DEVELOPMENTAL STAGES OF THE PRODUCTION OF PASSIVE VOICE BY CHILDREN NATIVE SPEAKERS OF JORDANIAN ARABIC

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ABSTRACT: This study aims at investigating the children’s production of passive voice in Jordanian Arabic. It sheds light on the factors that may influence the children’s production of some passive forms in Jordanian Arabic. The sample of the study consists of thirty Jordanian children who belong to five age groups from 3; 0 – 7;11 years old. Each of these groups includes six children with equal number of males and females chosen randomly from an elementary school in Jordan. A production test was given to the children using six pairs of pictures that illustrate the contrast between the active and passive sentences. The findings indicate the nature of the construction of passive in Jordanian Arabic does not have that complexity which may pose difficulties for the Jordanian children in their production of passive voice. The increase in age is accompanied by improvement in the child’s linguistic abilities necessary for the production of passive voice.

KEYWORDS: Acquisition, Production, Passives, Arabic, Age

INTRODUCTION

Child language acquisition has been a subject for many studies and the focus of attention in the field of psycholinguistics. Goodluck (1991) defines the study of language acquisition as “the study of how and when children get a command of the thing linguistics sets out to define.” (p.81). In this regard, Pye and Quixtan (1988) add that acquisition studies in a certain language may provide new insights into children’s capacity for learning grammatical structure. Passive structure is considered as one of the later acquired construction in the child language. Many researchers have related the late acquisition of passive voice to the complexity of such construction. Brown and Hanlon (1970) state that passive construction is non – canonical and derivationally complex, so it takes long time for children to acquire. Borer and Wexier (1987) explain the relatively late acquisition of passive construction by proposing the Maturation Hypothesis which states that the biological maturation determines the grammatical principles available to the child. They claim that the timing and nature of acquisition depend primarily on the maturation of grammatical principles rather than on the frequency of exposure to the constructions. Furthermore, they demonstrated that the grammatical principles are not available at certain stages of a child’s development, and they are available at a later stage. They hypothesize that the grammatical principles are not learned. In fact, the Maturation Hypothesis is in contradiction with the Continuity Hypothesis, suggested by Pinker (1984), that the latter argues that the grammatical principles are available from the beginning of the acquisition process and that learning then takes place gradually over time. It states that the principles that the child uses to fix her/his grammar are constant over the course of development of the child. Some other acquisition studies have shown that passive is acquired early in several non – Indo – European languages. For example, the native speaker children of Sesotho, a Bantu language, can use verbal passive productively by at least 2; 8 years and the K’iche’ children produce and comprehend passive sentences around two years of age. (Demuth 1989, Pye & Quixtan 1988).
As the study of child language acquisition often begins by adopting a specific analysis of the adult’s grammatical knowledge and proceeds to investigate how children arrive at this adult state, this study attempts to identify some of the important aspects in the acquisition of passive voice by Jordanian children, namely the production of some passive forms in their Jordanian Arabic. It is concerned mainly with the stages that Jordanian children pass through during their development of passive voice structures until they reach adult-like production.

Passive Voice in Standard Arabic:

Passive voice is used in standard Arabic when the subject of the active sentence is unknown or is kept unknown for one reason or another. Haywood and Nahmad (1962) state that passive voice in Standard Arabic is formed by merely changing the vowelling of the active verb. It is characterized by Damma /u/ on the first syllable. They demonstrate that when it is desired to draw the reader’s attention to the fact that a verb is passive, the placing of Damma /u/ over the first syllable is usually considered sufficient to indicate this. However, after the initial Damma /u/, kasra /i/ follows in the perfect and fatHa in the imperfect. For example, the passive form of kataba (he wrote) is kutiba (it was written); whereas the passive form of yaktubu (he writes) is yuktubu (it is written).

According to Khalil (1999), the Arabic passive can be classified into two types depending on the form of the passive verb: regular passive in which the verb is formed by internal vowel change and the infa9la (verbs of receptiveness). For example:

/inkasara lbaaibu/ انكسرت الباب (The door was/ has been broken). Besides the regular passive form and the infa9la (verbs of receptiveness) form, Khalil (1999) refers to another passive form which is the impersonal passive, in which an intransitive verb appears in its passive form at the beginning of the verb phrase provided that the deputy agent is a masdar (verbal noun), such is in /iHufila Htifaalun 9a/iimun/ (it was a great celebration), ṭarf (adverbial) such as in /wuqi'a amaama Imasjidi/ (The mosque was stood in front of), or jarun wa majruur (prepositional phrase) such as in /nu2ira ilayhaa / (She was looked at).

Passive voice in Spoken Arabic

In fact, passive voice in Standard Arabic differs somehow from its counterpart in spoken Arabic. O’leary (1962) studies Egyptian Arabic and states that the passive construction in spoken Arabic has various forms. He says that the passive verb in Egyptian Arabic is formed by adding either (it-) or (in-) to the active verb. The derived forms in (it-) often convey a passive sense. For example, from a verb as /?afal/ (lock), the passive form in the perfect is /lit?afal/ and in the imperfect is /yit?iifil/ (be closed). Also, from the verb kasr/ (kasser), the passive form in the perfect is /inkasar/ and in the imperfect is /yinkisir/.

Erwin (1969) studies Iraqi Arabic and states that most transitive verbs have associated forms known as passive participles. He says that these forms function as adjectives and indicate a state or condition resulting from having undergone the action named by the verb. Being adjectives, passive participles are inflected for gender and number. For example, from the verb /katab/ (to write), the masculine participle passive is /maktuub/ مكتوب, the feminine participle passive is /maktuuba/ مكتوبة, the plural masculine form is /maktuubin/ مكتوبين, the plural feminine from is /maktuubat/ مكتوبات. According to Erwin (1969), passive participle
patterns can be classified into six forms which are maf9uul, maf9i, mfa99al, mfa9al, mustaf9al, and mfa9lal.

On the other hand, Wise (1975) refers to the syntactic structure of passive sentences in spoken Arabic. He demonstrates that the subject or agent of the active is always unexpressed in the passive in the Egyptian Arabic. This can be explained by allowing the structural index of the transformation to specify that the subject (NP) must be an indefinite pro-form which is subsequently deleted. It will be interpreted by the semantic component as an indefinite agent, but will not appear in the surface structure. The object (NP) will be shifted to subject position by the operation of the transformation, and the verb prefixed. Wise’s passive transformation produces a string of the form in (b) from that in (a).

(a)  \[ \text{N} - \text{V} - \text{NP1} \rightarrow \]
    \[ \begin{array}{c}
    \text{+ Pro} \\
    \text{- Def}
    \end{array} \]

(b) \[ \text{NP1} - \text{V (PASS)} \]

Moreover, Wise (1975) gives the active tree (the deep structure) with an indefinite (-Def) pronoun in subject position from which the passive tree (the surface structure) is derived. Thus, the deep structure (DS) and the surface structure (SS) can be roughly represented as follows:

Deep Structure

\[
\begin{array}{c}
S \\
\downarrow \\
\text{Np1} \\
\downarrow \\
\text{Pred} \\
\downarrow \\
\text{N} \\
\downarrow \\
\text{NP2} \\
\end{array}
\]

\[
\begin{array}{c}
\text{VP} \\
\downarrow \\
\text{V} \\
\downarrow \\
\text{+ Pro} \\
\downarrow \\
\text{- Def} \\
\end{array}
\]
Surface Structure

```
S
<table>
<thead>
<tr>
<th>Np2</th>
<th>Pred</th>
</tr>
</thead>
<tbody>
<tr>
<td>VP</td>
<td></td>
</tr>
<tr>
<td>V Passive</td>
<td></td>
</tr>
</tbody>
</table>
```

**REVIEW OF RELATED LITERATURE**

The passive construction can be analyzed and described in various ways and the same goes for its acquisition. Beilin et al (1975) portrayed the passive construction in English as logically equivalent to its active counterpart although the grammatical relations between subject and object have been reversed. They claimed that before the mental component is fully developed about 6-7 years of age, children go through a transitional stage where they are capable of understanding a relation and its reversed counterpart but not at the same time. In accordance with this, Beilin et al (1975) found that children cannot realize the synonymity of an active sentence and its passive counterpart before the age of seven. This indicates that the acquisition of the passive construction is not merely the acquisition of a transformation of active sentences; only when the necessary level of mental reversibility is reached at around 7 years of age, the understanding of the synonymity of the two sentence alternatives is acquired. Others have also noticed the transition phase at this age. For example, Horgan (1978) claimed that children do not begin control over the full passive in English until the age of seven and upwards. Horgan’s youngest subjects (2;0-4;2) were asked to describe a series of pictures portraying a variety of agents and objects (animate and inanimate). The (5-13) year-old children were asked to tell stories about the pictures. Horgan found that the children in her study ranging from (2;0 - 13;11) used full and truncated passives differently. The youngest children relied almost on truncated passives (no expression of logical subject) and these passives involved stative verbs and inanimate logical objects. In contrast, their occasional full passives involved a wide range of action verbs and had animate logical object. In fact, Horgan made the point that children have different strategies in their acquisition of the passive construction. She demonstrated that at the seven—year transition, children with a reversible strategy start producing more reversible passives while children with a non-reversible strategy start uttering more agentive non-reversible passives.

The development of passive construction in English was also examined by Marchman et al (1991). They elicited passives from children aged 3-10 years as well as adults. The verbal descriptions were elicited by showing the subjects video clips of transitive events after asking them to talk about one of the participants. This was done by using verbal probes of the form “tell me about the ______ ”. In this study, the researchers could confirm that the more prototypically transitive the event, the easier it was for the children to describe using a passive construction.
Brook and Tomasello (1999) conducted an experimental study to investigate how young children produce English passives with nonce verbs. The study showed that the children who are younger than 3 years do not spontaneously use nonce verbs in the passive voice if it has only been modeled in the active voice. This finding led them to argue that grammatical constructions like the passive are initially learned imitatively on a verb-by-verb basis that generalizations do not emerge until the child has sufficient experience starting at around 3;5 years.

Didericheri (2001) investigated another variable that may affect the development of the passive voice by Danish children, namely, the development of the attention. The data of this study were collected within the experimental framework called the fish film, designed by Russell S. Tomlin. It consisted of a production task where subjects are to produce on-line descriptions of a sequence of 32 similar events showing two computer-animated fish swimming towards each other until they meet and one of them eats the other and swims off the screen. Thirty one Danish children (aged 3;6 to 10;1) chosen from a kindergarten and a youth center participated in the experiment. The results demonstrated that the younger children did a lot worse than the older children. Children below 7 years of age could not control their own selective attention to the same extent as adults. However, the author argued that the basic intentional mechanism already exists at a relatively early stage, and does not necessarily change radically with age. Rather, it becomes more efficient and controllable and the crucial change in the language use of the children around 6-8 years of age occurs because the functional scope of attention is widened.

Safari and Mehrpour (2015) studied the acquisition of passive voice by Iranian children. They investigated the role of age in the success or failure of the children’s production and comprehension of passive voice. Twenty-five Iranian children from different age groups of 3.5-5 and 7 – 9 were selected randomly from 4 day – care centers and 2 Kindergartens of Yazd and Shiraz. Two narrative tasks were used to assess children’s production and an elicitation task to determine their comprehension ability of actional and psychological passives. The researchers found passives are late acquired constructions among children and the acquisition of actionals occurs earlier than psychological passives.

Counter to those studies that have found that the production of passives develops relatively late in the language acquisition, some other acquisition studies have shown that passive is acquired early in several non-Indo-European languages. For example, Demuth (1989) investigated the acquisition of verbal passive in Sesotho, a Bantu language. The data for this study were compiled over a two-year period of research in rural Lesotho and constituted approximately 84 hours of spontaneous child interactions with adults, peers and older siblings. The Sesotho data indicate that the ability to use verbal passive is productive (creative) by at least 2;8 years.

Pye and Quixtan (1988) investigated the precocious passives and antipassives in the Mayan language K’iche’ (a language spoken by close to one million people living in the Western Highland region of Guatemala). The authors presented the morphology of voice marking in K’iche’ together with data from samples of spontaneous speech and comprehension tests. They found that the K’iche’ children produce and comprehend passive and antipassive sentences around two years of age and they produce and comprehend passives and antipassive sentences equally well with actional and non-actional verbs. Pye and Quixtan (1988) made the point that there is nothing about the structure of nonactive sentences in the K’iche’ language that makes them inherently more difficult for children to produce. Children’s production of nonactive sentences clearly reflects the frequency of the nonactive sentences in the adult language. If the
adult language requires nonactive sentences for particular pragmatic or discourse functions, then children’s acquiring the language will use nonactive sentences in these contexts.

Objectives and Significance of the Study

The lack of studies on the acquisition of passive voice in any variety of Arabic makes it necessary for a study of this kind to be conducted. This study involves the production of some forms of passive voice by Jordanian children. It investigates the extent to which Jordanian children produce these passive forms in their spontaneous speech and the steps they pass through during their development of passive voice until they reach the adult-like production. Thus, this study addresses the following question:

1- Is there a statistically significant difference (a < .05) in the production of passive voice by Jordanian children due to the age variable?
2- Is there a statistically significant difference (a < .05) in the production of passive voice by Jordanian children due to the gender variable?
3- Are all the forms of the passive voice equivalent in terms of the order of production?

METHODS

Sample of the Study

The sample of this study consists of thirty Jordanian children who belong to five age groups. Each group includes six children, three girls and three boys, chosen randomly from Alshomou Primary School in Jordan (the ages of the children who enrolled in this school range from 3;0 – 11:0. All the children’s primary care-takers were their mothers. The five age groups are:

Group 1 : 3;0-3; 11 year olds (mean age 3;3)
Group 2 : 4;0-4;11 year olds (mean age 4;4)
Group 3 : 5;0-5;11 year olds (mean age 5;4)
Group 4:6;0-6; 11 year olds (mean age 6;4)
Group 5:7;0-7;11 year olds (mean age 7;3)

Data Collection and procedures

In order to test the production of passive voice by the participants of the study, six pairs of pictures that illustrate the contrast between the active and passive sentences were used. Only culturally familiar items were used. The forms used which were likely to be elicited by the picture presented were: mfa99al، maf9i، maf9uul، itfa99al، infa9al، mfa99a. The standard question which was asked for the production test was: “What do these pictures show? For example, two pictures were exposed to the children; one of a man who is painting a wall and the other of a painted wall. The examiner asked “What do these pictures show? For example, two pictures were exposed to the children; one of a boy who is turning on the TV and the other of a turned on TV. The examiner asked; “What is the boy doing in this picture? (Pointing to the picture of a boy who is turning on TV). Then, the examiner asked: What has happened to the TV in the second picture (pointing to the picture which shows the turned on TV).
Statistical Data Analysis:

The researcher used the mean and standard deviation to statistically analyze the effect of age on the production of passive voice. ANOVA-Test (analysis of variance) was carried out to find out whether there are statistically significant differences in the production of the forms of passive due to age variable. Post Hoc Test using LSD (Least Significant Difference) was used to find out a pair wise comparison between age groups. Also, T-Test was carried out to find the effect of the gender variable on the production of passive voice.

FINDINGS AND DISCUSSION

In order to have an idea about the effect of age on the production of passive, the researcher carried out a statistical analysis (mean and standard deviation). The results are shown in Table (1)

<table>
<thead>
<tr>
<th>Form</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>mfa99al</td>
<td>mean 1.00</td>
<td>.00</td>
<td>.83</td>
<td>.41</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>maf9i</td>
<td>.00</td>
<td>.00</td>
<td>.33</td>
<td>.52</td>
<td>.17</td>
<td>.41</td>
</tr>
<tr>
<td>maf9uu</td>
<td>.67</td>
<td>.52</td>
<td>.83</td>
<td>.41</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>itfa9a9al</td>
<td>.17</td>
<td>.41</td>
<td>.17</td>
<td>.41</td>
<td>.17</td>
<td>.41</td>
</tr>
<tr>
<td>infa9aal</td>
<td>.67</td>
<td>.52</td>
<td>.67</td>
<td>.51</td>
<td>.83</td>
<td>.41</td>
</tr>
<tr>
<td>mfa99a</td>
<td>.00</td>
<td>.00</td>
<td>.17</td>
<td>.41</td>
<td>.00</td>
<td>.00</td>
</tr>
</tbody>
</table>

The data of the production test demonstrate different frequencies of occurrence of the forms of passive used by the children. The form mfa99al مفعّل، which was produced by 97% of the children in all age groups, showed the highest frequency of occurrence among the forms of passive; whereas only 10% of the children in all age groups used the form mfa99a مفعّى which was the least frequent form used by the children. Fifty percent of the children in all age groups produced the form maf9i مفعّي and 90% of the children produced the form maf9uu مفعّل. The form infa9aal انفعال was produced by 83% of the children and the form itfa9a9al انفعال was produced by 33% of the children. The mean percentages of frequency for each form are presented in Chart (1).
A closer look at the forms of passive voice used by each age group tells more about how the passive production can develop from one age group to another. According to the data in Table (1), the form مفعّل maf9uul was produced by 100% of the children in the first age group which indicates that children reached to the full mastery stage of the production of this form at an early age, namely three years of age. The mean percentage of the children who produced the form مفعّل maf9uul in the first age group is 67%. In the second age group, this percentage rose to 83%. By age group three, the mean percentage of children who produced this form increased to 100% which indicate that the full mastery of this form was reached by five-year old-children.

Regarding the form اتفاعل itfa99al, the mean percentage of the children in the first, second and third age groups who produced this form is relatively small: only 17% of the children in each of these age groups produced this form. This percentage increased to 33% in the fourth age group and kept rising to reach 83% of the children in the fifth age group. Furthermore, the mean percentage of the children who produced the form اتفاعل itfa99al in the first and the second age groups. This percentage rose to 83% in the third age group and kept rising to reach 100% in the fourth and fifth age groups, indicating that six-year old children fully mastered the production of this form.

In fact, one can notice that none of the children in the first age group produced the form مفعّى mfa99a. This percentage rose to 33% in the second age group, but it declined to 17% in the third age group. Nevertheless, the percentage began to rise again in the fourth age group to reach 100% where the children reached the full mastery of the production of this form. In other words, the full mastery of this form was reached by six-year old children. Similarly, the form مفعّى mfa99a was not produced at all by the children in the first age group, but it was produced by 17% of the children in the second age group. However, none of the children in the third age group produced this form. In each of the fourth and fifth age groups, the percentage rose again to reach 17%. Apparently, children in all age groups faced some difficulties in the production of this form.

Thus, the data in Table (1) show that the children of different ages are able to produce a variety of different forms of passive construction. The data suggest that the children respond differently to passive according to their ages; that is the frequency of the usage of certain forms.
can differ from one age group to another. It is worth mentioning that the researcher carried out a statistical analysis ANOVA (analysis of variance) to find out whether there are statistically significant differences in the production of the forms of passive due to the age variable as shown in Table (2)

**Table (2): Results of the ANOVA Test demonstrating the statistical differences in the production of the forms of passive due to the age variable**

<table>
<thead>
<tr>
<th>Form</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>mfa99al groups</td>
<td>1.33 0.833 0.967</td>
<td>4 25 29</td>
<td>.033 .033</td>
<td>1.000</td>
<td>.426</td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>maf9i groups</td>
<td>5.333 2.167 7.500</td>
<td>4 25 29</td>
<td>1.333 .087</td>
<td>15.385</td>
<td>* .000</td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maf9uul groups</td>
<td>.533 2.167 2.700</td>
<td>4 25 29</td>
<td>1.333 .087</td>
<td>1.538</td>
<td>.222</td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mfa99a groups</td>
<td>.200 2.500 2.700</td>
<td>4 25 29</td>
<td>.050 .100</td>
<td>.500</td>
<td>.736</td>
</tr>
<tr>
<td>Within Groups</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*significant (a < 0.05)

The data in table (2) show that the differences in the production of passive in the different age groups turned out to be statistically significant with regard to the age variable in the production of the form maf9i مَفْعِي ; whereas the other forms of passive turned out to be statistically insignificant. To find out a pair wise comparison between age groups with regard to the form maf9i مَفْعِي a Post Hoc Test using LSD (Least significant differences) was used as shown in table (3).
According to the data shown in Table (3), the significant development of this form appears in the fourth age group whose ages range from 6;0 to 6;11 years and that is the age at which the children reached the full mastery of the production of this form.

To answer the second question of this study, the researcher carried out a statistical analysis (T-Test) to examine the effect of the gender variable on the production of passive as shown in Table (4).
Table (4): The Effect of the Gender Variable on the Performance of the Children on the Production Test

<table>
<thead>
<tr>
<th>Form</th>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>mfa99al</td>
<td>male</td>
<td>15</td>
<td>.93</td>
<td>.258</td>
<td>-1.00</td>
<td>.326</td>
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<tr>
<td></td>
<td>female</td>
<td>15</td>
<td>1.00</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>maf9i</td>
<td>male</td>
<td>15</td>
<td>.47</td>
<td>.516</td>
<td>-3.54</td>
<td>.726</td>
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<td>15</td>
<td>.53</td>
<td>.516</td>
<td></td>
<td></td>
</tr>
<tr>
<td>maf9uul</td>
<td>male</td>
<td>15</td>
<td>.87</td>
<td>.352</td>
<td>-.592</td>
<td>.559</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>15</td>
<td>.93</td>
<td>.258</td>
<td></td>
<td></td>
</tr>
<tr>
<td>itfa99al</td>
<td>male</td>
<td>15</td>
<td>.40</td>
<td>.507</td>
<td>.756</td>
<td>.456</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>15</td>
<td>.27</td>
<td>.458</td>
<td></td>
<td></td>
</tr>
<tr>
<td>infa9al</td>
<td>male</td>
<td>15</td>
<td>.80</td>
<td>.414</td>
<td>-.475</td>
<td>.638</td>
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<tr>
<td></td>
<td>female</td>
<td>15</td>
<td>.87</td>
<td>.352</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mfa99a</td>
<td>male</td>
<td>15</td>
<td>.20</td>
<td>.414</td>
<td>1.871</td>
<td>.072</td>
</tr>
<tr>
<td></td>
<td>female</td>
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<td>.00</td>
<td>.000</td>
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</tbody>
</table>

The data in Table (4) show that there are no statistically significant differences in the production of passive due to the gender variable. Nevertheless, the data show that the girls tend to have higher mean percentages than the boys, but the differences are not consistent and turn out to be statistically insignificant. The data of the production test reflect the fact that older age groups performed better than younger age groups. This indicates that the development of passive in the Arabic language occurs in a step wise fashion. In fact, there was a gradual but steady increase in the use of passive over time. This result is consistent with the continuity hypothesis suggested by Pinker (1984) which argues that the grammatical principles are available from the beginning of the acquisition process and that learning then takes place gradually over time. Furthermore, the continuity hypothesis suggests that the principles that the child uses to fix his / her grammar are constant over the course of the development of the child. The fact that the age was found in this study to be significant for the production of passive is in support of Piaget (1980) who suggested that the acquisition is dependent upon age and cognitive development, i.e. the older the child is, the more his cognitive abilities expand, and consequently, the more his linguistic ability develops.

A review of the results shown in Table (1) demonstrates that the most frequent forms of passive were produced at an early age, i.e. even three-year-old children were able to produce the passive forms. Many previous studies conducted on the production of passive voice seem to run in accordance with such result. Demuth (1989) stated that the Sesotho verbal passives become productive (are used creatively) by at least 2;8 years. Similarly, Pye and Quixtan (1988) made the point that there is nothing about the structure of the passive sentences in the K’iche’ language that makes them inherently more difficult for children to produce. However, most developmental studies conducted on the production of passive voice in English came up with the conclusion that the English passive voice was acquired relatively late. Horgan (1978) observed that until age 11, no child produced both reversible and non-reversible passive. She suggested that individual children appear to select one way or the other to express passive, which would be problematic to children needing to express the other form. Actually, such variation in the timing and nature of passive acquisition across languages can be justified.
According to the degree of complexity of the construction of passive in a certain language and the nature of the transformations needed to form such construction. This is consistent with Gough (1965) who stated that the more transformations a sentence had gone through, the hardest it should be to process. However, the construction of passive in Jordanian Arabic seems to be so simple that most transitive verbs have associated forms known as passive participles which function as adjectives and indicate a state or condition resulting from having undergone the action named by the verb. Thus, Jordanian Arabic does not have such complex transformations needed to form the passive construction as in other languages and hence it is justifiable for the Jordanian children to acquire passive at a fairly early age. Furthermore, the data of the production test demonstrate different frequencies of occurrence for the various forms of passive. A review of the results in Chart (1) shows that the most frequent form was mfa99al (مفعول), whereas the least frequent form was mfa99a (مفعٌ). The reason behind such variation in the frequency of the forms of passive might be due to the frequency of exposure to certain forms of passive rather than other forms in everyday life used by adults and that what was suggested by Pye and Quixtan (1988). They demonstrated that children’s production of the passive sentences clearly reflects the frequency of the passive sentences in the adult language. In other words, if the adult language requires passive sentences for particular pragmatic or discourse functions, then children acquiring the language will use the passive sentences in these contexts. In fact, the data shown in Table (1) reflect an unexpected finding which is the decline in the performance of the production of some forms of passive in certain age groups; the mean percentage of the form maf9i (مَفَعِّل) declined to 17% in the third age group from 33% in the second age group. Furthermore, the mean percentage of the form mfa99 declined to 0% in the third age group from 1.7% in the second age group. In fact, such decline was also noticed in previous studies (Bever 1970, Maratsos 1974), but the exact significance of such decline is still controversial. Maratsos (1974) suggested that such decline of the performance of the children in the production of the passive in a certain age seems to reflect an overgeneralization from actives. For example, some children in the sample of this study tended to produce sentences like “ilHeit dahin” instead of “ilHeit madhuun” and “il?waa9i kawyeh” instead of “makweyeh” despite the fact that both dahin داهن and kawyeh كاوية are active participles rather than passive participles. In other words, the children found it easier to produce active participles instead of passive ones. Furthermore, such decline in the performance of the children in certain age groups can be ascribed to the individual differences between children in the different age groups as suggested by Fletcher and German (1986) who state that the individual differences in preferences for particular processing strategies can make the syntactic development of one child seem quite different from the other.

As for the order of the age of acquisition of the six forms of the passive under investigation in this study, the researcher relied on the theory of markedness which indicates that the forms which are unmarked or most frequently used are expected to be acquired before the forms which are marked or involve less frequent usages as Maravcsik (1986) suggest. The results of the study indicate that the form mfa99al (مفعول) did not pose any difficulty for children and would thus be the first form to be produced since it was the most frequent form and fully mastered by three-year-old children. The second form of passive to be produced by the children is the form maf9uu (مِفْعُول) and it is fully mastered by five-year-old children. Then comes the form infa9al (انفعال) and the data showed that it is fully mastered by six-year-old children. The fourth form of passive to be produced is the form maf9i which is fully mastered by six-year-old children. The form itfa99al (انفعال) comes in the fifth place and the form mfa99a (مفعٌ) is the
last form to be produced by Jordanian children. In fact, the forms *itfa99a* (انفعّل) and *mfa99a* (مفعّى) are not completely mastered by or before the age of seven.

The fact that the gender variable was found statistically insignificant for the production of passive is in support of the results of previous studies. Macauly (1978) suggest that what differences there are between the sexes are in rate rather than in style of acquisition, but that they are rarely significant and do not consistently favor either sex. Furthermore, Templin (1957) demonstrate that when the performance of boys and girls is compared over the entire age range, girls tend to receive higher scores more frequently than the boys, but the differences are not consistent and are only infrequently statistically significant. In fact, such relatively greater fluency of girls would be attributed to differential expectations of, and communication with, the two sexes by their parents as Smith and Connolly (1972) suggest.

**CONCLUSION**

There was a gradual but steady increase in the production of passive voice over time. That is because the increase in age is usually accompanied by improvement in the linguistic abilities of the child. The differences in the production of passive in the different age groups turn out to be statistically significant with regard to the age variable in the production of the form *maf9i* (مَفعّى). Jordanian children produce passive voice at an early stage of their childhood; most forms of the passive voice were produced by thee-year-old children with no difficulties. Thus, such finding leads us to conclude that the nature of the construction of passive in Jordanian Arabic does not have that complexity which may pose difficulties for the Jordanian children in their production of passive voice as with some other languages which have a complex passive voice structure. The gender variable was found statistically insignificant in the production of passive voice. This means that the performance of girls was more or less identical to that of boys.

**REFERENCES**


