**sciendo**

# Second Language Acquisition
# of the English Dative Alternation by Native Speakers of Arabic

**Anwar S Aljadani**
King Abdulaziz University, Kingdom of Saudi Arabia
asaljedaani@kau.edu.sa

**Abstract**
This paper reports on an experimental study that investigates the influence of the disparity between English and Arabic on second language acquisition, namely the phenomenon of the acquisition of the English dative alternation by Arab learners. The disallowance of certain Arabic verbs to occur in the double object dative structure causes difficulty for Arab learners to acquire English as far as the acquisition of the dative alternation is concerned. The experiment is devised to examine whether Arab learners are sensitive to syntactic and semantic properties associated with the English dative alternation. The experiment involved picture tasks with two structures: the prepositional dative structure and the double object dative structure. Overall, the results of the experiment show that the L2 learners failed to acquire the double object dative structure which does not exist in their L1. Based on these results, it is argued that L1 has an important effect on the acquisition of L2.

**Key words**: second language acquisition, the dative alternation, the prepositional dative structure, the double object dative structure, the broad range rules, the narrow range rules.

**Introduction**
Since the three last decades, the acquisition of English has been the topic of many studies. One of the issues addressed in previous research concerns the acquisition of the English dative alternation. It has received considerable attention and extensively investigated during the 1980s, for example (Gass & Selinker, 1983; Jarvis & Pavlenko, 2008). English and Arabic vary not only in the syntactic configurations they permit with some verbs classes but also in the ordering possibilities they allow for arguments and adjuncts. This paper aims to investigate the extent of the influence of these disparities on the acquisition of Second Language (L2) learners of English. The divergence between English and the Arabic argument structures is one of the obstacle that face L2 learners. An illustration facing L2 learners is the acquisition of structures that are not allowed

in their L1, this study intends to investigate how some verb classes are diversely utilised in English and the Arabic. This can be seen in the case of the expressing of certain verbs like 'read' in English and Arabic. English, on one hand, allows 'read' to occur in both the Prepositional Dative (PD) structure and in the Double Object Dative (DOD) construction, as exemplified in (1):

(1) a. Timor read the book to Campbell.          (PD)
    b. Timor read Campbell the book.              (DOD)

Arabic, conversely, only allows the PD structure with verbs such as 'read', as produced in (2a) and the DOD structure is grammatically unacceptable, as exemplified in (2b):

(2)  a. قرأ طلالٌ القصةَ لياسرٍ                                         (PD)
     qara-a        ṯalal-un        alqišat-a              li      yasser-in
     read          Talal-Nom       the story-Acc          prep    Yasser-Gen
     'Talal read the story to Yasser.'

     b. قرأ طلالٌ ياسرًا القصةَ                                          (DOD)
     *qara-a        ṯalal-un        yasser-an              alqišat-a
     read           Talal-Nom       Yasser-Acc             the story-Acc
     'Talal read Yasser the story.'

These illustrations provide an example of the difficulties which may face L2 Arab learners of English acquiring structures are not allowed in their L1 namely the acquisition of verbs like 'read' with the DOD structure, as exemplified in (1b).

**Theoretical background of the English dative alternation**
*Syntactic features*
The PD and the DOD constructions syntactically differ from each other. One of the major differences between them is that in (1a) the dative object is marked by a free morpheme (the preposition) and in (1b) the dative object is marked by word order (Hawkins, 1987). Moreover, it has been observed that the syntactic productivity of the PD construction is wider than the syntactic productivity of the DOD construction. This claim is supported by the fact that the majority of dative verbs that occur in the DOD construction can take the PD construction, however, only certain dative verbs take the DOD construction (Mazurkewich, 1984, 1985; Hawkins, 1987). However, some dative verbs require a recipient as in (3a), while

others require a benefactive as in (3b). The possibility of one proposition sometimes excludes the other, as illustrated in (4):

(3)   a. Peter gave a book to Kim.
       b. John baked a cake for Jane.
(4)   a. John built a house for Heather.
       b. *John built a house to Heather.

It can be observed that 'build' can take the *for*-PP but not the *to*-PP. It might be argued that in English the Goal argument is assigned by the *for*-PP such as in (4a) given that being assigned by the *to*-PP is ungrammatical as in (4b) (Hawkins, 1987). However, certain verbs that take the *to*-PP complements also permit the *for*-PP complement, but they have different meanings, as (5) shows:

(5)   a. John sent some flowers to Mary.
       b. John sent some flowers for Mary. Hawkins (1987, p. 22)

In (5a) 'Mary' received the flowers directly from 'John', however, (5b) illustrates that either 'John' sent some flowers on behalf of 'Mary' to someone else or 'John' sent someone some flowers for 'Mary'.

*Semantic features*
A semantic interpretation has been proposed by Pinker (1989) in Learnability and Cognition: the acquisition of argument structure draw linguistic attention to why several dative verbs are allowed to occur in the DOD construction while others are not. The proposal indicates that the dative alternation is the ability to be expressed into two various 'thematic cores' which are characterised in the following table:

| Table 1. Characterises the thematic cores of dative verbs | |
|---|---|
| The PD structure | The DOD structure |
| 'X caused Y to go to Z' is realised as the PD form. | 'X caused Z to have Y' is realised as the DOD form. |

The Broad Range Rules (BRRs) is a primary proposal was suggested by Pinker (1989) to allow that the PD construction 'X caused Y to go to Z' to alternate to the DOD construction 'X caused Z to have Y' when the given verb can apply to the causation of change of possession. Yet, being applied to the BRRs is necessary for

the given verb to allow the DOD structure but is not sufficient enough to govern 'negative exceptions', as illustrated in (6):

(6) a. *Abel pushed Owen a box.
　　 b. *Emma whispered Aileen the news.

　　It is easy to imagine an occasion in which someone is pulling a box to someone else leading to that person's possessing the box or an occasion in which whispering a secret to someone else leading to that person's possessing or knowing the secret. Regarding to the BRRs, examples such as those illustrated in (6) should be grammatically well-formed but they are not.
　　A consequence of the insufficiency of the BRRs to convert the PD structure to the DOD structure, the Narrow Range Rules (NRRs) application was proposed by Pinker (1989) to solve such problem. This application suggests a satisfactory explanation for a verb to occur in the DOD structure. As suggested, verbs are categorised into a number of categories, certain of them alternating and others non-alternating. Example (7b) is acceptable as 'throw' belongs to verbs of instantaneous causation of ballistic motion, which is an alternating class. However, example (8b) is unacceptable for the reason that 'push' is a verb of continuous causation of accompanied motion in some manner, which is a non-alternating class. Therefore, verbs must express a ballistic motion and not a continuous motion with a continuous imparting of force in order to alternate.

(7) a. Ellis threw the pen to Peter.
　　 b. Ellis threw Peter the pen.
(8)　a. Abel pushed a box to Owen
　　　b. *Abel pushed Owen a box.
　　Pinker (1989) argued that verbs such as 'throw' permit the DOD construction since the event involved expresses ballistic motion as in (7b). On the other hand, 'push' is not allowed to occur in the DOD structure, as exemplified in (8b) because it implies a continuous motion and a continuous imparting of force.

　　*The animate possessor constraint*
　　It has been suggested that the DOD construction is restricted to a condition which is that the Goal argument should be animate and a 'projected possessor' of the Theme argument (Green, 1974; Oehrle, 1976; Pinker, 1989). This constraint can be seen in the following examples:

(9)　　a. Ann sent the book to Alison.
　　　　b. Ann sent Alison the book.

(10)     a. Ann sent the book to Jeddah.
    b. * Ann sent Jeddah the package.


The animate possessor restriction illustrates the disparities between (9) and (10). The DOD construction is grammatically well-formed in (9b) since 'Alison', unlike 'Jeddah', is able to act as a potential possessor of 'the package', whereas in (10b) 'Jeddah' may be simply interpreted as the endpoint of the motion of 'the book' but not as a 'projected possessor'. The PD construction, as shown in (9a) and (10a), is acceptable with either 'Alison' or 'Jeddah' since not only 'Alison' but also 'Jeddah' can be understood as the endpoint of the movement of 'the book' or the physical location where 'the book' went to.

So far, all DOD instances that have been presented satisfy the possessor restriction. Specifically, the possession and the animacy are observed in all the DOD examples illustrated thus far. As long as such an observation is concerned, it is almost certain to hold the view that the animacy restriction is assumed. Moreover, it should be argued that such restriction might be an extremely fundamental condition for the possessor restriction.

However, regardless of widespread support for this argument, some researchers argued that the Goal argument sometimes is not an animate recipient. The examples in (11) were provided to support their argument. These examples are cited from Oh (2010, p. 410):

(11)     a. We gave the house a fresh coat of paint.
         b. We gave the house a new roof.


The previous examples in (11) obviously display the absence of the animacy restriction on the DOD structure. It could be argued that the possessor restriction is the heart of the semantic constraint on the DOD structure. It is likely that the animate restriction is a result of the possessor restriction to the extent that the animacy condition is respected for the DOD sentences where the referent of the first object is animate. The animacy restriction has been assumed in the DOD structure due to the widespread appearance of its Goal argument in an animate case which may legalize the inanimate goal in the DOD structure, which is probably rare.

*The physical movement restriction*
 It is a vital role of the PD construction to indicate 'directed motion'. That is, it illustrates an event in which the Theme argument moves from the Agent to the Goal argument. This movement denoted by the PD construction, is known as 'physical transfer' (Green, 1974; Oehrle, 1976; Gropen et al, 1989). The physical

movement is an essential element in the PD structure in which the *to*-PP is employed. Such a structure denotes the physical movement for the Theme argument from the Agent to the Goal argument. The following examples are presented by numerous researchers (den Dikken, 1995).

(12)    a. The revolution gave the country a new government.
        b. *The revolution gave a new government to the country.

    The ungrammatical PD sentence in the above example is due to the failure of 'direct movement'. Thus, the Recipient of the Theme argument must be a physical entity so as to be transferred by the preposition 'to'. The unacceptability of the PD constructions in (12b) is attributed to impossibility of transferring the Theme argument 'government' and 'perspective' in this example.
    The PD construction and the DOD construction seem to be semantically different from each other. The differences can be observed in many aspects. One of which is that the DOD construction, but not the PD construction, may possibly be related to a causative meaning (Oehrle, 1976; Larson, 1988; Pinker, 1989; Gropen et al., 1989).

(13)    a. The article gave me a headache.
        b. *The article gave a headache to me.      Miyagawa    &    Tsujioka
        (2004, p. 2)

    As can be understood from example (13a), reading the article caused the headache. The causative interpretation is impossible to be expressed in the PD construction, as shown in example (13b).
    The second semantic difference between these two constructions is that the DOD structure often implies a meaning of completion which possibly will be absent in the PD structure. This disparity can be clarified by Green (1974) who mentioned that an intuition that (14a) may possibly take place although 'the pupils' may not learn 'English'; while the interpretation of example (14b) proposes that 'the pupils' learned it.

(14)    a. Paul taught English to the pupils.
        b. Paul taught the pupils English.

    A further semantic disparity between the dative structures noted by Green (1974) is that the Goal argument in the DOD construction, unlike in the PD construction, should exist, as in (15):

(15)    a. Alex told his sorrows to God.
        b. Alex told God his sorrows.

It can be understood from example (15a) that God does not exist and it may be uttered by non-believer in God. However, the interpretation of (15b) must entail the existence of God.

To sum up, the semantic proposals: the BRRs and the NRRs are successively proposed by Pinker (1989) to solve the issue of why some verbs are syntactically allowed to occur in the DOD structure, while others are not allowed. The DOD structure is restricted by the animate possessor. Moreover, the physical movement is a vital condition for the PD structure.

### Theoretical background of the Arabic dative alternation
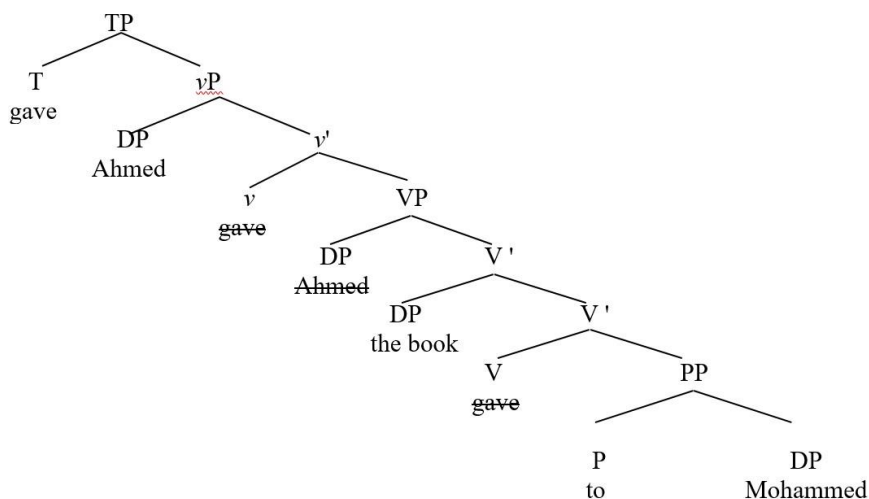*Syntactic features*

A variety of Arabic verbs permit what is known as the dative alternation, as exemplified in the pair of sentences in (16). Example (16a) shows the Arabic PD structure and example (16b) illustrates the Arabic DOD structure. Dative verbs in Arabic are verbs which appear with two objects that cannot form by themselves a separate verbless sentence. This definition was built on the base of the relationship between the two internal arguments of the dative sentence. In other words, the relationship between the indirect object (the Goal argument) such as 'Ali' in example (16b) and the direct object (the Theme argument) such as 'the book' in example (16b) does not have to be like the relationship between the subject and its complement in case of verbless sentence. The direct object 'the book' in (16b) cannot be the complement of the subject in a sentence such as *Ali (is) the book.

(16)    a. أعطى عمرُ الكتابَ إلى علي            (Theme)        (Goal)
        a'ṭa         omar-u         alkitaab-a      ela      ali-in
        gave         Omar-Nom       the book-Acc    prep     Ali-Gen
        'Omar gave the book to Ali.'

        b. أعطى عمرُ عليًّا الكتابَ            (Goal)         (Theme)
        a'ṭa     ahmed-u        ali-an          alkitaab-a
        gave     Omar -Nom      Ali -Acc        the book-Acc
        'Omar gave Ali the book.'

To show the structures of the PD as in (16a) and the DOD as in (16b), I will assume that the direct and the indirect objects are base generated inside the VP

projection, the former occupies an intermediate position of VP while the latter occupies the complement of the VP. This can be supported by the VP-Internal Subject Hypothesis which is formulated by Koopman & Sportiche (1988). They assumed that the subject of the simple clause is generated in the specifier of the VP whereas the objects are generated inside the VP. Therefore, the PD structure as in (17a), the direct object 'the book' adjoins to V' and the indirect object 'to Mohammed' has its own PP projection below the V. Similarly, the DOD structure as in (17b) has the indirect object 'Mohammed' adjoins the V' and the direct object 'the book' is in the lowest position of the clause structure. The verb merges in the V and then moves to the T position via the *v* while the subject merges in the spec-VP and moves to the spec-*v*P to receive the nominative case with the T 'gave', as shown in structure (17a & 17b).

(17)    a. The tree of the Arabic PD structure

b. The tree of the Arabic DOD structure
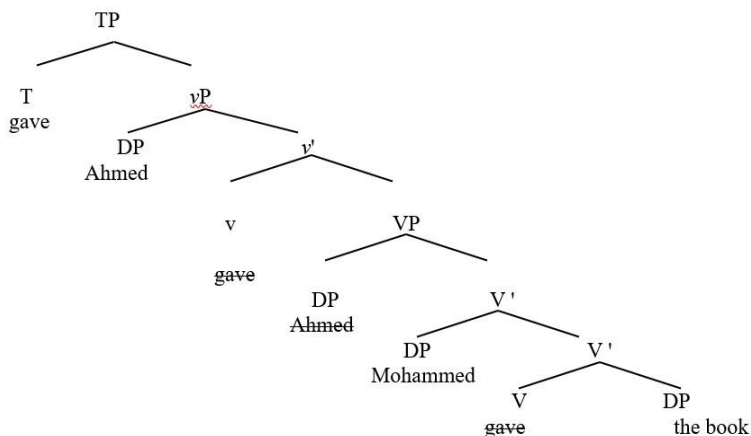


*Semantic features*

In Arabic alternating verbs, the Goal argument must be an animate in order to become the 'prospective possessor' or 'benefactive recipient' of the Theme argument as shown in (18):

(18)    a. باعَ إسماعيلُ المنزلَ لفيصلٍ

| ba'a | ismail-u | almanzi-a | li | faisal-in |
|------|----------|-----------|-----|-----------|
| sold | Ismail-Nom | the house-Acc | prep | Faisal-Gen |

'Ismail sold the house to Faisal.'

b. باعَ إسماعيلُ فيصلَ المنزلَ

| ba'a | ismail-u | faisal-a | manzil-a |
|------|----------|----------|----------|
| sold | Ismail-Nom | Faisal-Acc | a house-Acc |

'Ismail sold Faisal a house.'

In the example (18) 'Faisal' is a potential possessor of the house. Therefore, this example follows the animacy constraint. However, the Recipient has to be a potential animate possessor in the DOD construction but not in the PD construction. Al-Sadoon (2011) proposed that this animacy constraint is supported by the fact that $P_{HAVE}$ encodes possessive relations for which the possessor must be animate, whereas $P_{LOC}$ encodes locative relations which do not

need any animacy restriction. The following examples demonstrate this phenomenon.

(19)    a. أعطيتُ الهديةَ للطالبِ/ للمدرسةِ

    a'ṭay-tu        alhadiyat-a        li        ṭṭalib-i/mmadrast-i
    gave-I        the gift-Acc        prep        the student-Gen/the school-

Gen
    'I gave the gift to the student/the school.'

    b. أعطيتُ الطالبَ/المدرسةَ هديةً

    a'ṭay-tu        alṭṭalib-a/*almmadrast-a        hadiyat-an
    gave-I        the student-Acc/*the school-Acc        a gift-Acc
    'I gave the student/* the school a gift.'

In contrast, numerous verbs do not dativise even though their Goal argument is the 'possessor' or 'benefactive recipient' of the Theme argument as in example (20):

(20)    a. ركلَ أحمدُ الكرةَ إلى محمدٍ

    rakala  ahmed-u        alkorat-a      ela     mohammed-n
    kicked  Ahmed-Nom    the ball-Acc     prep    Mohammed-Gen
    'Ahmed kicked the ball to Mohammed.'

    b. ركلَ أحمدُ محمدًا الكرةَ

    *rakala        ahmed-u        mohammed-a    alkorat-a
    kicked        Ahmed-Nom    Mohammed-Acc  the ball-Acc
    'Ahmed kicked Mohammed the ball.'

A concern that may be raised is that why certain Arabic verbs such as the equivalent of "kick" do not dativise even though their counterparts in English do and they follow the animate possessor constraint. Hamdan (1997) proposed "involvement in the act" as a condition for Arabic dative verbs to alternate. He argued that the Agent and the Goal argument with alternating verbs in Arabic should involve in the action. This condition will be named as a simultaneous participation in the act and will be explained in the following section.

*A simultaneous participation in the act*

The underlying semantic analysis of Arabic alternating verbs, for illustration, *a'ta* 'give' and *akbara* 'tell' both the Agent and the Goal argument essentially participate in the act, as the following example:

(21)   أعطى عليٌّ خالدًا كتابًا

|        |        |           |            |
|--------|--------|-----------|------------|
| a'ta   | ali-un | khalid-an | kitaab-an  |
| gave   | Ali-Nom| Khalid-Acc| a book-Acc |

'Ali gave Khalid a book.'

In the above example both 'Ali' and 'Khalid' simultaneously participate in the act of giving the book. The image of this action is that Ali handed the book to Khalid and said that 'the book is for you.' On the other hand, Ali accepted the book either by receiving the book physically or indicating the acceptance verbally. In such situation, it can be said that Ali gave Khalid the book. However, if the involvement in the action did not occur, it may not be truly said that Ali gave Khalid the book.

The concept of the simultaneous participation between the Agent and the Goal argument in the DOD construction was highlighted by Ibn S-Saraaj (1996) who advocated that the meaning of the following example should be understood as 'Abdullah gave and Zaid took.'

(22)   أعطى عبدُ اللهِ زيدًا درهمًا

|       |              |          |            |
|-------|--------------|----------|------------|
| a'ta  | abd-u Allah-i| zaid-an  | dirham-an  |
| gave  | Abd-Nom Allah-Gen | Zaid-Acc | dirham-Acc |

'Abdullah gave Zaid a dirham.'

It may be widely agreed that the simultaneous participation in the act mentioned previously is very significant for dativisation. If a verb lacks this feature, it will not dativise even though the Agent and the Goal argument deliberately arrange the involvement between them in the act. This is illustrated in (23):

(23)   أرسلتُ عيدًا الكتابَ بعدما طلبه

|            |              |                         |
|------------|--------------|-------------------------|
| * arsal-tu | eid-an alkitaab-a | ba'dama talaba-hu  |
| sent-I     | Eid-Acc the book-ACC | after he had requested-it |

'I sent Eid the book after he had requested it.'

To conclude, it has been argued that the Goal argument in the Arabic dative alternation should be animate. A further necessary condition for the Arabic

dativisation is that the Agent and the Goal argument must simultaneously participate in the act.

### *The phenomenon of learners' acquisition of argument structure*

The phenomenon of the vital role of L1 influence on the acquisition of L2 has been widely recognised by both practicing language teachers and L2 researchers for decades. Specifically, the role of L1 in L2 learning has been a major concern in applied linguistics inquiries for some time now. It has been assumed that knowledge of L1 is a crucial cognitive element in shaping the process of L2 acquisition. For instance, Schwartz & Sprouse (1996) established the Full Transfer / Full Access (FT/FA) hypothesis and stated that the initial stage of the acquisition of L2 is the final stage of the L1 grammar and L2 learners will transfer the L1 representations to the L2 grammar (FT). Late, L2 learners will have to restructure their interlanguage and resort to principles and operation constrained by Universal Grammar (UG) once the input cannot be analysed by the L1 grammar (FA). Following the FT/FA hypothesis, Lardiere (2008, 2009, 2013) proposed the Feature Reassembly Hypothesis (FRH) and argued that successful L2 acquisition proceeds by means of reassembling sets of lexical features which are drawn from the L1 lexicon into feature bundles appropriate to the L2. The feature reassembly process follows 'initial mapping' as argued by Gil & Marsden (2013, p. 118):

> *'L2 acquisition proceeds by means of the learner perceiving correspondences between lexical items in the L2 input and items in their own L1. This results in the L2 form being mapped to the L1 feature set for the item that is perceived to be equivalent. Once this initial mapping is established 'feature reassembly' can occur, if required: features can be added or deleted from the L1-based feature set, as motivated by evidence in the input.'*

The FRH follows the FT/FA hypothesis by assuming that adult L2 learners bring the formal features, which are assembled into the L1 lexical items to the task of L2 acquisition. It could be said that the FRH is a modulation of the FT/FA approach as it insists that the successful acquisition of L2 relies on the reassembling the sets of feature bundles of L1 lexical items into feature bundles appropriate to the L2, in circumstances where divergences occur.

The learning task for L2 learners is twofold, namely, mapping features and feature reassembly. Firstly, L2 learners have to map a lexical item to its closet equivalent in L2, then, they reassemble the features that do not correspond

within both L1 and L2. During the first stage which is the mapping of the sets of lexical items in L1 to those of L2, Lardiere (2009, p. 191) predicted that:

> *'It seems plausible to assume (and the feature re-assembly approach indeed rests on the assumption) that learners will look for morpholexical correspondences in the L2 to those in their L1, presumably on the basis of semantic meaning or grammatical function (the phonetic matrices will obviously differ).'*

Consequently, the FRH assumes that L1 transfer is the initial attempt to directly map between L1 and L2 lexical items. However, in the case of failure of mapping, L2 learners need to refine the combined features which were transferred from their L1 and reassemble features that attribute to different feature bundles in L1 and L2.

At the second stage which is feature reassembly, L2 learners may need either to learn new features, or abandon features allowed in their L1, but not in their L2. As a consequence, interlanguage development might be conceptualised by the FRH as a process of assembling L1 features into L2 features.

There are certain previous studies of the acquisition of the dative alternation by L2 learners. One of these studies was carried out by Whong-Barr & Schwartz (2002) who investigated the acquisition of the English DOD construction by L1 English, L1 Japanese, and L1 Korean children. This paper aimed to examine whether L2 children overgeneralise the DOD construction as L1 children. It also sought to explore whether L2 children transfer structures of their L1 grammar. Their first question was that whether L2 children, like L1 children, overgeneralised the DOD structure. The second question was that whether L2 children, like L2 adults, transfer properties of the L1 grammar. Japanese disallows all DOD structures. Korean disallows them with analogues of *to*-dative verbs; but with analogues of *for*-dative verbs, Korean productively allows them more broadly than English if the benefactive verbal morpheme *cwu*- is added. The experimental participants in this study were five Korean children who were eight-years old and five Japanese children who were seven-years old. Six English children who were eight-years old also took apart in this study as control group. An oral grammaticality judgment task was carried out to examine the use of the DOD structure. There were four types of DOD structures: grammatical and ungrammatical *to*-dative sentences and grammatical and ungrammatical *for*-dative sentences. The results generally can be summarised by outlining that Japanese learners accepted all the grammatical DOD structure with *to*-dative and

*for*-dative verbs and overaccepted all the ungrammatical DOD structure. However, Korean learners accepted all the grammatical DOD structure and rejected the ungrammatical DOD structure with *for*-dative verbs but they overaccepted the ungrammatical DOD structure with *to*-dative verbs. The results of this research can provide evidence of both overgeneralization, like in L1 acquisition, and L1 influence, like in adult L2 acquisition, in this case from the (syntactic) argument-changing properties of overt morphology.

### Research questions

The current study intends to explore how Arab learners of English express certain verb classes in English: verbs of act of giving, verbs of type of communication and verbs of ballistic motion. More specifically, to what extent can these learners realise the grammaticality of the Throw class verbs with the DOD construction in English as *Ellis threw Peter the pen*?
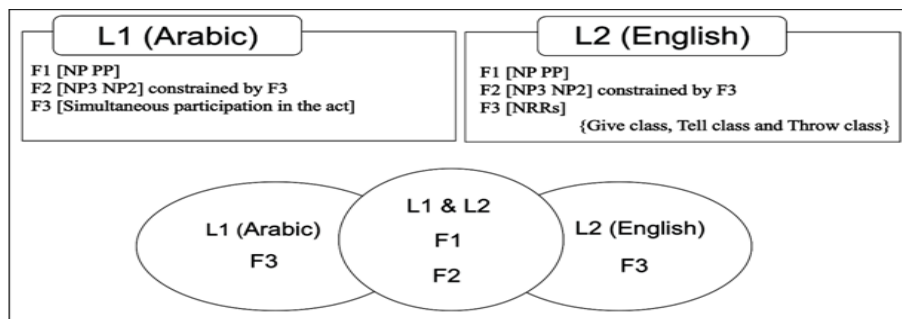
### The experimental study

The current study seeks to explore to what extent semantic constraints play a crucial role in mapping verb classes onto different syntactic configurations. The extent to which the acquisition of the semantic constraints assists L2 learners to map the investigated verb classes onto different syntactic configurations that are not allowed in their L1. This will be conducted through an investigation into how well native speakers of Arabic acquire the English dative alternation. With the intention of addressing this question, the study concentrates on the acquisition of three verb classes in English: act of giving verbs, type of communication verbs and ballistic motion verbs. English allows all these verb classes to appear in the DOD form. Arabic, on the other hand, only allows some verbs in the act of giving class such as the equivalent of 'sell' and the type of communication class such as the equivalent of 'show'. In other words, English structures correspond to a superset of those in Arabic by allowing the DOD2 structure. In such a situation, according to the FT/FA hypothesis, it is speculated that Arab learners will initially transfer their L1 grammar hence they will not acquire such structure due to its ungrammaticality in their L1. Late, they will acquire this structure once the input cannot be analysed by the L1 grammar.

A hypothesis tested in this study is that even though the equivalent of ballistic motion verbs and certain verbs in the act of giving class such as 'pay' and the type of communication class such as 'read' are not allowed to occur in the DOD construction in Arabic since these dative verbs violate the Arabic semantic constraints, Arab learners of English, to a great extent, are able to acquire such verbs with the DOD construction as long as positive evidence is available.

A question may be highlighted is that how Arab learners of English acquire the English dative alternation. In accordance with the superset and the subset of English and Arabic dative features as illustrated in Figure 1, Arab learners of English may need to substantially fulfil a learning task to acquire the English dative alternation. The task is twofold and corresponds to two distinct stages. The first stage is mapping L1 features to their equivalents in L2. An illustrative task for this stage is the mapping of the occurrence of the PD structure with all dative verbs as well as the allowance of the DOD structure with verbs such as 'give', 'sell', 'tell', and 'show'. The second stage is the reassembling of L2 features. This stage can be accomplished by abandoning L1 features that are not available in the L2 grammar. For example, they should stop assuming the validity of the notion of the simultaneous participation between the Agent and the Goal argument in the DOD structure. The abandonment of this point will occur based on the availability of negative evidence. The reassembling occurs also through learning the NRRs to assist them to acquire the DOD structure with certain verbs that are not allowed in their L1 grammar such as 'pay', 'read', 'write', 'throw', 'kick', 'toss', and 'shoot'. The acquisition of the NRRs is provided by positive evidence.

Fig. 1: English acquisition by Arab learners (mapping features and feature assembly)



### The methodology
*Participants*

Two major groups contributed in this study: one was the experimental group that was made up of 50 Arabic speakers learning English as L2 and the second group was 10 native speakers of English who acted as controls to certify the reliability and validity of the used test.

*The picture-judgment task*

The participants were given written grammaticality judgment tasks with pictures. The investigated items consisted of pictures and sentences containing alternating verb followed by a three-point Likert scale from 1 (bad example) through 2 (not sure) to 3 (good example). It was comprised of 24 pictures; each two pictures describe a verb in two different constructions. The different constructions are shown in the tables below. The investigated verbs were 'give', 'sell', 'pay', 'hand', 'tell', 'read', 'write', 'show', 'throw', 'kick', 'toss' and 'shoot'. The verbs used in the study were classified into two classes. The first class composes of five alternating verbs ('give', 'sell', 'hand', 'tell' and 'show'). The second class includes seven alternating verbs ('pay', 'read', 'write', 'throw', 'kick', 'toss' and 'shoot'). These two classes should be in one category since they all are alternating verbs in English, however, they were classified into two classes due to the fact that the first class can occur in the DOD form in Arabic but the second class cannot. This classification was made in order to assist the researcher to investigate the extent to which the participants can recognise the grammaticality of structures that do not exist in their L1. Table 2 shows an example of the two structures with 'give'.

| Table 2. Examples of the four different structures with 'give' | |
|---|---|
| **Sentence type** | **Example** |
| PD1 | Peter gave the book to Kim |
| DOD1 | Peter gave Kim the book. |

| Table 3. Examples of English constructions | |
|---|---|
| **The abbreviation of each structure** | **Example** |
| PD1 | Peter gave the book to Kim. |
| DOD1 | Peter gave Kim the book. |
| PD2 | Ellis threw the pen to Peter. |
| DOD2 | Ellis threw Peter the pen. |

*Results*

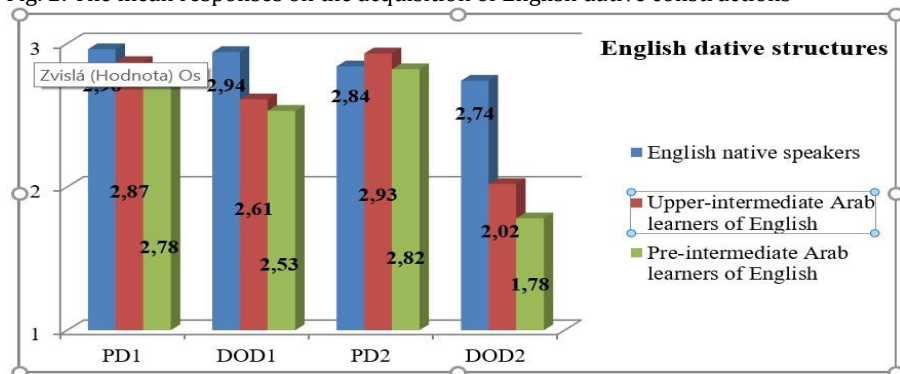Fig. 2: The mean responses on the acquisition of English dative constructions



Table 4. Tests of within-subjects effects on English basic structures

| Source | DF | MS | F | Sig. |
|---|---|---|---|---|
| Structures | 1 | 10.155 | 36.611 | .000 |
| Structures * group | 2 | 1.431 | 5.159 | .009 |
| Verb group | 1 | 3.984 | 47.550 | .000 |
| Verb group * group | 2 | .151 | 1.797 | .175 |
| Structures * verb group | 1 | 3.809 | 53.622 | .000 |
| Structures * verb group * group | 2 | .522 | 7.352 | .001 |

A three-way mixed ANOVA was run within participant groups (native speakers of English, upper-intermediate learners and pre-intermediate learners of English), as a between-subject variable, and structures (PD vs. DOD) and verb groups (group one {give, sell, hand, tell and show} vs. group two {pay, read, write, throw, kick, toss and shoot}) as within-subject variables. The statistical analysis showed a significant main effect of structure and verb group, and significant two-way interactions between structure and group, and between structure and verb group, as shown in Table 4. Moreover, the three-way interaction between structures, verb group and group was significant, $F$ (7.352) = .522, $p$ = .001. However, the interaction of verb group and group showed no significant main

effect for the acquisition of the basic structures $F (1.797) = .151$, $p = .175$. As the three-way interaction was significant results, it could be worth following this analysis up with a two-way ANOVA to find out the drives effects.

| Table 5. Tests of within-subjects effects on the English PD1 and DOD1 structures | | | | |
|---|---|---|---|---|
| Source | DF | MS | F | Sig. |
| Structures | 1 | .763 | 6.699 | .012 |
| Structures * group | 2 | .112 | .987 | .379 |

Two two-way mixed ANOVA, were run with group (native speakers of English, upper-intermediate learners and pre-intermediate learners of English) as a between-subject variable, and structure (PD1 vs. DOD1) as a within-subject variable. Table 5 provides an overview of the analysis of the PD1 and the DOD1 structure. The ANOVA pertaining to verb group 1 revealed that there is a significant effect of structure, $F (6.699) = .763$, $p = .012$. However, the interaction between the structures and group was not significant, $F (.987) = .112$, $p = .379$.

| Table 6. Tests of within-subjects effects on the English PD2 and DOD2 structures | | | | |
|---|---|---|---|---|
| Source | DF | MS | F | Sig. |
| Structures | 1 | 13.201 | 56.283 | .000 |
| Structures * group | 2 | 1.841 | 7.848 | .001 |

A two-way ANOVA was run with groups (native speakers of English, upper-intermediate learners and pre-intermediate learners of English) as a between-subject variable, and structure (PD2 vs. DOD2) as a within-subject variable. It showed considerable results on both the structures $F (56.283) = 13.201$, $p = .000$ and the interaction of structures and group $F (7.848) = 7.848$, $p = .001$, as illustrated in Table 6. This table will be followed by one-way ANOVA to identify the source of interaction.

| Table 7. One-way ANOVA on the English PD2 and DOD2 structures | | | | |
|---|---|---|---|---|
| Source | DF | MS | F | Sig. |
| PD2 | 2 | .079 | .826 | .443 |
| DOD2 | 2 | 3.492 | 12.154 | .000 |

Table 7 provides a statistical analysis of the PD2 and the DOD2 structures on one-way ANOVA. It was run within participant groups (native speakers of English, upper-intermediate learners and pre-intermediate learners of English) as a between-subject variable, and structure (PD2 vs. DOD2). As shown in Table 7, there is no evidence of the disparity between the participants on the assessment of the PD2 structure. However, there was a statistical disparity between the participants on the assessment of the DOD2 structure. These ANOVA analyses are followed by certain t-test analyses to further perceive the significance in assessment of the BDOD2 structure. It is interesting to find that there was a noticeable difference between native speakers (2.74) and the experimental participants (2.02 vs. 1.78) in terms of the assessment of the DOD2 construction, which led by the low acceptance of this structure by the non-native participants, as illustrated in Table 8 and 9 respectively.

| Table 8. Comparison between English native speakers and upper-intermediate Arab learners of English assessing the DOD2 structure in English | | | | |
|---|---|---|---|---|
| Groups of participants | N | Structure | Means | Sig |
| English native speakers | 10 | DOD2 | 2.74 | .001 |
| Upper-intermediate Arab learners of English | 25 | | 2.02 | |

| Table 9. Comparison between English native speakers and pre-intermediate Arab learners of English assessing the DOD2 structure in English | | | | |
|---|---|---|---|---|
| Groups of participants | N | Structure | Means | Sig |
| The English native speakers | 10 | DOD2 | 2.74 | .000 |
| Pre-intermediate Arab learners of English | 25 | | 1.78 | |

*Discussion of the findings*

The results of this study show that the Arab learners did not accept the DOD2 structure as their ratings were statistically lower than the native speakers' rate (2.02 : 1.78 vs. 2.74), as observed in Figure 2. As this results show, it seems that L2 learners realised the overlap between the L1 and the L2 and indicated that the L1 and the L2 are identical. Therefore, the DOD2 structure is allowed neither in Arabic nor in English. These results provided a support for the FT/FA hypothesis

as these learners transferred their L1 grammar to L2 grammar despite its ungrammaticality in the L2.

In terms of discussing the current findings on light of the acquisition of the semantic features, it is the focus of this study to explore the acquisition of English semantic features. The previous investigations of the acquisition of the semantic constraints in the English dative alternation showed varied and contradictory findings. An example can be revealed in the investigation undertaken by Sawyer (1996) found that Japanese learners could distinguish between the Throw class verbs and the Push class verbs despite the absence of such a distinction in their L1. Moreover, Inagaki (1997) explored the acquisition of the English NRRs by native speakers of Japanese and Chinese. He found that Japanese learners could distinguish the Tell class verbs from the Whisper class verbs while they could not do so with the Throw class verbs from the Push class verbs. The interpretation of these unexpected results was built on the selective access to UG and the frequent input. Chinese learners performed well in the distinction between the Tell and Throw classes but they could not do so with the Throw and Push classes.

Undertaking the investigation of the acquisition of the English dative alternation by the native speakers of Arabic to explore the extent to which the current participants well resemble the target semantic constraints. The findings of this investigation showed that in spite of the acquisition of the BRRs which are general semantic constraints these learners could not acquire the NRRs which are the specific semantic constraints that govern the dative alternation in English resulting in the failure of acceptance of the grammatical structure in the L2.

It might be a possible explanation for the weak acceptance of the DOD2 structure as a consequence of the unavailability of this structure in the L1 grammar. L2 learners will accept what is available in their L1 due to their assumption that the L1 and the L2 are the same and what is ungrammatical in the L1 has to be ungrammatical in the L2. The negative transfer (ignoring L2 grammar due to its absence in L1) revealed in this study by the Arab learners of English may simply reflect the insufficient evidence available to them which might be related to the low proficiency levels. L2 learners at low proficiency levels seem to be, to great extent, affected by their L1 due to the heavy reliance on the previous experience (L1 grammar) to fill gaps in the target language grammar. Another possible explanation could be that these learners are not sensitive enough to the NRRs which govern the dative alternation in English to realise the occurrence of the Throw class verbs and several verbs in the Give class such as 'pay' and in the Tell class such as 'read' in the English DOD structure. The delayed acquisition of the DOD2 structure is due to difficulties in acquiring the semantic features (NRRs) in the English dative alternation. Such

undergeneralisation errors can be easily overcome due to the availability of positive evidence.

The question that may be raised here is that how Arab learners of English eventually recover from the phenomena of undergeneralisation. Based on White's (1991) argument, the phenomena of undergeneralisation in the acquisition of L2 argument structures is easier to be solved than overgeneralisation. Initially, once L2 learners assume a restrictive grammar, L2 positive evidence will probably draw their attention to extend their L2 grammar. Once the Arabic native speakers notice the grammaticality of sentences such as *Ellis threw Peter the pen* in English, they will restructure their grammar to incorporate the English dative alternation that are not allowed in their L1.

Along with the investigation of the syntax-semantics interface conducted by Oh (2010) which proposed that the influence of negative transfer may be overcome once the proficiency level increased. As she found that certain participants particularly at advanced level could acquire the semantic properties associated with the benefactive DOD structure progressively but surely. It also was revealed that although the Arab participants could not acquire the DOD2 structure, some individuals, particularly at the upper-intermediate level, were able to acquire the semantic constraints related to the dative alternation gradually. Accordingly, it may be suggested that the acquisition of the semantics of the dative alternation can assist learners to acquire the semantics of the DOD2 structure, which in turn promote learners to correctly accept such structure. Moreover, it was suggested by Oh (2010) that the acquisition of the semantic constraints of a structure leads to the acquisition of the syntactic configuration of that structure. The syntactic and semantic relationship should be investigated to draw a definitive overview on the relation between them. Furthermore, it might determine the linguistic knowledge and mechanisms are occupied in this process. Learning a verb entails learning its semantic roles related to the inherent meaning of that verb (see Goldberg, 1995). Equally, learning a construction entails learning its associated semantics (Tomasello, 1992, 2000; Goldberg, 1999). Therefore, it may be assumed that the acquisition of the English DOD construction necessitates the acquisition of its semantic restrictions. The present study attempts to address the raised issues by examining Arab learners' knowledge of English semantic constraints governing the DOD construction. An exploration of the learners' knowledge of the relevant semantic restrictions provides a good understanding of the recovery from the negative transfer effects. As stated by the researchers, the acquisition of semantic features of a structure is the prior step to acquire that structure. Based on this suggestion, the Arab learners should learn that the English DOD construction encode certain semantic

features. Therefore, the acquisition of the semantic features associated with the DOD structure precedes the acquisition of its syntactic internal arguments.

*Conclusion*

The present study was set up to explore the ability of L2 in the acquisition of L2 structures that are absent in the L1 grammar. It investigated how Arab learners of English acquire the DOD with certain verbs such as 'throw'. It was revealed that the Arab learners could not acquire L2 structures that are not allowed in their L1. This can be observed in the assessment of the DOD2 structure (e.g. *Timor wrote his wife a letter*). All experimental participants did not assess this structure as positively as it should be. Both groups, the pre-intermediate and the upper-intermediate, revealed significant results when their judgements of the DOD2 structure compared to the English native speakers' judgements, as tables 8 and 9.

These results confirm the vital role of the L1 in the acquisition of L2. Lefebvre, White & Jourdan (2006) observed that the L1 transfer is the appropriate analysis until contrary evidence is provided to L2 learners. In case of the absence of such evidence, the influence of L1 will continue till the L2 advanced level. It is possible for these L2 learners to ultimately overcome the problem of L1 transfer and acquire the L2 grammar, once sufficient positive evidence is provided. Furthermore, the FT/FA approach assumes that L2 learners will eventually access to UG and acquire the L2 grammar.

To accurately discuss the possibility of the full acquisition of the dative alternation in English and Arabic by L2 adult learners after the critical period, the advanced learners should be examined as Sorace (1993) did in the acquisition of unaccusativity in Italian. Regardless of the participants' levels, it was probable to notice certain individual differences at each level. Individual findings showed that certain L2 learners seemed to be entirely influenced by their L1 whereas other learners started to incorporate the L2 grammar by accepting the grammatical sentences and ignoring the ungrammatical sentences.

## References

Den Dikken, M. (1995). *Particles: On the syntax of verb-particle, triadic, and causative constructions*, Oxford University Press on Demand.

Gass, S. M. & Selinker, L. (1983). *Language Transfer in Language Learning. Issues in Second Language Research*, ERIC.

Gil, K. H., & Marsden, H. (2013). Existential quantifiers in second language acquisition: A feature reassembly account. *Linguistic Approaches to Bilingualism*, *3*(2), 117-149.

Goad, H. & White, L. (2006). Ultimate attainment in interlanguage grammars: A prosodic approach. *Second Language Research,* 22**,** 243-268.

Goldberg, A. (1995). *Constructions: A Construction grammar approach to argument structure.* Chicago: University of Chicago Press.

Goldberg, A. E. (1999). The emergence of the semantics of argument structure constructions. *The emergence of language***,** 197-212.

Green, G. M. (1974). *Semantics and syntactic regularity*, Indiana University Press.

Gropen, J., Pinker, S., Hollander, M., Goldberg, R. & Wilson, R. 1989. The learnability and acquisition of the dative alternation in English. *Language***,** 203-257.

Hamdan, J. (1997). The acquisition of the dative alternation UG markedness or L1 transfer? *Dirasat. Human and social sciences,* 24.

Hawkins, R. (1987). Markedness and the acquisition of the English dative alternation by L2 speakers. *Second Language Research,* 3**,** 20-55.

Ibn S-Saraaj, M. B. S. (1996). *Al-Aušool fi Al-Nahwi,* Beirut, Al-Resalah Publishers.

Inagaki, S. (1997). Japanese and Chinese Learners' Acquisition of the Narrow-Range Rules for the Dative Alternation in English. *Language Learning,* 47**,** 637-669.

Jarvis, S. & Pavlenko, A. (2008). *Crosslinguistic influence in language and cognition*, Routledge.

Lardiere, D. (2008). Feature assembly in second language acquisition. In: Liceras J, Zobl H and Goodluck, H. (eds) *The role of formal features in second language acquisition*. New York:Lawrence Erlbaum, 106–40.

Lardiere, D. (2009). Some thoughts on the contrastive analysis of features in L2 acquisition. *Second Language Research* 25: 173–227.

Lardiere, D. (2013). Linguistic approaches to second language morphosyntax. In S. Gass & A. Mackey (Eds.), *The Routledge Handbook of Second Language Acquisition* (pp. 106-126). Routledge.

Larson, R. K. (1988). On the double object construction. *Linguistic inquiry***,** 335-391.

Lefebvre, C., White, L. & Jourdan, C. 2006. *L2 acquisition and Creole genesis: dialogues*, John Benjamins Publishing.

Mazurkewich, I. (1984). The acquisition of the dative alternation by second language learners and linguistic theory. *Language learning,* 34**,** 91-108.

Mazurkewich, I. (1985). Syntactic markedness and language acquisition. *Studies in second language acquisition,* 7**,** 15-35.

Miyagawa, S. & Tsujioka, T. (2004). Argument structure and ditransitive verbs in Japanese. *Journal of East Asian Linguistics,* 13**,** 1-38.

Oehrle, R. T. (1976). *The grammatical status of the English dative alternation.* Massachusetts Institute of Technology.

Oh, E. (2010). Recovery from first-language transfer: The second language acquisition of English double objects by Korean speakers. *Second Language Research,* 26**,** 407-439.

Pinker, S. (1989). *Learnability and cognition : the acquisition of argument structure,* Cambridge, Mass., MIT Press.

Sawyer, M. (1996). L1 and L2 sensitivity to semantic constraints on argument structure. Proceedings of the 20th annual Boston University Conference on Language Development, 1996. 646-657.

Schwartz, B. D. & Sprouse, R. A. (1996). L2 cognitive states and the full transfer/full access model. *Second language research,* 12**,** 40-72.

Sorace, A. (1993). Incomplete vs. divergent representations of unaccusativity in non native grammars of Italian. *Second Language Research,* 9**,** 22-47.

Tomasello, M. (1992). *First verbs: A case study of early grammatical development*, Cambridge University Press.

Tomasello, M. (2000). Do young children have adult syntactic competence? *Cognition,* 74**,** 209-253.

White, L. (1991). Argument structure in second language acquisition. *Journal of French Language Studies,* 1**,** 189-207.

Whong-Barr, M. & Schwartz, B. D.(2002). Morphological and syntactic transfer in child L2 acquisition of the English dative alternation. *Studies in Second Language Acquisition,* 24**,** 579-616.

**Contact**
Anwar S Aljadani
King Abdulaziz University
Kingdom of Saudi Arabia
asaljedaani@kau.edu.sa