RESEARCH ARTICLE

Speech Innovations In Child Language: A Comparative Analysis Of English And Uzbek

Vaxobova Barnoxon Muzaffarjon qizi
vaxobovabarnoxon1@gmail.com

Abstract.

Young children do not only learn the words of their language; they also create new ones. Such speech innovations forms like English to broom ‘to sweep’ or Uzbek yeygich ‘a thing for eating, a spoon’ are absent from adult usage, yet they are built according to productive rules of the language. This article compares lexical and word-formation innovations in the speech of English and Uzbek-speaking preschool children. The study is qualitative and comparative-typological: English examples were drawn from published research on child lexical innovation, and Uzbek examples from observations of preschool children’s everyday speech. The innovations were classified according to the word-formation mechanism used and compared with the conventional adult forms. The results show that children in both languages coin words to fill gaps in their vocabulary and rely on the most transparent and productive patterns available. The preferred mechanisms, however, differ: English-speaking children rely heavily on conversion (zero derivation) and compounding, while Uzbek-speaking children predominantly use transparent derivational suffixes such as -chi, -gich, -la and -xona. The findings are interpreted in terms of Clark’s principles of contrast, conventionality and transparency and in terms of the typological difference between an analytic and an agglutinative language. Pedagogical implications for preschool education and speech therapy are discussed.

Keywords: child language, speech innovation, lexical innovation, occasionalism, word formation, conversion, derivation, agglutinative language, English, Uzbek.

INTRODUCTION

Background: The creativity of child language has fascinated observers for more than a century. Children who have just begun to speak regularly say things that they have never heard from adults: a three-year-old English-speaking child announces that she is *crayoning* a picture, while an Uzbek-speaking child calls the driver of a car *mashinachi* instead of the conventional *haydovchi*. Such forms are neither random mistakes nor simple imitations. They are new words built from familiar elements according to productive patterns of the language, and they show that the child has begun to analyse the internal structure of words.

In the literature these forms are referred to as *lexical innovations*, *novel words*, *child neologisms* or, in the Russian and Uzbek linguistic tradition, *children’s occasionalisms* (occasional words created for a particular communicative situation). The classic collection of such forms is Chukovsky’s book *From Two to Five*, which documented hundreds of Russian children’s coinages and described the child as a “linguistic genius” who effortlessly

masters the patterns of word formation (Chukovsky, 1963). Later, systematic research by Clark (1982, 1993) demonstrated that innovations appear in many languages, follow regular principles and reveal how children build their lexicon.

In this article the term *speech innovation* is used for a word or a word meaning produced by a child that (a) does not exist in the conventional adult language, or exists with a different meaning, and (b) is formed from existing morphemes or words according to a recognizable pattern. Speech innovations should be distinguished from overregularization errors such as *goed* or *mouses*. In overregularization the child applies an inflectional rule to an existing word that already has a conventional irregular form. In innovation the child creates a new lexical item, usually to name something for which he or she has no word yet.

Previous research: Research on English lexical innovation has been dominated by the work of Clark. In a detailed analysis of diary and recorded data, Clark (1982) showed that children aged two to six coin new verbs from nouns (*to broom*, *to button*, *to nut*), new agent and instrument nouns (*a cooker* for 'a person who cooks', *a typer* for 'a typist') and new compounds (*plant-man* for 'gardener'). Clark and Clark (1979) demonstrated that adult English also allows very free conversion of nouns into verbs, which explains why this mechanism is so readily available to children. Bowerman (1982) described innovative causative verbs and prefixed forms such as *unsqueeze*, showing that children extract abstract meanings of morphemes and apply them creatively.

Two principles proposed by Clark (1987, 1993) are central for explaining innovations. The *principle of contrast* states that every difference in form marks a difference in meaning, so children assume that a new word must have a new meaning. The *principle of conventionality* states that for certain meanings there is a conventional form that speakers expect to be used. Children innovate when they need to express a meaning but do not yet know the conventional word; when they learn it, the innovation is pre-empted and disappears. In addition, children prefer forms that are *transparent* (the meaning of the parts is clear), *simple* (requiring minimal changes to the base) and *productive* (used frequently by adults to coin new words).

Cross-linguistic studies show that the preferred mechanisms of innovation depend on the structure of the language. Children acquiring languages rich in compounding, such as German or Icelandic, coin many compounds, whereas children acquiring Hebrew or Romance languages rely more on derivation (Clark, 1993). Research on Turkic languages is limited. Studies of Turkish child language have demonstrated that children master the regular, agglutinative suffix system very early (Aksu-Koç & Slobin, 1985), which suggests that derivational suffixes may also be readily available for creative word formation. However, systematic descriptions of lexical innovations in Uzbek child speech are practically absent from the international literature.

Aim and research questions: The aim of this article is to describe and compare speech innovations in the language of English- and Uzbek-speaking preschool children. The study addresses three research questions:

RQ1. Which word-formation mechanisms do English- and Uzbek-speaking children use to create new words?

RQ2. Which of these mechanisms are shared and which are language-specific?

RQ3. How can the similarities and differences be explained in terms of general principles of lexical acquisition and the typology of the two languages?

2. Materials and Methods

Research design: The study follows a qualitative, comparative-typological design. Its purpose is not to measure the frequency of innovations but to identify and classify the types of innovations that occur in each language and to compare the mechanisms behind them. This design is appropriate because the material for the two languages comes from different sources and is not directly comparable in quantity.

Material: *English material.* English examples were taken from published studies of child lexical innovation, primarily Clark (1982, 1993), Clark and Clark (1979) and Bowerman (1982), which are based on diary records and recorded spontaneous speech of children aged approximately 2;0–6;0. Published data were preferred because they have already been verified as genuine innovations, that is, as forms not used by adults in the child's environment.

Uzbek material. Uzbek examples were collected through observation of the spontaneous speech of preschool children aged 3;0–6;0 at home and in preschool educational institutions [number of children, location and period of observation to be specified by the author]. Each potential innovation was noted together with its context and checked against standard Uzbek dictionaries and the judgement of adult native speakers to make sure that it is not part of conventional usage.

Procedure of analysis: The analysis consisted of three steps. First, each innovation was compared with the conventional adult word for the same meaning (e.g. *yeggich* vs. *qoshiq* 'spoon'). Second, the innovations were classified according to the mechanism used: (1) conversion, (2) derivation by suffixation, (3) derivation by prefixation, (4) compounding, and (5) semantic innovation (a new meaning for an existing word or phrase). Third, the types found in each language were compared, and the results were interpreted in light of Clark's principles and the morphological typology of English and Uzbek. Descriptive grammars of Uzbek (Kononov, 1960; Sjöberg, 1963; Bodrogligeti, 2003) were used to determine the productivity of the relevant word-formation patterns in the adult language.

RESULTS

The analysis identified five types of speech innovations in both languages. The general classification with representative examples is presented in Table 1.

Table 1. Types of speech innovations in English and Uzbek child language

Type	English (child form → adult form)	Uzbek (child form → adult form)	Main pattern
Conversion	*to broom* → to sweep; *to crayon* → to draw with crayons	rare	noun → verb without affix (English)
Suffixation	*cooker* → cook; *typer* → typist	*mashinachi* → haydovchi; *yeggich* → qoshiq; *taroqla-* → tara-	agent, instrument and verb-forming suffixes

Type	English (child form → adult form)	Uzbek (child form → adult form)	Main pattern
Prefixation	*unsqueeze* → let go; *unopen* → close	not attested (Uzbek has no productive prefixes)	*un-* reversal
Compounding	*plant-man* → gardener; *car-smoke* → exhaust	*uchar-mashina* → samolyot; *suv-mashina* → sug‘orish mashinasi	noun + noun; participle + noun
Semantic innovation	“my foot is fizzy” → pins and needles	*qattiq suv* → muz ‘ice’; *osmon chirog‘i* → oy ‘moon’	descriptive phrase, metaphor

Innovations in English child speech

Conversion. The most characteristic type of English innovation is the conversion of nouns into verbs without any affix. Children use the name of an object to denote a typical action with it: *I’m going to broom the floor* (sweep), *I’m crayoning* (drawing with crayons), *Will you nut these?* (crack the nuts), *He’s keying the door* (opening it with a key). Such verbs are formed from instruments, substances and places, exactly as in adult conversions like *to hammer* or *to butter*. Conversion is also found from adjectives: *Can you higher the swing?*

Suffixation. English-speaking children create agent and instrument nouns with the suffix *-er*: *a cooker* (a person who cooks), *a typer* (a typist), *a climber* (a ladder), *a sweeper* (a person who sweeps). The suffix *-er* is chosen because it is the most productive and transparent agent suffix in English, whereas less transparent suffixes like *-ist* or *-ian* are rarely used in innovations. Children also coin adjectives with *-y*: *a crumby table* (covered with crumbs), *a nighty sky* (dark).

Prefixation. Children extend the reversative prefix *un-* to verbs that do not take it in adult English: *unsqueeze* (release), *unhang* (take down), *unopen* (close), *unbuckle* applied to any fastening. These forms show that the child has extracted the abstract meaning ‘reverse the action’ and applies it to new verbs.

Compounding. Noun + noun compounds are another frequent mechanism: *plant-man* (gardener), *car-smoke* (exhaust fumes), *fire-dog* (a dog at a fire station), *sea-water-bag* (a bag for collecting sea water). Compounds are formed when the child needs to name a subtype of a known category and the conventional word is not yet known.

Semantic innovation. Children also use existing words in new meanings or create descriptive phrases and metaphors: *my foot is fizzy* (pins and needles), *the moon is broken* (crescent moon), *the car is thirsty* (needs petrol).

Innovations in Uzbek child speech

Suffixation. In Uzbek child speech suffixal derivation is clearly the dominant mechanism. The most productive patterns are the following.

(a) Agent nouns with *-chi*: *mashinachi* ‘the car-man’ (adult *haydovchi* ‘driver’), *rasmchi* ‘the picture-man’ (adult *rassom* ‘artist’), *tishchi* ‘the tooth-man’ (adult *tish shifokori* ‘dentist’), *gulchi* ‘the

flower-man' (adult *bog'bon* 'gardener'). The suffix *-chi* is extremely productive and transparent in adult Uzbek (*ishchi*, *sutchi*, *o'quvchi*), and children readily extend it to any noun associated with a person's activity.

(b) Instrument nouns with *-gich/-kich*: *yeggich* 'a thing for eating' (adult *qoshiq* 'spoon'), *yopgich* 'a thing for covering' (adult *qopqoq* 'lid'), *yuvgich* 'a thing for washing' (adult *kir yuvish mashinasi* 'washing machine'). These forms follow the pattern of adult words like *ochqich* 'opener' and *o'chirg'ich* 'eraser'.

(c) Verbs with *-la*: *taroqla-* 'to comb' (adult *tara-*), *qaychila-* 'to scissor' (adult *qaychi bilan qirq-*), *qoshiqla-* 'to spoon' (adult *qoshiq bilan ye-*), *changyutgichla-* 'to vacuum' (adult *changyutgich bilan tozala-*). This pattern is functionally equivalent to English conversion: the name of an instrument becomes a verb for a typical action. In Uzbek, however, the verb must be marked by a suffix, and children choose the most productive denominal verb suffix *-la*, which is found in many adult verbs (*tuzla-*, *sovunla-*, *ishla-*).

(d) Place nouns with *-xona* and container nouns with *-don*: *o'yinchoqxona* 'toy-house' (a room or corner for toys), *o'yinchoqdon* 'toy box', *konfetxona* 'candy shop'. The adult models are *oshxona* 'kitchen', *kutubxona* 'library', *qalamdon* 'pencil case'.

Compounding. Uzbek-speaking children also create compounds, often with a participle or a noun as the first element: *uchar-mashina* 'flying car' (adult *samolyot* 'airplane'), *suv-mashina* 'water car' (adult *sug'orish mashinasi* 'watering truck'), *yurar-zina* 'walking stairs' (adult *eskalator*). The participial pattern (*uchar*, *yurar*) is transparent and productive in adult Uzbek (*uchar likopcha* 'flying saucer').

Semantic innovation. Descriptive phrases are frequently used to name unfamiliar objects or phenomena: *qattiq suv* 'hard water' for ice, *osmon chirog'i* 'the lamp of the sky' for the moon, *tishli qaychi* 'scissors with teeth' for a saw.

Conversion and prefixation. Conversion without any affix is rare in Uzbek child speech, and prefixal innovations were not found. This is expected, since adult Uzbek forms verbs from nouns almost exclusively by suffixes and has no productive native prefixes comparable to English *un-*. The few Persian-origin prefixes (*be-*, *no-*), as in *beg'ubor* 'careless' or *noma'lum* 'unknown', are lexicalized and not used by children to form new words.

Comparison of mechanisms

Table 2 summarizes the relative role of each mechanism in the two languages, based on the qualitative analysis of the material.

Table 2. Relative role of innovation mechanisms in English and Uzbek child speech

Mechanism	English	Uzbek
Conversion (zero derivation)	very productive; main source of new verbs	rare
Suffixation	productive (*-er, -y*)	dominant (*-chi, -gich, -la, -xona, -don*)
Prefixation	productive (*un-*)	not attested

Mechanism	English	Uzbek
Compounding	productive (noun + noun)	productive (participle + noun, noun + noun)
Semantic innovation	frequent	frequent

Thus, both groups of children innovate in order to fill lexical gaps and use compounding and semantic extension. The main difference concerns how new verbs and new agent or instrument nouns are formed: English-speaking children rely on conversion and a small number of suffixes and prefixes, while Uzbek-speaking children use a wider set of transparent suffixes.

DISCUSSION

The first research question concerned the mechanisms children use to create new words. The results show that in both languages children use every major word-formation mechanism available in the adult language, with the exception of those that are not productive in it (prefixation in Uzbek). This confirms the view that innovations are not random but reflect the child's implicit analysis of adult word formation (Clark, 1993). The child extracts patterns such as 'noun + *-chi* = person connected with the noun' or 'noun used as a verb = typical action with the object' and applies them to new bases.

The second research question concerned shared and language-specific features. Shared features include the motivation for innovation – filling gaps in vocabulary – and the use of compounding and semantic extension. In both languages innovations are typically based on the most salient feature of the object: its function (*yeygich*, *broom* as a verb), the person associated with it (*mashinachi*, *plant-man*) or its appearance (*qattiq suv*, *the moon is broken*). Children name things according to what they do or how they look, which reflects the functional and perceptual nature of early concepts.

The language-specific features are explained by the third research question, which links the findings to principles of acquisition and language typology. According to the principle of *transparency*, children prefer forms whose parts have a clear meaning. According to the principle of *simplicity*, they prefer forms that require minimal changes to the base. According to *productivity*, they prefer patterns that adults use frequently to coin new words (Clark, 1993). In English, conversion satisfies all three principles: it requires no change to the base and is extremely productive in adult usage (Clark & Clark, 1979). Therefore, English-speaking children form new verbs mainly by conversion. In Uzbek, conversion between nouns and verbs is not productive, so the simplest and most transparent way to form a verb from a noun is to add *-la*. Similarly, the agent suffix *-chi* and the instrument suffix *-gich* are fully transparent, regular and frequent, which makes them ideal tools for innovation.

This result is consistent with Slobin's (1985) operating principles, according to which children pay attention to the ends of words and prefer clear, one-to-one relations between form and meaning. Agglutinative suffixes in Uzbek correspond closely to these preferences: each suffix has a single, stable meaning and is attached to an unchanged stem. It is therefore not surprising that Uzbek-speaking children

use suffixal derivation creatively from an early age, just as Turkish-speaking children master inflectional suffixes early (Aksu-Koç & Slobin, 1985).

The principle of *contrast* and *conventionality* explains why innovations are temporary. When a child says *mashinachi,* adults usually respond with the conventional word: *Ha, haydovchi amaki* 'Yes, the driver'. Once the child has learned *haydovchi*, the principle of contrast tells him or her that two different forms should have two different meanings; since *mashinachi* and *haydovchi* mean the same, the innovation is pre-empted by the conventional form. In English, *to broom* is similarly replaced by *to sweep*. Innovations thus mark a temporary stage in which the child's productive knowledge of word formation is ahead of his or her vocabulary.

The findings also have practical implications. Speech innovations should not be regarded as errors to be corrected but as evidence of normal and even advanced language development. Parents and preschool teachers can respond to them by recasting – repeating the child's idea with the conventional word – and by discussing the structure of words (*o'qituvchi o'qi + t + uvchi*). In speech therapy, the absence of any innovative word formation at the age of four to five may indicate difficulties in morphological development and can be a useful diagnostic sign. For teachers of English as a foreign language in Uzbekistan, knowing that Uzbek learners rely on transparent suffixes may help to explain why conversion (*to email*, *to text*) is often difficult for them.

The study has several limitations. The English data come from published sources while the Uzbek data come from observation, so the two sets are not equal in size or method of collection, and no quantitative comparison of frequencies is possible. Future research should use recorded longitudinal corpora of Uzbek child speech, possibly in the CHILDES format (MacWhinney, 2000), and experimental elicitation tasks similar to Berko's (1958) "wug test" to examine the productivity of individual Uzbek suffixes in children of different ages.

CONCLUSION

Speech innovations show that young children are active builders of their language. English and Uzbek-speaking children create new words for the same reason to name things for which they do not yet know a conventional word – and according to the same general principles of transparency, simplicity and productivity. The typology of each language, however, determines which tools they use. English-speaking children rely mostly on conversion and compounding, producing forms like *to broom* and *plant-man*. Uzbek-speaking children rely mostly on transparent agglutinative suffixes, producing forms like *mashinachi*, *yeygich*, *taroqla* and *o'yinchoqxona*. Innovations are temporary and disappear when conventional words are learned, but they provide valuable evidence of how children analyze word structure. A systematic, corpus-based study of Uzbek child innovations would make an important contribution to the cross-linguistic study of language acquisition.

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