

Grammatical Construal of Measurement in Uzbek

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Abstract: Measurement expressions in Uzbek acquire different meanings when the same numeral and unit enter different grammatical constructions. This article examines how those differences arise and how they affect the presentation of quantity. The study uses qualitative constructional analysis of examples assembled in an Uzbek research manuscript, supplemented by published research on classifiers and independently checked textual instances. Schematic comparisons are distinguished from attested usage; neither is treated as evidence of corpus frequency. The analysis separates counting expressions from standard measures, bodily portions and container measures. It then traces the contribution of the suffixes -lik, -cha and -lab, case marking, predicates and evaluative modifiers. The results show that -lik presents a measured value as a property of a referent, while -cha marks an approximate value. Interpretations of -lab depend on whether the construction describes repeated portions, extensive quantity or figurative scale. Case-marked phrases identify limits, intervals, differences and attained values through their interaction with predicates and accompanying words. Percentage expressions make this dependence especially clear because a change and its endpoint can contain the same numeral but describe different relations. A constructional description therefore needs to record the dimension, numerical value, morphology, syntactic role and contextual interpretation together. The proposed distinctions support more accurate translation and provide categories for subsequent corpus annotation without implying that their distribution has already been measured.

Keywords: Uzbek; measurement expressions; numeratives; constructional semantics; approximation; scalar relations.

Introduction: The expressions *bash metr* ‘five metres’, *bash metrlik arqon* ‘a five-metre rope’ and *bash metrcha* ‘about five metres’ share a numeral and a measurement unit. They nevertheless answer different questions. The first supplies a value, the second uses that value to describe a referent, and the third presents it as an estimate. A comparable difference appears between *ikki kilogrammga oshdi* ‘increased by two kilograms’ and *ikki kilogrammga yetdi* ‘reached two kilograms’. Here the same case-marked phrase denotes either the amount of change or the resulting value. These contrasts place the interpretation of measurement at the intersection of lexical meaning and grammatical construction.

A measurement unit identifies a dimension and a conventional standard, but it does not determine how a

quantity functions in a sentence. A metre supplies a length scale; the surrounding construction determines whether a stated value describes an object, limits an event or measures a difference. This distinction also prevents numerical explicitness from being confused with empirical precision. A speaker who says *bash metr* names five metres without an approximation marker. The expression alone provides no information about the instrument used, the tolerance of the measurement or the reliability of the report.

Rothstein’s (2017) distinction between counting and measuring offers a starting point. Counting identifies the number of discrete individuals, whereas measuring relates a property or quantity to a scale and a unit. Thus, five apples and five kilograms of apples quantify the same kind of referent through different operations. The

contrast matters in Uzbek because the descriptive category numerative can bring together expressions that count individuals and expressions that establish portions or standard measures. A shared position between a numeral and a noun does not establish a shared semantic function.

Levy-Forsythe and Kagan (2022) distinguish sortal classifiers from mensural expressions in Tashkent Uzbek. Their analysis argues for a mass–count distinction at the noun-phrase level even where numeral constructions require classifiers. They also identify a dialectal qualification: obligatory classifier use in Tashkent Uzbek cannot simply be taken as the norm for Standard Uzbek.

The agglutinative structure of Uzbek allows measurement units to carry derivational and case suffixes, while its nominal and clausal syntax places those forms in larger relations. Modifiers generally precede the noun, and the basic subject–object–verb order allows a quantitative phrase to occur before its predicate. These properties provide the grammatical setting for the contrasts examined here (Boeschoten, 2021; Akhundjanova & Talamo, 2025). Yet a description of suffixes in isolation leaves unanswered why one dative-marked expression can designate an increment and another an endpoint.

This article examines how Uzbek morphology, syntax and context organize measurement values. It asks which distinctions separate counting from measuring, how suffixes change the presentation of quantity, and how predicates establish a value's role on a scale. Construal refers here to the aspect of a quantitative situation that an expression presents. The analysis classifies the selected contrasts; it does not infer speakers' mental processing from written examples.

METHODS

The study is a qualitative reanalysis of material assembled in an unpublished Uzbek-language research chapter on the lexical and grammatical expression of measurement. The material contains schematic examples, analytical tables and citations to published linguistic and textual sources. Construction families were selected because they allow a numerical value or measurement unit to be compared across different grammatical environments. The resulting set is purposive rather than representative: it is designed to

reveal interpretive contrasts, not to estimate their prevalence.

Three kinds of evidence were kept separate. Schematic examples from the underlying manuscript illustrate a construction and its proposed interpretation. Examples from classifier research are attributed to the variety investigated in that publication. Published textual instances were checked against the cited web texts and retained with enough context to identify their function. The latter material includes a historical feature from the Uzbekistan National News Agency, a Xabar.uz news report, a Hurriyat commentary and a literary interview with Dilmurod Quronov. They provide contextual evidence for particular uses; they do not constitute a balanced corpus.

Analysis proceeded from the measured dimension and numerical expression to the morphological marking, syntactic environment and contextual function. Each construction was examined for the kind of unit it supplies, the scope of its suffixes and the role assigned to the value. Where possible, comparisons kept the numeral and unit constant while changing a suffix, a predicate or a scalar modifier. For example, the comparison of *bash kilometrcha* and *bash kilometr gacha* isolates approximation from a limiting value. The comparison of *oshdi* 'increased' and *yetdi* 'reached' tests the interpretation of a dative-marked quantity against the predicate.

These comparisons are semantic diagnostics, not a speaker-elicitation experiment. No acceptability ratings, participant responses, frequency counts or inter-annotator agreement scores were collected. Potentially ambiguous examples were retained as ambiguous rather than assigned an interpretation on the basis of the suffix alone. Register labels are used only to describe the available context or a proposed reading; claims that one form is preferred in a genre would require additional evidence.

Uzbek expressions are given in Latin script with English translations. Hyphens identify morpheme boundaries only where segmentation is discussed. Sortal and mensural distinguish counting individuals from introducing a measure or portion. The analysis restricts *-lik* to measurement-based attribution, *-cha* to approximation, and *-lab* to portions, repetition or extensive quantity. Corpus publications are considered

as resources for future validation; their sentences were not searched or counted for this article.

RESULTS

Counting and measuring within numerative expressions
Table 1 distinguishes counting individuals from standard

measures and context-dependent portions. Similar positions in the noun phrase can therefore host different quantitative operations. The categories describe the selected examples rather than exhaust the Uzbek numerative system.

Table 1 Functional distinctions within Uzbek numerative expressions

Expression type	Schematic example	Quantitative operation
Counting expression	uch nafar talaba three students	Counts discrete human individuals
Standard measure	uch kilogramm un three kilograms of flour	Relates mass to a conventional unit
Bodily portion	bir chimdim tuz a pinch of salt	Establishes a portion through a bodily action
Container expression	ikki chelak suv two buckets of water	Counts containers or measures their contents

The distinction depends on the expression's current function. A bucket is an object when containers are being counted and a measure when its capacity is used to quantify water. On the latter reading, the relevant quantity is two bucketfuls, which need not remain in two physical buckets. This interpretation still leaves the capacity dependent on the container. By contrast, the conventional value of a litre does not vary with the vessel used. Container expressions therefore occupy an intermediate position between counting objects and measuring their contents.

Levy-Forsythe and Kagan's (2022) examples *ikki-ta kitob* 'two books' and *ikki hovuch qor* 'two handfuls of snow' contrast counting individuals with supplying portions. Their dialectal scope remains essential. The Standard Uzbek schematic form *ikki kitob* cannot be rejected merely because a classifier is obligatory in their Tashkent Uzbek examples. Language variety must be identified before classifier presence is treated as a requirement.

Standard units also combine with nouns that denote discrete objects. *Uch kilogramm olma* 'three kilograms of apples' gives their aggregate mass rather than their number. It consequently offers no fixed answer to how many apples are present. The operation selected by the construction is therefore more informative than the countability of the noun alone. In neutral explicit

measurement, the unit appears without plural *-lar*, as in *besh metr* and *uch kilogramm*. Forms such as *kilometrlar osha* 'over many kilometres' occur in a different environment, where extent can be presented without a specified cardinal value.

Attributive measurement and approximation

The suffix *-lik* turns a measurement expression into an attributive description: *besh metrlik arqon* 'a five-metre rope'. Its morphological attachment is to the unit, but the interpretation includes the entire numerical value. In the segmented form *besh metr-lik arqon*, the property attributed to the rope is having a length of five metres. It is not merely a general property associated with metres. This observation concerns semantic scope and does not, by itself, settle the syntactic constituency of the expression.

The sequence *Arqonning uzunligi besh metr* 'The rope's length is five metres', *uzunligi besh metr bo'lgan arqon* 'a rope whose length is five metres' and *besh metrlik arqon* 'a five-metre rope' presents the same proposed length through different structures. The first makes the value a clausal assertion. The second retains an explicit parameter in a relative construction. The third incorporates the value into a compact noun phrase. Rothstein's (2017) treatment of attributive measures provides a theoretical point of comparison, while the Uzbek suffix supplies the specific morphological

realization examined here.

The Uzbekistan National News Agency's historical feature uses 3000 kilometrlik safarga in describing a journey (UzA, 2025). The attributive value characterizes an event rather than an object's length. The head noun thus helps identify the relevant dimension: a journey supports a distance reading even though it is not a bounded physical object.

Compression can leave the parameter implicit. Besh metrlik xona 'a five-metre room' requires context to determine whether the value concerns length, width or another linear dimension. Naming the parameter avoids that uncertainty. Xabar.uz (2024) uses the compact form 3 metrlik ilon in its headline and 3 metr uzunlikdagi mazkur ilon in the body of the report. The latter expression explicitly identifies length. The two forms offer a useful textual comparison between an economical headline description and a more explicit statement within the report.

Approximation changes a value's status in a different way. In besh kilometrcha 'about five kilometres', -cha indicates that the stated number serves as an approximate reference value. It does not change the definition of a kilometre. The same construction can use a bodily unit, as in yuz qadamcha 'about a hundred steps', where variation in step length introduces a further source of uncertainty. The approximate region is not assigned a fixed width by the suffix, and the example gives no reason to assume an exactly symmetrical tolerance around the numeral.

Lexical expressions offer related possibilities. Taxminan besh kilometr gives a neutral estimate, whereas qariyb besh kilometr can present the quantity as approaching the stated value. Qirq-ellik metr 'forty or fifty metres' supplies two numerical anchors for an estimate. Such paired numerals need not denote a formally specified closed interval. Nor should qariyb bir kilometrcha automatically be classified as a grammatical error: the two approximation devices may reinforce a speaker's limited commitment to precision. Their acceptability and distribution across registers remain questions for further investigation.

Distributed quantities and extensive scale

The suffix -lab does not receive a single quantitative

interpretation across the selected constructions. Grammlab berildi 'was given in gram-sized portions' can describe portioning, while tonnalab mahsulot 'tonnes of produce' presents extensive quantity without naming a total. The unit remains available as a semantic reference, but the whole expression no longer has the same function as an explicit value such as uch tonna mahsulot 'three tonnes of produce'.

The UzA (2025) feature places 75 kilometrlab within a description of daily training before the journey. Kuniga 'per day' supplies the repeated frame, so the figure concerns daily distance rather than the total route. Repetition cannot be attributed to -lab alone: the suffix, value and temporal expression jointly establish the relation.

Extensive quantity can acquire an evaluative function. Meliboyev's (2022) commentary uses tonnalab taom pishirish in a criticism of large public activities. The expression draws on a possible mass measurement of food while emphasizing the scale of the activity. The passage does not supply an independently measured total, so its argumentative function should not be converted into a numerical claim.

Quronov (2015) uses tonnalab ruda ichidan in comparing the selection of literary value to extracting valuable material from ore. The comparison retains mass as its source dimension while evaluating literature. Annotation therefore needs separate labels for the literal dimensional reference and its analogical function. Calling both simply 'measurement' would obscure what the image invokes and what the passage evaluates.

Limits differences and attained values

Case marking places measurement expressions in scalar relations, but the relation is established by the construction as a whole. In besh kilogrammdan ortiq 'more than five kilograms', the ablative-marked value is a reference point and ortiq places the quantity above it. With kam 'less', the direction reverses. A description that assigns the meaning 'more than' directly to -dan cannot account for this contrast. Table 2 keeps the numerical reference stable where possible to show the different relations.

Table 2 Scalar relations expressed by schematic measurement constructions

Uzbek expression	English rendering	Role of the stated value
besh kilometr	five kilometres	Specified value
besh kilometrcha	about five kilometres	Approximate reference
besh kilometrgacha	up to five kilometres	Limiting value
besh kilometrdan ortiq	more than five kilometres	Lower threshold
besh kilometrdan kam	less than five kilometres	Upper threshold
besh kilometrdan o'n kilometrgacha	from five to ten kilometres	Two interval endpoints
ikki kilogrammga oshdi	increased by two kilograms	Amount of change
ikki kilogrammga yetdi	reached two kilograms	Attained value

The ablative also occurs in distribution and comparison. In har bir qutiga besh kilogrammdan olma joylandi 'five kilograms of apples were placed in each box', the expression gives the allocation per recipient. In yangi ko'priq eskisidan ikki metr uzunroq 'the new bridge is two metres longer than the old one', -dan marks the object used as the comparison standard, while the separate measure phrase gives the difference. The location of the case suffix is therefore part of the analysis. A case-marked standard and a measure of the difference should not be merged into one semantic role.

The dative contrast between ikki kilogrammga oshdi and ikki kilogrammga yetdi makes predicate dependence especially visible. With 'increase', two kilograms names an increment. With 'reach', it names the final value. The increment construction permits a resulting value greater than two kilograms because an earlier value is presupposed. The endpoint construction does not report how much was added. Translating either expression requires the relation licensed by the verb, rather than an invariant English equivalent for -ga.

The construction -dan ... -gacha identifies the two limits of a range, as in besh kilometrdan o'n kilometrgacha. This is structurally more explicit than an estimate expressed by paired numerals. Nevertheless, a linguistic range should not automatically be treated as a mathematical interval with independently established endpoint inclusion. A rule, specification or surrounding sentence may determine whether a boundary is inclusive. Similarly, kamida besh kilogramm 'at least five

kilograms' and ko'pi bilan besh kilogramm 'at most five kilograms' establish opposite limits without changing the unit's lexical meaning.

Predicates percentages and evaluative modifiers

Predicative constructions determine whether quantity is presented as a property, a measurement result or a change. Yukning og'irligi besh kilogramm 'the load's weight is five kilograms' names a parameter directly. Qop ellik kilogramm tortdi 'the sack weighed fifty kilograms' invokes weighing. Masofa o'n kilometrni tashkil etadi 'the distance amounts to ten kilometres' presents a stated value through a light-verb construction. These contrasts concern the information made explicit. They do not establish that each model belongs exclusively to a particular register.

Percentage expressions require an additional distinction between a relative change and a change in a percentage value. Ko'rsatkich o'n foizga oshdi can report a relative increase of ten per cent, whereas ko'rsatkich o'n foizga yetdi identifies an endpoint of ten per cent. If a share rises from twenty to thirty per cent, the difference is ten percentage points and the relative increase is fifty per cent. Reporting that event simply as an increase of 'ten per cent' risks confusing the two calculations. Grammar identifies change or endpoint, but the baseline and the intended calculation may still need to be stated.

Quronov's (2015) interview pairs hypothetical returns of 30, 100, 150 and 300 per cent with increasingly troubling moral choices. The figures organize an

argument about literary education and ethical judgement rather than report economic observations. They arrange alternatives on a rising scale whose function in the passage is evaluative.

Modifiers make some evaluations explicit. Atigi ikki kilometr ‘only two kilometres’ presents a distance as limited relative to a contextual expectation. Roppa-rosa yuz metr ‘exactly one hundred metres’ emphasizes correspondence with the named value. Neither expression changes the dimension being measured. Their effects belong in the interpretation of the utterance, alongside the numerical description. A distance of two kilometres has no intrinsic linguistic status as small: a context supplies the relevant expectation.

DISCUSSION

Explaining measurement through the complete construction

The results support an account that connects the unit’s dimension and numerical value with morphology, syntax and context. Morphology changes a value’s grammatical presentation, while syntax relates it to a referent or event. Context resolves an implicit parameter or adds an evaluation. This is an analytical order for examining an expression, not a proposed historical sequence of development.

The contribution of morphology is real but conditional. In the measurement contexts examined here, -lik introduces an attributive use and -cha indicates approximation. The meanings of -lab and case-marked values require more information from the surrounding phrase or clause. A grammatical description should therefore preserve both the morpheme category and the quantitative role. Replacing a morphological label with an entirely semantic label would make the forms harder to compare; relying only on the morphological label would conceal their differences in use.

The analysis also narrows the role of the term numerative. It remains useful as a descriptive umbrella, provided that the operation carried out by each expression is recorded separately. Counting students, measuring flour and allocating bucketfuls of water require different interpretations even when the expressions occupy similar positions. This distinction avoids treating all intervening words as equivalent classifiers and avoids treating all nouns that occur with

a measure as lexically mass. The noun, unit and selected dimension must be considered together.

Attributive compression also requires the head noun to remain within the analysis. A measurement property can be recovered readily for a rope or journey but remain uncertain for a room. That difference follows from the dimensions available for the referent, as well as the compressed form. It explains when a compact description is adequate and when the parameter needs to be stated.

Implications for translation and annotation

Translation benefits from identifying the quantitative role before selecting an English expression. An attributive phrase such as besh metrlik argon can be rendered as ‘a five-metre rope’, while an ambiguous description of a room may require the translator to recover or state the intended dimension. Approximation normally needs an overt expression such as ‘about’. Dative-marked values require a choice among relations such as ‘by’ and ‘to’, depending on the predicate. These are contextual translation decisions, not a list of fixed equivalents for Uzbek suffixes.

The same distinctions can guide corpus annotation. A record should retain the source and language variety, the measurement unit, numeral, affixes, head noun or predicate, and the interpreted scalar relation. A separate field should indicate literal, analogical or evaluative use. This arrangement permits tonnalab to be identified morphologically even where the discourse uses mass as an image. It also allows ambiguous cases to remain open for review rather than being forced into a single interpretation at extraction time.

Lemma-only searches would miss distinctions central to this account. Forms such as kilometrlik, kilometrcha and kilometr lab need to remain distinguishable, and an extracted foizga requires its predicate to identify an increment or endpoint. Morphological tools such as UzMorphAnalyser provide relevant resources for recognizing Uzbek endings (Salaev, 2024), but recognizing the ending does not decide the scalar relation. A search procedure should therefore retrieve the phrase or clause and retain the affix information before any normalization removes it.

Published treebanks provide a starting point for grammatical validation. Akhundjanova and Talamo’s (2025) resource reports 500 sentences and 5,850

tokens from news and fiction. Matlatipov and Aripov (2026) report 684 sentences and 7,582 tokens in UzUDT, drawn from literary texts. Those are the sizes stated in the respective publications, rather than counts produced by this study. Both resources offer annotated structures, but their size and composition do not justify assuming broad coverage of every measurement construction.

A distributional study would need a larger sample, reconciliation of Latin and Cyrillic forms, and controls for duplication and dialect. Genres should be compared through explicit sampling. For example, an association between -lik and headlines requires a defined set of headlines and an appropriate comparison set. The occurrence examined here establishes availability, not preference.

LIMITATIONS

The evidence supports a qualitative classification of the selected expressions. It does not establish frequency, productivity or uniformity across dialects. Schematic examples require further examination with speakers in defined contexts. The checked passages strengthen contextual interpretation but cannot replace a balanced corpus or a controlled study of judgements.

Several questions remain unresolved. The scope of -lik deserves a fuller syntactic analysis, especially where a measurement phrase has internal modification. The interaction of lexical approximation with -cha requires evidence about speaker interpretation and register. The distinctions among portioning, repetition and extensive quantity with -lab may overlap in individual passages. These questions follow from the observed contrasts and should be investigated separately, rather than resolved by assigning one broad meaning to each suffix.

CONCLUSIONS

Uzbek measurement expressions present quantity through constructions that combine a numeral, a unit and a grammatical environment. Within the material examined, counting must be distinguished from standard measurement and from context-dependent portions. Attributive -lik incorporates a value into a referent's description, and approximative -cha weakens commitment to that value's exactness. Interpretations of -lab and case-marked quantities depend more strongly on the surrounding words, predicates and discourse.

The increment–endpoint contrast shows the practical consequence. Identical numerical expressions can describe different relations, so a translation that preserves the number but loses the construction can mislead. An adequate description records the dimension, value, grammatical form and contextual role together. This classification leaves frequency, productivity and dialectal distribution to studies designed to test them.

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