



EQUIVALENCE IN THE TRANSLATION OF ROAD CONSTRUCTION TERMINOLOGY

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Abstract. The paper examines equivalence in the English-Uzbek translation of road construction terminology. Road engineering texts contain specialized units naming pavement layers, earthworks, drainage facilities, materials, geometric parameters, construction processes and pavement defects. Their translation requires not only linguistic competence but also conceptual knowledge of road engineering. The study distinguishes full, partial, contextual and descriptive equivalence and illustrates them through English-Uzbek examples. Particular attention is paid to polysemantic terms such as pavement, grade, course, shoulder, overlay and subgrade.

Keywords: *road construction, terminology, equivalence, technical translation, pavement, English, Uzbek, specialized text.*

INTRODUCTION. The translation of road construction texts is a specific area of technical translation because the translator works with terms that belong to a strictly organized conceptual system. A road design, construction specification, bill of quantities, maintenance report or technical instruction may contain terms referring to pavement structure, earthworks, drainage, materials, construction machinery, geometric characteristics and pavement defects. In this type of discourse, a small terminological error can change the interpretation of a structural element or a technological operation. Therefore, equivalence is not simply a matter of finding a word with a similar dictionary meaning; it is a matter of identifying a target-language unit that denotes the same professional concept [1; 2].



Translation theory treats equivalence at several levels. Nida differentiates formal correspondence from forms of equivalence oriented toward meaning and communicative effect [1]. Newmark emphasizes the need to preserve the referential meaning of technical vocabulary [2], while Baker shows that a direct lexical counterpart may be absent even when the target language can express the same concept by a phrase, explanation or different grammatical form [3]. These ideas are especially relevant to road construction, where the English terminology is highly compact and many terms are polysemantic outside their professional context.

For example, the word pavement can refer to a pedestrian walkway in general British usage, but in road engineering it denotes the structural system constructed above the subgrade. FHWA materials distinguish the subgrade, subbase, base and surface or wearing layers as different elements of the pavement system [4]. Uzbek regulatory terminology also differentiates yo‘l to‘shmasi, qoplama, asos and asosning qo‘shimcha qatlamlari, which shows that the translator must preserve the hierarchy of the road structure rather than translate isolated words mechanically [6].

MAIN PART. Full terminological equivalence is found when the English and Uzbek units refer to the same professional concept and are conventionally used in the two systems. Examples include asphalt concrete - asfaltbeton, compaction - zichlash, crushed stone - chaqiq tosh, geotextile - geotekstil, cross slope - ko‘ndalang nishab and retaining wall - tirgak devor. In the sentence “The crushed stone base shall be compacted before asphalt paving”, an appropriate translation is “Asfaltbeton qoplamani yotqizishdan oldin chaqiq toshli asos qatlami zichlanishi kerak.” Here the technical relations are preserved without unnecessary explanation.

Partial equivalence occurs when the semantic scopes of two terms overlap but do not coincide completely. The pair subgrade - yo‘l poyi is illustrative. In engineering descriptions, subgrade often refers more narrowly



to the prepared upper soil surface supporting the pavement, while yo‘l poyi may refer to a broader road formation. Thus, “Soft subgrade soil must be stabilized before placement of the subbase” can be translated as “Asosning qo‘shimcha qatlamini yotqizishdan oldin yo‘l poyining yumshoq grunt qismi mustahkamlanishi lozim.” The expanded Uzbek form avoids an oversimplified one-word correspondence [4].

The term pavement is another example of partial and contextual equivalence. In technical documents it can be translated as yo‘l to‘shamasi when the whole structural system is meant, but qoplama may be more appropriate if the context refers only to the upper road surface. The Uzbek regulatory definition of yo‘l to‘shamasi includes qoplama, asos and additional protective or drainage layers [6]. Therefore, “The pavement structure consists of a surface course, base course, subbase and prepared subgrade” may be rendered as “Yo‘l to‘shamasi konstruksiyasi qoplama qatlami, asos qatlami, asosning qo‘shimcha qatlami hamda tayyorlangan yo‘l poyi yuzasidan tashkil topadi.”

Table 1. Examples of English-Uzbek equivalence in road construction terminology

English term	Uzbek equivalent	Type
road construction	avtomobil yo‘li qurilishi / yo‘l qurilishi	full
pavement	yo‘l to‘shamasi / qoplama	contextual
surface course	qoplama qatlami / ustki qoplama qatlami	partial
wearing course	yeyiluvchi ustki qatlam / yemirilish qatlami	functional
base course	asos qatlami	full



subbase	asosning qo'shimcha qatlami / quyi asos qatlami	partial
subgrade	yo'l poyi yuzasi / grunt asosining yuqori qismi	partial
shoulder	yo'l yoqasi	full
carriageway	qatnov qismi	full/contextual

The table shows that a considerable number of road construction terms require contextual or descriptive translation. This is especially visible in English compounds. The word course, for example, means qatlam in such combinations as base course, binder course and surface course. A literal form such as “kurs” would be terminologically incorrect. “The binder course shall be placed immediately below the surface course” can therefore be translated as “Bog'lovchi asfaltbeton qatlami ustki qoplama qatlamining bevosita ostiga yotqizilishi kerak.” The equivalent is selected for the whole terminological combination rather than for each isolated component [4].

Contextual equivalence is particularly important with polysemantic terms. Grade can denote a longitudinal slope, an elevation level or another technical category. Thus, “The maximum road grade is 6 percent” corresponds to “Yo'lining maksimal bo'ylama nishabi 6 foizni tashkil etadi”, while “The finished grade shall follow the design elevations” is better translated as “Tayyorlangan sath loyiha balandlik belgilariga mos bo'lishi kerak.” Similarly, the fixed expression at-grade intersection requires “bir sathdagi chorraha”. One source word therefore receives different Uzbek equivalents because the professional concept changes.

Shoulder demonstrates the difference between general-language and technical meaning. In road engineering it is not connected with the human body but denotes the part adjacent to the carriageway. Uzbek road regulation defines



yo‘l yoqasi as the part located on both sides of the road formation between the carriageway edge and the edge of the road formation [6]. Hence, “The road shoulder shall be strengthened with crushed stone” is appropriately translated as “Yo‘l yoqasi chaqiq tosh bilan mustahkamlanishi kerak.”

Descriptive equivalence is necessary when the English term compresses a technological function. Tack coat refers to a thin bituminous application that creates adhesion between pavement layers. Accordingly, “Apply tack coat before placing the new asphalt layer” may be translated as “Yangi asfaltbeton qatlamini yotqizishdan oldin yopishishni ta‘minlovchi bitum emulsiyasi sepilsin.” Prime coat can similarly be rendered as “singdiruvchi bitum materiali bilan dastlabki ishlov”. Such expansion is preferable to an artificial transliteration because it explains the engineering function of the process.

The results also have methodological value for the training of future technical translators. Students should be taught to identify the conceptual class of a term before choosing an equivalent. A useful classroom sequence is: first, determine whether the unit denotes a material, layer, operation, geometric parameter or defect; second, check its definition in an engineering source; third, compare several Uzbek candidates; and finally, test the selected equivalent in a complete technical sentence. This procedure reduces dependence on general bilingual dictionaries and encourages terminological reasoning [2; 3].

Contrastive exercises can be built around false or incomplete equivalents. For instance, students may compare pavement - yo‘l to‘shmasi with pavement - piyodalar yo‘lagi, course - qatlam with course - kurs, shoulder - yo‘l yoqasi with shoulder - yelka, and grade - bo‘ylama nishab with grade - baho. The task is not merely to mark one variant as correct, but to explain which professional context activates the technical meaning. Similar exercises may use short specifications: “Compact the subgrade to the required density”, “Place the base course in two layers”, “Provide drainage outlets at low points”, and “Repair rutted sections before overlay placement”.



Translation trainees can also prepare mini glossaries in which each entry contains the English term, Uzbek equivalent, definition, thematic group, typical collocation and a sentence from a technical context. For example: subgrade - yo'l poyi yuzasi - pavement foundation; compacted subgrade - zichlangan yo'l poyi; stabilize the subgrade - yo'l poyini mustahkamlash. Such micro-lexicographic work develops consistency and makes students aware that a technical equivalent should be supported by concept, context and professional usage rather than intuition alone [4; 6].

CONCLUSION. Effective translation of road construction texts therefore requires a combination of linguistic competence, terminological analysis, knowledge of engineering concepts and consultation of specialized sources. The translator should identify the concept, determine its place in the road-engineering system, compare possible Uzbek variants and select the form that is both technically accurate and consistent with professional usage. Such an approach reduces semantic ambiguity and increases the reliability of translated technical documentation [4; 5; 6].

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