

## Development of Noun Inflectional Morphology in Children Acquiring Urdu and Punjabi

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### *Abstract*

The present research assesses the noun inflectional acquisition of children acquiring Urdu and Punjabi as 1<sup>st</sup> Language. A total of 36 bilingual children age ranged 3.0 – 6.0, divided into six groups, participated in this study. Their acquisition of noun inflectional morphology which includes gender, number and case categories was judged through picture description task. The results of all these three grammatical categories of these bilingual children reveal that the acquisition of Urdu and Punjabi noun inflectional morphology is a gradual process not an instant one which follows overgeneralization of different sorts. This acquisition is better acquired with advance age, more exposure and frequency. The results are in line with the constructivists' ideas of inflectional acquisition..

**Keywords:** noun inflectional morphology, gender, number, case, gradual process.

Inflectional morphology expressed through morphosyntactic or grammatical categories is universal but its use is language specific. Each language has a unique combination of these categories to express grammatical information through inflection and lexical information through separate lexical items (Santos, 2008; Tallerman, 2015) and this variation causes vitality and meanings to human languages. For the last sixty years, the child acquisition of these grammatical categories (inflectional morphology) has been interest of the researchers from almost all language families (Clark, 2001)

Generally two frameworks i.e. Generativism and Constructivism are much researched from this point of view. Generativists always relate speech with “rule – governed activity” (Antal, 1988) and these principle / rule based generativists take grammar (including syntax, inflectional morphology and in few approaches phonology also) as a series of combination of rules which “...express structural relations among the sentences .... (Chomsky, 1957)”. This frame work takes inflectional acquisition or the acquisition of grammatical categories on the same ground as of syntax. The rules present in UG help children to construct the inflection system of any language by observing the presence and absence of marking. According to them children start using inflections very productively and creatively the moment they acquire these inflections (Ambridge & Lieven, 2011; Rowland, 2013).

While in usage based constructivist framework (Langacker, 1987; Bybee, 1998; Tomasello, 2000, 2003, 2006, 2009), the focus is on the construction instead of rule based grammatical items combined in the process of speech (Baerman & RFTSMGM, 2015). They provide the other possibilities like “lexically specific constructions” also (Ambridge & Lieven, 2011). So in the

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beginning through “unanalyzed forms” without any distinction of stem and inflection or case marking, children make generalization of commonalities (inflections or suffixes) in these utterances and with the process of repetition, they discover that these utterances contain some inconsistent slots and consistent frame patterns (Tomasello, 2000, 2003, 2009; Rowland, 2013). They add new components in these slots through “cuts and pastes” and use them productively (Tomasello, 2006; Rowland, 2013). Later on, they internalize or conceptualize these schemas to construct morphological structures which are acceptable in adult world (Tomasello, 2006; Ambridge & Lieven, 2011). In this process the most frequently occurring inflections or suffixes and auxiliaries are acquired earlier with low rate of errors by the children than the other way round (Rowland, 2013).

The errors in the speech of children show the creativity and productivity. Almost all children between the ends of 2-3 years overgeneralize rules and continue till school years. They commit the errors of irregular stems along with irregular past tense, plural, adjective and pronoun also. Children scrutinize inflection from adult talk and eagerly use them in their conversation. The errors indicate the “reorganization” of patterns which they extract from language available to them and apply it in every direction (Pinker, 1999). This rule based approach of inflection acquisition is further expressed by the generativists as Dual Mechanism Models (Clahsen, 1999; Pinker & Ullman, 2002) taking the acquisition of regular (most frequent forms) and irregular (less frequent) as independent processes where the acquisition of regular inflection is related with the application of one default grammatical rule while the irregular inflection is memory based.

On the other hand usage base approach (Bybee, 1985, 2001; Bybee & Slobin, 1982; Tomasello, 2003) and connectionists (McClelland & Patterson, 2002) take the acquisition of all types of inflection with association of phonological and semantic features favoring the second main model i.e. Single Mechanism or Network Model of Bybee (1985, 1995) where the child can retrieve the whole inflected form if it is more frequent through processing and if it is infrequent then through an access to a stem and addition of affix in the form of schema (Bybee, 2001). In inflection acquisition children either adopt product-oriented schemas related with the formation of new forms out of already existing forms of the same morphological class or source-oriented schemas which are related with the composition of a form with its affix and make generalizations about them (Bybee & Slobin, 1982).

### **Urdu and Punjabi Languages**

‘Modern Vernacular Urdu’ (has influence of KhaRi Boli) spoken in Dehli region and after migration of Muhajirs in Pakistan, called as Pakistani dialect is now spoken in mostly urban areas of Pakistan and has got a regional flavor because it has absorbed many words from regional languages like Punjabi, Sindhi, Pashto and Balochi and has become different from Urdu spoken in India (Nauman, 2013; Schmidt, 2007).

While Punjabi Western belonging to the same family tree and almost same number of native speakers is spoken in East-Central Districts of Punjab (Pakistan)

(Punjabi and Punjab, 2008).

### Noun Inflection in Urdu and Punjabi

The main aim of this research is to find out the normal inflectional developmental sequence of children acquiring Urdu and Punjabi nouns simultaneously. Nouns in Urdu inflect in a number of ways and have productive morphology. They inflect in gender, number and case.

Urdu has natural gender (Ranjan, 2013) and grammatical gender also. Gender in Urdu language has the relationship of binary opposition as masculine or feminine e.g. masculine *laRkA*, لڑکا (“boy”) / feminine *larki*, لڑکی (“girl”), which means a noun can take only one value and this gender of the noun affects the other linguistic items in the sentence like Lithuanian and Russian languages discussed by Voeikova & Savickiene (2001). The Urdu nouns also have gender feature of markedness or unmarkedness. Marked nouns have gender suffix. So this inflection can be analyzed in four ways like marked masculine, unmarked masculine, marked feminine, unmarked feminine (Schmidt, 1999). But the nouns which are common in Urdu and Punjabi contain the same gender (Cummings & Bailey, 2005).

While the Modern Punjabi which is grammatically more analytical than its previous forms where suffixation till four morphemes is a common phenomenon rather than the use of prefixes (Singh, 2014). Punjabi is closely related to Urdu that's why its more “structural influence” on Urdu can be observed (Butt, 1995). Like Urdu language, Punjabi nouns also inflect in gender, number and case.

Punjabi gender system is also similar to Urdu language which is realized through two values of masculine *ghoRA*, گھوڑا (“horse”) / feminine *ghoRi*, گھوڑی (“mare”). Bhatia (1993) also discussed the Punjabi gender feature of markedness or unmarkedness but the other way round.

The number category which is also a grammatical feature for showing contrastive analysis of nouns (Crystal, 2008) inflects in Urdu on two contrasts i-e. as singular *laRkA*, لڑکا (“boy”) / plural *laRke*, لڑکے (“boys”). So every noun in Urdu has feature value of singular and plural indicating one and more than one entities.

The same is with Punjabi where number category inflects on two contrasts i-e. as singular *ghoRA*, گھوڑا (“horse”) and plural *ghoRe*, گھوڑے (“horses”).

Urdu language morphologically inflects in three cases i-e. Nominative or direct case (*laRkA*) which is used as the grammatical subject in sentences without any clitics or case markers and agrees with the verb, oblique case (*laRke*) is used when a noun is followed by a marker like *ko*, *ke*, *ka*, *me*, *se*, or when it is used adverbially and vocative case *O laRke*, او لڑکے (“o boy”) is used in proper nouns and kinship terms with “vocative interjections like *ae*, *o*, *وہ*, *اے* etc. (Schmidt, 1999; David, Maxwell, Browne, & Lynn, 2009).

While in Punjabi noun inflects in five cases like nominative (*ghoRA*, گھوڑا “horse”) / oblique (*ghoRe*, گھوڑے “horse”) / vocative (*ghoReA*, گھوڑیا “o horse”) / ablative (*ghoReoN*, گھوڑیوں “from horse”) and locative/ instrumental which is rare in use [(*skule*, سکولے “to school”), (*ghare*, گھرے “to home”)] (Humayun & Ranta, 2010; Shackleton, 2007; Kaur, 2012). Vocative case sometimes neglects its ending like *ghoRe*, گھوڑے “horse” (Cummings, Bailey, 2005).

### **Research Question**

When and how do bilingual children pass through developmental sequence of Urdu and Punjabi noun inflectional morphology?

### **Procedure**

#### *Design for this Study*

This particular research used quantitative methodology of cross sectional studies. The subjects were divided into groups according to their chronological age.

#### *Respondents*

Keeping in view the main objective of this research a total 36 respondents of 3.0- 6.0 years including 3 males and 3 females in each group, divided into 6 groups agewise like 3.0-3.5, 3.5-4.0, 4.0-4.5, 4.5-5.0, 5.0-5.5, 5.5- 6.0, which is considered ideal for this type of research were selected. Only those bilingual respondents were selected who had no speech, language or hearing problem and could speak Majhi dialect of Punjabi and Urdu spoken in Lahore easily.

### **Tools or Instruments for the Study**

#### *a) Picture Description Task*

For grammatical or morphosyntactic categories of Noun e.g. Gender [masculine/ feminine (M/ F)], Masculine Number [singular/ plural (S / PL)], Feminine Number (S / PL), Case Masculine Singular [nominative/ oblique/ vocative (NOMI / OBL/ VOCA)], Case Masculine Plural (NOMI / OBL/ VOCA), Case Feminine Singular (NOMI / OBL/ VOCA), Case Feminine Plural (NOMI / OBL/ VOCA) the picture description task was used. For cases more confined or structured questions like *laRke kahAN hEN?*, لڑکے کہاں ہیں؟ (“Where are the boys?”), for vocative case the respondent was asked to call what was in the picture. Sometimes especially the younger children were asked to call their brothers and sisters to record how they would respond in vocative case.

#### *b) Recordings*

The data was collected through recording and the transcription was done in Roman to set the uniformity in the whole of data including Urdu and Punjabi.

### **Protocols for Data Collection**

For Urdu Punjabi noun acquisition 4 responses i-e. Yes (Y) for absolute correct responses, No (N) for absolute incorrect responses, In Process Acquisition (IP) for over -generalization, mixing, response in third language (English) etc. and No Response (NR) for no construction of any sort were selected to observe the production of respondents.

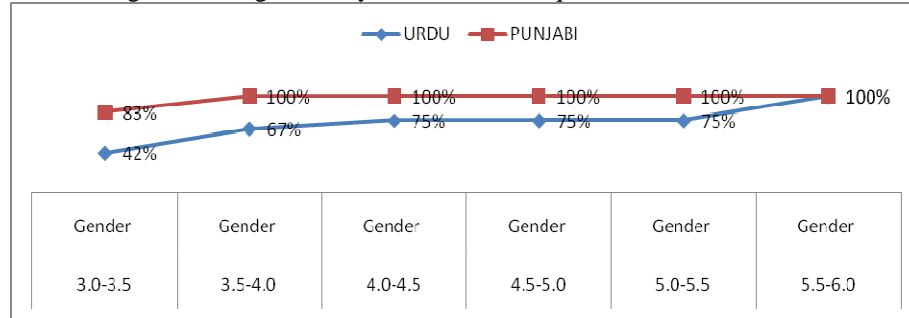
### **Results**

The analysis of only yes responses of Gender (Masculine & Feminine combined), Number Masculine & Feminine (Singular & Plural combined) and Masculine Singular and Plural (Nominative & Oblique & Vocative) Cases and Feminine Singular and Plural (Nominative & Oblique & Vocative) Cases of both the languages was compared below to find out morphosyntactic development of both the languages among these early bilinguals and to see the similarities and differences in

the developmental process among different age groups.

This is the combined analysis of Masculine and Feminine Gender Categories of both the languages.

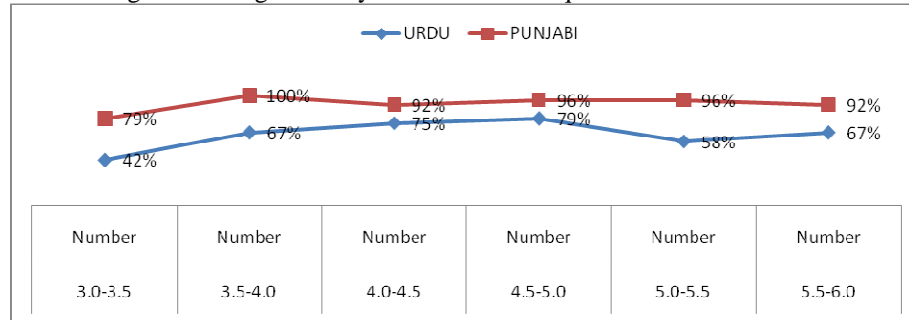
Figure 1 Bilingual Analysis of Gender Acquisition



The bilingual Gender analysis showed that children acquired Punjabi Gender system quite early i.e. between the age of 3.5-4.0 while Urdu Gender category took time as it was in the process of acquisition. One of the reasons might be that children acquire lexical differences like in Punjabi *munDA*, مُنڈا (“boy”) / *KuRi*, کڑی (“girl”), earlier as compared to morphological differences like in Urdu *murGA*, مرغَا (“cock”) / *murGi*, مرغی (“hen”).

But the end state was the complete acquisition of Gender category in both the languages which indicated the normal development of Gender by bilingual children and proved the claim that bilingualism does not create any hindrance in the development of Gender Category in both the languages and bilingual children develop both Gender systems quite easily and autonomously (Muller, 1990).

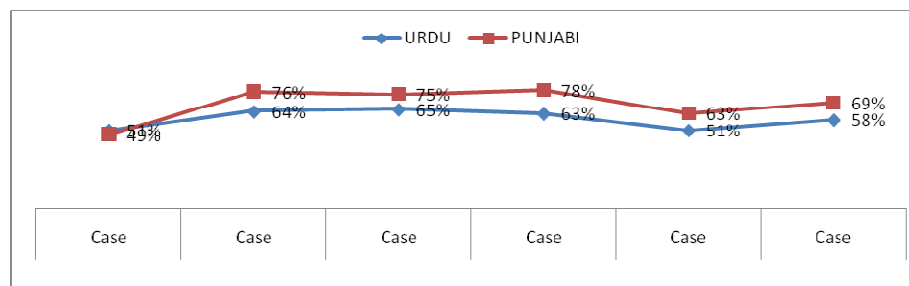
Figure 2 Bilingual Analysis of Number Acquisition



The combined result of Masculine & Feminine Singular, Plural Number category of both Urdu and Punjabi showed that bilingual children acquired Punjabi Number category between the age of 3.5-4.0 and afterwards due to over – generalization like German- French bilingual in Koehn (1994) their values declined while Urdu Number got its highest value between the age of 4.5-5.0 but different factors like late exposure, more productivity and variety in the Number marking were the result of late acquisition of Number marking in Urdu. In overall bilingual acquisition of Number marking the age between 4.5-5.0 seemed to be the sensitive

period. The acquisition of Plural in Punjabi especially also indicated “U shaped developmental Curve” as children were acquiring Plural correctly in initial stages then over generalized and then internalized it.

Figure 3 Bilingual Analysis of Case Acquisition



The combined result of Masculine Singular and Plural (Nominative & Oblique & Vocative) Cases and Feminine Singular and Plural (Nominative & Oblique & Vocative) Cases of Urdu and Punjabi shows that in the initial stage the acquisition of Case category was better in Urdu as compared to Punjabi but with the passage of time the Punjabi Case system was acquired better by these bilingual children although they could not acquire it fully till the last. The reason might be that in Masculine and Feminine Plural Oblique Case in Urdu *-oN* *وں* suffix was present while in Punjabi *-aN* *ਾਂ* suffix was present which was easy for the children to produce.

The overall highest value of both cases in both the languages was achieved by the age group of 4.5-5.0. So this age could be the most suitable for Case acquisition as a whole. The delay in the production of these cases by bilingual children also indicated the avoidance of the use of Cases and the further decrease in the case values involve factors mentioned earlier like individual differences, amount of exposure, use of particular constructions etc. Secondly the same age was observed suitable for the Number acquisition as well which reveals the fact that Number and Case system are said to be acquired by children at the same time (Abraham, Stark & Leiss, 2007).

### Discussion

In this research the morphosyntactic development of children acquiring Urdu and Punjabi nouns as L1 has been observed under the constructivists frame work which is a bottom up approach of inflection acquisition. Different phenomena of errors as discussed by the researchers of different languages related to inflectional morphology for so long can also be observed in the present research e.g. Overextension is an error where in early acquisition a child denotes different things with a single label not used by adults and these errors also point out the sense of object word in the child's mind (Kuczaj, 1999). In this particular research “A categorical over-inclusion” type of overextension e.g. *koki*, *کوکى* (“cock”) to all cocks and hens (age 3;1) where that overextended word is closely resembled to the referent in the real world can be observed. Generally children use overextension in the acquisition of those highly frequent words which are acquired early as compared

to those acquired late but the errors appear late, not in early months of production. The reason behind is again the generalizations which children make in acquisition process (Rescorla, 1980).

The respondents of this particular research also exercised the misapplication of Gender marking in noun where Masculine marking is more over- applied in almost six cases in Urdu and Punjabi context as compared to Feminine marking like children of different age (3;7, 3;10, 4;4, 5;4) used *kukaR*, ککڑ (“cock”), instead of *kukaRi*, ککڑی (“hen”). While the misapplication of Feminine instead of Masculine marking in three Cases like *kuRiaN*, کڑیاں (“girls”), instead of *munDe*, منڈے (“boys”) at age 4;7, *kukaRi*, ککڑی (“hen”) instead of *kukaR*, ککڑ (“cock”) at age 4;4 can also be observed. This inconsistency in the use of proper gender by the children is considered as a normal phenomenon in the developmental process as they might be the result of “an approximation to the correct gender identification (Brehmer & Rothweiler, 2012)”. But the high rate of errors of Masculine over-use is not related with the young age rather related with the use of default form in cases where children cannot judge the Gender class from the pictures shown to them. The similar misapplication of Masculine default form in elder children has been reported for Polish- German bilingual children (Brehmer & Rothweiler, 2012).

Another type of errors observed in this particular research is the use of Bare Stem Forms in Urdu Number marking as the numeral + bare stem form like *do ghoRA*, دو گھوڑا (“two horse”), which is observed even till age 3;7 while in Feminine, Plural marking is missing till 3;5 age group like *kukaRi*, ککڑی (“hen”) instead of *kukaRiaN*, ککڑیاں (“hens”) and a child of 5;11 also used *do laRki*, دو لڑکی (“two girl”), as bare stem. While in Punjabi, Feminine Plural marking is missing till 3;1 age. The reason for this type of errors of omission given by the advocates of dual model system is that before the acquisition of default rule and in the absence of proper inflected form in child’s memory, he will produce bare stem form and the moment he learns the default rule they disappear from his speech (Pinker, 1999) while the proponents of schema based model think that due to early use of product-oriented schemas the children omit noun inflections where the base form resembles to existing inflected schemas and it is a time taking process which continues even after the productive use of inflection and gradually it disappears from the child’s speech with the help of type and token frequency (Mathews & Theakston, 2006). The observations of bare stem form used by children in the present research favor the schema based model as even at age 5; 11 children are committing error of omission indicating it a gradual process which is affected by token frequency of this noun although in Oblique Plural Case form the child has used *laRkiaN*, لڑکیوں (“girls”) but the point of resemblance of base form along with other factors as discussed by Mathews & Theakston (2006) are not observed here.

In the use of unmarked inflection of the same language in marked stems children over generalized Urdu Plural suffix i.e. – *ieN* ائیں which is used productively by the children e.g. in Number Plural *murGieN*, مرغئیں, at age 5;9, *kukaRieN*, ککڑئیں, at age 4;9. Similarly *billieN* بلیں (“cats”), *kuRieN*, کڑئیں (“girls”), *laRkieN*, لڑکئیں (“girls”), in Nominative Plurals only by the children aged 4;8, 5;1, 5;10, and *laRkieN*, لڑکئیں in Nominative and Vocative Plurals but not in Oblique by the children

aged 4;4, 4;9, 5;0, 5;2. Likewise *laRkieN ne*, لڑکیاں نے ("by the girls") at age 5;2, *kuRieN ne*, کڑیاں نے ("by the girls") at age 4;10 in Oblique Plurals can also be observed. The proponents of dual route model (Clahsen, 1999; Pinker & Ulman, 2002) explain this phenomenon as a result of one default rule but in Urdu and Punjabi languages which are highly regular languages there is no one default rule of Plural formation and children are overgeneralizing the inflection not used in marked or known stems. So single route model or schema based learning (Krajewski, Theakston, Lieven & Tomasello, 2011) seems to explain this phenomenon in a better way which argues that this pattern of Plural marking is the result of children's generalization about product – oriented and source – oriented schemas which some time make them create novel utterances with the help of semantic features which are unacceptable in the adult world.

In Case Marking errors instead of using Accusative Case in place of Nominative as observed by the researchers of other languages, in present data Oblique Singular is used instead of Oblique Plural like *ghoRe ke Uper*, گھوڑے کے اوپر ("on horse") instead of *ghoRoN ke Uper*, گھوڑوں کے اوپر ("on horses") at age 3;7 & 5;9, in Feminine *laRki ne*, لڑکی نے ("by the girl"), instead of *laRkioN ne*, لڑکیوں نے ("by the girls") at age 3;7 while in Punjabi *laRki ne*, لڑکی نے ("by the girl"), instead of *laRkeaN ne*, لڑکیاں نے ("by the girls") at the age 5;4. *kuRi kol*, کڑی کول ("to girl"), instead of *kuRiaN ko*, کڑیاں کول ("to girls"), at age 3;9. The reason may be the late acquisition of Oblique Case by the children which continue till school years and are considered as "late production errors" (Clark, 2016).

#### Conclusion

The close observation of Urdu and Punjabi inflectional acquisition by these bilingual children reveal that much of data of this particular work supports Constructivists point of view like in Urdu and Punjabi the acquisition of the Nominative Case is acquired by the children earlier as compared to other two cases because it is used most frequently by the children. Similarly the results of Gender and Number acquisition show that inflection acquisition is a gradual process, not an instant development like the one expected in the Generativism. Thirdly because all these respondents are from Punjabi background and they have got more input in Punjabi before they enter school so their Punjabi data shows better understanding of Punjabi inflection as compared to Urdu in the early years but as soon as they get more input and chance of practice in Urdu, they improve Urdu inflection acquisition also.

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