Greene, J. P. (2016). The softer side of learning: Measuring students' non-cognitive skills. *Improving Schools, 19*(1), 27-40.

Eger, L., & Egerová, D. (2016). Project risk management in educational organizations. *Educational Management Administration & Leadership, 44*(4), 578-598.

El-Atrash, A. (2009). *Promoting sustainable urban growth strategies to curb sprawl in the urban area of Bethlehem governorate* (Doctoral dissertation, Birzeit University).

Fisher, J. B., Schumaker, J. B., Culbertson, J., & Deshler, D. D. (2010). Effects of a computerized professional development program on teacher and student outcomes. *Journal of Teacher Education, 61*(4), 302-31.

Frye, H. (1988). The principal's role in teacher preparation. *Journal of Teacher Education, 39*(6), 54-58.

Gagné, R. M. (1975). Learning hierarchies and learning conditions. *Journal of Curriculum Studies, 7*(2), 133-134.

Galloway, K. R., & Bretz, S. L. (2015). Measuring meaningful learning in the undergraduate chemistry laboratory: a national, cross-sectional study. *Journal of Chemical Education, 92*(12), 2006-2018.

Gordon, E., & Lowrey, K. A. (2017). The mentoring web – coming together to make a difference. *Improving Schools, 20*(2),178-190.

Harpaz, Y. (2013). *Teaching and learning in a community of thinking: The third model.* Springer Science & Business Media.

Howland, J. L., Jonassen, D. H., & Marra, R. M. (2012). *Meaningful learning with technology.* Upper Saddle River, NJ: Pearson.

Kärki, T., et al. (2018). Meaningful learning with mobile devices: pre-service class teachers' experiences of mobile learning in the outdoors. *Technology, Pedagogy and Education, 27*(2), 251-263.

Karpicke, J. D. (2012). Retrieval-based learning. *Current Directions in Psychological Science, 21*(3),157-163.

Keengwe, J., Onchwari, G. & Wachira, P. (2008). The use of computer tools to support meaningful learning. *AACE Journal, 16*(1), 77-92.

Khan, B. H. (Ed.). (2005). *Managing e-learning: Design, delivery, implementation, and evaluation.* IGI Global.

Lee, J. C., & Lo, L. N. (2007). The accelerated schools for quality education project: Experiences of school change in Hong Kong. *Improving Schools, 10*(2), 180-198.

Levine, T. H. (2011). Experienced teachers and school reform: Exploring How two different professional communities facilitated and complicated change. *Improving Schools, 14*(1), 30-47.

Li, X., & Yang, X. (2016). Effects of learning styles and interest on concentration and achievement of students in mobile learning. *Journal of Educational Computing Research, 54*(7), 922-945.

Menard, E. (2013). Creative thinking in music: Developing a model for meaningful learning in middle school general music. *Music Educators Journal, 10*0(2), 61-67.

Mifsud, D. (2015). The setting-up of multi-site school collaboratives: The benefits of this organizational reform in terms of networking opportunities and their effects. *Improving Schools, 18*(3), 236-249.

Miller, R. J., Goddard, R. D., Kim, M., Jacob, R., Goddard, Y., & Schroeder, P. (2016). Can professional development improve school leadership? Results from a randomized control trial assessing the impact of McREL's balanced leadership program on principals in rural Michigan schools. *Educational Administration Quarterly, 52*(4), 531-566.

Moran, M., Hawkes, M., & Gayar, O. E. (2010). Tablet personal computer integration in higher education: Applying the unified theory of acceptance and use technology model to understand supporting factors. *Journal of Educational Computing Research, 42*(1), 79-101.

Mustafa, Ashraf Attia (2016). *The reality of Islamic education teachers' practice of alternative assessment methods and ways to develop them in the lower basic stage in Gaza.* (An Unpublished Master's Thesis). the Islamic University, Gaza.

Ng, S., & Szeto, S. E. (2016). Preparing school leaders. *Educational Management Administration & Leadership, 44*(4), 540-557.

Novak J, (2011), A theory of education: Meaningful learning underlies the constructive integration of thinking, feeling, and acting leading to empowerment for commitment and responsibility.   *Meaningful Learning Review, 1*(2),1-14.

Novak, J. D. (2002). Meaningful learning: The essential factor for conceptual change in limited or inappropriate propositional hierarchies leading to empowerment of learners. *Science Education, 86*(4), 548-571.

Novak, J. D., & Gowin, D. B. (1984). Concept mapping for meaningful learning. *Learning how to learn,* 15-54.

Ou-Yang, F. C., & Wu, W. V. (2017). Using mixed-modality vocabulary learning on mobile devices. *Journal of Educational Computing Research, 54*(8),1043-1069.

Picard, D., Martin, P., & Tsao, R. (2014a). iPads at school? A quantitative comparison of elementary schoolchildren's pen-on-paper versus finger-on-screen drawing skills. *Journal of Educational Computing Research, 50*(2), 203-212.

Przybylski, A. K., Rigby, C. S., & Ryan, R. M. (2010). A motivational model of video game engagement. *Review of General Psychology, 14*(2),154-166.

Rigby, C. S., & Przybylski, A. K. (2009). Virtual worlds and the learner hero. *Theory and Research in Education, 7*(2), 214-223.

Runhaar, P. R., & Sanders, K. (2016). Promoting teachers' knowledge sharing. The fostering roles of occupational self-efficacy and human resources management. *Educational Management Administration & Leadership, 44*(5), 794-813.

Sadik, A. (2008). Digital storytelling: A meaningful technology-integrated approach for engaged student learning. *Educational technology research and development, 56*(4), 487-506.

Khaled Ahmad Ateyeh Alhassanata & Sonia Abdulfattah Ibrahim Shehadehb / Base For Electronic Educational Sciences, 3(1), 29-45.

45

Seilhamer, R., Sugar, A., & Mao, J. (2013). User acceptance of mobile technology: A campus-wide implementation of blackboard's mobile™ learn application. *Journal of Educational Computing Research, 49*(3), 327-343.

Shamir-Inbal, T., & Blau, I. (2016). Developing digital wisdom by students and teachers. *Journal of Educational Computing Research, 54*(7), 967-996.

Sharkey, J., Clavijo Olarte, A., & Ramírez, L. M. (2016). Developing a deeper understanding of community-based pedagogies with teachers. *Journal of Teacher Education, 67*(4), 306-319.

Shelly, G. B., Cashman, T. J., Gunter, R. E., & Gunter, G. A. (2004). *integrating technology in the classroom: teachers discovering computers.* 4th Ed. Thomason Course Technology. China Social, Demographic, & Economic Factors. The Bedouin population in the Negev.

Stalheim-Smith, A. (1998). *Focusing on active, meaningful learning.* IDEA Paper Number 34.

Stringer, P., & Hourani, R. B. (2016). Transformation of roles and responsibilities of principals in times of change. *Educational Management Administration & Leadership, 44*(2), 224-246.

Suleiman, Odeh and Murad, Odeh (2013). The reality of the use of information and communication technology and the obstacles to its use in teaching among teachers of the Shoubak District Education Schools. *Al-Balqa for Research and Studies, 17*(1), 107-138.

Sun, G., & Shen, J. (2013, July). Teamwork as a service: a cloud-based system for enhancing teamwork performance in mobile learning. In Advanced Learning Technologies (ICALT), *2013 IEEE 13th International Conference o*n (pp. 376-378). IEEE.

Szczesiul, S., & Huizenga, J. (2014). The burden of leadership: Exploring the principal's role in teacher collaboration. *Improving Schools, 17*(2),176-191.

Thawabteh, Ahmed and Al-Saudi, Khaled (2010). Obstacles to applying realistic assessment strategies and tools from the point of view of Islamic education teachers in Tafila Governorate, 2016. *Studies, Educational Sciences, 43*(1), 265-280.

Vallori, A. B. (2014). Meaningful learning in practice. *Journal of Education and Human Development, 3*(4).

Vermeulen, M., Van Acker, F., Kreijns, K., & van Buuren, H. (2015). Does transformational leadership encourage teachers' use of digital learning materials? *Educational Management Administration & Leadership, 43*(6), 1006-1025.

Wang, H. Y., Liu, T. C., Chou, C. Y., Liang, J. K., Chan, T. W., & Yang, S. (2004). A framework of three learning activity levels for enhancing the usability and feasibility of wireless learning environments. *Journal of Educational Computing Research, 30*(4), 331-351.

Wayne, M. R. (2011). *Visiting classrooms: A design study to support principals' instructional leadership.* University of California, Berkeley.

Wei, W., & Yue, K. B. (2017). Concept mapping in computer science education. *Journal of Computing Sciences in Colleges, 32*(4), 13-20.

White, B. R., & Agarwal, P. K. (2011). *The principal report: The state of school leadership in Illinois.* Illinois Education Research Council.